

in

DIETETICS

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WOMEN'S BUREAU

51

UNITED STATES DEPARTMENT OF LABOR MAURICE J. TOBIN, SECRETARY
WOMEN'S BUREAU
FRIEDA S. MILLER, DIRECTOR

The Outlook for Women in Dietetics

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HOME ECONOMICS OCCUPATIONS SERIES

No. 234-1 The Outlook for Women in Dietetics

LETTER OF TRANSMITTAL

United States Department of Labor, Women's Bureau, Washington, January 24, 1950.

SIR: I have the honor of transmitting a report on the employment outlook in dietetics, a field in which women have already contributed greatly to the well-being of our people and in which more women are needed not only to reduce existing shortages but also to utilize our growing knowledge in the field of human nutrition.

This is the first bulletin in the study of the outlook for women trained in home economics, planned and directed by Marguerite W. Zapoleon. Martha J. Ziegler, formerly regional representative of the Bureau, completed most of the fact finding. Agnes W. Mitchell was responsible for the preparation and writing of the final report.

I want to express appreciation here for the generous cooperation rendered by the many organizations, agencies, and individuals who contributed information and photographs for this study.

Respectfully submitted.

FRIEDA S. MILLER, Director.

Hon. Maurice J. Tobin, Secretary of Labor.

FOREWORD

The study of home economics has long been important in training women for their work as homemakers. With the long-time trend in our economy toward the transfer to manufacturing or service industries of many of the functions formerly performed in the home, our colleges of home economics have also become a principal source of leadership and professional staff for these activities.

This bulletin on dietetics is the first in a series prepared by the Women's Bureau which will describe the trends in occupations for which training in home economics at the college level prepares women. Unlike the usual monograph which describes an occupation in detail at a particular point in time, this study, following the pattern of the earlier series on occupations in the medical and other health services and in the sciences, is concerned primarily with changes and developments which affect the outlook for women's employment.

In the preparation of this bulletin, more than 600 books, pamphlets, and articles were read. But the principal sources were the women engaged in dietetics, reached primarily through their organizations, their places of employment, their training centers, and the government agencies concerned with foods programs.

Besides the staff and members of the American Dietetic Association (the principal professional organization for those trained in dietetics), whose generous cooperation made the study possible, these sources included:

Twenty other organizations, such as the School Food Service Association and the American Home Economics Association, the Foods and Nutrition Section of the American Public Health Association, the National Restaurant Association, and the American Hospital Association.

Twenty-eight hospitals. In addition, questionnaires to 378 hospitals in Illinois were made available through the courtesy of the United States Public Health Service and the Illinois State Department of Public Health, and information on dietetic personnel in military, veterans', and other government hospitals was made available by Federal agencies.

Eighteen training centers, including hospital and other internship courses and foods and institutional management programs.

Thirty government agencies, including 2 international organizations, 4 State health departments, and 24 Federal agencies. Special help including unpublished information and expert criticism was given

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by the Children's Bureau, the Office of Education, and the Public Health Service in the Federal Security Agency; the United States Department of Agriculture; and the Bureau of Labor Statistics in the United States Department of Labor.

In spite of these varied sources, this study has revealed the need for more current statistics on the educational background and experience of the many women employed in this field, particularly on those employed outside hospitals. It is hoped that this bulletin and others in the series which border on it will throw some light, not only on what is known about this important field of work, but into the corners which need further exploration.

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Figure 1. Dietitians work in a variety of places.

THE OUTLOOK FOR WOMEN IN DIETETICS

The fast-growing, relatively new field of dietetics employed at least 15,000 women in 1949. Many more were needed to reduce a shortage that had grown to alarming proportions with no immediate prospect of relief. In this shortage dietetics shared the stage with other specializations which have developed within the general field of home economics, but it was in the spotlight because of its obvious role in the maintenance and recovery of health.

In part because of the newness of dietetics and in part because of further specializations which have developed within it, the difference between a dietitian, a nutritionist, and a food service manager is not always clear. Actually, a woman trained as a dietitian may take a position under any one of these titles, as indicated in part I of this bulletin, which describes the outlook for women dietitians. In doing so, she may work side by side with nutritionists and food service managers who are not dietitians, but who have approached their work from other avenues. Since large numbers of nutritionists who specialize in the promotion of healthful food habits are trained dietitians, the outlook in nutrition is discussed in detail in part II of this bulletin. The majority of food service managers in hotels, restaurants, and other commercial eating places are not trained dietitians, and many of them are men. This is borne out by an analysis of the Managers and Stewards Directory for New York City, Winter Issue 1948, which showed that of 844 managers and stewards in hotels, restaurants, clubs, and industrial establishments, less than 10 percent were women and only 6 of the total were known to be trained dietitians. For this reason the outlook for women as food service managers will be discussed at greater length in another bulletin in this series.

The typical dietitian works in a hospital, although many other fields are open to her. In a small hospital she may be the only dietitian and may have a variety of duties including not only the supervision of therapeutic diets for the sick but also the operation of the food service for patients on general diets, the hospital staff, and the employees of the institution. In a larger hospital she may be one of a staff of dietitians and may specialize in one particular type of work. For instance, as a therapeutic dietitian she may supervise the food service for the sick in a special diet kitchen; as an administrative dietitian she may be in charge of the general food service for the

institution; she may be employed wholly as a teacher of student nurses or medical students; or she may be a clinic dietitian in a clinic for diabetics or others who need dietary guidance.

There are wide variations in the duties of hospital dietitians. A 1948 study of 75 Illinois hospitals, ranging in size from 7 to more than 3,000 beds, showed differences in the duties and responsibilities of the members of the American Dietetic Association found in charge of the dietetic programs in 39 of these hospitals.

All were responsible for preparing therapeutic diets for patients in the hospital, and twenty-three instructed out-patients on their diets. Thirty were responsible for menu planning and food distribution for the entire hospital. Twenty-nine had responsibility for all food preparation and for the management of the employees engaged in food service, including their selection and training. Twenty-six also purchased the food supplies, but only thirteen were responsible for food cost accounting. Twenty-three instructed student nurses, and seven supervised the preparation of infant formulas. One reported housekeeping duties in addition to dietetic activities.

All these duties, with the exception of the hospital emphasis on therapeutic work and the instruction of nurses and other medical personnel, are also characteristic of administrative dietitians in restaurants, school lunch programs, industrial cafeterias, college resi-



Figure 2. A nutritionist employed by a dairy council instructs children in good eating.

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dence and dining halls, and other large-scale feeding programs, where programs are based primarily on normal nutrition.

To be adequately prepared for work as a dietitian, it is necessary to have a bachelor's degree from a home economics college or university, to have placed special emphasis on undergraduate courses in foods and nutrition and institution management, and to have followed such undergraduate work by a fifth year of training known as a dietetic internship. The dietetic intern becomes one of a group of interns in a dietary department, usually in a hospital or in an administrative unit where training is given through observation and supervised practice, as well as in the classroom. The intern learns every phase of the work which she, as a dietitian, may be called upon to perform. (See appendix, p. 70, for requirements for completing an internship approved by the American Dietetic Association.) Usually some provision for maintenance is made by the hospital for its interns while they are in training, and in some instances a stipend is paid during this period.

The typical nutritionist is likely to be employed by governmental or private agencies in public health work, although some are found in industry, in the Red Cross, and in welfare agencies. The public health nutritionist, too, may have a variety of interesting duties. For instance, she may be one of a team, including a doctor, a nurse, and other health personnel, who survey a district to determine nutritional deficiencies in the diet of all who live there, or of a certain group, such as sufferers from diabetes or heart ailments. Again, she may advise nurses, social workers, school lunch supervisors, crippled children's agencies, or others on improving the diets of the persons for whom they are responsible. Nutritionists also specialize in foods and nutrition in undergraduate courses in home economics. Many of them take the fifth-year dietetic internship because of its value in offering a broad basis of training; others continue their graduate training in schools of public health or home economics. A goodly number take both graduate academic study and a dietetic internship.

Dietitian (Professional and Kindred) 0-39.93, as Defined in the Dictionary of Occupational Titles (86)

"Applies the principles of nutrition to the feeding of individuals and groups: Plans menus and special diets with proper nutritional value for a hospital, institution, school, restaurant, or hotel. Determines dietetic value of foods and food products. Purchases food, equipment, and supplies. Supervises chefs and other food service employees. Maintains sanitary conditions. Prepares educational nutrition materials."



Figure 3. A school lunch service dietitian observes student food selection in a school cafeteria.

THE OUTLOOK IN 1949

The demand for dietitians exceeded the supply for all the principal types of work in the profession in 1949, and there appeared to be no immediate prospect of an ample supply. Expansion of the traditional fields of dietetic work and the certainty of additional demands with the rise of newer types of activity promised growth both in number and variety of employment opportunities.

Hospitals had not only the largest number of dietitians in 1949, but the heaviest current and anticipated demand. Seventy-four percent of the placements made by the American Dietetic Association Placement Bureau in 1948 and 84 percent of its placements in 1949 were in hospitals. Opportunities in the hospitals of the Federal Government were growing. The Veterans Administration alone planned to expand its force of dietitians from 728 in 1949 to 1,300 in 1954 to serve veteran patients in its hospitals. The Army was seeking 75 to 100 additional dietitians, and the Navy was conducting a recruiting campaign for 20 dietitians in 1949 with the intention of hiring a greater number the following year. In non-Federal hospitals the potential demand for dietitians was also large in proportion to the number employed. In the rural area outside of Chicago, for example, only 39 out of 139 hospitals had college-trained dietitians. (17) Cooks, nurses, housekeepers, stewards, and others were supervising the food service in the other institutions. Of the 183 hospitals approved by the American College of Surgeons in North Carolina in 1946, only 22 had dietitians approved by the American Dietetic Association, because others were not available. (19)

Furthermore, the hospital industry, already reported to be the fifth largest in the country in terms of personnel, pay roll, and investment, was rapidly expanding. In addition to the building program of the Veterans Administration, expected to reach its peak in 1975, the 1946 Hospital Survey and Construction Act (Public Law 725) set up a 5-year grant-in-aid program, under which the Federal Government may pay one-third of the cost of local hospital construction. New and expanded hospitals built under this program, or otherwise financed, will need dietitians. Even the small hospital may be expected to use the services of a dietitian, and itinerant and consultant dietitians,

employed in some localities in 1949, will be increasingly in demand. The rise in the average age of the populace will also create a need for more hospitals and for dietitians skilled in devising means for the aged.

The relation of new findings in psychosomatic medicine to hospital food service is one of the many fascinating areas in which exploration was just starting in 1949. Particularly in the case of neuropsychiatric patients, greater attention will be paid to nutrition in the future than in the past because of the psychosomatic consideration in their total treatment program.

The increased use of food clinics is also expected to result in more requests for specialists in clinical dietetics. The rising popularity of hospital insurance and the resulting increase in the use of hospitals by those who are ill is another factor in the growing need for hospital dietitians. These conditions indicate a heavy demand and attractive opportunities in this field for many years to come.

Expansion is also predicted in college residence-hall work. The long-time trend in college enrollments has been steadily upward, and the growing interest in adequate food service has caused more and more colleges to employ dietitians. Nearly one-fourth (23 percent) of the alumnae of the New York State College of Home Economics at Cornell University, reporting in a 1948 study, were engaged in college food service. Twenty percent of Cornell graduates were reported to be employed in commercial restaurants, another indication of the broadening demand for women trained to administer food service. A study of the placements of graduates of Iowa State College for the 10-year period from 1939 to 1948 indicated a similar trend. At least one-third were in quantity feeding other than hospitals.

In school lunch work the potential demand was so great that specialists in this field believed in 1949 that it would be years before it would be adequately met. More children than ever before depend upon the school to provide noontime meals. The sympathetic support of the parents, teachers, and the general public, however, is needed to finance the extension of adequate food facilities to all of the children of the country. Only about 20 percent of the Nation's children were served by such programs in 1947. Private schools and camps were other interesting fields in which the potential demand was already from two to three times as great as the employment of dietitians in those fields in 1949.

Many other, though considerably smaller, fields were promising. Food research, the frozen food industry, food chemistry, food demonstration, food advertising through writing, the radio, and television were seeking an increasing number of women who combined other talents or experience with their training in dietetics.

The field for the self-employed consultant dietitian, although small, was reported by those engaged in this work to offer an unparalleled

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opportunity for the enterprising dietitian with experience and financial resources. A need for this free-lance type of service is anticipated in smaller population centers, as well as in larger cities where practically all of the independent dietitians were located in 1949.

In the next 5 to 10 years, at least, there are likely to be splendid opportunities for the young woman who completes her training for recognition as a dietitian. A wide variety of choices awaits her, almost all of them offering opportunity for service essential to the health and welfare of mankind.

DEMAND

In Hospital and Other Institution Work

One authority estimated the number of qualified dietitians in all hospitals in the country in 1949 at 7,000 full time and 600 part time. This estimate appears to be conservative. In May 1949 members of the American Dietetic Association employed in hospitals alone totaled 4,000. A 1947 survey covering 224 Illinois hospitals indicated that half of the 201 hospitals reporting had in charge of dietary departments a member of the American Dietetic Association. Undoubtedly, many dietitians who were not in charge of their departments were members of the American Dietetic Association, and possibly there were others among hospital dietitians who qualified for membership in the association. If the 1947 Illinois statistics are at all typical of the country as a whole in 1949, it is possible that at least one-third, and more probably one-half, of those classified as hospital dietitians were members of the American Dietetic Association or qualified for membership. Generalizing further, the 4,000 members of the American Dietetic Association in hospital work would indicate that there were at least 8,000 dietitians in hospitals in the United States in 1949.

Probably not more than one-fifth of hospital dietitians were completely responsible for the food service as chief dietitian or as the only dietitian employed in the hospital. Of approximately 3,500 hospital dietitian members of the American Dietetic Association reporting in the fall of 1948, 15 percent, or 536, were head dietitians, while those reporting as the only dietitians in their respective hospitals numbered 128.

Assistant dietitians in hospitals seemed to be divided almost equally between those who specialized in therapeutic diets (used in the treatment of certain diseases) and those who assisted the chief dietitian with the administration of food service to patients on general diets and to the staff. A small but growing group were the clinic dietitians attached full time to in-patient or out-patient clinics where diet planning was an important part of treatment. Almost half of the Veterans Administration hospitals operated nutrition clinics in 1949, and there were 15 nutrition clinics in its Regional Offices. More than 100 of the



Figure 4. A hospital dietitian instructs a patient.

American Dietetic Association members employed in hospitals in May 1949 were in this type of work. It is likely that at least 200 dietitians were employed exclusively in clinics in 1949.

Over 1,000 dietitians in Federal agencies were operating hospital food services in 1949. The Veterans Administration alone employed 725 (as compared with 231 in 1940). Army dietitians in 1949 numbered 167, a reduction from the war peak of over 1,500. The creation of a Dietetic Section in the Women's Medical Specialist Corps, providing permanent work in the regular Army with its benefits and allowances, added new attractions to dietetics service with the Army. Other Federal agencies employing dietitians in hospitals in 1949 were: the Public Health Service with 81 dietitians, of whom 30 were commissioned officers; the Office of Indian Affairs with 12 dietitians in 8 of its 64 hospitals; the Department of National Defense with 10 dietitians, stationed in the Panama Canal Zone; and St. Elizabeths, Freedmen's, and Gallinger Hospitals and Glenn Dale Sanitarium of the District of Columbia with a total of 36.

A number of administrative dietitians were employed in public and private institutions for the aged, for children, and other groups in 1949. No separate statistics on the members of the American Dietetic Association employed in institutions of this type were available. Some were undoubtedly classified as hospital dietitians, if the institution also



Figure 5. A hospital dietitian checks with a patient on quality and amount of food as the nurse serves a tray.

included a hospital, as was often the case. Councils of Social Agencies reports from local communities indicated some employment in this type of work, both by the councils themselves, to service camps and institutions, and by affiliated agencies which operate camps or institutions. Camp positions during the summer used hundreds of dietitians, most of whom were employed in schools and colleges during the remainder of the year.

In Teaching

Dietitians engaged in classroom teaching ranked next in number to hospital dietitians as a group. Almost 600 members of the American Dietetic Association were primarily teaching dietetics, foods and nutrition, or institutional management in college or university classrooms in 1949. It is probable that there were altogether 1,000 women teaching these subjects, most of whom had a master's or doctor's degree. (See p. 55.) Many of these college teachers were also responsible for food service to students or faculty and might also be classed with the college food service group.

The foregoing dietitians will be discussed more fully in a bulletin on teaching in this series.

In addition to teachers in colleges and universities, the American Dietetic Association reported 100 of its members who were classified as hospital dietitians and who were engaged full time in 1949 in

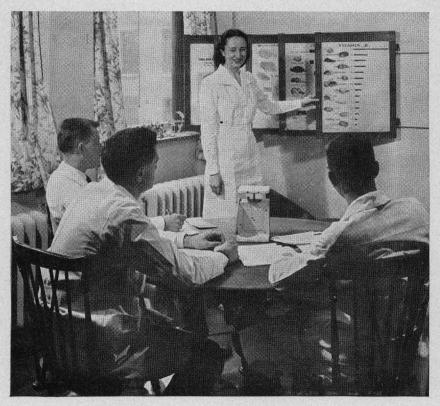


Figure 6. A dietitian instructs medical students.

teaching dietetic interns, student nurses, medical and dental students, social workers, and others on hospital staffs. Some were known as directors of internship training courses. Since these dietitians were engaged in teaching college graduates, they were usually required to have advanced degrees. In a large hospital it was usual to have one dietitian or more whose entire time was devoted to teaching. Dietitians were sought by large schools of nursing not only to teach preliminary courses in nutrition and diet therapy to student nurses, but also to participate in clinic teaching in cooperation with nursing, medical, and social service work staffs.

In College and School Lunch Programs

No reports were available in 1949 on the number of colleges which had dietitians in charge of their food services for students and faculty. There were conflicting reports from college administrators on the extent to which dietitians were employed. One midwestern business manager said they were employed only in very large institutions, while another cited one small college after another which was known to have a dietitian in charge of food service. One State university in 1949

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employed 12 trained dietitians to service its students and faculty; a small junior college and a small sectarian college in the same city each employed one. If every State had one comparable city with 14 qualified dietitians, this alone would account for nearly 700 dietitians in college food service.

Nearly 600 members of the American Dietetic Association were in college or school food service work in 1949. There is reason to believe that approximately 2,000 dietitians were actually employed in such work, one-third to one-half of this number in the college field alone. (The work of dietitians in college quantity feeding will be more fully discussed in a later bulletin on food service managers and supervisors.)

In connection with school lunch programs for children, dietitians were employed at the Federal, State, and local levels in both public and private schools. Twelve dietitians were employed in 1949 by the U. S. Department of Agriculture's School Lunch Division in the Marketing Administration. Forty-seven States had school lunch programs in operation in 1949, according to the School Food Service Association. About one-half of the 47 State directors of these programs were women. College degrees with major specialization in foods and nutrition or in institution management had been earned by 103 of the 148 directors and their assistants employed by the States, and 100 had had one or more years of experience in food service management before they began their State employment. The larger school systems generally employed dietitians to administer their cafeterias. A questionnaire, sent to 93 school cafeterias even before the war, in 1941, brought reports of 680 dietitians employed in these cafeterias. (39) In 1949 the Boards of Education of Detroit and Chicago employed, respectively, 39 and 12 trained school lunch managers. Nine of these 51 were members of the American Dietetic Association, and at least 8 others were known to have met membership requirements.

There is less information on private boarding schools, day schools, child care centers, and nursery schools, but informed persons estimated that less than half of them had trained dietitians in charge of their feeding programs in 1949.

In Commercial and Industrial Food Service

Hotels have traditionally employed chefs and stewards to supervise their food services, and restaurants have not traditionally hired women trained in home economics as managers. However, a number of women dietitians were working in hotels and restaurants in 1949. One large hotel chain was known to employ them, and some of the resort hotels, catering to convalescents, advertised the services of a trained dietitian. Some of the larger restaurants, including some

chains, employed dietitians exclusively to plan menus and supervise the food service.

Many graduate from institution management courses and then go directly into the commercial field. Then, through their business organizations, they may become members of the National Restaurant Association. These people lack hospital internships and are not able to qualify for membership in the American Dietetic Association until they have gained 3 years of acceptably supervised experience. This explains the fact that in 1949 less than 250 of the members of the American Dietetic Association were employed in this field or in the related operation of cafeterias in industrial plants. Fragmentary statistics compiled by the Women's Bureau from over 30 scattered localities indicated the employment of over 600 trained dietitians in the commercial and industrial field. It is probable that at least 2,000 trained dietitians are employed in this type of work, which will be discussed in more detail in another bulletin in this series.

In Public Health Nutrition

A growing number of women trained as dietitians, probably at least 1,000, were engaged in 1949 in nutrition education work, primarily in public health and social service agencies, and were known as public health nutritionists. Members of the American Dietetic Association in this type of work in 1949 totaled 359. Since some of the personnel engaged in this specialization had their preliminary training in other fields of study, such as science or health education, opportunities in this field have been described in a separate section of this bulletin. (See part II.)

In Consulting, Writing, and Research Work

A widely scattered but sizeable number of dietitians, probably 1,000, were engaged in writing, research, or consulting work in 1949. Almost 350 members of the American Dietetic Association were so employed in May 1949.

Some dietitians were hired as consultants on institution problems by government agencies to assist less experienced personnel with problems of administration and of operation of food service in hospitals and institutions. Many States employed a dietary consultant in their health departments to visit small institutions and hospitals to advise on food service programs. Some cities, as well as community chest councils and other social agencies, employed a consultant dietitian to aid small hospitals or institutions which were unable to finance a dietitian of their own. This consultant service is a recent development, apparently growing in importance.

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Figure 7. A dietitian develops recipes for use in a weekly bulletin she writes for a large food company.

Possibly 25 women in 1949 were working as self-employed consultant dietitians in large cities, serving private patients, often in conjunction with a physician or group of physicians. Fifteen or more were known to be working on the west coast in 1949, as well as several each in New York and Chicago, and one in Washington, D. C.

Some women trained as dietitians worked for industrial firms, such as food manufacturers or distributors, preparing educational materials on the nutritional value of food products or on methods of preparation. Others worked as writers or editors on newspapers and magazines which published food articles or columns for the general public or for medical or other technical groups. An increasing number wrote for the radio; some also engaged in broadcasting. Television, too, was attracting a number. Special abilities and training in journalism or public speaking were needed in this type of work. (These fields will be discussed at greater length in a later bulletin in this series.)

A small group of probably 200 to 300 dietitians were engaged in full-time food research in 1949. In addition there were many teachers and hospital dietitians who participated or engaged in research as part of their routine duties. One woman, for instance, who headed a university department of home economics for 35 years, experimented with the effects of sulfur dioxide on thiamine and ascorbic acid. She

was the first to observe the graying of hair from vitamin deficiency in experimental animals, to observe the damaging effect of pantothenic acid deficiency, to record heat damage to proteins, and to note the action of vitamin D on parathyroid extract. (32) Most women in research have taken further training in science following their internship. This work will be discussed in more detail with that of other research workers in foods and nutrition research in a later bulletin in this series which will include information on all home economists in research.



Figure 8. A dietitian checks fruit for salad and dessert counter for a hospital staff cafeteria.

Until the decennial Census is taken in 1950, when a complete count of dietitians and nutritionists in the United States will be made for the first time, the total number of dietitians in the United States can only be estimated. The estimate of a total of 15,000 dietitians given in table 1, together with their estimated distribution as based on information assembled for this bulletin, is a conservative one. The distribution of members of the American Dietetic Association, by type of work, is shown for comparison.

Table 1.-Women in Dietetics in the United States in 1949, by Type of Employment

Type of employment	Women in dietetics (estimated)		Employed members of the American Die- tetic Association, May 1949	
	Number	Percent	Number	Percent
Total	15, 000	100.0	1 6, 151	100.0
Hospitals and other institutions Colleges—teaching Schools or colleges—food service Public service agencies (nutritionists) Hotel, restaurant, and industrial food services Consulting; writing; editing; research	8, 000 1, 000 2, 000 1, 000 2, 000 1, 000	53. 3 6. 7 13. 3 6. 7 13. 3 6. 7	4,000 611 591 359 248 342	65. 0 10. 1 9. 6 5. 8 4. 0 5. 5

¹ Additional employed members may be found among the 1,862 in a miscellaneous category, which included 1,468 homemakers, 38 students, and retired members. Note.—Many members engage in two types of work; for example, teachers may operate food services. But each member was classified under the ype of employment to which most of her time was devoted.

Geographic Variations in Employment Opportunities

On the whole, the development of dietetics has been general throughout the country, as indicated by a 1948 analysis of the membership of the American Dietetic Association. About 26 percent lived in the Northeastern section of the United States, over 35 percent in the North Central section, 21 percent in the South, and 17 percent in the Western Table 2 shows how this distribution compared with that of the population and the supply of hospital beds in those areas. Western and the North Central States had a higher proportion and the South a lower proportion of dietitians in relation to the number of people in these areas. A specialist in the field of dietetics believed that the supply of dietitians was relatively higher in the West because many prefer the climate. In 1948 the membership of the association doubled in Denver, Colo. Apparently in that community the supply exceeded the demand. Some married dietitians living there, who had worked in other communities, remained unemployed, and others reported themselves engaged in non-dietetic work.

The small proportion of dietitians in the South followed the general trend among medical and health personnel, with whom the South was generally less well supplied than other parts of the country. A contributory cause may have been the fact that a smaller number of schools of home economics and hospital internship training courses were to be found in the South. For all the major types of work in the dietetic field the geographic distribution of American Dietetic Association members was similar. Variations in the different sections of the country for any one kind of dietetic work did not exceed 3 percent when compared with the distribution of all members. In most instances, the differences were less.

Table 2.—Geographic Distribution of Members of the American Dietetic Association Compared With That of Estimated Population and Hospital Beds in the United States, 1948

Region	Percent distribution of—		
	Members of the ADA	Estimated population	Hospital beds
United States	100.0	100. 0	100.0
Northeastern States ¹	25. 8 35. 5 21. 2 17. 5	26. 7 30. 0 30. 5 12. 8	33. (29. (24. <i>t</i> 12. (

1 The regions as designated in Census reports are as follows:
 Northeastern States—Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont;
 North Central States—Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin;
 Southern States—Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia;
 Western States—Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming. (81)

Sources: American Dietetic Association membership tabulated by the Women's Bureau from American Dietetic Association membership cards. Population Estimates, U. S. Department of Commerce, Bureau of the Census. (82) Hospital Beds, American Medical Association. (8)

SUPPLY

Almost all members of the dietetic profession, except the few in research who come directly from the sciences, start off in colleges and universities and specialize in foods and nutrition or in institution management. The profession is dependent, therefore, upon the graduates of these courses as a reservoir from which to draw the workers required for increases in staff, as well as for those to replace dietitians who die, retire, or leave the field for marriage or some other reason.

Reports from many colleges express concern over the decreasing number of women majoring in home economics. According to the U. S. Office of Education, the number of those with majors in home economics declined from 43,117 in 333 colleges in 1941 to 41,990 in 388 colleges in 1948, while total enrollments for women during the same period increased in these institutions from 256,209 to 368,818. During the same years the number of nonmajors in home economics in these colleges increased from 18,651 to 24,385.(83) Thus the number of home economics majors has not kept pace with increases in college enrollment.

In 1948, 388 institutions granted 6.953 bachelor's degrees in home economics. (83) No information is available regarding the proportion of these graduates who entered the food field, but clues may be furnished by the more detailed information available from land grant colleges, as reported by a Committee of the Land Grant Colleges Association. In 1948, 38 of these colleges granted 2,695 bachelor's



Figure 9. A hospital dietitian instructs student nurses in planning menus for patients needing therapeutic diets.

degrees in home economics. About one-fourth of these graduates planned to enter the food field: 274, or about 12 percent, in hospital dietetics; 113, or 4 percent, in institution management; and 235, or about 9 percent, in the other food and nutrition fields. The proportion of women graduates entering the food field from land grant colleges is believed by specialists in this field to be higher than the ratio for the graduates in all colleges preparing home economics majors. On this basis, less than one-fourth of all home economics graduates were planning to enter the food field in 1949, in contrast to the proportion of 50 percent choosing this specialization some years earlier. (15) It may be assumed, then, that less than 1,740 of those graduated with home economics degrees in 1948 will find their way into food work, and a maximum of 800 or so may become hospital dietitians. This is not much higher than the 676 graduates reported for 1947–48. (6)

The experience of a midwestern college illustrates the problem. It graduated 14 foods and nutrition majors in 1947. One year after graduation, eight were continuing their education or training; one had obtained immediate employment as a dietitian at \$180 per month; one had married and didn't seek work; one remained unemployed, though unmarried; two were working in clerical jobs at \$150-\$160 per month; and one was employed as a laboratory assistant at \$150 per month. Higher marriage rates and earlier motherhood as well as

well-paying jobs in other lines of work in recent years also tended to withdraw a high proportion of graduates from the undergraduate reservoir.

An increasing number of scholarships were being made available in 1949, so that qualified students will no longer be barred by lack of resources from completing their training. Information regarding such scholarships may be obtained from schools of home economics or from the American Dietetic Association.

The 676 women who in 1947—48 completed internships approved by the American Dietetic Association were not enough to supply the hospital need alone. Assuming a minimum of 8,000 hospital dietitians in 1949, 528 dietitians would be needed for replacements alone if the

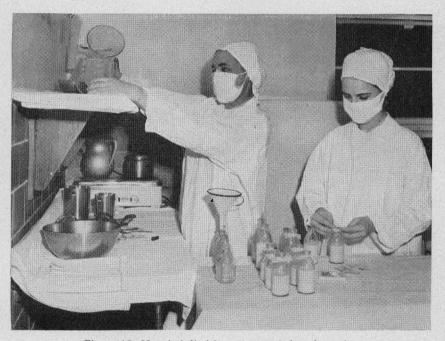


Figure 10. Hospital dietitians prepare infant formulas.

current annual withdrawal rate for dietitians were no higher than that of professional nurses during the depression decade of the thirties, when withdrawals might be expected to have been low. With the tremendous hospital expansion planned and underway, the remaining 148 dietitians would be easily absorbed by the hospitals, even assuming all of them actually entered employment. This would leave no dietitians available from this source for the increasing number of outlets outside hospitals, outlets which, when combined, equaled that of the hospital field. (60) Replacements needed for the entire field at the lowest estimate would be from 900 to 1,000 annually, and for some

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years an equivalent number will be needed to fill accumulated vacancies and new openings.

Those coming from graduate courses in institution management, another source of supply especially for nonhospital employment, were too few to brighten the supply picture. In 1947–48, 15 persons were awarded a master's degree in this field, and none received a doctorate. (78)

A study of some 3,400 members of the American Dietetic Association made in 1949 by the Bureau of Labor Statistics indicates a generally low average number of years spent by the average dietitian in the professional field. One-half of the employed hospital dietitians were found to have been in the profession for an average of 6 years or less in 1949. Dietitians who had left the field but had continued their membership in the Association had worked an average of only 4 years in the profession—a trend that reduced the supply of qualified persons available.

In 1949, with unfilled places in dietetic internship training courses and enrollments in home economics still running low, opportunities were heightened for women entering this field. A young woman starting a course of study in home economics with the idea of later specialization in dietetics may be sure of placement, providing her scholastic achievement is satisfactory. In fact, she may look forward to a variety of choices offered by the various types of work in this interesting field and the many places in which it is carried on.

Shortages

The shortages in 1949 in the Federal Civil Service, where competition for jobs in peacetime is generally keen, are indicative. Dietetics continued to be one of the few fields in which active recruiting continued long after World War II. In 1949 only 102 dietitians were on the Civil Service register, of whom only 36 were available for beginning professional jobs, as compared with a register of 661 in 1941, including 461 available for beginning jobs. From 75 to 100 Army dietetic positions were unfilled in 1949. The Navy was launching a program to recruit 20 dietitians as a start toward the employment of women dietitians in all its large hospitals and dispensaries. It sought dietitians between the ages of 21 and 25, who were graduates of an accredited college with a major in foods and nutrition or in institution management, and who, in addition, had had 1 year of internship or 3 years of experience in a hospital. Late in 1949 the U.S. Air Force announced the organization of the U.S. Air Force Medical Service. which was to include a staff of dietitians. (77) Twenty-nine budgeted positions were unfilled in the U.S. Public Health Service.

Hospitals of all other types reported openings for qualified dietitians. Even before World War II, State hospitals for mental disease had reported an 87-percent deficit in dietetic personnel, as compared with 42 percent for their employees in all categories. Working conditions and salaries have generally improved in this field in recent years and made these positions more attractive. The frequently announced State and local civil service examinations for dietetic positions in State, county, and city hospitals in 1949 indicated continuing needs.

Reports from placement bureaus likewise confirmed the many opportunities in all areas of dietetic employment. The American Dietetic Association's Placement Bureau reported more positions listed in each of the years since World War II than during the peak year of 1942-43. In August 1949 openings listed with the Bureau numbered 859. Only 536 members were seeking positions during that month. Throughout the preceding year, during which 224 placements were made by the Bureau, the number of members registered for placement had remained far below the number of positions which employers sought to fill through the Association. Many of the members registered were already employed as dietitians and were interested in better jobs, so that they did not help to reduce the shortage by obtaining placement. Most of the applicants expressed a preference for a certain type of work. In April 1949, for example, two-thirds of the registrants preferred hospital work. The only other group large enough to be reported separately was composed of the 13 percent who preferred college food service or school lunch work.

Employer requests ranged widely. Of 84 representative orders in April 1949, almost two-thirds were for hospital staff or assistant dietitians, and a few were for civil service positions as dietitians in State hospitals. Only about one-sixth were for teachers, mostly teachers of dietetic interns or teachers of student nurses in hospitals and a few for college faculties. Openings on college faculties ranged from the headship of a department (Ph. D. required) to beginning instructorship with a master's degree required. The remainder included requests for a few each of managers or supervisors of college food services (whose duties included teaching and one of whom was required to have a master's degree), school lunch dietitians, home economists, food production managers, assistant business managers, and public health nutritionists.

Reports from the placement service of the Division of Home Economics at Iowa State College, which offers courses in hospital dietetics and in institution management, were similar in type to those of the Association and offered many attractive choices to the qualified dietitian. Employer requests sent to this institution for hospital



Demonstrates standardized portion of food to those who serve it.



Checks quality and amount of meat.

Advises employees on weight control by means of a well-balanced diet.



Figure 11. The dietitian in an industrial cafeteria.

dietitians, which totaled 75 in 1944, fell to 70 in 1945, and rose again to 141 in 1948. Placements dropped from 93 in 1944 to 36 in 1948. The number of graduates available for jobs in 1948 served to meet only one-fourth of the requests from employers. Requests and placements in institution management rose from 43 requests and 14 placements in 1940 to 329 requests and 77 placements in 1944. In 1948 employers' requests totaled 179, of which the college was able to fill only 28.

The New York State College of Home Economics at Cornell University reported that the demand for its graduates in institution management had doubled since 1940 and that it was unable to fill 210 positions in 1948. Sixty-six of these positions were for hospital dietitians,

Columbia University's Department of Institution Management at Teachers College reported 57 requests which it had been unable to fill in 1948 for dietitians in hospitals and other institutions, including tearooms. Salaries ranged from \$1,200 per year at a Quaker institution to \$4,000, with board and two-room apartment, as director of foods in college dining service. Salaries for positions which were filled were good and in several instances were exceptionally high.

Evidence that many jobs in dietetics were held by persons without the training considered desirable for work in this field also emphasized the shortage. A survey of Illinois hospitals in 1947 showed that, although almost half of those who headed dietary departments were American Dietetic Association members, more than one-third (39 percent) of those in charge of food service did not even have a college degree in home economics. Of 110 State school lunch supervisors, only 22 were graduate dietitians, according to a country-wide survey made in 1949. Many of the positions with poorly prepared personnel will be filled by qualified dietitians as soon as they are available, adding to the favorable position in which the trained dietitian will find herself during the next few years.

Paid Aides and Consultants

One method of reducing the load of work for hospital dietitians and spreading their professional services is through the use of paid diet aides to assist the hospital dietitians in many ways, such as making infant formulas, keeping records and reports, telephoning orders, tallying menus and special diets, checking trays, typing menus, and doing many other of the more routine tasks done by dietitians in many hospitals.

Some chief dietitians in the larger hospitals believe that there is a definite need for aides to help relieve the effects of the shortage of hospital dietitians by giving them more assistance. But there is a DIETITIANS 23

difference of opinion on the background and training such employees should have. A number of hospitals have been experimenting with a program of training diet aides, especially where the number of dietetic personnel is insufficient to meet the need. The responsibilities given such aides vary widely in the different hospitals. A committee of the American Hospital Association in 1949 was studying the need and possible remedies. The aide program has not yet been sufficiently developed to recommend a representative plan.

Some dietitians have suggested that hospitals and general food services make large scale use of junior aides, and that training for such aides be provided for in a 2-year junior college curriculum in food service. Courses of this general type, that might easily be adapted to train specialized personnel assistants or aides, were already offered in a few places in 1949. Some junior colleges, like Stephens College in Columbia, Mo., offered a food specialization course at the junior college level. Graduates became assistants in tearooms, school lunch programs, and nursery schools, and were placed in charge of salads and other stations in cafeterias. Naturally, to qualify as trained dietitians, it would be necessary for them to complete their undergraduate work and dietetic internship.

The New York State Agricultural and Technical Institutes in 1949 offered a 2-year food course to high school graduates. Of the 207 women graduated from the food courses of two of these institutions from 1945 to 1949, 126 worked in hospitals assisting dietitians and 59 were placed in food service of other kinds, including school lunch programs, commercial and college food services, and State institutions.

Another means of spreading the services of dietitians has been the assignment of a consultant dietitian, employed by the local or State department administration, to supervise less well-trained persons in charge of the food service at several small institutions in an area or district. This type of work has become increasingly important in view of the shortage of trained personnel.

Improving Working Conditions

The improvement of working conditions has been suggested as another means of attracting more women into this field. The conditions of work vary as widely in this field as do earnings. Indications are that, as with earnings, progress has been made in the postwar period. Hours are generally shorter and more regular than they were before World War II. But in residence hall management and in hospital administration the split shift, with a spread as great as 12 hours, is still used in some places, and hours on the whole tend to be longer because of the continuous responsibility for food service.

Some dietitians dislike work in small hospitals where additional tasks, such as supervision of the housekeeping service, are often assigned. However, others prefer the variety of work in such positions. Some have complained that they are influenced to live in the institution because the permissible living-out allowance is too small to be attractive, although they prefer living elsewhere. Hospitals in isolated, rural locations, like those operated by the Office of Indian Affairs, seem to have more difficulty in obtaining personnel because of the virtual necessity of living in the hospital and the restriction of daily social life to a limited environment. Some women, however, seek positions where pleasant quarters in a nurses' home at an attractively located hospital are available. The new hospitals generally have modern working and living quarters, unlike the old kitchens or dormitories in which dietitians began their hospital service many years ago. The American Dietetic Association has consulted with the American Institute of Architects on appropriate building specifications for dietary departments in hospitals, and the American Hospital Association has conducted workshops on lay-out and equipment for dietary departments, so that even greater improvement can be expected in future lay-outs.



Figure 12. A chief dietitian discusses the lay-out of the dietary department of a new building with architects and the hospital superintendent.

Coverage by old age and survivors' insurance and unemployment, not available in 1949 to dietitians working in most hospitals and other nonprofit organizations, has been recommended. Such coverage is provided for in a bill passed by the House of Representatives and scheduled for consideration by the Senate in 1950. Lack of inclusion under Social Security provisions was the chief cause of dissatisfaction reported by nurses in a 1947 survey, and it may rank similarly high with dietitians. Salaries of positions in the Federal competitive classified service are subject to deductions for retirement, although no unemployment benefits are provided. Inadequate provisions for sick leave or vacations are also a source of dissatisfaction in some hospitals and institutions.

Various other working conditions in a few of the less progressive hospitals or institutions seem to have an unfavorable effect on dietitians. The relationship with the food service employees may be unsatisfactory where the dietitian is not in charge of their management or where the wages for these employees are so low that the turnover is heavy.

Recruitment and Changes in Training

Recruiting more students for internships is another means of increasing the supply to which dietitians have directed their efforts.



Figure 13. Dietetic interns go over patient's chart with the doctor.

A special vocational guidance committee of the American Dietetic Association has worked through State and local dietetic associations and all other possible media, and has even employed publicity personnel, to call the attention of prospective high school and college students, counselors, and teachers to the shortages. Observation trips to hospitals, as well as visual aids and radio and assembly talks, have been arranged by local groups for potential dietitians currently in high school.

Counselors and teachers, as well as some dietitians, have reported that the length of the training and the extensive science requirements seem to be the chief deterrents to many girls who would otherwise consider the field. (See appendix, p. 68, for typical requirements for an approved training course, and appendix, p. 70, for those for completion of an approved internship.) The 5 years of preparation usually required for hospital dietitians tend to discourage some girls from entering the field. Some educators have proposed including an internship in a 4-year course, leaving out some of the academic work: others suggest a master's degree following a reorganized 5-year program. One eastern college experimented with the latter program some years ago, but dropped it because the combined hospital-internship and seminar-thesis program proved too exhausting. However, in 1947, two internship programs provided for completion of the master's degree, and some of the others allowed graduate credits for part of the work. (3)

One food instructor blamed the science requirements for the fact that only 8 of the 228 young women she was preparing in food service and institution management planned to enter hospital internships. She and some others have contended that administrative dietitians need only an understanding of physics, biology, chemistry, and physiology, and that this might be acquired without completion of a full course in each as now required. Others believed just as strongly that these requirements are absolutely necessary.

TRAINING

Shortages in dietetic personnel have led to the establishment of short courses or short-cut schools which advertise that they train dietitians. Some of these accept high school graduates and give courses lasting 1 or 2 years. In some of these schools high tuition is charged. Although many graduates of such schools obtain certain types of jobs in food service, they are in no sense trained dietitians and are subject to bitter disappointment if they attempt to qualify as such where college-trained women are desired.

The young woman who plans to be a dietitian can be sure of satisfactory qualifications if she completes the schooling and training recommended and approved by the American Dietetic Association. The fact that the American College of Surgeons has the policy of requiring its approved hospitals to have at least one dietitian who is eligible for American Dietetic Association membership, and the fact that the Nurse Examining Boards in a number of States require that registered nurses be trained in dietetics by a dietitian who meets American Dietetic Association membership requirements, encourage



Figure 14. Hospital dietitian (at end of table) instructs dietetic interns in the testing of samples of canned foods.

the employment of such dietitians in hospitals. In addition, many employers prefer American Dietetic Association members because of the standards of training and experience which they have met.

Three types of 1-year internship courses for dietitians following college graduation are approved by the American Dietetic Association: Hospital internship courses, offered at 63 hospitals in 1949, prepare primarily for administrative or therapeutic work as a hospital dietitian; administrative internships, offered at 8 colleges, industrial corporations, or other organizations in 1949, train primarily for administrative dietetic work outside hospitals, such as supervisory work

in a restaurant or a hotel; the food clinic internship, offered at the Boston Dispensary Food Clinic, prepares for specialization in hospital clinic work. (For usual requirements for completing these approved courses see appendix, p. 70.)

For entrance to internships approved by the American Dietetic Association, a bachelor's or advanced degree from an accredited college or university (work for which has included or been followed by the basic academic work in foods and nutrition or in institution management) is the customary requirement. For those planning to become hospital dietitians, undergraduate work should include the specified courses in science required for membership in the American Dietetic Association. (See appendix, p. 68, minimum requirements for student dietitians in the Veterans Administration, for typical science and other educational requirements for entrance to an approved dietetic internship.) The student who plans to continue her training in a hospital should take the foods and nutrition major and should include diet therapy, quantity cookery, and institution management in her courses. In some colleges the institution management program does not offer the full science requirements that qualify for hospital internships but instead prepares students for executive management. These students may take apprenticeships in restaurants, hotels, or industrial organizations instead of internships in a hospital after graduation from a home enonomics college or university. Certain of these apprenticeship programs are approved by the Association. Those trained in the apprenticeship programs lack the therapeutic diet training as well as the supervised practice training considered essential for most hospital work. They are sometimes employed in hospitals and other institutions, however, as administrative dietitians, who have the responsibility for food purchasing, menu planning, food production service, cost accounting, and food cost control for the staff and for patients on general diets. School lunch and college food service, hotels, clubs, and commercial and industrial food service organizations place such dietitians in supervisory positions after they complete their apprenticeships. Many of these trained dietitians are known as food service managers or supervisors rather than dietitians.

As a result of personnel shortages, there were in 1949 a few hospital internships which did not meet American Dietetic Association standards. For instance, one of the seven internships offered in Illinois hospitals in 1945 was not on the approved list, and a number of unapproved internships were known to exist in New York State and other parts of the country. Some hospitals also have hired college graduates directly from home economics courses without internship training. These graduates may qualify for membership in the Ameri-

can Dietetic Association only after 3 years of experience and provided they have met certain standards in their undergraduate training and in the supervision they received during their hospital employment. (See appendix, p. 69.) Only a small fraction of the supervisory people in the commercial and industrial field have had apprenticeship training which would meet with the approval of the American Dietetic Association, but the demand for such highly trained people is becoming greater, according to those who are specialists in this field.

To assist the dietetic intern during the year of internship, stipends or other maintenance provisions usually are made. For the year of training, the Federal Government pays an intern \$1,470, which includes the cost of maintenance. (See appendix, p. 68, for details.) Other training courses offer varying amounts of stipends, sleeping quarters, meals, uniforms, and/or laundry services. Of the 70 or more hospitals or business organizations that are approved by the American Dietetic Association for internship training, almost all make provision for some maintenance, while about one-half provide stipends, which vary from \$112.50 to \$1,627 for the year, in addition to making various maintenance provisions.

Persons who have specialized in the field of dietetics stress the value of this year of internship training in giving an insight into the prob-



Figure 15. The dietitian checks individual patients' meals with the dietetic interns.

lems of administration and into the operations of a functioning institution, as well as an awareness of human relationships seldom gained in any other way.

Besides the administrative internship courses approved by the American Dietetic Association and the institution management courses offered by colleges of home economics (which train for nonhospital administrative work, or food service management as it is usually called), apprenticeship training programs for food service managers and supervisors are sponsored by the National Restaurant Association in certain hotels and restaurants. These programs will be described in another bulletin in this series.

Although for many years it has been the practice in hospitals to provide funds for internship programs, it has not been customary for school systems to finance apprenticeship training for supervisors of school lunch programs. Detroit and Chicago are among the few cities which have trained selected home economics college graduates as school lunch supervisors on an apprenticeship basis. One specialist in this field stated that if the school lunch program is to develop under trained guidance it will be necessary for many more cities to offer graduate apprenticeships, and that State departments of education should also provide for adequate supervisory staffs by offering apprenticeship training for persons with suitable training and experience. A joint committee of the American Home Economics Association, the American Dietetic Association, and the School Food Service Association in 1948 prepared a statement of recommended standards of training and experience for school lunch personnel.

Because of the continuous progress in the field of dietetics and nutrition, refresher courses are emphasized, especially for those whose initial preparation has not been recent. Training programs and refresher courses for school lunch supervisors, home economics teachers, and others responsible for school feeding have been primarily in the form of workshops, over 100 of which were conducted in 1949. (76) A number of colleges offer practice experience in school lunch work, and some teachers' colleges make such courses available to students planning careers as elementary or secondary teachers. The American Hospital Association conducted four institutes in 1948 for administrative dietitians in hospitals, and at least two such institutes were planned for 1949. Dietitians in the Veterans Administration and the Army are given refresher training at intervals to keep them abreast of new developments, and they are encouraged to take graduate training

Over 80 percent of the members of the American Dietetic Association replying in a 1946–47 survey had taken some type of special training following their initial preparation. Most of those holding

Ph. D. degrees were specialists in teaching, research, or nutrition work. The proportion holding master's degrees was greatest among teachers and among consultants. (3) Further study was encouraged by an American Dietetic Association Loan Fund for Graduate Study from which members, who have been active for at least 2 years, might borrow up to \$1,000 for further study. (1)

In 1949 an annual fellowship of \$1,000 for graduate study and research in nutrition or allied fields was made available to the American Dietetic Association by the Nutrition Foundation, Inc., to encourage dietitians who are members of the American Dietetic Association to study the newer aspects of nutrition, such as preparation for the teaching of nutrition to medical or dental students. The fellowship is known as the Mary Swartz Rose Fellowship, to honor a pioneer in nutrition education, who held the first professorship in nutrition in the United States when, in 1921, she became Professor of Nutrition at Teachers College, Columbia University. Her text books were still widely used in nutrition courses in 1949. A fellowship committee within the American Dietetic Association receives nominations and decides on the award each year. (59)

EARNINGS, WORKING CONDITIONS, AND ADVANCEMENT

The average hospital dietitian received an annual salary of \$2,820 in 1949, according to the Bureau of Labor Statistics study of 3,400 members of the American Dietetic Association referred to earlier. Half of them earned between \$2,400 and \$3,200, although salaries below \$1,200 and above \$5,000 were reported. Highest salaries, averaging from \$2,950 to \$3,000, were reported in the Mountain, Southwest, and Pacific States.

Part of the regional differences in salaries can be explained by the differences in the extent to which dietitians lived in hospital quarters. Such arrangements were most frequent in New England and the Southeast, where cash salaries were the lowest. Meals in addition to cash salaries were provided for more than one-half of the hospital dietitians and almost all college food service managers in the study. In most cases, 21 meals per week were furnished. Cash salaries for those living outside of hospital quarters were almost \$600 higher than for those occupying quarters. Those living outside hospitals averaged \$2,970 yearly.

This survey further indicated that salaries tended to increase with the length of service with the dietitian's present employer, as well as with the total years of experience in the profession. The size of the community apparently had little effect on salary levels of hospital dietitians, but salaries tended to be higher in large than in small hospitals. General hospitals, where the great majority of dietitians



Figure 16. A dietetic intern assists an administrative dietitian in menu planning and cost computation.

worked, showed an average of \$2,760 annually, while the highest salaries were reported for dietitians in mental hospitals, which paid an average of \$3,330 per year. Salaries tended to increase with the amount of education in the field; an average of \$1,860 was received by those without college education in the profession, as compared with the \$3,100 average received by those with some graduate work in the field.

In 1949 the beginning salary for a staff dietitian in the Federal civil service was \$3,100. (For requirements for this position, see appendix, p. 67.) Dietitian positions in high grades, involving management and supervisory duties, ranged from \$3,825 to \$7,400.

Commissioned dietitians in the Army, the Public Health service, and the Navy received similar pay and held military titles. For example, the second lieutenant in the Army corresponded to the junior assistant dietitian in the Public Health Service and the ensign in the Navy. The highest Public Helath Service rank, senior dietitian, was on a par with lieutenant colonel of the Army and the commander in the Navy. Student dietitians accepted for Army training were commissioned as second lieutenants and received base pay and allowances of approximately \$3,000.

County and city civil service examination announcements from scattered communities indicated a considerable range in salaries offered in 1949. For staff dietitians, lowest rates appeared to range from \$1,900 to \$2,800. For administrative and executive dietitians in institutions, salaries announced were generally higher, from \$3,000 upward. The remuneration in private agencies, both hospitals and philanthropic institutions, was not generally as high as in governmental agencies. In 1948, it was reported, dietitians in civilian hospitals were paid from \$1,800 plus maintenance to \$5,000.(45)

Median annual salaries for the heads of school cafeteria programs in city school systems in 1948-49, according to the National Education Association, ranged from \$2,650 in cities with a population of from 5,000 to 10,000, to \$5,125 in cities of over 500,000 population. (66) Many school cafeteria positions were held by men administrators, but trained women dietitians were being employed more and more in this field. In the larger city systems college-trained persons who managed individual cafeterias under the city head usually received higher salaries than those without training. In one southern city in 1949, for example, managers of small cafeterias serving 50 to several hundred children started at \$2,100 if they were college trained, and at \$1,800 if they were not. Beginning salaries for trained cafeteria managers there ranged upward to \$2,600 in the large high schools. These salaries were for a school year rather than for a calendar year. some northern cities women who were school lunch directors were paid \$6,000, and in others women assistant directors received that amount. College food service jobs for women began at \$2,800 to \$3,000 with full maintenance and paid as high as \$7,000 with maintenance.

For self-employed dietitians income varied with the amount and type of work. Some received a salary from medical clinics. For independent consultant dietitians' earnings usually were low for the first few years before a clientele had been built up. Then, after the overhead expense of office rent, equipment, and supplies were paid, net incomes might vary from \$3,500 to \$4,000 per year upward, according to one dietitian with experience of this type.

Hours of work were generally shorter than they were before World War II for hospital or institutional dietitians, but because of the continuous responsibility for food service they tend to be long. (See p. 23.) Many dietitians preferred school lunchroom work or other types of dietetics activity where the 40-hour week was assured. Dietitians in some of the less progressive hospitals or institutions complain of too frequent work on Sundays or of arbitrary, sudden shifts in time schedules which make satisfactory utilization of their free time impossible.

The 1949 survey by the Bureau of Labor Statistics also showed that the average hospital dietitian worked 44 hours per week and the average college food service dietitian about 49 hours weekly. Two-thirds of the hospital dietitians reported that their work schedule exceeded 40 hours, as did 9 out of 10 college food service dietitians. For those working in hospitals, the longest schedules were reported in New England, and the longest actual hours worked in New England, the border States, and the Southeast. The shortest hours were found on the Pacific coast with an average of 42 hours.

Split shifts, where the working day was divided by a period of more than 1 hour off work, were reported by one-half of the hospital dietitians and by almost three-fifths of the college food service dietitians. Most dietitians worked split shifts only on some workdays in the week. In New England, where split shifts were most common, over one-third were required to work this schedule during all workdays.

This survey also indicated that practically all dietitians had paid vacations of at least 2 weeks annually. Almost one-half of the hospital dietitians had 4 weeks of vacation, as did three-fifths of the college food service dietitians. Sick leave was widespread although less universal than vacation plans but was limited in most cases to not more than 2 weeks annually. One-third of the hospital dietitians and one-half of the college food service dietitians were covered by retirement pensions. Hospital dietitians enjoyed provisions for hospitalization and medical care more frequently than other groups but participated less in insurance plans than did college food service personnel.

Sources of dissatisfaction most frequently reported in the study were economic, involving provisions for retirement, employment security, salaries, and opportunities for promotion. The condition of work equipment was also a source of complaint among a relatively large number of dietitians. There was somewhat less dissatisfaction with regard to hours of work in those parts of the country where shorter workweeks were common.

There are excellent opportunities for women to advance in dietetics. Leaders must come from the ranks of women in this field, and many are needed to administer expanding programs and to train the increasing number of young women needed to supply the demand. A hospital dietitian often begins as a therapeutic or administrative dietitian in a small hospital where she may be the only trained dietetic person on the staff. Her next step might be to head dietitian in a hospital of 200 or more beds where she probably would have supervision of one assistant who would handle the therapeutic work. Her chief chance for promotion would be in directing an internship training course or in obtaining an administrative job in a large hospital of

450 beds or more where she might have 5 assistants, 2 for the administrative and 3 for the therapeutic work. The average Veterans Administration hospital, for instance, employs one chief dietitian who supervises 4 others. Hospitals in the Northwest are reported to have one dietitian to each 50 to 60° beds. However, most therapeutic dietitians find their work of providing special diets in the treatment of disease very interesting. Many forego administrative work to continue as therapeutic dietitians.

Dietitians serving as commissioned officers in the Army, Navy, and the U. S. Public Health Service benefit from provisions for their automatic advancement in grade and periodic pay increases, on the basis of longevity, of 5 percent of the base pay for each 3 years of commissioned military service. Promotion in the commissioned service is not delayed until vacancies occur but is given provided the work is satisfactory. A woman with the rank of lieutenant colonel headed the Dietetic Section of the Women's Medical Specialist Corps in the Army in 1949. The first woman to be appointed to this position was later awarded the Legion of Merit for organizing the Army Dietetic Section and for generally outstanding professional achievement.

In the Federal Government advancement from one grade to the next higher one is made possible by a combination of seniority, satisfactory service, and available vacancies. That steady advancement is possible in this service was indicated by a survey of government agencies. In 7 nonmilitary governmental agencies in 1949, 351 persons were at the beginning grade for dietitians, which is the 5th grade; 237 were in the next two higher levels; 123 in the next two grades; 117 in the next one; and 29 in the 12th grade.

After a few years of experience a dietitian can look forward to opportunities for many interesting positions. She may choose to specialize in one type of hospital work, such as supervising quantity feeding in a children's hospital or teaching in a food clinic. She may decide to enter the field of the public health nutritionist, of college residence hall feeding, or of home economists in business. Work as a self-supporting independent dietitian also offers opportunity to a person with enough financial resources to tide her over the first few years. The dietitian who marries and gives full time to homemaking will find her education and experience directly useful in her housekeeping duties and in rearing a family. In turn, her experience in her own home, if she keeps abreast of professional developments, will add to her value in the eyes of an employer if she seeks employment in later years. marriage rate among dietitians is reported to be high and accounted in 1948 for many of the changes in address reported by nearly 9 percent of the members of the American Dietetic Association in that year. In



Figure 17. A consultant dietitian, who works with a group of physicians, interprets diet to a patient.

May 1949 more than a third (37 percent) of all members of the Association were married. Eighteen percent were housewives, some of whom held part-time positions. The 1949 Bureau of Labor Statistics study of members of the Association indicated that 4 out of 5 of the inactive members were married and not working outside their homes and gave care for their homes and families as their main reason for leaving their profession. Some stated that it did not pay to work in their profession and to hire someone to care for their families.

Dietitians who marry and want to continue to work full time outside their home can find many opportunities for employment. One-fourth of the members of the American Dietetic Association reporting employment in October 1948 were married. Before World War II the general practice of providing maintenance for hospital dietitians only in quarters provided by the institution in which they worked discouraged the employment of married women in hospitals. Although employers still preferred single persons on hospital jobs offering full maintenance in 1949, in view of the general shortage of workers, most employers were willing to allow other residence arrangements for well-qualified married candidates. Only once in the entire year of 1948 did the marital status or home duties of a candidate for placement through the American Dietetic Association prevent her from taking

a position. In this case, the dietitian was unable to make living arrangements for her child so that she could be free to take a job. Married women are also accepted in most internship training courses, although some training centers prefer single women.

Certain types of dietetic work are more feasible for married women, especially those with children. Work in industrial plants, public health work, food clinic work, teaching, or school lunch programs with a 5-day week and Saturdays, Sundays, and holidays free are more desirable for women with home responsibilities than are most hospital

jobs.

For those who wish to make a lifetime career in the field, there are many opportunities for long service. Many women in dietetics have continued in an administrative capacity in hospital, school, and other types of work as they have reached their fifties and sixties. There are also teaching, writing, and consulting jobs for which considerable experience is desired. Although most employers prefer to hire women between 25 and 35, some schools accept students in their early forties or even beyond, if a personal interview is favorable. In dietetics, emphasis is placed on physical ability to do the job rather than on one's age. Every intern must pass a physical examination.

Since the dietitian is expected to reflect good principles of nutrition in her own living, a healthy physical condition is required. She should be strong and active, because most of the work is strenuous and involves much standing. Regular food service must be maintained by her in spite of emergencies. This very demand upon her emphasizes the importance of the services she renders and is in part responsible for the deep satisfaction most dietitians obtain from their work.

ORGANIZATIONS

The principal professional organization for those trained in dietetics is the American Dietetic Association. It was organized in 1917 with 58 members and had about 8,500 members in 1949, of whom 37 were men. Most of the latter were honorary members employed in biochemical or food research or related fields. About 1,500 of the women members were essentially homemakers who worked outside their homes only part time or irregularly. Affiliated dietetic associations existed in all but 3 States in 1949.

The Association has progressively raised professional standards for the dietitian, and cooperation has been given in this trend by the American College of Surgeons, the American Medical Association, the American Hospital Association, the American Home Economics Association, and the American Public Health Association. The Association has a placement bureau for members in good standing, and it publishes a monthly journal, as well as bulletins and reports. Much



Figure 18. An Army dietitian checks food supplies as they are unloaded at a hospital central storeroom.

emphasis has been placed on a vocational guidance program which is organized under the Association's Professional Education Section. Projects are conducted by four sections of the Association: the Community Nutrition Section on imparting sound nutrition information to the public by teachers and public health nutritionists; the Diet Therapy Section, concerned with the use of food as a therapeutic agent in treating disease; the Food Administration Section, which assembles information for the use of institution dietitians and those in commercial and business organizations; and the Professional Education Section, which sets up standards for training in the dietetic profession and for teaching dietetics to groups in allied professions. (2) Approximately 83 percent of the new members admitted to the Association in recent years were graduates of approved internships who had all the required academic credits. The others were college graduates who were able to offer 3 years of acceptable experience in dietetic work for association membership. (For requirements for active membership in the Association see appendix, p. 69.)

Some hospital dietitians belong to the American Hospital Association, which in addition to its 4,017 member hospitals, had 3,127 individual members in June 1948. About half the individual members were hospital administrators, but department heads in dietetic, personnel, accounting, and other fields were also members.

Dietitians in school lunch work may belong to the School Food Service Association, formed in 1946 by a merger of the Food Service Directors' Conference and the National School Cafeteria Association. In 1948, about 900 members were in this rapidly growing organization, composed mainly of school lunch managers and including a few college food service personnel. Home economics school or college faculty members teaching institution administration, public health nutritionists, and any other persons interested in institution food service are also eligible for membership.

Dietitians in hotels and restaurants may belong to the National Restaurant Association, a majority of the members of which are employed in management or staff jobs connected with the operation of commercial restaurants. (Such work will be discussed in more detail

in a later bulletin in this series.)

Many dietitians are also members of the American Home Economics Association, which has a Foods and Nutrition Division and a Department of Home Economics in Institution Administration. Requirements for membership in this Association include a college degree with a major in home economics or related fields and acceptable subsequent training or experience as a home economist. In 1949 the Association had approximately 19,000 members, of whom many were in the field of foods and nutrition.

SUGGESTIONS TO THOSE ENTERING THE FIELD

The woman who plans to enter this rapidly developing field needs an open mind, social vision, and adaptability. She should have buoyant health, intelligence, emotional stability, analytical and administrative ability, and poise in a professional environment. To be properly prepared, the student should decide very early in her academic career upon the type of dietetic work she desires for a specialty, in order to follow the requisite curriculum and obtain the necessary training. Both the American Dietetic Association and the American Home Economics Association have published helpful literature on this subject. (7) (4)

A young woman interested in this field may test her reactions to the various types of activity offered by observing or by gaining some actual experience in quantity feeding before she makes a final decision regarding her choice of work. For example, visiting hospitals, talking with dietetic interns, and attending clinics are educational and helpful; working in a hospital or restaurant during summer months in any position in a dietary department is often an excellent means of checking one's interest; work at a summer resort or in a local hotel as a pantry maid gives insight into the problems of food service in a hotel or restaurant.



Figure 19. A dietitian instructs diabetic patients in a clinic.

Tomorrow's dietitian needs adequate preparation to meet the demands that will be made upon her. Besides the training described earlier in this bulletin, she will find typing and accounting useful tools. If she teaches in clinics, as most dietitians do, courses in education and psychology would be of great assistance. For the clinic dietitian, abnormal psychology in addition is suggested, and for those who plan to work in children's hospitals, child psychology is helpful. Additional emphasis on science and statistics is important for those who desire to specialize in research. Courses in psychology, industrial relations, and labor union activities, as given in home economics schools, will broaden the understanding of the woman trained in dietetics who plans to supervise food service personnel.

DEMAND PRIOR TO 1949

Like nursing, hospital dietetics is believed to have obtained its first recognition as a result of Florence Nightingale's service in the Crimean War in 1854. By 1890, four hospitals in the United States were operating dietetic classes. (58) But progress was slow. Only a few college-trained dietitians were working in hospitals before World War I, according to a report released in 1913. The average dietitian then had a small diet kitchen, usually in an undesirable location, such

as a hospital basement, and taught dietetics to nurses. Diabetes and a few liver ailments were the only illnesses for which diet therapy was given. (35) Menus following the prescription of the physician were written by the dietitian, and in many hospitals she was also responsible for the preparation of the food for special diets. The purchasing for the special diets was usually done by the chef or steward, who also had the responsibility for the purchasing, planning, preparation, and service of food for patients on general diets and for the staff. (27)

A new emphasis was given dietetics in World War I, when the American Red Cross organized a dietitians' service for military hospitals in the United States and overseas. In 1918, 356 dietitians were in this service, of whom 84 served overseas. (43) Following the war, dietetic programs expanded in civilian hospitals too. By 1938, 2,400 qualified dietitians were employed in hospitals in the United States. (46) During the intervening period clinic dietitians had become an established specialty in some hospitals where they conducted food clinics in the out-patient department, interpreting the diet orders of the physician in terms of family food preferences and income level. For example, a maternity hospital in St. Louis employed a dietitian who devoted full time to a maternal health clinic where mothers were advised regarding the feeding of their infants after discharge from the maternity hospital. (62)

Although there appeared to be no shortage of dietitians during the thirties, there was a steady demand for the increasing number of women who took training for this work. Of 370 dietitians who completed their training in 1936, 90 percent were employed by the following year, a time when unemployment was plaguing most professions and beginners in most fields were having difficulty in finding jobs. (48) In fact, the need for economy during this period in hospitals, where one-fourth of the expenditures were for food and food services, led to wider recognition of the skill of the administrative dietitian in serving nutritious meals at a minimum cost. (55) Dietitians gradually assumed the responsibility for general diets, until it became customary for them to supervise the food service for both patients and staff in a hospital, and in some instances to purchase supplies and equipment and oversee the storeroom. (27)

The trend toward hiring dietitians was also strengthened by the fact that the American College of Surgeons urged that the dietary department in its approved hospitals be operated by a person who qualified for membership in the American Dietetic Association. By 1940 more than 400 hospitals approved by the College employed more than 1,100 dietitians, of whom 83 percent were members of the American Dietetic Association; and each of 6 States had a supervisory dietitian to over-

see food service in mental institutions. (52) (68) (61) (41) By 1941 veterans' hospitals alone employed 260 dietitians, and Federal prison and marine hospitals employed 51 others. (65)

Consulting dietitians were being employed increasingly both by private and public agencies. A child health foundation and a welfare federation, for instance, employed a consulting dietitian to visit summer camps under their auspices. As early as 1937 three States had consultant dietitians to visit State agencies and institutions to insure adequate nutrition for staff and patients. In one State department of welfare a consulting dietitian was assigned to visit children's institutions and boarding homes. (41)

At the start of World War II the demand for dietitians had outstripped the supply, although more than 1,500 young women were trained in hospitals as dietetic interns from 1939 to 1941, and others were prepared for administrative work in courses in institution management in schools of home economics. The American Dietetic Association reported 468 positions for dietitians in 1941 which it was unable to fill, 70 percent of which were in hospitals. The same year an eastern university offering training in institution management received 127 requests for staff dietitians from employers in 25 States. (44)

Although most of the demand was for hospital dietitians for administrative or therapeutic work, new fields of work were reflected in these requests as well as in other reports.

World War II heightened the demand for all types of dietitians, both in military and in civilian services. At the peak of the war a study, based on a questionnaire sent out over the Nation, indicated that the demand for dietitians had increased fivefold since the start of the war. (33) Expansion in the number of school lunch programs, of nursery schools and day-care centers, and of industrial cafeterias for war-service workers was responsible for some of the increase, but the principal demand came from hospitals.

The most spectacular development was the increase in the number of dietitians in the Army. In 1941, just before the declaration of war, there were 110 dietitians on duty, and provision for 350 more had been made for camp hospitals established to serve an expanding defense Army. (10) But during the war the number of hospital dietitians employed by the Army reached 2,000, of whom a maximum of 1,600 were on duty at any one time. In the latter stages of the war Army dietitians, in addition to the usual duties of administrative or therapeutic hospital dietitians, carried responsibility for requisitioning all food supplies, for assisting in the supervision of hospital mess halls, and for food sanitation. Some served overseas and on hospital ships. Those in hospitals in combat zones shared the rough life of the



Figure 20. The dietitian in charge of the food standardization program for a restaurant chain (seated at left) checks quality of food service.

soldiers and wore trousers, leggings, and helmets instead of their usual hospital uniforms.

A number of dietitians served as Waves, Marines, and Spars during the war. A committee of 23 dietitians wrote the Navy Cook Book after 2 years of testing, and Wave dietitians were assigned to duty in this country and abroad. (11)

Other Federal needs, too, were expanding. The U. S. Public Health Service sought dietitians for the marine and other hospitals under its jurisdiction and offered reserve and regular commissions, with grades corresponding to those of the Army and uniforms like those of the Spars, as well as civil service positions in this field. (90) In 1944 the Veterans Administration announced 275 vacancies for dietitians. (4) At the same time these new demands were developing, the number of dietitians in other government hospitals also increased, though more slowly. For instance, women dietitians on the administrative staffs of State and veterans' hospitals for mental disease numbered 219 in 1945, a 5.3 percent increase over the number in 1940. (80)

Civilian hospitals meanwhile continued their administrative, therapeutic, and clinical programs. In 1944, registered hospitals of all types reporting to the American Medical Association listed 6,753 full-time dietitians and 695 part-time dietitians, as compared with 5,548 full-time and 459 part-time dietitians in 1941.(22) (9)

Every effort was made to supply the extraordinary wartime demand. The U. S. Civil Service Commission, the American National Red Cross, and the American Dietetic Association were among the agencies which recruited actively for war needs. By the close of the war almost one-fourth of the membership of the American Dietetic Association, which increased about 10 percent during the war years, had served in the Army. (88) (37) Dietitians who had retired were asked to return to service to replace younger women who were free to take assignments anywhere in the country or overseas. The Army raised its maximum age for entrance for dietitians to 45. (24)

Another attempt to augment the supply involved the use of volunteer dietitian's aides in hospitals. The first group started their training in a government hospital in May 1943, taking a course sponsored jointly by the American National Red Cross and the American Dietetic Association. (49) By the end of 1944, 6,641 aides had been trained, and 157 corps of these dietitian's aides had served in 259 civilian and military hospitals. (57) They performed some of the tasks ordinarily done by student nurses or dietetic interns, especially kitchen tasks connected with the preparation of food, food service to patients and staff, and the keeping of records. (18) Discontinued in 1946, the dietitian's aide corps was viewed with enthusiasm by some, by others as useful in an emergency but impractical in peacetime, and by still others as ineffective except in those instances where supervision was unusually expert.

Training facilities for dietitians were also expanded. Eight new hospital internship courses were started, including one in an Army hospital and one in a Veterans Administration hospital. (37) As early as 1942 the 12-month course for student dietitians in the Army was shortened and concentrated so that the output of accredited dietitians from this source was doubled. (67) A few other hospitals attempted 9-month accelerated programs with the approval of the American Dietetic Association, but found them generally unsatisfactory. In 1945, 950 dietitians were graduated from 74 approved courses, of whom probably one-third were planning to enter military service. (88) (37) Refresher courses of 6 weeks' duration were set up in several hospitals in an effort to prepare dietitians who had retired from professional work for further service. However, the number of jobs continued to outnumber the available applicants, and shortages continued into the postwar period.

Public Health Nutritionist Defined

According to the American Public Health Association, a nutritionist in a public health agency is "a qualified professionally trained person who directs or carries on a program of activities dealing with the application of the scientific knowledge of nutrition to the promotion of positive health, the prevention of ill health, and the dietary control of disease. The nutrition program of a health agency is directed toward strengthening the service that the agency is rendering in determining the health status of the population served, in dealing with the causes of ill health, in caring for the sick entrusted to its care, and in promoting well-being among the groups and individuals through better food practices." (28)

An unpublished statement released in 1948 by the director of the nutrition unit, Children's Bureau, states further that "although many nutritionists have the training and experience which makes them 'proficient in the art of feeding individuals or groups,' it is their training in the sciences of nutrition, education, public health, and social welfare that is considered essential for the performance of their duties. By far the majority of nutritionists work in the field of public health, although some are employed by social welfare and educational agencies. Their work is primarily that of technical consultation and of in-service education for those health, welfare, and education workers coming into direct contact with the public whose nutrition needs to be improved or maintained in a satisfactory state."



Figure 21. A public health nutritionist interviews a child patient in a nutrition clinic in a search for general dietary deficiencies.

THE OUTLOOK IN 1949

Well-trained nutritionists, especially those with graduate training in certain phases of human nutrition, were in demand in 1949. Prospects were for a steady growth of opportunities in this small but important field. The shortage of highly qualified persons to fill vacancies in Federal and State Government positions was serious enough to delay the inauguration or expansion of nutrition programs where funds for financing them were available. Local governments, and more recently international bodies, have also established programs in this field.

In view of the great advance in the science of nutrition and the realization on the part of public health officials that the proper nutrition of individuals plays an important part in well-being, the demand for trained workers to carry on nutrition programs in the field of public health has been constantly increasing. The recognition of research in nutritional status and food consumption as a function of public health agencies, and recognition also of the importance of nutrition in school lunch work, industrial hygiene, social welfare, and agricultural extension work, have been relatively recent. Further development will open new opportunities for nutritionists in these fields.

Specialists in public health have estimated that one public health nutritionist for every 75,000 to 100,000 persons would insure a minimum of necessary nutrition service and education in the United States. Another estimate by a leader in the field of public health administration mentions one public health nutritionist for 100,000 to 200,000 inhabitants as necessary for general well-being. (70) The range between the lowest and the highest figure signifies estimated needs for from 750 to 2,000 nutritionists. These figures, however, apply only to nutritionists in community work, and do not include those needed in teaching and research.

The problem is one of financing these needs. A few States have shown what can be done. In one State, for example, nutrition planning was well developed in 1946–47, with 47 nutritionists employed in State work and 14 more working in the largest city in the State. (54) (36) Eight of the latter worked for the Visiting Nurses Association and the other six for other Community Chest agencies and for the Red

Cross. One organized Red Cross nutrition classes for Scouts and business girls; another advised infant and preschool clinics, gave radio talks, wrote a newspaper column, and taught nurses and teachers. Similar nutrition programs may ultimately be developed in all States and localities in proportion to their needs.

Despite our knowledge, people are still suffering from the effects of nutritional deficiency. To reduce this toll by spreading and applying that knowledge in organized programs of health services and education is the challenge to meet which an increasing number of nutritionists will be needed in the future.

DEMAND

State and Local Public Health Nutritionists

Typical of the variety of duties of a State nutritionist were those of four nutritionists employed by Tennessee. They assisted in training nurses and student nurses in hospitals and accompanied nurses on home visits. They advised patients in prenatal clinics, planned school nutrition projects, prepared food budgets for use in public welfare programs, and assisted with nutrition meetings for dentists, nurses, health officers, school lunchroom workers and managers, camp leaders, industrial workers, and families. (69) In some States the



Figure 22. As part of a nutrition education research project, sixth grade children are taught vitamin values of foods.

work for nutritionists was less varied. In each of two Midwestern States, for instance, a nutritionist served only on the State lunch program staff; and, in a western State, one staff nutritionist and eight field nutritionists administered the school lunch program. (79)

The largest number of public health nutritionists in 1949 were employed in State health agencies, where 173 were at work, according to the U. S. Public Health Service. The work of these public health nutritionists, as well as their number, varied in the several States. Many State health agencies are responsible for the institutional care of people in State sanatoria and hospitals and wards for crippled children. In these institutions, the dietary departments need constant attention, both because the diet is important in treatment and because the cost of food is one of the major items of expense. In such States, the nutritionists may be sent out to consult with the personnel in charge of food service, and find their work similar to that of the consulting dietitian. The Department of Public Health in Illinois in 1946, for example, employed a nutritionist who gave consulting service to hospitals providing maternity care: suggesting improved kitchen lay-outs and more efficient tray operation; checking methods, schedules, sanitation and food preparation for nutrition; offering guidance in food purchasing, cost control, employee problems; and observing the teaching of student nurses. A guide for menu planning was prepared by the nutritionist for hospital use in this State. (73) In the Division of Maternal and Child Health in the same State, on the other hand, nutritionists were concentrating on improving public understanding of the use of foods through community conferences in regions comprised of groups of local health units. (40)

Some counties and many of the larger cities employed nutritionists in public health work. Chicago, New York City, and Detroit were among those with nutrition departments in their departments of health.(20) San Diego and Los Angeles were among other cities which hired nutritionists. Los Angeles had a special program for the prevention of dietary deficiency diseases. In Washington, D. C., one nutritionist was employed in the Health Department in the Bureau of Maternal-Child Welfare, and another budgeted position for a nutritionist was vacant in 1949 for lack of qualified personnel. Some community chests and welfare federations, like the one in Cleveland, had a nutritionist serving as a dietary consultant to their affiliated agencies. (87) Cleveland also had three other nutritionists on the staff of the Nutrition Association of Greater Cleveland, a member agency of its Health Council. The local chapter of the American National Red Cross for several years contributed substantially to this program by paying the salary of at least one nutritionist.

Nutritionists in the Federal Government

Nutritionists in the Federal Government, although comparatively few in number, exert great influence in improving country-wide nutrition. The Federal Security Act, passed in 1935, stimulated the demand for nutritionists in the Federal Government in connection with local and State programs for health services to mothers and children. (See appendix, p. 69, for civil service requirements for a public health nutritionist.)

The Division of Chronic Disease of the Public Health Service in the Federal Security Agency employed nine nutritionists in 1949. Five of the nutritionists were assigned to the Nutrition Branch, two to the Diabetes Branch, and two to the Heart Branch. All except one had master's degrees, and the chief nutritionist had a Ph.D. degree.

A major activity of the Nutrition Branch was to assist State and local departments by demonstrating methods of determining the extent of malnutrition in a community and its correction through an educational program. The field work was carried on by demonstration teams composed of a physician, nutritionist, nurse, biochemist, and health educator. The teams worked on the nutritional problems of families and school children, the aging population, racial groups, institutions, and industrial groups.

A small staff of nutritionists formed the Nutrition Unit of the Children's Bureau in the Federal Security Agency. The five nutritionists employed in this unit in 1949 all had master's degrees and at least 3 years of actual experience in their field when they were hired. Three of them were engaged exclusively in field work. These nutritionists gave advisory and technical assistance to regional medical officers of the Bureau, to State departments of public health and crippled children's agencies, to colleges and universities maintaining or planning professional training in public health nutrition, and to regional child welfare consultants on foster and boarding homes and child-care institutions. Conferences, meetings, reports, and publications on nutrition were utilized in their work. International activities of this program included consultation with the Food and Agriculture Organization and the World Health Organization of the United Nations, the exchange of information with nutritionists in other countries, and the assistance and training of foreign visitors for leadership in nutrition programs for mothers and children in their own lands.

The Agricultural Extension Service of the Department of Agriculture in cooperation with the extension service of the land grant colleges of the States employed a large number of women specialists in foods and nutrition in its extension program in rural areas throughout the United States. The number has remained fairly constant, at

around 100, since 1939. In 1949, 97 women extension nutritionists on this staff were improving the nutrition of people in the rural areas. Some positions remained unfilled because qualified people were not available. (This work will be treated at greater length in a later bulletin on home demonstration work.)

At headquarters in Washington, D. C., the Department of Agriculture in 1949 had a staff of 44 women engaged in nutrition research in its Bureau of Human Nutrition and Home Economics. They were not called nutritionists but were known as research workers in nutrition. Some were nutrition chemists, for example. However, one-fourth of the staff had earned master's degrees in nutrition or in foods and nutrition. Their work will be discussed in more detail in a later bulletin in this series which will include information on all research workers in home economics.

Red Cross Nutritionists

A large group of nutritionists with quasi-governmental status were those in the service of the American National Red Cross. Nutritionists employed by the Red Cross in 1948 numbered 124, of whom 38 were in the national headquarters or area offices. Those on the national staff planned and supervised a nutrition program carried on by ap-



Figure 23. The Red Cross nutritionist instructs a class of young mothers.

proximately 1,100 chapters throughout the United States, 86 of which employed nutrition directors. The nutrition activities of the remaining 1,000 or more chapters with nutrition programs were guided by the professional and lay volunteers of the community in which they were situated. Chapters often organized refresher courses for professionally trained women with previous nutrition training which met specific standards established by the Red Cross. They in turn conducted classes in food and nutrition in their communities. (56) These volunteers numbered many hundreds in any one year. In 1941, from 1,500 to 2,000 gave time to the Red Cross. (65) Although no report on later years is available, it would seem that the number increased, in view of the growth in the number of Red Cross staff nutritionists.

The Rochester, N. Y., Chapter of the Red Cross carried on activities typical of the programs of the large city chapters. The Red Cross Nutrition Committee was made up of professionally trained women from many organizations and agencies, as well as of interested lay persons. Classes in nutrition were conducted for both adults and children. One of the most popular courses was the one entitled, "Basic Cookery for Young Homemakers."

The Board of Governors of the American National Red Cross on June 30, 1949, found it necessary to curtail both budget and staff of Nutrition Service as part of a general reduction in the activities of the agency. Many protests have been voiced by local communities which desired continuation of this nutrition education program.

Nutritionists in International Work

Another employer of nutritionists in 1949 was the United Nations and its affiliated organizations. The Food and Agriculture Organization of the United Nations employed a staff of 15 persons on technical nutritional improvement and the chemical composition of foods. Most of the staff were medical personnel, but 3 were women nutritionists. Occasionally other women nutritionists were hired to go on a mission abroad or to perform some other particular assignment, but these were unlikely to be citizens of the United States. The need for many more such specialists was reported by one of the nutritionists in that program, but lack of funds was expected to hamper expansion in the immediate future. The World Health Organization in 1949 also announced a program for setting up a staff of nutritionists, for which money had been allocated. The International Children's Emergency Fund, with a technical staff in Paris, planned to include among its employees nutritionists and specialists in group feeding. (29) The Institute of Inter-American Affairs had five women nutritionists from the United States employed in five different countries in Central and South America in 1949, to improve rural home life by means of demonstrations and the training of local women.

Other demands for nutritionists develop from time to time for emergency feeding programs in devastated areas abroad, such as the programs conducted under the United Nations Relief and Rehabilitation Administration during and following World War II. During the war period and for some years after the end of the war, UNRRA sent many nutritionists, trained in the United States, to war-torn countries. The great majority of them were women. These nutritionists, using the limited food at hand, worked out quantity recipes for the camps for refugees or prisoners of war where they were stationed; some found their work similar to that of the administrative dietitian. 1945, a request was received by the American Dietetic Association from UNRRA for more of these workers. The need was so great that the organization was willing to use anyone with experience in quantity feeding. Highly skilled stewards were used as far as possible. (23) It is estimated that at the peak of this program as many as 1,000 persons from the United States were at work in the program in other countries, although few of them were trained dietitians or nutritionists. A few governments have since requested nutritionists from the United States for consultation work. A good knowledge of the French language is considered important for anyone interested in service in the international field. Opportunities in international work seemed in 1949 to be limited in the immediate future, but appeared likely to grow in the long run.

Nutrition Instructors

Instructors in colleges and universities in 1949 comprised another large group of nutritionists. The National Roster of Scientific and Specialized Personnel reported 314 women and 32 men nutritionists on the faculties of schools of higher learning as of June 1943, the last date for which such a report is available. Some of these may have come from the fields of physiology or chemistry. Many were undoubtedly among the teaching members of the American Dietetic Association, who in 1949 numbered 611. Subjects taught were not reported by these members, but undoubtedly most of them were teaching dietetics, nutrition, or other food courses. Among the members who were hospital dietitians, 102 gave individual or group nutrition instruction in 1949 as part of their clinical duties. Nutrition instruction in secondary schools was usually given by general home economics teachers rather than by specialists in nutrition or dietetics. Institutes and conferences for school lunch personnel were often conducted by nutritionists. (38) (74) (84)

The teaching of medical or dental students by nutritionists has continued to develop. At Vanderbilt University, for example, in 1948 each group of fourth-year medical students was given 3 to 4 hours of

nutrition instruction each quarter. The Universities of Iowa and Illinois also allotted an exceptional amount of time to this subject. (42) Nutritionists were known to be teaching medical and dental students the principles of nutrition in 16 hospitals, universities, or medical centers in 1949, according to one authority in the field. These institutions represented only a few of the 70 medical schools in the country, although the importance of nutrition in the recovery of patients was being more and more emphasized. The teaching time devoted to nutrition in dental schools was also still fragmentary, according to two recent surveys. However, 30 of the 40 dental schools in the United States were reported to have courses in nutrition, and more time for this subject was recommended. (26)

Nutrition education is an important part of the work of the home economics program in the public schools. In these classes more than a million secondary school pupils are reached annually. In addition, approximately 1,000 home economics teachers are employed by the schools to teach foods and nutrition to adults. The cafeteria directors in some school systems also give consultation service to pupils and their parents who have special nutrition problems. (Home economics teaching will be discussed in a later bulletin in this series.)

Nutritionists in Industry

Where a trained dietitian supervised the food service for the workers, she sometimes worked with the medical department in encouraging better nutrition among employees, but ordinarily her work was purely administrative. Nutrition problems of employees, if attended to at all, were handled for the most part by industrial nurses and doctors. Few nutritionists were retained in industry following the end of World War II when the Federal program was discontinued, although some large manufacturing firms employed nutritionists in 1949 to carry on nutrition programs for the welfare of the employees.

The only labor union in the United States known to employ a nutritionist in 1949 was an older one which has spared no effort to improve the general condition of its members. Although the services of a nutritionist could well be used in other labor organizations, one authority stated that a tremendous educational job must be done before the need for such service is recognized by the rank and file of the membership.

Women with specialized training in foods and nutrition in undergraduate or graduate courses were also working in 1949 in experimental cookery or in demonstration work or other educational work connected with the sale of products of food manufacturers and distributors and the programs of trade associations and life insurance companies. Although this work was often closely related to that of the nutritionist,



Figure 24. A nutritionist (right) and an artist plan a nutrition education exhibit.

these women were usually grouped with other home economists in business, about one-half of whom were specialists in the food field. (51) Their work will be described in more detail in a later bulletin in this series.

Estimated Number in 1949

In 1949 there were probably some 1,000 public health nutritionists in the United States, more than twice the estimated 400 in the country in 1946. (28) The largest number, excluding full-time teachers, were in State health agencies, which, as noted before, employed 173 in 1949. The American National Red Cross, in addition to its thousands of part-time volunteers, all of whom had training or experience in foods and nutrition, accounted for the next largest group—124 reported in 1948—of whom 86 were in local Red Cross chapters. State Extension Services reported 97 positions, and an additional 14 were in the Public Health Service and Children's Bureau. (5) To these 408 employed in State and Federal agencies and the Red Cross may be added more than 300 women instructors in nutrition on college faculties. In 1943, the last year for which such a report is available, 314 women instructors in nutrition were reported by the National Roster of Scientific and Specialized Personnel. Some of these were undoubtedly included

among the 611 members of the American Dietetic Association who were teaching in 1949.

This total of over 700 nutritionists in Federal and State agencies, the Red Cross, and on college faculties, does not, of course, include those employed by city and county health departments, visiting nurse associations, and other local health and welfare agencies on which data were not available. It also does not include the many home economists who teach dietetics and foods and nutrition as a part of a general course in home economics in college and high school, nor the volunteer Red Cross instructors.

SUPPLY

The supply of nutritionists was below the number of positions available, especially in the higher grades of nutrition work. The U. S. Department of Agriculture, where vacancies in ten or more positions with particular specifications existed in 1949, reported that a shortage of nutritionists had continued for a decade and that there was little prospect of immediate improvement. Most of the Federal agencies had vacancies, and about one-fourth of the positions for public health nutritionists in State health agencies in 1948 remained unfilled in 1949.

Since legislative provision for licensing is lacking and the sources of supply of nutritionists are various, there is little information on the number of persons who become available each year for this work. Authoritative data on how many additional women are needed each year to maintain an adequate supply are also wanting. There are merely a few clues. Although some in the field of nutrition have been specialists in biochemistry, physiology, or other sciences, the majority of nutritionists have obtained their start in undergraduate courses in home economics with specialization in foods and nutrition. Many women begin to work in the nutritionist field immediately following graduation from a home economics school. Only 7,000 bachelor's degrees in all phases of home economics were awarded by 388 colleges in 1948. This number of degrees is reported to be far less than the number of individuals needed to fill positions for home economists in all fields. (83) (See p. 16 under Dietitians.)

For nutrition work involving graduate training, the oncoming supply of persons with such preparation is definitely small. In 1947–48 the number of master's theses completed in foods and nutrition numbered 145; the number of doctor's theses, 18.(78) As in the case of the undergraduates, these numbers represent the supply of individuals, not for nutrition alone, but for almost all types of professional foods and nutrition work. Similarly, women completing dietetic internships engage largely in administrative or therapeutic work. How-

ever, one-third of a group of 128 nutritionists employed in 1948 had completed such internships, and others of the group had gone into nutrition work, but only after experience as hospital dietitians. (75)

The seven universities which offered master's degrees in public health nutrition awarded that degree to less than 100 persons in a 4-year period. (6) A few other colleges and universities were taking steps toward offering a formal graduate curriculum in this subject, but the shortage of nutrition instructors was a handicap. The Placement Bureau of the American Dietetic Association reported many calls for nutrition instructors and teachers in the early part of 1949, but the supply of those seeking placement was inadequate to meet the demand.

A minimum of 60–70 nutritionists is needed annually, merely to replace those who leave the field (for the most part because of marriage or family responsibilities). This, however, assumes a withdrawal rate no higher than the low 6.6 percent rate which existed for nurses from 1930–40. The nutritionist who completes post-graduate work will find herself in a very favorable position with regard to good positions for some years in the future, if present trends are indicative.

TRAINING

To become a nutritionist, a student should obtain in a college of home economics or a school of public health: (a) good training in the sciences on which nutrition is dependent, (b) practical application of nutrition in work with the public, (c) training in education methods as applied to nutrition, and (d) an appreciation of the principles involved in any investigation. The order in which these are obtained varies with different nutritionists. Following undergraduate work in a college or university of home economics, a nutritionist may take graduate work either in a school of public health or of home economics. Graduate work is desirable, and many women in this field continue their training in graduate schools.

In 1947–48, seven schools offered master's degrees in public health nutrition: Columbia University (New York City); Harvard School of Public Health (Boston, Mass.); Michigan School of Public Health (Ann Arbor, Mich.); Simmons College (Boston, Mass.); the University of Tennessee (Knoxville, Tenn.); Western Reserve University (Cleveland, Ohio); and Yale School of Public Health (New Haven, Conn.).(6) The degree of Doctor of Philosophy in nutrition was offered at the Universities of California, Chicago, Minnesota, and Wisconsin; Columbia, Cornell, Harvard, and Yale Universities; and Iowa and Kansas State Colleges. Other colleges and universities were adding more graduate work in this field, especially in their schools of home economics, which usually offer some nutrition courses together

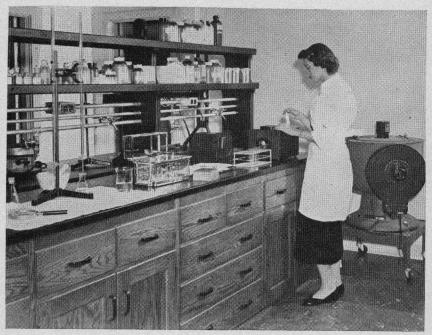


Figure 25. A graduate student in foods and nutrition engages in vitamin assay of experimental diets for human subjects.

with foods specialization. Although few offered a formal graduate curriculum in nutrition, a number were arranging special schedules for occasional gradute students.

Fellowships and Scholarships

Efforts to increase the supply in the field of nutrition were directed towards increasing facilities and opportunities through fellowships and scholarships. A limited number of these are available to the student in public health schools, in teaching, or in research assistant-ships. For instance, one university in 1948 offered several 12-month, \$1,200 graduate fellowships with free tuition leading toward the degree of Master of Science in Community Nutrition. Candidates were trained for positions as nutritionists with health and welfare agencies. Requirements included a degree in home economics with a major in foods and nutrition and 2 years of experience in teaching, extension work, or hospital or other food service. (34)

The American Home Economics Association and the American Association of University Women also offered fellowships which were open but not limited to women trained in dietetics and nutrition. To meet the needs in the State public health field, six State health departments provided leave and stipends for graduate study for 11 nutritionists in 1947.(85)

EARNINGS, WORKING CONDITIONS, AND ADVANCEMENT

The young home economics graduate with basic preparation in foods and nutrition, entering the field of public health nutrition and working under close supervision, may expect a beginning salary of about \$2,100 to \$2,400 and may progress to \$2,700. After a satisfactory period of service, she may receive additional compensation through a stipend for graduate training. A worker with some graduate training and 2 or 3 years of experience in the public health field usually starts at a salary of from \$3,000 to \$3,600 and may advance to \$4,000 or slightly more. The median salary for a professional public health nutritionist in a State health department was \$3,200 to \$3,400 in 1949. The seasoned worker responsible for a staff of workers in a large agency often reaches a salary level of \$5,000 or over and may earn \$6,000. For example, in a far western State in 1949 the salary scale for the director of the service was \$4,200-\$5,100; in a northeastern State, from \$4,620-\$5,720; and in a southern State, \$4,800-\$6,000. District workers in these same States, responsible for service in a large section of the State, received \$3,540-\$4,296, \$3,720-\$4,620, and \$3,384-\$4,320, respectively.

Salaries for nutritionists in large city official health agencies tend to be similar to those found in State health agencies, the remuneration



Figure 26. A public health nutritionist of a child welfare society instructs a mother on the preparation of nourishing meals.

depending upon the training and experience of the worker and the responsibilities that she is expected to undertake. For instance, in New York City, the Department of Health made appointments for staff nutritionists in 1949 at \$3,300 a year. These staff nutritionists numbered 26, and their qualifications included a master's degree and 2 years of experience. In private agencies in the city staff nutritionists received from \$2,400 to \$4,680, and directors of nutrition services from \$3,200 to \$6,450, depending upon the agency. Salaries were generally lower in other cities.

The hours of work for nutritionists usually followed those of office workers in the employing agencies and averaged 40 hours per week. Split shifts, where more than a period of 1 hour divided the working day, were unusual for nutritionists, according to the Bureau of Labor Statistics study previously mentioned. The survey further showed that all nutritionists included in the study had paid vacations of at least 2 weeks, and that two-fifths of them had 4 weeks of paid vacation. Two-thirds of the nutritionists were found to be covered by retirement pensions, and many of them participated in life insurance plans.

Advancement in the field of nutrition is related to experience gained and postgraduate study. Many positions call for a master's or a doctor's degree. Experience may be accepted as a substitute for a graduate degree in some types of nutrition work. For young women taking up work in this field, however, postgraduate work, either immediately following the completion of the undergraduate course or after some employment experience has been obtained, should be given serious consideration. Some experienced nutritionists believe postgraduate work is more valuable if taken after a few years of actual experience in nutrition work or a related field. The American Dietetic Association, to whose members employers often give preference, admits nutritionists to membership only after 3 years of acceptable experience in the public health field or in clinic programs in foods and nutrition.

As in all fields, women found at the top are few in relation to the many in the lower ranks. Of 44 research employees on the staff of the Bureau of Human Nutrition and Home Economics in the Department of Agriculture, for example, almost half were at the fifth and sixth levels in 1949, where the salary ranged from \$3,825 to \$4,950 per year. However, several nutrition specialists on the staff had reached higher positions, including that of division head.

ORGANIZATIONS

The American Public Health Association in 1949 included a Food and Nutrition Section which had 616 members, of whom 262, or 42 percent, were women. More than half of these women were public

health nutritionists, 14 percent were professors in colleges and universities, and the remaining number were engaged in agricultural extension work, school lunch programs, research, or hospital work, or were employed by food associations, councils, and food companies. Membership in the American Public Health Association in 1949 was open to those professionally in or interested in public health work, but only Fellows of the Association might vote and chair committees. A Fellow, in addition to having been a member for 2 years, had to show evidence of having made a contribution to public health, and had to be approved by a committee on eligibility following recommendation by two Fellows of the Association.

Some nutritionists were members of the American Dietetic Association, where they formed usually from 2 to 3 percent of the total membership. The membership requirements of this Association provide that 3 years of acceptable experience may be offered as substitute for completion of an American Dietetic Association internship, provided that the applicant has had some supervised field work in addition to academic training. In 1949, 359 public health nutritionists were members of the American Dietetic Association.

Some nutritionists also belong to the American Home Economics Association, which has a Social Welfare and Public Health Department.

The only national organization of professional persons which included "nutrition" in its title was the American Institute of Nutrition, which was part of the Federation of the American Societies for Experimental Biology. About 315 persons belonged to this organization in 1949, including 71 women. Membership in the Institute was limited by its by-laws as follows:

Qualified investigators who have independently conducted and published meritorious original investigations in some phases of the chemistry or physiology of nutrition and who have shown a professional interest in nutrition for at least five years shall be eligible for membership in the Society.

Usually members have had from 5 to 7 years of progressive experience in research in their chosen field when they join the organization. A few are physicians and physiologists, and many are biochemists.

SUGGESTIONS TO THOSE ENTERING THE FIELD

Potential nutritionists are advised by successful women in this field to determine as early as possible the kind of work they desire to do in order to train for that work specifically. College students, by seeking guidance, can avoid the waste of improper preparation, as when, for example, women trained for public-health work but not for research, desire research positions, or vice versa.



Figure 27. A nutritional advisor (seated at left with dietetic intern) with physician, public health nurse, and mother.

One experienced nutritionist suggested that a student beginning her training in the field of nutrition should have interviews with various specialists, for example, with a nutritionist who supervises nutrition work in State institutions, with one in a State health department who works on health surveys, and with an industrial nutritionist. An interview could be arranged with a nutritionist by a request addressed to the appropriate State agency which employs nutritionists, since most of them circulate about the State and are glad to talk with prospective students and explain the possibilities of the work. In large communities locally employed nutritionists may be located through health and welfare agencies. To find the most desirable curriculum, inquiry regarding the formal training available may be made of the deans of schools which train nutritionists. The curriculum should vary in accordance with the student's chosen specialization, whether research, industrial feeding, community nutrition, or institution consultation.

For public health nutritionists, broad background and training are useful, since they are called upon to do many types of things. Try-out experiences in the form of special projects are often included in undergraduate programs in colleges offering a major in nutrition. For instance, in a midwestern college, students become acquainted with

community agencies interested in nutrition and then are assigned to such projects as: work with the city milk council on exhibits and educational material or with the food editor of a local newspaper; the observation of the dietary habits of women attending the pre-natal clinic at the university hospital or those of children being served in the university nursery school or in school lunch programs; teaching of nutrition to mothers of young children at neighborhood houses or to summer playground groups; working out food budgets in cooperation with such agencies as the State division of aid to the aged. One authority suggests 4 years of undergraduate college work in home economics with a major in nutrition, followed by several years of experience, before going on to do graduate work for a master's degree in nutrition. A number of State health agencies not only allow leave for graduate study but provide their nutritionists with a stipend for it.

A course in journalism is of value because the nutritionist is likely to be called upon to help meet the need for valid written information on nutrition. A recent survey conducted by the Bureau of Agricultural Economics of the Department of Agriculture in cooperation with the Virginia Nutrition Committee indicated that nearly 90 percent of 400 representative homemakers relied on newspapers and magazines for information about food and nutrition. (89) Only one-half of these women were providing adequate daily meals in terms of foods considered basic for good nutrition. Only 4 percent had adequate information on nutrition, although food and its proper use is of universal interest to the family.

The work of the nutritionist offers a challenge to the woman who is interested in improving the health of her community. Few professions offer as much opportunity to improve living standards as that of the public health nutritionist.

DEMAND PRIOR TO 1949

Nutrition service was begun in the Massachusetts and the New York State Departments of Health in the period from 1915 to 1920. Simmons College, Boston, in 1918 was the first to offer supervised practice training for nutrition workers. Students spent one-half day a week in the field, either visiting referred families or working in the Food Clinic of the Boston Dispensary.

The Dietitians' Service organized by the American National Red Cross in 1917 also made its contribution toward creating the new profession of nutritionist. (11) Mary Swartz Rose, writing in the Teachers College Record for February 1932 stated, "It [the Red Cross] has done outstanding pioneer work in developing the nutritionist, a new type of educator. We hope that nutrition will be a Red Cross responsible."

sibility until every community has its nutrition service as a part of community education."

The work of the home demonstration agents of the Extension Service of the United States Department of Agriculture, of bringing nutrition and other information to rural homes since the time of World War I, will be discussed in a later bulletin in this series.

By 1929 about 273 nutritionists were reported to be engaged in work for public and private agencies, including counties, cities, and social agencies. Some of these agencies were encouraged by the Red Cross to initiate programs. For example, a nutrition program started in the New York City Department of Health in 1932 was financed for a 5-year demonstration period by the New York Chapter of the Red Cross, which also loaned the department a nutritionist to participate in a staff training program for public health nurses and physicians. The demonstration resulted in a permanent nutrition program in the department, which in 1949 had a Bureau of Nutrition with plans for a staff of 30 nutritionists.

As early as 1938 the health council in a large midwestern city employed a public health nutritionist. Her duties were to conduct classes for visiting nurses and refresher courses for homemakers who had formerly had some training in nutrition, estimate the cost of diets for tuberculous families and the needs for special diets, assist in maintaining health in summer camps, lecture to low-income groups on food, teach pregnant women at prenatal clinics, and teach children in nursery schools. (71) In turn, some of the women who had taken refresher courses became volunteers in teaching classes of mothers. (72)

The Social Security Act, for which funds were made available in 1936, gave new impetus to the employment of nutritionists in State health agencies, in some of which nutrition programs had already been in operation. (41) In the next few years a wide range of activity was reported. In both Michigan and Massachusetts, nutritionists were instructing and advising teachers in rural areas. (64) (16) Staff nutritionists of the Departments of Public Health in Kansas and Illinois gave consultation to cafeteria managers in urban elementary schools, and to rural teachers to encourage the eating of more nutritious meals and to sponsor classes for parents on meal planning and school lunches. In North Carolina the State Board of Health set up a School Health Coordinating Service to improve school children's health, impaired by the poor diets resulting from living at the bare subsistence level. The nutritionist of the service worked with teachers and rural children and made an attempt to have better lunches brought to school and to have each family keep chickens and a cow. of the parents did not attend parent-teacher meetings, an attempt was made to reach the parents by way of the children. (13) The Massachusetts Department of Public Health also employed a nutritionist to service the State lunch program. Refresher conferences for 90 trained and untrained food service managers were held. (50) Nutritionists were sent to small towns to organize school lunch programs where none existed. Summer conferences were held and talks were given at women's club meetings. (53)

By 1940 twenty-five State health departments employed nutritionists, and the American Red Cross employed 15, including 11 in local chapters. (63) County and city nutrition committees of New York State employed nutritionists to teach classes of housewives the principles of nutrition. Literature was distributed where classes were impractical. A homemaking center was set up in one county where the planning and serving of adequate low-cost meals was taught. (47)

The total number of nutritionists had risen by 1940 to 400: 72 were in State extension service; 60 in State, county, and city health departments; 100 in private agencies; and the remainder in public welfare, food clinics, and other organizations.

Meanwhile, nutritionists were turning to related fields. They taught nutrition principles to medical, dental, and public health students. In Philadelphia nutritionists, together with public health nurses, used various teaching devices to improve the food habits of patients, and a 3-year dietary study was undertaken by nutritionists in collaboration with chiefs of dental clinics and dental students to determine the dietary habits of pregnant women, children, and adults with teeth and gum diseases.

World War II made the people of the United States increasingly nutrition conscious. The food rationing program, the shortage of civilian physicians, the intense industrial effort to produce munitions of war, and the extended hours of work for most civilians were factors which resulted in a Nation-wide nutrition program. Such slogans as "Food Will Win the War" became popular.

A Nutrition Division was set up in the Office of Defense Health and Welfare Services, which became a part of the Federal Security Administration. The Division operated through local nutrition committees, which numbered 73,000. Leadership was furnished by 78,000 professionally trained volunteers who had taken refresher courses and who conducted nutrition classes in their own communities. (31) In a large western city 10,000 women were reached through 118 classes conducted by volunteers trained by three full-time nutritionists. The volunteers were former students or teachers of home economics who met certain qualifications in nutrition training. (21) (The work of this wartime Nutrition Division was transferred to the Department of Agriculture in 1943.)

Cooperating in the special wartime program were nutrition programs which had been under way before the war. In the South, home

economists who had specialized in nutrition met with farm groups, both men and women, to improve nutrition by discussing food production, land and livestock needed, food preservation, canning, and refrigeration. Under a 5-year program which had been launched in a New England State, nutritionists volunteered their services to promote a coordinated health plan by leading discussion groups. (14)

The American Red Cross also expanded its nutrition program during the war, and in 1943–44 its nutrition staff totaled 96, of whom 72

were employed at the local chapter level. (12)

Efforts were made to spread nutrition information especially to the families and communities of war workers. For example, a plant in a small town in Ohio organized classes for housewives with two nutritionists in charge. (30)

The Industrial Feeding Programs Division of the Production and Marketing Administration of the U.S. Department of Agriculture was set up with a small staff in 1942 to stimulate the application of the principles of nutrition in the feeding of industrial workers. Many workers came to war plants in the morning without breakfast; some were unable to provide themselves with packed lunches because of dislocations in living conditions; and in many cases wives were also war workers and were unable to provide the proper nourishment in the meals prepared at home. These conditions made the provision of wellbalanced meals at industrial plants imperative. Companies and government agencies which employed trained nutritionists reported on their value in terms of less absenteeism and greater production, less spoilage of manufactured articles, and a lower accident rate. In Massachusetts, a staff of qualified nutritionists was available upon request for industrial group meetings. Classes covering such subjects as weight control, the preparation of bag lunches, and cafeteria meals, were conducted for forewomen in one plant. (25)

The Quartermaster General of the Army called upon nutritionists and dietitians to assist in improving the nutritive value and increasing the palatability of the rations offered to the military forces. These nutritionists devised a master menu and an Army cook book. A test kitchen was set up in Washington, and a staff of nutritionists carried on research work at the Naval Medical Research Center at Bethesda, Md.(11) Organizations such as the YWCA also had a program of nutrition education for their members throughout the country. Although many of these efforts were curtailed following the war, their effect has been felt in the increasing support for permanent nutrition programs in health and welfare agencies.

APPENDIX

Minimum Requirements for Beginning Federal Civil Service Position as Dietitian for Duty in Veterans Administration Establishments and Other Federal Agencies¹

(As taken from Civil Service Announcement No. 1-16-3, unassembled)

Issued: September 29, 1948.

No closing date.2

Citizenship in the United States.

Physically capable of performing the duties of the position (passing of a physical examination is necessary for appointment).

Education and experience:

Applicants must have the following:

- A. A bachelor's degree from an accredited college or university, including or supplemented by the satisfactory completion of the following in a college or university of recognized standing:
- 12 semester hours in chemistry, including general, organic, biochemistry;
 - 6 semester hours in biology, including human physiology and bacteriology;
- 6 semester hours in foods, including food preparation and meal planning;
- 6 semester hours in nutrition, including diet in disease;
- 6 semester hours in institution management, including quantity cookery and organization and management;
- 9 semester hours in social science, including at least two of the following: psychology, sociology, economics:
- 3 semester hours in education, including at least one of the following: educational psychology, methods of teaching, principles of education.

B. Experience

- (1) Completion of a hospital training course for student dietitians which has been approved by the Administrator for Veterans' Affairs; or
- (2) Completion of at least 3 years of successful experience as a dietitian in a hospital of at least 50-bed capacity, which experience has included at least three of the following: diet therapy, teaching, plan-

¹ In November 1949 the beginning salary for this position was \$3,100 per year.

² For more complete and later information, consult latest announcements of the Civil Service Commission posted in first- and second-class post offices.

ning adequate menus, supervision of employees in food preparation and service, ordering food supplies and equipment, food cost control. Substitution of hospital training for experience:

Completion of a hospital training course which has not been approved by the Administrator of Veterans' Affairs will, if certain conditions are met, be credited as experience as a dietitian.

Minimum Requirements for Appointment to the Position of Student Dietitian 3 in the Veterans Administration at \$1,470 Per Year

(As taken from the Civil Service Announcement No. 126, unassembled.)

Issued: October 19, 1948.

No closing date 4

Citizenship in the United States.

Eighteen years of age, or over, but not more than thirty-five.

Physically capable of performing the duties of the position (passing of a physical examination is necessary for appointment).

Educational requirements:

A bachelor's degree from a college or university of recognized standing, including the following courses:

- 12 semester hours in chemistry, including general, organic, and physiological chemistry and laboratory work in these;
 - 6 semester hours in biology, including human physiology and bacteriology;
 - 6 semester hours in foods, including food preparation and meal planning;
 - 6 semester hours in nutrition and diet in disease;
- 6 semester hours in institution management, including quantity cookery and organization and management;
- 9 semester hours in social science, including at least two of the following: psychology, sociology, economics;
- 3 semester hours in education, including at least one of the following: educational psychology, methods of teaching, principles of education.

If more than 3 years have elapsed between appointment to the position of student dietitian and completion of the education requirement, applicants must have completed, in addition, 3 semester hours of advanced nutrition to be eligible for appointment.

Note: The training courses are 12 months in length. Students who successfully complete the full 12 months' training will be eligible for promotion to a permanent position as staff dietitian.⁵

³ The same as a dietetic intern.

⁴ For more complete and later information, consult latest announcements of the Civil Service Commission posted in first- and second-class post offices.

⁵ In November 1949, the beginning salary in this position was \$3,100 per year.

APPENDIX 69

Persons interested in the position of student dietitian with the United States Public Health Service or the Department of National Defense should write directly to these agencies for information.

Minimum Requirements for a Beginning Federal Civil Service Position as Public Health Nutritionist ⁶

(As taken from the Civil Service Announcement No. 202, unassembled, Code P-454-3-6.)

Issued: November 22, 1949.

No closing date.7

Citizenship in the United States.

Physically capable of performing the duties of the position (passing of a physical examination is necessary for appointment).

Education and experience:

Applicants must have one of the following or a time-equivalent combination of both:

A. A bachelor's degree from an accredited college or university, supplemented by 12 semester hours in foods and nutrition and 12 semester hours in a combination of chemistry, biology, and dietetics.

B. At least 4 years of progressively responsible experience as a nutritionist in the field of public health.

Applicants must, in addition, have had 2 years of progressively responsible experience (a) as a nutritionist in a health agency (either governmental or nongovernmental); or (b) as a hospital dietitian who, either through training or experience, has acquired an understanding of the problems involved in applying technical knowledge of nutrition to a community health program; or (c) in a combination of (a) and (b). At least 1 year of this experience must have demonstrated ability to perform adequately in a community program without close technical guidance.

Requirements for Membership in the American Dietetic Association

Active Membership.—A bachelor's or advanced degree from an accredited college or university which has included or been followed by the basic academic work in foods, nutrition, or institution management. The undergraduate courses required by the Association ⁸ include the following:

12 semester hours of chemistry (general inorganic, organic, physiological with laboratory work);

6 semester hours biology (human physiology and bacteriology);

⁶ The beginning salary in this position was \$4,600 in November 1949.

⁷ For more complete and later information, consult latest announcements of the Civil Service Commission posted in first- and second-class post offices.

⁸ Also needed for entrance to approved internships.

9 semester hours social sciences (from at least two of the following: psychology, sociology, economics);

3 semester hours education (at least one of the following: educational psychology, methods of teaching, principles of education);

6 semester hours foods (food selection and preparation, meal planning and service);

6 semester hours nutrition and dietetics (at least two of the following: normal nutrition, advanced nutrition, diet in disease 9);

6 semester hours of institution management (quantity cookery, organization and management). (*Note:* not required of those employed in public health agencies.)

In addition, the applicant must have completed one of the hospital, administrative, or food clinic internships approved by the Executive Board of the Association or, in lieu of this, 3 years of acceptable experience in the field of dietetics, including work in a position of responsibility in a hotel, hospital, residence hall, restaurant, public health program, or teaching at the college level. At least 1 year of this experience must have been supervised by a member of the Association. The applicant must be endorsed by two active members, who are thoroughly familiar with the work of the applicant.

If more than 3 years have elapsed between the completion of college and admission to internship, 3 semester hours of advanced study in nutrition or related subjects must be presented. If the applicant has not been employed for 5 years, 5 semester hours of advanced study in nutrition or related subjects are required within the 5 years preceding the date of application.

Junior Membership.—Appropriate undergraduate training, as described above, a bachelor's degree, and participation in an approved internship.

Usual Requirements for Completion of an Internship Approved by the American Dietetic Association 10

Hospital Internship

Completion of 12 months of training 11 in a hospital, including:

1. Approximately 4 months in observation and practice of training in food administration, including purchasing and storing of food; planning menus for staff, employees, and patients; supervising food

⁹ Required for hospitals.

¹⁰ A list of approved training centers is available from the American Dietetic Association, 620 N. Michigan Avenue, Chicago, Ill.

¹¹ The American Dietetic Association requires that the courses listed under each type of internship consist of formal classes, seminars, and conferences.

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service workers; keeping office records; calculating unit food costs; supervising supplies and sanitation; and studying kitchen equipment.

2. Approximately 4 months in diet therapy, including preparation and service of special diets to patients, instructing patients in carrying out discharge diet orders, and writing at least three case histories involving dietary problems.

3. Approximately 2 months in infant and child feeding, including preparation of infant formulas, instructing mothers on the formulas, adapting menus to children, serving children, and teaching them desirable food habits.

4. Teaching:

- a. Patients in the hospital and out-patients. In this connection, doing follow-up work in homes, conducting baby clinics, advising on emergency food work and adaptation of diets to low-income conditions and nationality habits.
- b. Student nurses, in normal nutrition and diet therapy and conducting laboratory lessons.
- 5. Not less than 2 hours a week in lectures, seminars, and conferences on diet therapy, nutrition, administration, and related science topics.
 - 6. At least one lecture per week on medical and pediatric subjects.
- 7. Study of special problems whose solution contributes to efficiency of dietary department.
- 8. Field trips to other institutions to supplement hospital experience.

Administrative Internship

Completion of a course of 10 to 12 months in an approved food service department other than hospital, i including:

- 1. Quantity food production, including preparation, service, and merchandising.
 - 2. Recipe standardizing and figuring cost of recipe.
 - 3. Menu making.
- 4. Study of organization and management relating to all types of large-scale feeding, such as that in educational institutions or commercial or industrial organizations.
 - 5. Food purchasing.
 - 6. Housekeeping administration.
- 7. Office procedure—record keeping, cost accounting, budget making, equipment buying.
 - 8. Personnel management.

¹² This training may be obtained in approved administrative internships providing experience in several food service departments such as industrial units, college residence halls and cafeterias, school lunchrooms, and restaurants.

Food Clinic Internship

Completion of a 12-month food clinic course, including:

1. Practical experience in a nutrition clinic.

2. Hospital experience to provide planning and calculating of therapeutic diets, food service, and diet instruction to patients.

3. Experience with community agencies and organizations in home visits, individual and group instruction, pricing, and budgeting.

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