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WHITE HOUSE CONFERENCE
ON CHILD HEALTH AND
PROTECTION

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PRESIDENT HOOVER

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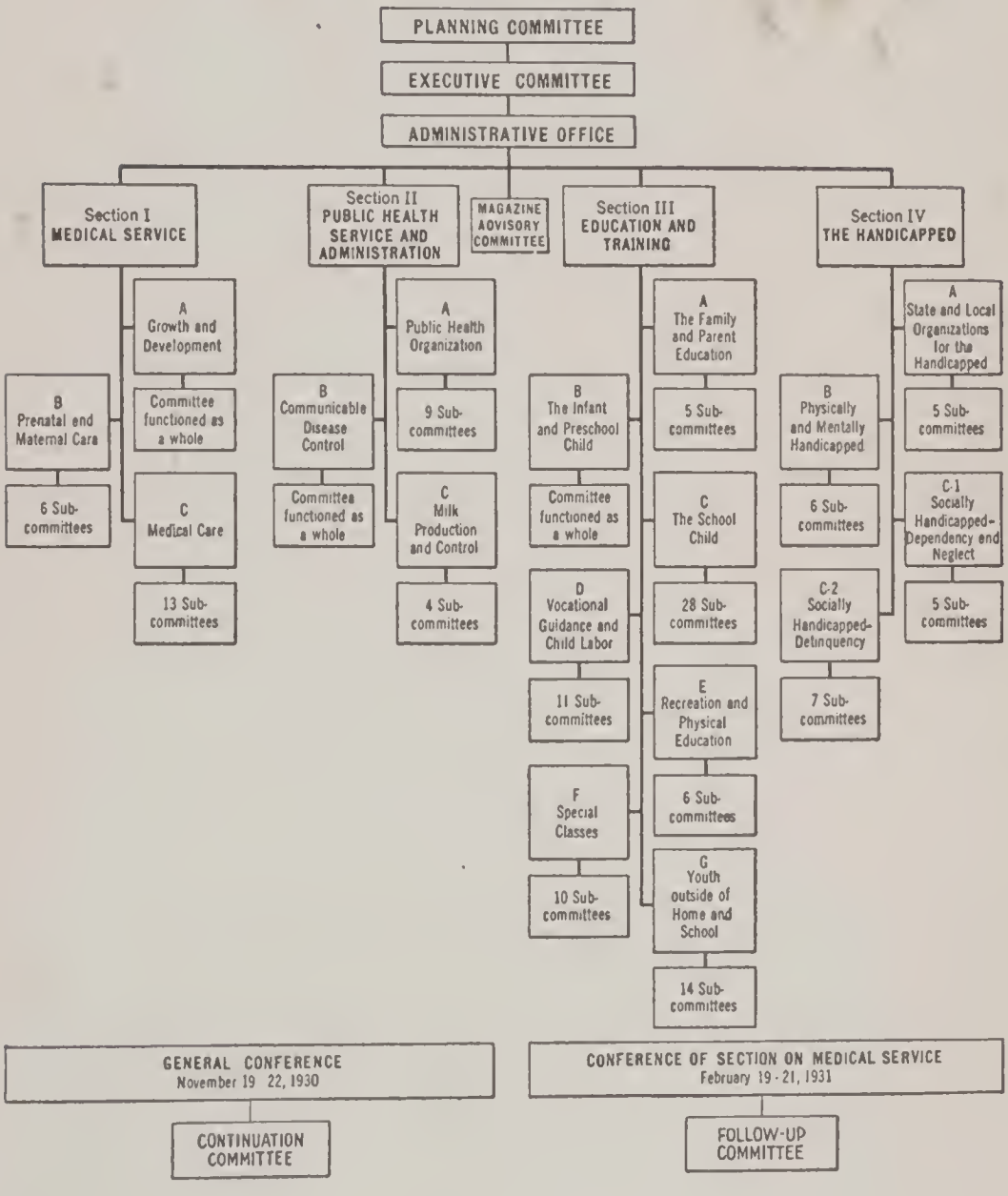

Section I—MEDICAL SERVICE

Samuel McC. Hamill, M.D., *Chairman*

Committee on

MEDICAL CARE FOR CHILDREN

Philip Van Ingen, M.D., *Chairman*

NUTRITION SERVICE IN THE FIELD

V For every child health protection from birth through adolescence . . . the insuring of pure food, pure milk and pure water

From THE CHILDREN'S CHARTER

NUTRITION SERVICE IN THE FIELD

REPORT OF THE SUBCOMMITTEE
ON NUTRITION
LUCY H. GILLETT, *Chairman*

WHITE HOUSE CONFERENCE ON
CHILD HEALTH AND PROTECTION

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Dedicated to

THE CHILDREN OF AMERICA

WHOSE FACES ARE TURNED TOWARD THE LIGHT
OF A NEW DAY AND WHO MUST BE PREPARED TO
MEET A GREAT ADVENTURE

SECTION I

MEDICAL SERVICE

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NUTRITION SERVICE IN THE FIELD

INTRODUCTION

THE importance of good nutrition has long been recognized by the medical profession. Nutrition work, however, as the term is used today, is a relatively new activity in the general program for child health and protection. For this reason it seems advisable to review briefly some of the developments which have led to a wider recognition of this problem.

The marked increase in attention to the nutrition of children in the United States since 1915 has come about largely as the result of four distinct factors:

The large number of physical defects revealed by medical examinations of young men during the period from 1917 to 1919;

The high percentage of malnutrition reported among the preschool children who were examined in 1918 to 1919, "The Children's Year," as a part of the program outlined by the second White House Conference;

The large number of so-called malnourished children in our public and private schools shown by physical examinations;

The newer knowledge showing the relation of proper food to normal growth and health, which has become available as the result of research and clinical investigation.

Each group of findings has helped to stimulate an interest in the essentials of growth and physical fitness and to influence our attitude toward child health and protection. Out of this interest have grown new points of view, new methods of approach, and new goals in public health programs. State and local boards of health, boards of education, welfare agencies, hospitals and clinics are now revising their programs to emphasize the importance of proper food as a factor in health and social well-being.

With this development came the realization that a special worker with scientific knowledge of foods and also with pedagogical training was needed to popularize and disseminate this newer information, and to help in its application to everyday living.

Thus nutrition programs were formulated and trained workers, later known as nutritionists, became a part of this phase of health work. The work has increased constantly in scope and importance until it is now a recognized part of a truly constructive program for the health and protection of children. Accordingly the Committee on Medical Care for Children of the White House Conference appointed a Subcommittee on nutrition, which defined its task as follows:

To find out what is being done throughout the country by nutritionists in the field of child health and protection;

To secure information as to the training of these workers;

To consider the relationship and contribution of other public health workers to the nutrition program;

To consider ways of making nutrition an integrated part of programs for child health and protection;

To make recommendations as to what ought to be done and how to do it, in order to make optimal nutrition possible for the children of our country.

THE NUTRITIONIST

Who She Is and What Her Duties Are

The term *nutritionist* as used in this report refers to those workers whose training has included special attention to the relation of food to growth, development, and well-being; the nature, selection, and preparation of food; methods of presenting these facts to individuals and groups; and whose major activities are directed toward the furtherance of good nutrition in public health and community welfare programs through education.

Individuals with this training, doing the type of work referred to previously, are sometimes spoken of as *nutritionists,* sometimes as *dietitians,* and sometimes as *home economists.* For brevity and clearness, the term *nutritionist* is used throughout this report to include all such workers.

In the field of community health and public welfare, the nutritionist arouses individuals and groups to the need of good nutrition as a factor in positive health. To coworkers in public health programs and to parents, she teaches approved normal diets for various age groups. To school children she teaches nutrition as part of general education, correlating this work with other school subjects. She assists the physician with problem nutrition cases by seeing that his directions are properly understood. In all this work she considers food habits and other health habits; the social background and economic status of the groups of individuals with whom she works; the racial characteristics and emotional tendencies of individuals and families; and the need for the correction of physical defects and abnormal mental attitudes.

Thus it is apparent that she may develop her program through general educational and promotional work in the community, through education of individuals and groups; through helping and guiding other workers, through remedial work by means of individual contacts in the home or

at some center, through the carrying on of investigations and the evaluation of results, or through a combination of several of these methods, depending upon the work of the organization with which she is associated.

Organization Employing Her and Number Employed

The nutritionist, although a comparatively new type of worker in the field of child health and protection, is steadily increasing in numbers. This Subcommittee has endeavored to determine the number of organizations or

TABLE 1

NUMBER OF NUTRITIONISTS AND AGENCIES EMPLOYING THEM

Type of Organization or Agency	Number of Organizations	Number of Nutritionists
Cooperative Extension Service in Agriculture and Home Economics	1	56
American Red Cross	1	55
Boards of health (state and city)	5	9
Clinics, dispensaries, hospitals and dental centers	31	31
National health organizations	2	1
Public and private health and welfare agencies, including health centers	96	122 [a]
Commercial organizations	59	109 [a]

[a] Records incomplete because only 30 questionnaires were returned by commercial firms and 73 by public and private welfare agencies.

agencies employing such workers, the number of workers employed, their training, and the nature and scope of their work. It was assisted in this task by state supervisors of home economics, state nutritionists of the Cooperative Extension Service in Agriculture and Home Economics, the American Home Economics Association, the American Dietetics Association, the National Conference of Social Work, and other organizations.

As it was our understanding that nutrition work in the schools and in institutions for child care was to be covered by sections on Education and Training, and on the Handicapped, this Subcommittee made no survey of the ever in-

creasing number of nutritionists in these positions. Questionnaires were sent to 195 agencies and organizations; 122 replies were received, reporting 273 individual nutritionists exclusive of those in schools, institutions for child care, commercial firms, magazines and daily papers. Our totals include only those workers whose training in foods and nutrition meets the specifications set up by the Committee.

Table 1 summarizes the information obtained with regard to number of workers. Table 2 gives the location of these workers according to the seven United States Census Divisions. Since the work of the commercial firms

TABLE 2

LOCATION OF THE 273 NUTRITIONISTS ACCORDING TO THE UNITED STATES CENSUS DIVISIONS

	Number
North Atlantic	46
Middle Atlantic	62
South Atlantic	28
North Central	92
South Central	25
Mountain	8
Pacific	12
Total	273

from which questionnaires were received is for the most part national in scope, their workers are not included in the distribution according to census divisions.

Services

The nutritionists of the American Red Cross and those on state boards of health work in both urban and rural areas; those in the Cooperative Extension Service in Agriculture and Home Economics work primarily in rural areas. The services rendered by nutritionists in various types of work are outlined.

American Red Cross. The nutrition service of the American Red Cross operating through its various branches has been instrumental in establishing nutrition

programs in a number of communities. During the year 1929 to 1930 there were seventy Red Cross chapters carrying full-time or itinerant nutrition service with nutritionists serving as community workers. These Red Cross chapter nutrition programs are undertaken by a local chapter at the request of a community in which the need of nutrition education is recognized by local community leaders.

The programs adopted are primarily educational in nature and are planned according to the needs of the community. Frequently the community nutrition program has the elementary school for its center, around which are gathered the activities for parents, teachers and pupils. It includes instruction of all the children in given schools and of their teachers and parents. Home visits are made where special help is needed.

Sometimes the program is built around the preschool child and his parents, with classes for mothers and children, consultation service at clinics and conferences, and home visits when needed. In some instances, the program centers about the adult group and includes nutrition classes for parents, industrial workers, teachers, nurses, social workers, grocers, and others. Individual service is given when needed. In other communities where a remedial program seems to be the need, the nutritionist works in closest cooperation with the physician on individual nutrition problems by means of conferences, consultations, and home visits.

At the request of state and local authorities, the American Red Cross has financed some nutrition activities in chapters where disaster has caused an outstanding need.

Teaching material, outlines of trends, and technical supervision of chapter programs through field visits and correspondence are furnished by the Nutrition Service of the American Red Cross and its branches. The local chapters aim, through demonstration, to influence community thinking to the extent that the programs will be established as an integrated part of community activities and

eventually be taken over by the proper tax-supported agencies.

Cooperative Extension Service in Agriculture and Home Economics. The Cooperative Extension Service in Agriculture and Home Economics, consisting of the Extension Service of the United States Department of Agriculture and the Extension Services of the state agricultural colleges in 48 states, Hawaii and Alaska, employs one federal nutritionist, fifty-six full-time state extension nutritionists, and three part-time workers. Each state extension worker organizes and directs a foods and nutrition project which is a fundamental part of the state extension program. These state extension nutritionists assist and guide a total of 1,400 county home demonstration agents trained in home economics, who work with organized groups of rural homemakers and 4-H club girls from ten to twenty-one years of age. State nutritionists also work with groups in counties where the agricultural agent is the only extension representative.

The project aims to help farm families provide an optimal year-around diet by building up a suitable supply of farm food, and by selecting and preparing food suitable for all members of the family, especially the children. The workers give intelligent training in food habits; build toward a standard of optimal growth and development for children, and interest 4-H club boys and girls in producing fine club members as well as fine agricultural products.

State extension nutritionists conduct training schools for lay leaders, confer with county extension agents, hold community meetings, give demonstrations, and prepare subject matter and outlines of methods, bulletins, exhibits, and newspaper articles. The state extension service cooperates with state and county health officers and superintendents of education; and with parent teacher associations, women's clubs, and all other organizations interested in promoting the health of rural people, especially rural children.

In many rural communities, home demonstration agents, working with groups of rural homemakers under the guidance of state extension nutritionists, have been the first to promote preschool clinics, hot school lunches, health examinations for school children, and to demonstrate modern health education methods.

Boards of Health and Departments of Welfare. Nutritionists on state boards of health and in departments of welfare are engaged chiefly in promotion, consultation and demonstration work. They hold themselves in readiness for service to stimulate an interest in nutrition in local communities throughout the state; to promote and develop programs; and to consult and advise at all times. Their work includes talks or demonstrations before women's clubs, parent teacher groups, church groups, and the like. In some states they give courses for parents, nurses and teachers. In Massachusetts, the workers hold individual conferences with mothers attending a demonstration clinic for the well preschool child; they also talk to children in the ten-year-program, instituted by the state department of health for the detection of tuberculosis among school children.

State nutritionists are called upon to help with dietaries for institutions and summer camps. They arrange exhibits for state fairs and other large gatherings. They prepare printed material, posters, films, lantern slides, and exhibits for distribution within the state. They give radio talks and information through correspondence.

The duties of nutritionists with city boards of health are similar in nature to those with state boards; but their activities may be confined to the city in which the worker is located, or they may be more specific in nature. Milwaukee and Detroit workers prepare material which the teachers use in presenting health education to the children. The Bellevue-Yorkville Health Demonstration Center in New York City has a worker who advises and consults with nurses concerning food problems and instructs them

by means of demonstrations and talks with mothers and children who come to the clinic.

Boards of Education. Although no survey of the nutrition work in schools was made, several interesting pieces of work have come to our attention, among which are the following: In New York State there is a nutritionist in the state department of education; her title is State Supervisor of Health Teaching. Her work has included establishing school lunches, especially in rural districts; introducing nutrition instruction in training schools for grade teachers, lecturing to teachers, and preparing courses of study and other material for their use.

This nutritionist also promotes health education programs in many city schools. During 1929 to 1930 there were twenty-five nutritionists under her supervision in the school systems of the state. The employment of some of these workers has been made possible through joint programs with the American Red Cross or with the Tuberculosis Association. Some of them have been financed entirely by these organizations with the idea of showing the value of the work and having it taken over and extended by the schools.

Nutritionists with city boards of education sometimes give health lessons in the classroom and prepare outlines of the material for the use of the teachers. In other schools they assist the teachers with subject matter and methods, prepare outlines for them, and supervise their health teaching. This latter method is used in the school system of Columbus, Ohio.

In some communities, the nutritionist serves as a health counselor in the junior high schools. In other communities, she serves as chairman of a committee on nutrition and health for both junior and senior high schools. In both capacities, she helps the teachers to see the possibilities of making their own subject material count in the health of the community.

In Newark, New Jersey, eighteen nutritionists are employed and work in forty-four of the sixty-four schools in the city. In addition to the services already described, they visit the homes of children referred by the physician as the result of physical examinations, or by the classroom teacher or parent because of poor food habits. In these instances, they study home conditions and offer advice to mothers when needed. They also cooperate with the visiting teacher in conducting a monthly study group for mothers.

Many home economics teachers while not nutritionists according to the definition set up in our report, do real nutrition work. Such service is rendered through their own class teaching, through health projects presented at assembly, and through helping the grade teacher to prepare health lessons. Some home economists cooperate with school physician, nurse, and teacher in helping malnourished children. Home economics teachers, well trained in foods and nutrition, have splendid opportunities to arouse interest in this subject, and many have been instrumental in securing the appointment of full-time nutritionists.

Welfare Organizations Including Health Centers. Our questionnaires located 122 nutritionists in welfare organizations and health centers. One infant welfare society has fourteen; one health association has seven; and one welfare organization has ten such workers. The duties of these workers in health centers and welfare organizations vary. Sometimes they serve as instructors, consultants, and supervisors for their coworkers concerning the nutrition phase of their work, and sometimes they do intensive work with individual cases. They prepare printed material adapted to income and racial needs. Some organizations have conducted studies in food economics and cost of living which help to give a sound basis for recommendations concerning the needs of the people served.

In health centers nutritionists advise mothers attending the clinics for medical or other attention. They visit

the homes of these individuals if follow-up work is needed. In some health centers, they develop in the schools of the district, programs which include the correction of dental defects and instruction with regard to foods recommended for good teeth. They also do promotional work in the community, thus furthering health by making the people think about nutrition. This work is done through community groups, such as parent teacher associations and civic groups by means of lectures, exhibits, and demonstrations.

Hospitals, Clinics and Dispensaries. One may be inclined to think of the duties of the hospital dietition as making out menus, buying food, and supervising its preparation and serving. More and more, however, she is expanding her services to include constructive teaching which will influence the food habits of patients and hospital staff. Some hospital dietitians are giving part time to outpatient departments and clinics. In addition, our survey shows thirty-one full-time dietitians in clinics, dispensaries, and outpatient departments of hospitals. To these workers physicians refer cases needing intensive advice and instruction about foods. Although this work usually begins in the hospital, it is frequently extended into the homes, a continued service thus being made possible.

Twelve food clinics have already been established and eight more are in process of development. Each is organized as a separate department in the dispensary or medical clinic of which it is a part. The report from the Food Clinic in the Boston Dispensary, the first to be established, says: "The patient is referred to the food clinic by the physician in the medical clinic after he has made his diagnosis and recommendations for food treatment. The dietitian studies the patient's mental and physical needs, his racial habits, economic situations, and environmental condition. On the basis of medical and social findings, she plans the diet and teaches the patient the prescribed amounts and kinds of foods, and methods of preparing it

if necessary. The social worker who visits the home helps the dietitian to overcome obstacles which are interfering with satisfactory progress, such as insufficient income, unwillingness of the mother to cooperate, ignorance of parents, an unhappy home atmosphere, and unhygienic home conditions."

Dental Infirmaries. At the Forsyth Dental Infirmary, a nutritionist is employed to do educational work with students and patients. She gives courses in nutrition to dental interns, dental hygienists, and home economics seniors either at the infirmary or in their own training schools. She has individual discussions on diet and health habits with parents and children. Her clinics are a demonstration center at which interns, dental hygienists, and home economics seniors participate in the conference on the case. She supervises health education for waiting groups in the building; she also prepares printed material and gives lectures and radio talks.

Commercial Organizations. Two commercial concerns employ nutritionists whose time is devoted to improving the nutritional condition of their own employees and indirectly of the children in the homes of these workers. At the Eastman Kodak Company in Rochester, New York, the worker is attached to the medical department, where problem nutrition cases are referred to her by the physician. Her duty is to work with these cases until satisfactory improvement is shown. She also conducts demonstration work with groups to show the effect well-regulated health habits, including food habits, have on health and efficiency, and she prepares printed material for distribution to all workers within the organization.

At least thirty commercial concerns report that they employ nutritionists who prepare literature, posters, films, and exhibits which emphasize nutrition and child health education. During the year 1929 to 1930, twenty-five commercial concerns distributed a total of 13,000,000 pieces of literature, and fourteen concerns report a total of over

one million dollars spent on literature and advertising material relating to nutrition in child health.

Newspapers and Magazines. Magazines and newspapers are recognizing nutrition of children as a topic in which people are interested, and are printing articles on the subject. Some newspapers, and many magazines have on their staffs specialists in this subject who prepare material, and some who do not have the specialist, publish articles by outstanding people in this field. This material is read by millions of people all over the country; doubtless it reaches many men and women in remote districts who have very little contact with the outside world, and who do not have the inspiration afforded by health workers.

Summary

Generally speaking, the services of the nutritionist may be summarized as follows:

Promotion and general educational work in the community:

Stimulating interest in the importance of good nutrition.

Increasing such service for individuals and communities.

Organization and executive work:

Organizing and directing nutrition services in a community.

Instruction, supervision, and consultation:

Interpreting scientific facts which are fundamental to good nutrition; disseminating these facts to children, parents, coworkers and the general public; providing the necessary information as to ways and means of fostering good nutrition by means of individual and group teaching, conferences, lectures, literature, demonstrations,

posters, exhibits, contests, newspaper publicity, and the like.
Advising and consulting with coworkers.
Supervising nutrition service in institutions.

Direct Service:

Maintaining a consultation and advisory service for individuals and families in connection with nutrition and budget problems.
Helping families, either in clinics or at home, to adjust their habits of food, and living and racial customs to their economic status in such a way as to favor normal development of children.
Interpreting to parents and children, in terms of their individual home problems, the physician's directions regarding food and other health habits.
Acting in an advisory capacity with regard to diets in institutions and summer camps for children.

Research:

Planning and conducting research in the field.
Evaluating results.
Interpreting results in terms that may be directly applied.

Training

In general, the questionnaires indicate that the nutritionist in the field is well prepared for her work. Of the 391 workers including 109 workers in commercial firms, 360 have Bachelor's degrees; in addition 101 have Master's degrees; four have Doctor of Philosophy degrees; one had the degree of Doctor of Medicine, and ten were unreported. Eighty-two of those who have Bachelor's degrees only, report additional credits toward higher degrees.

About 75 per cent of the workers listed have had their training at the Universities of Chicago, Illinois, and Cornell, at Kansas and Iowa State Colleges, at Teachers Col-

lege (Columbia University), and Simmons College. These are all institutions with recognized high standards.

In order to study the training offered in various universities and colleges from which nutritionists are graduated, questionnaires were sent to eighty-six of the largest and best home economics training schools in the country. The seventy-three colleges and universities replying require the technical subjects shown in Table 3 for graduation with a major in food and nutrition:

TABLE 3

TECHNICAL SUBJECTS TAUGHT IN HOME ECONOMICS COURSES
(73 COLLEGES)

Subject	Hours of Credit	Per Cent of Institutions Offering Courses
Physiology	3 to 6	88
Inorganic and organic chemistry	10 to 20	100
Biological and food chemistry	3 to 6	.....
Adaptation of nutrition instruction to normal growth with approved diets for various ages	.....	93
Diet in diseases of nutrition	.....	85
Relationship between nutrition and other phases of health work	.....	80
Psychology, methods of teaching, and child training	.....	88
Economics	.....	84
Budgets in relation to food and low income	.....	50
Social problems of families and communities	.....	40

The information obtained gives further evidence that the requirements in the majority of colleges and universities in which nutritionists receive their training include technical courses which adequately cover subject matter in nutrition and allied sciences. This study, however, lends us to recommend a better opportunity for those now in the field, or for those who desire to work in the field of community child health, to obtain information concerning those subjects which enable them to adjust their work to the social status, mental attitudes, economic situations, and various racial characteristics of families. It would be advantageous if nutritionists in training could obtain super-

vised field experience in a public health or welfare organization, or in a well organized school system.

OTHER GROUPS INTERESTED

Integration

Nutrition work has two aspects, one of which is corrective in character, the other preventive. Both must receive adequate attention in any thoroughly constructive plan for child health and protection.

The retarded growth, lowered resistance, and frequent minor ailments of the undernourished child, his inability to keep up with his grade, and the prospect that he will break prematurely under the strain of adult life, call aloud for a remedial program. This may include such diverse elements as correcting physical defects, improving the physical or emotional environment in the home, adjusting a scanty budget to provide proper food, breaking up wrong food and health habits, and changing the point of view of the entire family to the importance of safe-guarding the children's health.

Although the remedial aspect was the first to claim our attention, we are slowly learning that a steady day-by-day building for good nutrition in all children is still more important. This procedure has its roots deep in educational and preventive measures.

The aim of all nutrition work should be nothing less than optimal nutrition as a foundation for optimal health. Optimal nutrition involves many factors. Among them are a reasonably good inheritance, enough food of the right kind from the prenatal period through and beyond adolescence, suitable home environment, freedom from physical defects, and protection from diseases that disorganize the orderly processes of growth and leave behind them foci of infection and lowered resistance to disease. In a program that will provide for these various needs, par-

ents, physicians, nurses, nutritionists, teachers, social workers, dental hygienists and mental hygienists all have their part. Doubtless there are many others who directly or indirectly share in this responsibility. This means a high degree of team work between the family on the one hand, and organized society on the other.

Parents

Parents are naturally the most important individuals in nutrition education. They alone are in positions of authority to see that the recommendations given are put into practice.

If all parents possessed sufficient information, ability, and money to create a favorable home environment for children, to teach them good food and other health habits, to provide them with competent medical and dental supervision, and to instill in them a desire for good growth, the public health aspects of child health and protection would practically disappear.

Most parents, however, lack one or more of the desirable assets suggested above. An important part of the child health program, therefore, must be the education of parents to understand the importance of health and the factors contributing to health protection. Those who are unable to solve successfully problems which interfere with the proper development of their children need guidance and assistance. This is particularly true in communities where the economic level is low, or where large numbers of families are obliged to adjust their home life to the unfamiliar living conditions, food supply, and food customs of a new land. It cannot be too strongly emphasized that progress in nutrition, as in other elements of child health, depends on the extent to which parents are aroused and informed, for they dominate and largely control the situation in the home.

Relation to Program

Much nutrition work is being done by a wide variety of professional and non-professional people who are connected with programs for child health and protection. While many people are giving real nutrition instruction which is not called by this name, doubtless much that is called nutrition work is not worthy of that name. Because of the large number engaged in welfare and educational work, and because of the wide variation in the interpretation of the term *nutrition work,* it was considered impossible to cover the field by questionnaires. We can, therefore, touch only briefly on the contributions of any one group.

The Physician. The physician alone has the background and the training necessary for determining whether some physical condition is interfering with the proper utilization of food, which does or may result in malnutrition. He alone can determine the extent to which pathological or abnormal conditions have been caused by improper food and other bad health habits. The responsibility for the physical examination of all children, and the recommendations for the correction of their physical defects rest with the physician. He also has an opportunity to interest the children under his care in forming good health habits. He not only has an opportunity, but a responsibility as well.

When the parents of children are well-informed and cooperative and have an adequate income, a few suggestions from the physician, in addition to the correction of physical defects, may transform a malnourished child into a well nourished one. In some communities, busy physicians are finding the nutritionist valuable in interpreting their suggestions. Many physicians in dispensaries and large hospitals do not have the time for the investigation and the adjustments of home conditions which often interfere with the successful progress of a patient. In several of these institutions, the nutritionist is called upon to inter-

pret the recommendations of the physician in terms of food economics, racial and family customs and traditions, and child psychology.

The following incident, as told by a physician, serves to illustrate why some children do not respond to the suggestions received at the clinic: Mary was under treatment at the clinic for extreme malnutrition but she was not gaining and the case was referred to a nutritionist for follow-up work. At the first visit to the home the mother recited a long list of foods which she said formed the diet of the child. As the appearance of the home did not seem to be in keeping with this diet the worker, on her second visit, questioned more closely until finally the woman confided, "You know I just couldn't offend that nice doctor by telling him that the rest of my children would have to starve if I gave Mary the foods he said she must have; I just could not afford to buy them for her." The nutritionist then determined how much the mother could afford to spend for food and showed her how to substitute cheaper foods of the same food value as the ones the physician had prescribed. Very soon, not only Mary but the whole family showed marked improvement. This story aptly illustrates the need for an understanding of family situations if all children are to benefit from the advice given.

The Nurse. The nurse works in clinics, health centers, visiting nurse organizations, and in many schools; she is a part of city, county, and rural health work. She is concerned with the health of the families she visits and it is recognized as a part of her duty to advocate the factors which will influence their nutrition. The nurse should, therefore, have sufficient information and training to enable her to teach the essentials for this branch of health work. The Subcommittee feels that the amount of nutrition instruction given in hospital training schools for nurses, even in those of recognized standing, is often inadequate.

For the purpose of determining the amount of train-

ing in this subject which public health nurses receive, the Subcommittee studied the catalogues from the eleven schools listed by the National Organization for Public Health Nursing, which offer courses in public health nursing for graduate nurses. The catalogues indicate that, with one exception,[1] an average of fifteen to eighteen hours of nutrition instruction is a required part of the curriculum. This Subcommittee feels that more instruction in this subject is desirable for nurses who are going into public health work.

The Social Worker. In the majority of families with which the social worker comes in contact, home conditions are frequently such as to interfere with the health of children. Since poor nutrition not only increases the chances of illness, but decreases efficiency, it is one of the main causes of a lowered standard of living. The relationship of the social worker to the family gives her an opportunity to observe when home conditions are such as to cause or increase malnutrition. She should, therefore, be trained to recognize these contributing causes, to teach good food and other health habits, and to refer problem cases to the proper person for attention.

A study of the catalogues from the twenty-six schools of social work on the approved list of the Association for Schools of Social Work indicates that only six require instruction in this subject or its equivalent; such instruction averages about fifteen hours. It is mentioned or recommended as an elective in the curriculum of six additional schools. Considering the relationship of nutrition to social work, and the relationship of the social worker to the home, this Subcommittee feels that nutrition has received inadequate attention in the schools of social work.

The Visiting Teacher. In certain sections of the country, the visiting teacher is employed to investigate condi-

[1] The University of Minnesota offers courses in nutrition to candidates for the Bachelor of Science degree in public health nursing, but they are not required of other public health nursing students.

tions surrounding those children who are making unsatisfactory progress at school. In many, perhaps in a majority, of these cases the cause lies in frequent absences from school due to recurrent, though minor, illnesses, brought about by the nutritional condition of the child. The visiting teacher should have such information as will enable her to interpret the relations of food to health in these families.

The Teacher. The teacher has a rare opportunity for intensive educational work in nutrition because school attendance is required. Through her daily contacts, she is in a position to arouse an interest in health and to motivate desirable activity on the part of the child. Many teachers are tremendously interested in this subject and are eager to interpret it to their pupils. Here and there teachers are already emphasizing the relation of food to health and growth, both as a subject in itself and through its integration with other school subjects. Sometimes this work is done because of the personal interest of the individual teacher; sometimes it is a part of a general health education program throughout a school because of the enthusiasm of the principal, and in some cities the interest of the superintendent or of the school board has made it a regular part of the school program.

The teachers need proper training for this phase of their work. In New York State, courses in nutrition are given in the teacher training schools. There may be a few other places where such training is given. It should be a requirement in every teacher training school.

The Dentist. Recent research which indicates a relationship between certain foods and sound teeth has stimulated the dentists to stress the importance of diet in dental care. The foods which we believe help to make strong teeth and prevent malocclusion and decay are also valuable for promoting general health. The dentist therefore is in a strategic position to contribute to child health and protection.

While caring for the teeth of the expectant mother he has an opportunity to advise the use of correct food as a means of preserving her teeth during this period. He should give her the known facts about the development of the child's teeth. The care of the child's teeth during early years offers further opportunity to advise her with regard to the relation of food to sound teeth and the prevention of dental caries.

The dental profession as a whole seems to appreciate this new aspect of preventive dentistry, and courses in nutrition are being added to the curricula of dental schools. Extensive research is also being conducted to confirm and extend our present information about the influence of food on teeth.

The Dental Hygienist. The dental hygienist has an excellent opportunity to advise the use of foods that are believed to build and protect the teeth. In addition to the instruction given while cleaning the teeth, some school dental hygienists stimulate the children to form desirable food and dental hygiene habits through integrated health programs. They give this information by means of dental talks and plays at assembly or in the classroom. In health centers and hospital clinics, the dental hygienist conducts similar activities for the children. In addition, she works with expectant mothers attending the prenatal clinics. In thirteen of the fourteen schools of the United States where dental hygienists are trained, an average of twenty hours of nutrition instruction is included in the curriculum.

The Mental Hygienist. The mental hygienist has an opportunity to observe many nutrition cases in which behavior problems are really fundamental. Since this problem of control or adjustment is one of the reasons why the correction of malnutrition is so difficult and laborious a process, the mental hygienist can make a very real contribution to the nutrition program.

Desirable Nutrition Training

Nurses, teachers, visiting teachers, social workers, dental hygienists, mental hygienists, and other groups of cooperating workers, who have a similar contact with the family, should have sufficient instruction to enable them to explain the essentials for good nutrition, to cooperate in making suggestions within the financial possibilities of the family, and to recognize situations that need the personal attention of a nutritionist.

The amount of training each of the cooperating workers needs will vary with her educational background and the extent of her participation in the health program. The Subcommittee recommends a minimum of from fifteen to twenty hours of nutrition instruction for all workers, and from thirty to forty hours as desirable for nurses, social workers, and teachers.

Relation of Nutritionists to Other Workers

This brief survey of those who contribute to the nutrition of children shows that the work involved is many-sided. In addition to its medical aspect, educational work is almost always necessary; frequently the diet must be rearranged to fit need, income, and racial characteristics; behavior problems are often encountered; and sometimes home conditions need adjusting. If income is low, if suggestions given do not conveniently fit the family routine, or if father or mother or both are unsympathetic, a child may be helpless to follow the advice given unless someone explains to the parents the need for cooperation. Thus, the overcoming of malnutrition often meets environmental, emotional, and economic, as well as physical difficulties. It is frequently a time-consuming process.

In one organization, a study was made of the results of the work of the nutritionist who concentrated on this phase of health work. The study showed that it took from

three to six months of concentrated effort to bring malnourished children into the well nourished group. If each worker carried more than fifty cases at any time, results were not satisfactory when conditions were complicated by home situations. It is, therefore, unreasonable to expect nurses, social workers, teachers, and other professional groups in the health program, in addition to their many regular duties, to do the intensive work required in the many serious and complicated nutrition problems.

There should be available well trained nutritionists, who will keep their coworkers informed with regard to the newer knowledge of food as it relates to health, and of current prices as they affect buying, and who will help to adjust situations complicated by economic and other home conditions.

THE CHALLENGE

Need for Nutrition Education

The prevalence of malnutrition among our boys and girls makes us wonder whether nutrition education has been pushed to the background to make way for seemingly more complex or more immediate problems; or whether the dangers and ill-effects of malnutrition are sufficiently recognized.

Dentists find caries and malocclusion almost universal among children. Medical examinations of children reveal far too many deviations from normal health and development. Diseases such as rickets and pellagra are frequently encountered. Clinical evidence supports laboratory findings in the conviction that a large percentage of these disorders are manifestations of faulty diet during prenatal life and early childhood. There is evidence to show that tuberculosis and other infections of the respiratory tract find a foothold more readily among malnourished individuals. Although malnutrition is largely preventable and although its prevention is largely an educational problem, yet we find it among children in all economic levels.

Various estimates place the number of children in our country who are thus handicapped within a range that includes from 15 to 30 per cent of the child population. In other words, according to the most conservative estimate, over six million of our forty-five million children are malnourished, or one in every six or seven.

Children who are below par physically increase the cost of our public and private health agencies and of our educational systems. But great as is the cost in dollars and cents, malnutrition has a more vital and far-reaching effect in its influence on the child himself. Such boys or girls, arriving at the working age, are frequently hampered in their choice of occupation, earning capacity, and chances for advancement, because they are unable to stand the strain of competition. The effect which such conditions exert on the hopes, the ambitions, the courage and the self-respect of the child, his attitude toward life, and his contribution to the community in later years is immeasurable. It will, doubtless, vary with the individual, but it is evident from the observations and experiences of the past that these handicaps will influence economic productivity, individual advancement, and the sum of human efficiency and happiness. We have before us the problem of saving our boys and girls from physical and social handicaps arising from a lack of nutrition information. This problem involves not only cooperation among the workers in child health programs but it also challenges us to give the education of the parents serious consideration.

SUMMARY

Summarizing the points brought out in this report, the facts before us are as follows: Good nutrition is essential to child health and protection. Our knowledge concerning its importance has placed a new emphasis on its relation to children. The facts involved in the subject of nutrition cover a wide range and are constantly increasing. Many

prominent groups in positions to disseminate the facts are in general not yet adequately prepared to do the work. It is difficult also for workers who may have had adequate training, but whose main responsibilities lie along other lines, to keep informed concerning approved practices or to give the necessary time for the correction of complicated conditions causing malnutrition. Properly trained workers are available whose duties include the proper coordination of nutrition with other phases of health, social, and education work.

RECOMMENDATIONS

With these facts in mind, the Subcommittee makes the following recommendations with regard to nutrition service for child health and protection:

1. That nutrition work be recognized as a basic part of every district, county, or community program for child health and protection.

2. That nutrition programs in public health and welfare agencies and educational systems be organized under accepted medical direction.

3. That a determined effort be made to create a nutrition consciousness through magazines, newspapers, exhibits, lectures, literature, the radio, and the like.

4. That one or more qualified nutritionists, either on full time or on part time, be connected with every child health program:

To keep attention focused on the importance of good nutrition for children.

To serve as an ally to the physician, dentist, and psychiatrist by helping to interpret their recommendations in terms of the family need.

To serve as consultant and adviser for other health and welfare workers, keeping them informed as far as possible regarding new facts in nutrition and methods of interpreting them.

To make reliable nutrition instruction and advice available for children and parents.

5. That nutrition service in a community be intelligently coordinated through:

A study of problems.

An analysis of resources to determine what each agency or group can contribute.

A carefully developed program which utilizes all resources of the community with responsibility for its execution delegated to some one individual who is properly qualified by training and experience.

A review of services unprovided for with consideration of ways to bridge the gaps.

6. That every worker employed as a nutritionist have training in nutrition, chemistry of food, and allied sciences equivalent to that required for a major in food and nutrition, in an accredited school of home economics; that every worker thus employed have training in child psychology and in methods of teaching.

7. That facilities be developed for the training of nutritionists in:

Preventive measures and factors other than food which influence nutrition.

Social problems and racial characteristics which will influence plans and recommendations.

Food economics and the use of the budget as related to the low income group.

Methods of doing educational work in the community, of developing programs in an organization or a community, and of presenting scientific facts in clear, simple, convincing non-technical terms.

The making of reports and evaluation of results.

The scope of related phases of child health work, thereby enabling the nutritionist to appreciate the problems of her coworkers and to adjust her service to their needs, with emphasis on the value of cooperation and coordination.

Supervised field work in a public health or welfare organization or in a well organized school system.

8. That schools training public health and welfare workers other than nutritionists provide not less than fifteen to twenty hours of instruction covering nutrition fundamentals, food economics, and budgets, and that such instruction be given by a well trained nutritionist qualified as a teacher and who has had experience in social and health work.

9. That the importance and value of nutrition work in the child health program be demonstrated in communities not yet alive to its need with the idea that eventually it be taken over by the community.

10. That nutrition service be made available to those communities which are unable to finance a complete nutrition program through a stimulation of such sources as the American Red Cross, city and state boards of health and education, and other agencies and groups supported by taxation, and which contribute to child health and protection.

11. That a suitable committee, including representative nutritionists, be organized:

To further investigations in the nature and scope of work which is being done in nutrition and results obtained.

To study the facts thus revealed.

To use the information thus obtained to work toward the development of sound, well integrated, educational, community programs in nutrition.

In behalf of the children suffering from malnutrition because of the failure to apply the nutrition information at our disposal; and in order to make possible for every child good nutrition, which is necessary for health and protection, this Subcommittee wishes to urge upon this Conference, and the American public which it represents, the most serious consideration of the recommendations submitted.

APPENDIX

EXAMPLES OF NUTRITION SERVICE

THE following accounts of work in nutrition were selected as examples of the various types of organizations engaged in the work, and the lines along which they are working.

NATIONAL AGENCIES

Cooperative Extension Service in Agriculture and Home Economics

The extension nutritionist plays her part in one of the great agencies for adult education in our country. Created in 1914 by the Smith-Lever Act, the Cooperative Extension Service in Agriculture and Home Economics links together the Extension Service of the United States Department of Agriculture in Washington and the Extension Services of the Agricultural Colleges in forty-eight states, in Hawaii, Alaska, Porto Rico, and the Virgin Islands. Back of the Extension Service lies the tremendous and many-sided research program of the Department of Agriculture and the state and territorial experiment stations. It is the function of the Extension Service to apply to local problems of the farm, the rural home and the rural community pertinent facts established by this vast body of research and by other scientific investigation. Still more important, the Extension Service is charged with stimulating rural people to try out and adopt improved practices based on this research, which will help them increase their incomes and raise their standards of living.

The Extension Service is concerned with the child not as a member of an age group in school or as a case in a clinic, but as a member of a rural family whose growth and development must be furthered by every constructive

factor of home environment and community housekeeping. Except for its 4-H club project, the extension program is organized around the needs of the rural home rather than around the child as an individual. Most home economics and many agricultural projects, however, apply with especial force to the home with children, and it is probable that at the present time extension work influences the environment of the rural child from a greater number of angles than does any other form of adult education.

The Extension Service works with rural men and women through permanent community and county extension organizations under various names, such as farm bureaus, home bureaus, home demonstration clubs, and community clubs; through temporary project groups; and through cooperation with educational, business and social organizations in the rural community. It works with country boys and girls between the ages of ten and twenty-one years through its 4-H clubs, which in 1930 enrolled some 822,700 members. Although extension workers cooperate with the schools along many lines affecting the education and the welfare of the rural child, and in some few cases work under a cooperative agreement, extension work is conducted primarily outside of the school room.

In this country-wide outside-the-school program of adult and junior education and organization for successful living on the farm and in the rural home, the foods and nutrition project holds a key position, interlocking with food production, farm management, home management, child development and many other lines. The extension nutritionist is the responsible leader of the project in each state.

Extension work in foods and nutrition antedates even the passage of the Smith-Lever Act. It began in the South in 1910 with the raising, canning and utilization of the tomato and other vegetables by the garden and canning club girls, and in the North with the food selection and preparation demonstrations, the child feeding lectures and

school lunch propaganda of the earliest farmers' institutes and extension schools.

The objectives of the project have broadened and deepened with experience and with the accumulation of data showing living standards and health conditions in the open country. Generally speaking they include: creating an understanding of and a desire for optimal growth in children and positive health for all the family; demonstrating the part played in growth and health by right feeding; building up an adequate year round food supply on the farm and in the rural community; helping the home maker to carry on with interest and intelligence the job of feeding her family for health through proper selection, preparation, serving and conservation of food, skillful buying and the building of right food habits and attitudes in the members of the family; and encouraging, assisting or organizing such community nutrition activities as are necessary to safeguard and carry forward the home program of making and keeping the family fit. Naturally, these objectives include or focus upon the health of the rural child.

Through its growth work program for 4-H club members, the Extension Service aims to give farm boys and girls an intelligent understanding of the signs of good growth and physical fitness, to interest them in making the most of themselves physically through proper food and health habits, good posture, and the correction of defects; to emphasize the parallels between successful methods of feeding and caring for the livestock or crops raised by the club member and the successful growing of boys and girls; and incidentally to enlist the influence of these youngsters for the proper growth of younger members of the family and prepare them for a more intelligent parenthood.

In pursuing these objectives, extension workers contact and cooperate with schools, county and school nurses, child hygiene workers, health officers, welfare workers, and medical and dental associations; with editors, food

merchants, business men, bankers and plantation owners; with civic organizations, parent teacher associations, Red Cross, women's organizations, and many other groups. In emergencies like storms, floods, and drought they take leading parts in working out relief plans and low cost dietaries, organizing and directing food service in concentration camps, and putting across comprehensive food conservation work and information on pellagra prevention.

The extension nutritionist works under the direction of the state home demonstration agent, cooperates with other state subject matter workers and with the extension editor, and assists and guides men and women extension agents in whose counties home demonstration clubs or 4-H clubs are carrying on work in the project. On December 30, 1930, these county extension agents numbered 1,406 home demonstrations agents, of whom 125 were Negroes, 2,784 agricultural agents and 242 boys' and girls' club agents, and were located in the county seats of about two thousand four hundred counties. In some states the nutritionist carries on programs with organized groups of women in counties served by agricultural agents only, but the bulk of this work is conducted through the county home demonstration agents. Since the large majority of these have Bachelor of Science degrees in home economics and some previous teaching experience, the combined forces of nutritionist and agent make for strong leadership. Because the county extension program covers a variety of home making needs, the agent welcomes the counsel and assistance of the nutritionist, no matter how excellent her own training may be.

The nutritionist studies conditions in the state and the counties, advises with state and county workers and committees, demonstrates teaching and publicity methods and trains the agent to use them, prepares mimeographed or printed outlines on subject matter and methods, assembles illustrative material, and prepares forms for recording

results. She may assist the agent in making contacts with editors, food and equipment dealers, seedsmen, bankers, and civic organizations. In most states an important responsibility is to train local leaders to handle limited fields of instruction with community groups, under the supervision of the agent. The nutritionist also helps to train 4-H club leaders and plan 4-H club contests, judges at contests and fairs, and plans state and county exhibits. She teaches at camps and short courses for 4-H club members and for farm women and helps to make contacts and plans for cooperation with other state organizations. She prepares occasional feature articles for the larger dailys, and contributes to the college clip sheet and the monthly extension news. She submits an annual forecast or plan of work, and prepares an annual report of work conducted in her project over the entire state.

To the county home demonstration agent fall the duties of preparing and organizing for the project and its follow-up, handling publicity, making local contacts, doing part of the teaching, supervising the work of trained leaders, mobilizing community activities, rounding up records and attending to a host of details.

In December, 1930 the project commanded the services of one extension nutritionist in the Department of Agriculture and 61 nutritionists in 45 states, with a budget of $237,000 for salaries and expenses. All these workers are college graduates, usually with the degree of Bachelor of Science in Home Economics. About 68 per cent hold also a degree of Master of Science in Nutrition or Master of Arts in Home Economics Education, and nearly all the rest have taken work leading to advanced degrees. Most of them have a background of high school or college teaching, a few have been hospital dietitians, and an increasing number have had in addition several years of work as county home demonstration agents. Salaries range from $2,100 to $3,770 for eleven months' work, with the average at $2,770. State budgets show that

salaries of $3,000 or over have been allotted to more than one-third of this group for 1931 to 1932.

The extension nutritionist of the Department of Agriculture is employed by the Office of Cooperative Extension Work and enjoys the cooperation of the Bureau of Home Economics. She extends to the states results of Department research in foods and nutrition; keeps in touch with the work of the state nutritionists through field visits, correspondence and the study of annual reports; carries from state to state information regarding extension methods and results; assists in demonstrating and developing new lines of work; coordinates and guides the project, and prepares annual and special reports.

Because of unique facilities afforded by the Editorial and Visual Instruction Section of the Extension Service and cooperation with the Bureau of Home Economics, prints, bromide enlargements, slides, film strips, and charts on the growth and nutrition of children have been prepared which have been widely used not only by extension workers but also by public health workers, teachers and writers.

The lines of work carried on under the Foods and Nutrition Project in each county are selected by mutual agreement of home demonstration agent, local women, and state nutritionist. Guiding these decisions are the desires of the homemakers, observations of agent and nutritionist, revelations of the food selection score, health and school statistics, census information, studies by experiment station workers, and special surveys and fact finding studies carried on by the Extension Service with the cooperation of rural leaders.

Among the problems bearing on child nutrition thus revealed are: evidences of poor growth and lack of positive health seen in poorly shaped bones, soft and poorly shaped teeth, serious underweight for body type, anemia, constipation and low resistance to infections such as the common cold and tuberculosis. In the adult population, the

same methods uncover many cases of discomfort, disability, and even death due to ailments or diseases in which faulty diet or bad food habits play a contributing or a controlling part. Inadequate milk consumption by children and adults, the use of too few fruits and leafy and other vegetables and in some localities a decided underconsumption of meat and eggs are also shown. In most cases inadequate consumption is accompanied if not caused by inadequate food supply on the home farm.

Such conditions have their roots in a variety of causes, including lack of a mental picture of the well grown, healthy child, lack of understanding of proper body functioning, ignorance of the relation of diet to growth and health, and consequent indifference to problems connected with the food supply, food selection and food habits training. In some sections a traditional agriculture and an economic structure based on the raising and financing of the cotton, tobacco or sugar crop give rise to fundamental problems of land tenure, housing and income that vitally affect the food supply, living standards and health of thousands of farm families, both white and black, and keep them so close to the nutritional border line that deficiency diseases like rickets and pellagra are extremely common.

Discussions and demonstrations in the foods and nutrition project cover such topics as food needs of the family, with special reference to expectant and nursing mothers and children of various ages, contribution to the diet of the familiar foods; proper preparation of the various food groups, such as milk, vegetables, fruits, meats, eggs, and cereals; meal planning, and simple table service for the home and for the community gathering; the building of good habits and ways of overcoming food dislikes. Because of small cash income and distance from market the diet of the farm family is likely to be restricted in variety far below the standard for optimal health, unless milk, vegetables, and fruit, poultry products, and sometimes

meat, are produced at home; and so the nutrition program promotes also the raising of an adequate food supply on the farm, and the canning and storage of foods against the non-productive months. These recommendations conform to a budget based on nutritional needs and intelligent buying of foods that are not raised on their farms.

To make nutrition teaching concrete and to stimulate to action, extension nutritionists as a group have adopted several standards which serve to coordinate the entire project. The food selection score helps in planning and checking the daily meals, and serves as a basis for the formulation of local standards for the farm food supply and the food preservation budget. A set of "points to work for in children," or the outward signs of good growth and nutrition, is based on a standard formulated several years ago at our request by the American Child Health Association, and published by them in a booklet called *Signs of Health in Childhood,* embodying the best information available at that time. The studies leading to the compilation of this publication undoubtedly helped to stimulate subsequent investigations on the relation of skeletal measurements to body weight and other points which have so materially altered certain hitherto accepted criteria of child nutrition.

Units of food and nutrition work for adult groups are usually organized in a series of from four to eight or more meetings held at monthly intervals. Reports are made of work done, new matter is presented by lecture, discussion and demonstration, and individual and community problems are talked over. Appropriate home activity is expected of each member, and the group frequently undertakes some definite community service in line with the project. Newspaper notices prepared by agent and local publicity chairmen embody subject matter skilfully hung on local news pegs, and spread the influence of the work. Window exhibits and posters may also be used. Because the Extension Service teaches as much for the example

of the learner upon his neighbor as for the direct benefit to himself, the influence of a local extension group reaches into many homes outside its actual membership. The series of meetings is usually climaxed by a county achievement day open to visitors, in which all local groups take part by presenting reports and making exhibits, and often by original dramatizations of subject matter.

In some states the home demonstration agent carries on all teaching and demonstrations with the local homemakers' groups, which may number from eight to twenty or more. In most states, however, part or all of the instruction is presented by the local leaders, who are selected women given special training in subject matter and methods by the nutritionist and supervised by the home demonstration agent. Local leadership makes it possible to conduct a larger number of extension activities in the county than is the case when the agent attends all meetings; it also develops a high type of responsibility on the part of a large number of local women. While not flawless, the local leader plan has already passed its experimental stage in extension work, and is developing a quality of discrimination and initiative in nutrition activities difficult to secure by any other method.

As the child goes out into the community, the foods and nutrition program of the organized farm homemakers follows it, to insure a properly packed school lunch taken from home, and encourage the provision of one or more hot dishes at school; to encourage adequate health examinations; to promote and not seldom to demonstrate adequate health education methods; to sponsor and assist with preschool clinics, and to encourage other forms of community health service. An adequate community food supply and sanitary handling of food materials in local stores is a corollary to the home program.

The following figures from the annual report of the Kansas nutritionists for 1930 illustrate the nature and scope of a program in foods and nutrition developed

under the continuous leadership of two strong workers in a state well organized for home demonstration work. They might be matched from several other states.

Portions of the project were carried in 33 home demonstration agent counties, with a total of 1,880 method demonstrations attended by 34,000 persons. Three hundred and twelve general meetings and 205 meetings on trains and at special events brought the total attendance up to 60,000. Eighteen counties carried food selection and preparation, 10 child feeding, 11 menu planning, 14 garden and nutrition, 4 dairy products utilization, and a number special 4-H club activities. Five hundred and seventeen communities were reached and 692 local leaders were trained by nutritionists and agents at 223 local leader training meetings. Window exhibits were set up by local leaders in many communities, following a plan drafted by the nutritionist. Methods of child feeding were improved in 2,140 recorded cases; some 2,000 mothers planned food budgets, more than two thousand improved the packing of the school lunch, and 218 schools served hot lunches following extension suggestions to some three thousand rural children. In seven counties the extension groups alone or in cooperation with other organizations, sponsored 19 preschool clinics, attended by 1,150 rural children. State fair panels were prepared to emphasize the importance of these clinics. One hundred and ten different circular letters were sent to leaders in the project to the number of 31,780 copies.

Special foods and nutrition activities enrolled 2,290 4-H club girls. Growth work was emphasized with these girls and with other boy and girl club members. With the cooperation of state and county health authorities, and other professional workers, county and state 4-H health contests, based on health examinations and records of food and health habits were held for these youngsters. Records show that 99,800 persons were reached in some definite way by the foods and nutrition

project, exclusive of those who saw fair exhibits and read articles connected with this work.

Thus the Extension Service, under the leadership of its nutritionists, holds up the picture of the well-grown child with his body in splendid functional condition, as an end product of its nutrition program, and directs the thoughts and activities of rural people to the farm and community food supply, the food habits, the home feeding program, and the nutrition and health activities of the community which will contribute toward raising the children of the present nearer this ideal, and shaping toward it the children of the future. It cooperates with every group and agency in the rural community which can help in reaching this goal.

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Extension Service, Washington, D. C.

MIRIAM BIRDSEYE,
Extension Nutritionist.

The American Red Cross

The Nutrition Service of the American Red Cross had its inception in war needs. During the World War, when the American National Red Cross undertook the organization of base hospital units, it was found necessary that each unit include a trained dietitian. Accordingly, early in 1917 a National Committee on Red Cross Dietitians Service was organized to work with the Bureau of Dietitians Service. The committee was composed of women prominent in the field of home economics. The duties of the committee included setting up standards for Red Cross enrolment, passing on qualifications of applicants, securing women trained in home economics to serve as dietitians in the Army and Navy, and with the American Red Cross Commission overseas, and securing dietitian-instructors to give food and nutrition courses in this country. These

courses were given to help meet the need for education in food conservation during the war.

At the close of the World War, there came a new conception of the service the American Red Cross might render through nutrition education. In July, 1921, the Nutrition Service of the American Red Cross came into being as an outgrowth of the work of the Bureau of Dietitians Service. Since that date the service has continued to maintain the enrolment of dietitians as a reserve; in addition, since 1921 it has contributed increasingly to individual and community health and well-being through Red Cross nutritionists who are employed by Red Cross chapters to conduct chapter nutrition programs. Through these chapter programs, the American Red Cross has an opportunity to be of service where malnutrition exists or where there is need of nutrition education.

In determining the nature of its program, the executive committee of the Red Cross chapter usually studies the needs of the community or appoints a committee to undertake such work.

The chapter, through groups of public-spirited citizens under the leadership of the Red Cross, starts a nutrition service with the idea of continuing the work until it has become permanent, is taken over by proper public authorities, and maintained from public funds.

The nutrition program of the Red Cross is essentially educational. The aim is to afford each community the type of nutrition service needed. The activities undertaken are determined by local needs, the facilities, the resources of the chapter, and the possibilities of the situation. A complete program for the community includes:

Instruction of the expectant mother concerning the food requirements of this period.

Preschool work including individual and class instruction to mothers.

A school program including instruction of all school

children, teachers and mothers concerning food and its relation to health.

Personal service in homes where illness or malnutrition exists or where health is needed in food selection and food budgeting.

Community education in nutrition, introduced by courses given to specific groups in food and nutrition, and continued by means of lectures on the relation of food to health, exhibits and demonstrations at meetings, and advice given to individuals needing special help.

The prevention of malnutrition begins with the instruction of the expectant mother; she is advised as to the kind and amount of food necessary to insure proper nourishment for herself and her baby. Such instruction is given in close cooperation with the physician.

The preschool work includes individual instruction to the mother concerning the requirements and selection of food for the preschool child.

The school program includes graded nutrition instruction to school children, boys and girls, concerning food and its relation to health. Instruction is given to teachers concerning their own food and health requirements and the requirements of children of school age. Help is also given in devising ways of relating nutrition activities to other subjects taught. Follow-up visits are made to the home for children whom the physician considers malnourished. As part of the school program hot lunches are established; mothers' classes are organized; conferences are held with parents, teachers and pupils; talks are given to parent teacher associations and other groups concerned with the nutrition of children.

A special course is offered to teachers covering thirty to forty-two hours of class instruction under the nutritionist. In some instances normal schools, colleges, and universities grant extension credits to individuals who have satis-

factorily completed this course. In 1924 one school gave credit; in 1930 there were thirty schools giving or offering to give credit for the course.

Nutrition instruction is offered to mothers and others. For those who have the time an eighteen-hour course is offered. It embraces a study of foods and the factors that must be considered in the selection of an adequate diet, the aim being to enable those interested to make a choice of food suitable to their needs and to the needs of those under their care. Red Cross certificates are awarded for the course when it is satisfactorily completed. For those whose time is limited, two unit courses covering six hours and twelve hours each are offered.

Where illness or malnutrition exists or where social or economic factors interfere with the sound nutrition of the family, personal service is given by the nutritionist either through consultation or by visits to homes. When such assistance is given, the nutritionist works in close cooperation with the medical, health, and social service groups. This service is available to all in need of advice regardless of economic status.

When a chapter undertakes nutrition work in a community it creates a nutrition committee composed of leaders, among the local people. The following are among the individuals suggested to chapters as desirable members of the committee:

Representative of the medical association
Representative of the dental association
County health officer
Home economics supervisor or teacher
Home demonstration agent
Superintendent of schools
Representative of the parent teacher association
Representative of the women's club, Rotary, Kiwanis, and so forth

County or municipal official, county commissioner, member of council, and so forth
Chairman of branch nutrition committees, parents who know the nutrition problems.

When a program is carried out by the chapter and some other agency as a joint service, each helping to finance the work, the committee is composed of representatives from the participating groups. The nutrition committee is responsible for the organization and development of the local program. Advice is given the committee through correspondence and through supervisory visits by the nutrition service. The director of nutrition service is responsible for the technical service in the chapter.

The program is carried out by full-time or itinerant nutritionists. The full-time workers serve the chapter continuously and the itinerant worker three months or more annually. The latter service is carried out when chapters cannot afford a full-time program or hope eventually to have a full-time service.

The Red Cross nutritionist must be a graduate or accredited by a school of home economics, who has majored in food and nutrition. She must have a thorough knowledge of the science of nutrition, a social and medical point of view which will enable her to make practical application of nutrition in both health and sickness, ability as an organizer and teacher, and experience that will equip her for the work undertaken. The appointment of the nutritionist must be approved by the director of nutrition service before assignment to duty by the chapter. Annually, Nutrition Service holds a ten-day training school at national headquarters and branch offices. All incoming nutritionists, also itinerant and full-time nutritionists, attend. Red Cross chapters desiring the services of a nutritionist make application to national headquarters or branch offices.

During the year 1929–1930 Red Cross nutritionists gave the Red Cross nutrition course to 685 teachers; regu-

lar graded nutrition instruction to 160,342 school children; class instruction to 10,615 adults; and regular instruction to 24,000 persons through home visits, consultations and clinics (12,000 were school children). During the year, following the work occasioned by a disaster, the American Red Cross financed some nutrition programs in chapters where there was a need. In view of the opportunity and responsibility of the chapters in meeting the nutrition needs of communities, the Committee on Resolutions at the 1930 Annual Convention passed the following resolutions:

WHEREAS, the importance of nutrition is recognized; and
WHEREAS, nutrition service is possible with so little effort on the part of chapters; and
WHEREAS, such service represents one of the finest contributions to our present day life, be it
RESOLVED, that all chapters investigate the possibilities for Nutrition Service to be added as a part of their Red Cross activities.

American Red Cross
Washington, D. C.

CLYDE SCHUMAN
National Director, Nutrition Service.

STATE AGENCIES

Massachusetts Department of Public Health

The Massachusetts Department of Public Health was one of the first to realize the value of nutrition in a public health program by appointing in October, 1917, a nutritionist to its Hygiene Staff, now called the Division of Child Hygiene. Her duties, as suggested by her title, *Health Instructor in Foods,* were educational in character. The nutrition program still is educational in its aim.

At present there are six nutritionists, one being the

consultant and supervisor. These six workers fit into any part of the program when necessary though each one is responsible for certain state-wide activities. The aim is to impress upon communities the need for nutrition in a well rounded public health program, to stimulate them to want this service, and to plan with them how and by whom the work should be developed.

This state nutrition program, with its definite aim, functions in different ways. Two types of programs are being sponsored in two communities that became interested in part-time nutrition programs two years ago. In both, the nutritionist is provided by the state; each program continues for a period of three months, the worker returning after the same length of time to give a month's follow-up.

In one of the programs the nutritionist, cooperating with the school nurse, visits the homes of all malnourished children in the community as selected by the school physician in his examination. Material for the classroom teacher is provided so that more nutrition may be taught through health education and all children thus reached. The parents receive nutrition instruction through home visiting, newspaper publicity, exhibits, and talks to various groups. The school system is not yet ready for teachers' classes but this may be an outgrowth of the program. The Agricultural Extension Service has organized mothers' classes. The nutritionist and home demonstration agent cooperate so that the same message reaches the home from different angles.

The second community program uses all the children in two schools as the experimental group, with another group serving as a control. The nutritionist teaches once a week in the classroom, furnishing material for the teacher to carry on the lessons in her absence. Home calls are made and mothers' meetings held. Replies to letters sent to the mothers asking them to indicate the phase of nutrition in which they are most interested are discussed

at arranged meetings. Bulletin boards and suggested reading for the teachers have proved successful educational mediums.

Another nutrition activity is centered in the state-wide Ten-Year Program for the prevention of tuberculosis, instituted seven years ago with the school as the point of contact. The original plan of the clinic was to examine only those children 10 per cent or more underweight, those who were known to be tuberculosis contacts, and those who for some reason might be suspected of having the disease. After three years' work with the compilation of statistics on the relationship of underweight and tuberculous infection, results seemed to indicate that the condition of underweight did not predispose to tuberculosis but tended to be a result. Plans were changed and all children whose parents consented were examined. As this work seemed to duplicate the work of the school physician, however, a third plan, the present system, developed.

The Von Pirquet test is given to all children whose parents consent to it; those with a positive reaction are X-rayed; and those with a positive X-ray are thoroughly examined by specialists in tuberculosis. A nutritionist is present at this examination period. The individual conference method is used at which posters are displayed and printed nutrition material is explained and distributed. Exhibits are often used depending on the amount of room available. A very complete history of habits pertaining to nutrition is made, recommendations written out, and a copy given to the parent. In addition a copy is given to the school nurses for her follow-up during the ensuing year, and one kept on file for reference and comparison at the time of the follow-up clinic held the following year. Where there is no local nutritionist the school nurse is responsible for the follow-up between clinics.

Since the active cooperation of parents is fundamental to the success of any health program, a special effort is made to encourage parents to attend the conference so

that the nutritionist may explain the recommendations to them. The percentage of parents present varies with the type of the community; industrial towns have a lower percentage because of working mothers. It depends also upon the activity of the local nurse in doing advance work, her home contacts, her powers of persuasion; on publicity, and on general educational methods. Attendance is decreased among foreign groups because of their difficulty with the language. In a few instances all mothers attended; the average, however, is about 50 per cent.

As an interview is impossible in every case on examination days those children not seen at the clinic are interviewed at home. The home call has its advantages though it is time-consuming. There is a closer bond between mother and worker and the difficulties consequently are lessened; it permits a good demonstration which may be necessary in order that instructions may be adapted to the living conditions of that particular family; interest is not diverted by discussions of others who are present in the larger group; often sidelights on the situation are obtained which otherwise would have been impossible. A report of results of the home visit, with recommendations, is made to the local nurse.

The Follow-Up Clinic returns to the community each year after the first clinic has made the initial examination. Nutritionists are present for individual conferences with parent and child, but the local nurse does the follow-up where no nutritionist is available. Eighty-two per cent of the children had improved during the last year according to the physicians' examinations. Conferences with parents, written instructions, and posters of interest to children are means of carrying the stimulus into the home.

Another activity in which the state nutritionist is engaged is the preschool program. In this, as in the school program, the method is a demonstration to interest the community in providing its own nutrition service for the preschool child. Several organizations having preschool

programs are now seriously interested in such a possibility. One town is employing a part-time nutritionist for preschool work only.

For established well-child conferences with a physician in attendance (of which there are 76 in the state) a state nutritionist now is available. Posters, exhibits and individual conferences with the parent are used as means of education. Although the local nurse in charge of the conference can benefit most from observation of the technique and methods of the nutritionist as well as from subject matter presented, she is often so busy with the routine of the conference that educational work must be carried on by a special conference between nurse and nutritionist. If time permits and the desire for the development is created, the assistance of the nutritionist in home follow-up of difficult nutrition cases will be another service offered to the community.

Various professional groups can deal with children effectively only by having a working knowledge of nutrition and a definite conception of its relationship to the whole field of the care, health and development of the child. Classes for these groups are organized as the demand is made evident. In six lessons of one hour each, careful discrimination and selection of practical material is required. In cooperation with the state department of education, nutrition courses are taught at Fitchburg Normal School Summer Session. These students, vocational home economics, academic and evening practical arts teachers carry nutrition into their winter program, reaching the school age and parent groups.

This year, from every nurse in the state, we are asking for a compilation of figures on malnutrition, based on the school physician's diagnosis, not on the height-weight-age relationship. We hope these comparative state-wide figures will serve as an incentive to each community to decrease its percentage of malnutrition by focusing its attention on the conditions existing.

To lessen the incidence of malnutrition, close cooperation with home economics teachers and extension workers for adult classes is recommended. A well organized school lunch program, utilizing the opportunities for the teaching and practice of good health habits, is needed wherever children are obliged to eat their lunch away from home.

Consultation service for summer camps, state sanatoria, individuals desiring nutrition information, school lunchrooms, communities interested in nutrition programs, and tuberculosis clinics, adult and child; the publication of teaching material in leaflet and poster form; talks to various groups; all are a part of the educational nutrition program carried on by the six nutritionists in the Department of Public Health.

The acquisition of nutrition facts with interest keen enough to cause necessary habit changes on the part of everyone in each community may be a stupendous undertaking. With the provision of more trained nutritionists in local communities to care for the school programs as well as adult, preschool, and prenatal instruction, however, we may hope to attain the objective of bettering individual and community health through improved nutrition.

Massachusetts Department of Public Health
Boston
ESTHER ERICKSON BALDWIN,
Consultant in Nutrition.

New York State Department of Health

Years ago when nutrition work was in the early stages of recognition, the late Hermann M. Biggs, M.D., realized that at least one worker trained in nutrition should be on the staff of the New York State Department of Health.

One of the first assignments for this new worker was to help in cases where the medical history of department employees showed a need of dietary advice and follow-up.

The publication of literature for free distribution such as diet cards for children of different ages and for the expectant and nursing mother next was made possible.

The nutritionist now dovetails her services with those of the other staff workers, giving instruction in nutrition to groups of graduate and undergraduate nurses throughout the state, working on some of the health consultation clinics, and going to state institutions for children in order to make dietary studies and to help with their dietary problems when requests have come for such assistance. From time to time, in various localities, leaders of women's groups have arranged for series of classes to be conducted by the state nutritionist. Such a series of lessons covers the fundamentals of nutrition, with attention to the present status of our food practices and our problem of improving them. The greatest emphasis has always been laid on the importance of suitable diet during pregnancy, lactation, and the preschool period. A group of four lessons seems to be most satisfactory as a unit. In some places these classes have been arranged year after year; this has meant that more and more advanced work could be given and that a greater number of people have become nutrition-conscious.

Without imposing supervision the nutritionist has aided and stimulated local workers in the field whenever possible. She has helped with the planning of local programs, has suggested possible openings to people seeking work and has found workers where communities were looking for them; acting in short as a clearing house of information and assistance in developing local community work.

Besides lecturing, teaching, and demonstrating, assistance has been given each year in preparation of exhibits for state and local fairs, and arranging for Child Health Week Demonstrations, window exhibits, and the like.

Many radio talks and technical papers have been pre-

pared. A large number of letters are written daily replying to inquiries. Copies of department publications have been sent to thirty-four states and nine foreign countries during 1930. Visitors from other states and foreign countries have been received at various times.

It would be difficult to estimate correctly the number of people influenced by all these means. It is planned within a few months to train a group of local leaders who are nurses, giving them an eight months' course in nutrition which they in turn will be expected to pass on to other nurses in class work the following year. The idea is not to make nutritionists out of nurses, but to give them instruction which will integrate itself with the rest of their public health education work.

What is most needed today is more local field workers in nutrition. We have health department organization locally throughout the state. Nurses and physicians are largely carrying on this work as they should, but trained nutritionists are also needed.

No one can deny that people are at the moment health-minded. Advertising, if nothing else, makes them so. How important, then, it is to help them evaluate the various factors influencing health instead of letting them learn by trial and error that this fad and that scheme have small merit. It may be that we owe some debt to the faddist and the propagandist in that, like a brass band, they attract attention and arouse interest. May it not be our job to capitalize that interest now, showing people where science leads, thus bringing, as Professor Henry C. Sherman has expressed it, to a much larger proportion of our people that full measure of health and vigor which only the more fortunate now enjoy.

New York State Department of Health
Albany, New York

Jessie G. Cole,
Nutrition Specialist.

Pennsylvania Departments of Public Instruction and Welfare

In November, 1919, the Superintendent of Public Instruction of Pennsylvania appointed a nutritionist. He charged her with one commission only: to raise the standards of applied nutrition in the homes of the school children of Pennsylvania.

The prerequisite for such a practical, far-reaching movement was a survey of normal and secondary schools; of teachers in service; and of other agencies working with the health of the school child. As was to be expected in so new a subject as nutrition, further education of these groups was necessary if the newly acquired information was to be applied in school and home. Naturally the place to begin was in the thirteen state normal schools, the teacher-training centers of Pennsylvania. Normal school principals did not see the need of instruction in nutrition, and were reluctant to add to an overloaded curriculum.

In certain normal schools, however, the food department was working inharmoniously and was unsatisfactory to student and faculty, and the budget trend was ever upward. These departments presented basic problems, the solution of which might prove the need of nutrition education as a curriculum requirement. The nutritionist, having visions of a state-wide education program, offered her services to put these kitchens on a business basis. The offer was welcomed. The results (reduced expenses, better food, increased efficiency) were gratifying to both the state department and the schools and led to calls for capable food administrators.

With nutrition instruction still in mind, the nutritionist sent calls to the leading home economics colleges from Minnesota to the Atlantic for trained nutritionists having personality and tact, who had had successful food managerial experience. Through the intelligent cooperation of officials of these colleges, splendidly qualified young women were secured. The professional status was that of head of a

department, and the salaries were commensurate with the responsibility. These salaries, at first regarded as high, were cheerfully paid when the first appointees proved their ability to harmonize forces, to please the student body, and to save a year's salary during the first six months.

On one occasion the state budget officer noticed that the raw food cost of three normal schools greatly exceeded that of the other schools, and asked for an explanation. Two of these schools had not appointed a nutritionist. In the third, where the nutritionist had left the month before and had not been replaced, the cost of raw food had soared $1,000.

While normal-school graduates were teaching the children in grade schools and rural communities how to form correct food habits, the state nutritionist was making a special effort to assist teachers and nurses in service. These efforts were aided by a six-weeks' summer course in nutrition offered at Pennsylvania State College for three consecutive summers. The course, given by the state nutritionist, was open to grade teachers and nurses; also, by the contributions of the American Child Health Association, to normal school students and teachers in service. This service which it rendered through its representatives, by personal correspondence, and by attractive health literature, proved both inspiring and helpful.

Other channels which offered the state nutritionist opportunity to promote an active interest in the program were addresses before national and state educational meetings, men's and women's organizations, teachers' institutes, and community gatherings. Further interest was awakened through contributions to state and national educational journals.

By way of food management and the food budget, nutrition instruction gradually found its place in the normal school curriculum, first as a separate subject and later as a part of health education. Finally nutrition was recognized by the Association of the faculties of the Pennsylvania State Normal Schools, now called State Teachers Colleges,

and the nutritionist was privileged to conduct sectional meetings at the annual conferences of the association.

The nutritionist was ably supported in her program by the state parent teacher association, the state federation of women's clubs, and the League of Women Voters. Not infrequently these groups aided the state nutritionist to interest the school man who did not favor the program.

Upon request to the superintendent of public instruction, the services of the nutritionist were loaned to the state departments of health and welfare. These services led the secretary of welfare in 1924 to suggest, with the approval of the governor, that the time of the nutritionist be equally divided between the Departments of Public Instruction and Welfare. A year later the Department of Public Instruction, with full consent of the nutritionist, agreed that she be associated with the Welfare Department but continue to serve the normal schools upon request. In Welfare, as in Public Instruction, the urgent need was the application of business methods to food management.

The agriculturist and the nutritionist together have estimated the per capita requirement of fruits and vegetables, dairy products, meat, and eggs, and have used the estimates as a guide to increase both acreage and production on the institution farm. The plan has been supported by institution officials, and the studies have directed attention to the advantage of increasing the production of those vegetables and fruits most essential to health and decreasing that of the less essential.

An understanding of each other's problems resulting in closer cooperation between farmer and nutritionist has been fostered by state conferences instituted by the agriculturist of the Department of Welfare. At such conferences these groups have discussed mutual problems and determined policies which have made possible better and more satisfactory dietary service to the population.

The nutritionist, in cooperation with the director of rehabilitation, has been promoting a better-health food

program in state penal institutions. Also, she has worked in conjunction with the American Prison Association on better balanced rations for these institutions.

Again, as in Public Instruction, the nutritionist has aided the program by contributions to the official organs of state and national welfare agencies. These articles have dealt largely with food administration.

Child Nutrition, Bulletin Number 22, of the Pennsylvania Department of Welfare, although written primarily for institutions for child care, is extensively used in school and clinic.

The Goal of the Department of Welfare's Nutrition Program is to institute a more efficient and more economical administration of the food department where necessary; to familiarize institution officials with the service the food department can render each division of the institution, and each individual; to improve the nutrition of each patient during his stay in the institution; to interpret nutrition to those leaving the institution, so they may know better how to safeguard their health through correct eating.

Science is constantly demonstrating the relation of correct eating to physical and mental health, and to personal conduct. Nutritionists who have worked with the several departments of a state government have followed the malnourished child from school to the state tuberculosis sanitarium, to the reform school, or to the juvenile detention home, and as such always as a ward of the state. The cost to the taxpayer of such a ward of the state is far greater than the cost of nutrition education in school, institution, and clinic. Moreover the latter fosters accomplishment and fits for society; the former lessens accomplishment and burdens society.

State Department of Welfare,
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KATHARINE A. PRITCHETT,
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COMMUNITY HEALTH AND WELFARE AGENCIES

The A.I.C.P., New York City

In 1905 the report of a survey was published which indicated that a considerable percentage of New York City's school children were malnourished; improper food was given as one of the main causes.

Since malnutrition leads to inability to maintain an adequate standard of living, and since one of the aims of the association from the time of its organization in 1843 has been constructive social work, it could hardly do other, when brought face to face with such a report, than consider a means of educating its families in the importance of selecting food to protect health.

As a result, in 1906, Winifred Gibbs who had been trained in home economics and had a special interest in foods and food economics ae related to health, was added to the staff of the A.I.C.P. By 1913 three more workers had been added. In 1931 there are nine nutritionists, one research worker, the superintendent of the work, and her associates; the present nutrition staff thus numbers twelve and constitutes the Nutrition Bureau of the New York A.I.C.P

In general, the bureau is responsible for all policies that influence the nutrition of families under the care of the A.I.C.P. Its work touches, either directly or indirectly, all activities of the association, whether relief, care of the tuberculous, nursing and health education, dental care, convalescent and country care, or care of the aged. Its plans include both preventive and corrective measures that are carried out through, or in close cooperation with, social workers and nurses.

At all times, the bureau strives to keep before the staff of the A.I.C.P. the importance of good nutrition in constructive welfare work. It attempts to keep coworkers informed concerning accepted new facts that should be incorporated in nutrition teaching. Advice given must in-

clude information as to the amount of money required to provide adequate nourishment for families of varying sizes and for various conditions. Since the A.I.C.P. is especially interested in families with low or moderate incomes, suggestions are most frequently adapted to the needs of this particular group.

This instruction or advice is given through conferences with individuals or groups, and the distribution of leaflets, booklets, posters, and a monthly bulletin of nutrition notes. In these ways, nutrition information is translated into non-technical terms so that every social worker and nurse on the staff may use it as one means of promoting good health in the children of every family visited. In this way, nutrition advice as a preventive measure reaches the five thousand or more families registered with the association. These families contain approximately fifteen thousand children.

The duties of individual workers vary according to the nature of the work of the particular branch to which they are attached.

To the three nutritionists who are assigned to the relief bureau of the association, three types of families are referred, as follows: all children whom the physician considers malnourished are automatically referred through the nursing bureau; individuals needing special diets, such as for diabetes, are referred by nurse or social worker whenever the patient is unable to follow directions received at the clinic; the social worker refers families that find it difficult to plan proper nourishment for the children on a small though adequate wage.

In each instance, the nutritionist reads the case record and consults with nurse or social worker in order to become familiar with the policies they have recommended, because she realizes that only through close cooperation can good results be obtained. She then calls upon the family. One visit is sometimes sufficient to enable her to recommend plans that may be followed up by the social

worker or nurse. More frequently, however, the nutritionist must make from two to four visits per month for four to six months in order to produce satisfactory results in terms of good nutrition.

Each of the three nutritionists does such intensive work in from one hundred to one hundred and fifty families yearly, thus helping from five hundred to eight hundred children a year. Studies of results at two different times and in two parts of the city showed that about 75 per cent of the errors of diet and health habits that were interfering with the nutrition of children were corrected by means of this intensive work; and that 80 per cent of the good habits formed were still retained one year after the nutritionist's visits to the family had ceased. As the many duties of other workers on the staff leave them too little time for the intensive work required to correct malnutrition, many of these children would have a poor chance of becoming strong and vigorous without the service of a nutritionist.

In each of the two health centers operated by the A.I.C.P., there is a nutritionist who interviews and advises mothers who bring their children to the clinic for physical and dental examinations. She tells each mother how to adapt the recommendations of the physician to her particular home and economic situation, outlines a daily health routine, and encourages strict adherence to good food and other health practices.

All malnourished children who come to these clinics have additional attention. In one center they are helped by means of class instruction, supplemented with a few home visits; in the other, the nutritionist consults with the nurse who carries the instruction into the home. Each of these workers improved the nutrition habits of at least two hundred mothers and five hundred children per year.

Four nutritionists are engaged in developing educational nutrition programs in the community. The work is planned to carry the general message of nutrition to a

large number of people. Various projects are used, such as a window display contest among grocers, monthly talks in some of the schools, intensive drives to encourage children to have dental defects corrected, poster and essay contests, debates, plays, films, and the distribution of literature.

At present, intensive drives for 100 per cent good teeth are in progress in six schools. Since these drives are always accompanied by talks and leaflets that urge a good diet as well as dental care, and as the average enrolment in a school is about one thousand, it follows that six thousand children are receiving nutrition advice through this method alone.

Children in eleven other schools are striving to get their names on an honor roll that appears weekly in one of the leading newspapers of the city. The column, headed *Who's Who for Better Teeth,* contains names of children whose dental work has been completed during the week, as well as a paragraph on the importance of diet, daily care, and the dentist in teeth preservation. Just recently, this program has been extended to include the preschool child.

Mothers who need rest and fresh air are sent with their small children for a period of three weeks to Caroline Rest, an A.I.C.P. all-year-round fresh air home. Each week a nutritionist demonstrates to these mothers such subjects as diet during pregnancy, during lactation, and during the preschool age. Each mother has an individual conference during her stay concerning her particular home and economic problems. Recommendations are sent to the social worker or nurse who has referred the women for convalescent care so that she may offer follow-up encouragement if necessary. About five hundred mothers and fifteen hundred children are thus reached during the year.

During the summer, between five thousand and six thousand mothers and children who are especially in need of fresh air are sent to twelve camps, either at the shore

or in the mountains. The diets served at nine of these camps are directly under the supervision of dietitians. At the remaining three units, the supervision is of a more general nature and confined to conferences between camp director and the superintendent of the nutrition bureau.

In addition to its nutrition service, the A.I.C.P. cooperates with Columbia University in research in the field of food economics or concerning some problem that will have a direct bearing upon the recommendations for adequate but low-cost diets. The publication of this research and of other material that relates to nutrition of children provides literature that is widely used by social agencies and educational institutions throughout the country.

In addition to services as described above, the work of the nutrition bureau includes talks to groups of nurses, social workers, and students outside of the association; supervision of student volunteers; and consultation upon request with organizations having no nutritionist. The A.I.C.P. also cooperates with other agencies in promoting nutrition through community projects and the publication of standards.

The work of the bureau is financed partly through the general funds of the association, partly through a donation from the Milbank Memorial Fund, and partly through the funds for various A.I.C.P. activities, such as those for the Columbus Hill and Mulberry Health Centers, for the Committee for the Relief and Prevention of Tuberculosis, and for summer camp work.

N. Y. A.I.C.P.,
New York City
LUCY H. GILLETT,
Superintendent, Nutrition Bureau.

The Community Health Association of Boston

The visiting nursing organization of Boston, called the Community Health Association, has a staff of 150 nurses,

seven nutrition workers, including the supervisor, three mental health workers, one orthopedic supervisor, one maternity supervisor, and one social hygiene supervisor. Its scope is the bedside nursing, and the communicable diseases, orthopedic and maternity work of the city. In all its contacts it stresses corrective work and education for the entire family.

The association is supported by income from endowment, by contributions and by payment for service. No charge is made for the educational services of the association, including those of the nutrition department.

The present nutrition program of the Community Health Association has evolved during the amalgamation of several organizations. It began in 1918 when the Dietetic Bureau was formed to stimulate an interest in the nutrition of children among the various social agencies of Boston and to advise them concerning their nutrition problems. At first, there was one consultant and one field worker for demonstration work. Later several nutritionists were employed to work with malnourished children that were referred by social workers from various organizations.

In 1920 the Dietetic Bureau united with the Baby Hygiene Association, an organization caring for well babies and preschool children, and the work of the nutritionists became concentrated on the preschool group. Weekly conferences for preschool children were held at which the children were weighed, measured, and examined. The nutritionists also visited the mothers of these children in order to stimulate them to carry out the recommendations of the clinic physician and to give advice regarding proper food and health habits.

New developments came in 1923 with the merger of the Baby Hygiene Association and the Instructive District Nursing Association, an organization that had done the visiting nursing in Boston since 1886, to form the present organization. A generalized plan of work was adopted for

both nurses and nutritionists, the latter now discontinuing their visits to all preschool children and again working only with those who were malnourished. They also acted as consultants in other nutrition problems to the 125 staff nurses.

This plan of work continued until the winter of 1924 to 1925 when the well-baby and preschool work was assumed by the city board of health.

From this time there has been a well defined policy in which the nutritionists function largely in the capacity of consultants to the nurses. Since the nursing staff visits approximately twelve hundred homes each day, it is obvious that they are in a position to do the family teaching. The whole program of education work in nutrition has been based on this requirement for home teaching by the individual nurse.

To fit the staff nurses for the rôle of teachers of nutrition, extra nutrition training seemed necessary to supplement that received in the hospitals, where the emphasis in dietetics is laid largely on dieto-therapy rather than normal nutrition. A series of nine lectures, centering about normal nutrition, is given by the nutrition supervisor to all new staff nurses. Three of these are on diet in pregnancy and lactation, one is on racial diets, and the others are given over to discussion of the dietary standards of families with low incomes. These lectures are all given from the public health point of view and present practical methods of giving nutrition knowledge to the families.

Monthly half-hour conferences between nurses and nutritionists are held in the fourteen district offices to further develop the plan for staff education. Busy staff nurses cannot keep themselves informed of the advances in all fields, so an effort is made in these conferences to present new developments in the field of nutrition. Special problems that have arisen are also discussed, as well as cases presenting good points for helpful criticism. Among the

subjects recently discussed are "Sources of Health Education Material for Teaching," "Recent Research in Vitamin Knowledge," and "Low Cost Family Diet."

Soon after joining the staff each new staff nurse makes two visits with a nutritionist to patients selected by her for nutrition teaching. On the first visit the nurse observes the nutritionist give the instruction, watching especially for her method of explanation. On the second visit the nurse makes the visit and the nutritionist observes her. This method has been quite successful in stimulating interest in other nutrition problems. The nurse can always ask the nutritionist to visit with her on any problem for the nutritionist is always available for consultation. The nurse's records indicate whether or not she is taking advantage of her opportunities to do nutrition teaching.

A certain number of families are carried by the nutritionists themselves. These are referred either by staff nurses or social workers from various social agencies in the city. In the beginning these cases were largely those of prenatal care during first and second pregnancies, and patients referred for correction of faulty food habits, dietotherapy, correction of family diet, and income management. Since the program of staff education in nutrition has been extended, the nurses have been able to recognize and correct faults in diet and hygiene resulting in poor nutrition. They have used the nutritionist as a specialist in nutrition and home management for problems beyond their scope. In the last year the nurses have done the greater part of the routine teaching, leaving the nutritionists free to devote much of their time to families requiring help in income management.

The cooperation between the nurse and nutritionist must be, and is, very close for best results. Practically all of the children with whom the nutritionist works intensively are referred to her by the nurse and transferred back to her when the nutritionist has completed her visiting.

Mothers' clubs for expectant mothers provide further opportunities for nutrition teaching. Each nutritionist attends two of these classes weekly, at which she talks to the group on some phase of nutrition or household management. Among the subjects discussed are Prenatal Diet, Diet for Abnormal Conditions, Daily Schedule of Work, and Budgeting the Family Income. In addition to the talks, instruction is given on individual problems. In 1930 there was a total attendance of 6,642 at these clubs. Refreshments served at the club are all planned with a view to improving the food habits of the patients. It is much easier for patients to be convinced of the desirability of certain foods after they have eaten them and been shown how to prepare them.

Another important feature of the nutrition service of the Community Health Association is the preparation of budget material for use with low income families. This budget is revised twice a year. This service is available to other agencies and is used by most of the private and some of the public relief organizations of the city. There are nearly a hundred agencies on the mailing list, many from outside Massachusetts.

Among the duties of the nutrition supervisor are those of preparing budget figures and teaching material and giving lectures to the new staff nurses. She does some visiting in the field and supervises the other nutritionists. In addition she collects and prepares subject matter for recipes, menus, and other aids for home teaching. Close contact is maintained by means of individual discussions and bi-weekly staff conferences where methods and problems are discussed.

It is always difficult to measure in concrete terms such an intangible thing as educational work, but the following developments seem to indicate the value of the nutrition program in the association:

Increased interest of the nurses in nutrition teaching, their own food habits have improved, they are do-

ing more outside reading on nutrition, and they are taking more interest in the nutrition lectures

A well developed tendency on the part of the nurses to regard nutrition teaching as part of the content of their visits and to refer problems to the nutritionists more intelligently

Increased use of the nutritionist as a consultant

Improved quality of the prenatal visit

Better teaching carried on in the mothers' clubs

Response of patients to nutrition teaching

Community Health Association, Boston

BLANCHE DIMOND,
Nutrition Supervisor.

The East Harlem Nursing and Health Service

East Harlem is a small but highly congested district on the upper East side of Manhattan in New York City.

Nutrition work began in the Health Service of East Harlem with the organization of this particular health demonstration in December, 1922. Through 1924, nutrition work (as well as certain phases of public health nursing) was administered as a specialized activity. Malnourished children were found by the pediatricians and referred to the staff nutritionists for rehabilitation, through home supervision and parental education.

The remedial care of the malnourished child, however, soon ceased to absorb the entire interest of the nutrition workers. The attempt to get at the underlying causes, so that malnutrition might be prevented, directed their activities through the various age groups of the families under care, until the ideal approach in nutrition work was found in the prenatal care of the mother, and nutrition teaching began to supplement this as well as all other phases of the health program.

Thus nutrition work ceased to function as a specialized

service to a group of malnourished children and became an integral part of every service offered in the homes, medical conferences and non-medical teaching conferences, or classes.

During this early period, a field study was made of the value of specialization in public health nursing field work as compared with the results achieved by the general or district worker. The results of this study pointed unmistakably to the fact that teaching in the homes was strengthened when responsibility was vested in a single district worker.

This fact, when considered in relation to the need for nutrition instruction on every visit and in all of the homes, led to a radical departure from established practice in the conduct of nutrition work. The nutritionist's primary responsibility became that of a teaching supervisor, whose aim is to enrich the content of the field nurses' work with individuals in the homes by giving her materials for health instruction based upon nutritional needs. She does not aim to make nutritionists of public health nurses but rather to help them to become more effective health workers through their ability to interpret and use the specialized knowledge gained by research in nutrition, just as they are able to apply facts gleaned from the fields of sociology, psychology and mental hygiene.

The program of the health service enlists the cooperation of the supervisory group and the field staff in intensive health education so that the home may become the dwelling place of normal, healthy individuals. To this end the cooperation of the family members is sought while the complex needs of the child determine largely the content and method of health teaching. Thus the scientific contribution of the nutritionist, as that of the pediatrician, the mental hygienist and case worker, the teacher, and public health nurse, is a factor stressed in the health program for the building of child health, home and community interests.

The teaching supervisors (nutrition, educational method, nursing and mental hygiene) extend their influence beyond the immediate staff and community through the use of the Nursing and Health Service as a training center for public health nurses, field nutritionists, and certain other allied workers.

The nutrition supervisor outlines her responsibilities as follows:

Training responsibilities are to discuss with the staff members and students the place of nutrition work in a health program and the specific content of health teaching in each branch of the service. This includes the nutritional needs of the mother and infant, the neonatal and postnatal periods; growth and development of the infant, from birth to one year, of the preschool child, one to six years; the nutritional needs of acutely ill patients, of convalescents; other special disease conditions, tuberculosis.

Integration of health teaching into the educational program for the home, clinic and class services through an understanding of the needs of the field is accomplished by means of: individual conferences with the workers concerning specific family problems; observation and work with staff members in the homes, in clinics, and classes; group conferences to discuss problems, content, and plan for family nutrition work; actual participation in every phase of health teaching; study of records to determine the worker's grasp and understanding of her task in terms of the family situation, response, and use of teaching materials, the worker's strength and weaknesses, and the effectiveness of her plan and methods of work; constant analysis, evaluation, and study of methods, plans and results in relation to objectives and standards; consultation and participation with other supervisors in the student program.

She assists the staff in carrying out remedial programs for malnourished children while stressing the more con-

structive values of prevention of malnourished conditions, and health building.

The scope of opportunity for nutrition work is indicated by the figures quoted. Malnourished children, as well as acutely ill persons, and behaviour problem cases must receive attention but the teaching and supervisory staff aim to focus the workers' attention upon normal growth and development, and the prevention of abnormalities rather than upon exclusively remedial measures.

The Nursing and Health Service reaches annually about three thousand families: 2,890 was the yearly average number reached in 1928 to 1930. In these families a yearly average of 1,304 infants under one year of age, 2,456 preschool children, 1,361 school children and 2,249 adults (including 1,289 maternity cases) were registered for some type of nursing care or health instruction. The average number of yearly contacts with these individuals was 48,218.

Approximately three-quarters of all contacts are made in the homes by the district staff and the remainder in attendance at medical and other health conferences. The latter average 772 sessions yearly with a combined attendance of 12,650. The Nursing and Health Service aims to make a complete health examination the basis for individual health work: 50 per cent of all infants under active home supervision at the close of the last fiscal year, 63 per cent of the preschool children, 32 per cent of the school children, and 24 per cent of the adults had been examined in the medical conferences administered by this agency.

The Nursing and Health Service is administered by a nurse director and associate director. The supervisory staff includes a general administrative nurse supervisor who is assisted by three senior staff workers, a supervisor of nutrition work, a supervisor of educational methods, a supervisor of mental hygiene and social case work, and a supervisor of student activities.

The program represents the interests in nursing, health and social activities for the East Harlem district, of four supporting agencies: The Henry Street Visiting Nurse Service, The Association for Improving the Condition of the Poor, The Maternity Center Association and St. Timothy's League. A Board composed of members from these four agencies with specialized advisors from the fields of public health, public health nursing, pediatrics, nutrition, mental hygiene and education, sponsor the work of the organization.

From the primary aim of the Health Service which was to determine what values could be obtained by bringing together the like services of these voluntarily supported agencies into a single program of health work under unified direction and support has developed a generalized community health service in which nutrition like all the other specialized work has merged to form one effective unit.

East Harlem Nursing and Health Service, New York City

BERTHA B. EDWARDS,
Supervisor of Nutrition.

The Elizabeth McCormick Memorial Fund

The Elizabeth McCormick Memorial Fund is carrying on nutrition work as a part of its program. The work of the fund itself started in 1908, the object being "to improve the condition of child life in the United States."

Its early work in open air schools, among infants in Chicago and studies of special health and social problems in Chicago and Illinois were programs for the alleviation of physical and social disability. There was, however, a growing emphasis upon preventive work. The open air school particularly showed the need of a program of health protection and nutrition among children and among the parents of those children in order that the particular

problems known to the dispensary or social or health agency might be prevented. These schools were carried on from 1909 until 1919 by cooperative arrangement with the board of education and the Municipal Tuberculosis Sanatorium. In 1919 all but one of the schools were turned over to the board of education, with the continuing cooperation of the Municipal Tuberculosis Sanatorium. The fund, during those years, had attempted to demonstrate the value of a program of medical and nursing service, of a modified school program to permit of individual attention, and of specialized services to fit the needs of the group of frail children.

In one school the work was continued by the fund as a complete demonstration of service and a center for experimentation with the curriculum. From this work there developed some of the early work in health education which the fund carried on among public school children and which has since then spread to other schools.

The nutrition department, as such, began in 1919. This resulted from the recognition of the need of considering the health condition and health habits of the child and the family before the health and social problem becomes flagrant. The early work of the nutrition service was extended into public and parochial schools in Chicago and into various social centers, such as settlements, within easy reach of the groups served. Such groups comprised those children known to be in poor nutritional state as determined by weighing and measuring and a medical examination by a pediatrician. The work in the schools was carried on as a specialized service; they met as a group separate from the rest of the school and as a rule during regular school hours. In some cases, however, they met at other times.

In the meantime, the fund was promoting in these same centers and elsewhere a program of health education not only for children already discovered to be in poor nutritional condition but for all children in the schools.

A program of health education in all of the elementary schools in Oak Park, Illinois, was carried on for three years, with one school selected for intensive nutritional work. In the selected schools the fund provided medical service and a special nutrition worker who met groups weekly, a follow-up for correction of defects and home program, and a program of parent education through meetings at the school.

A similar program of health education throughout the school system was carried on in the elementary schools of Joliet, Illinois. A part of this program was research, comprising the study of physical and mental growth of approximately five hundred children.

The work in the Chicago schools is no longer carried on on a nutrition class basis. The efforts have been directed toward a comprehensive health program in the schools which shall include health instruction for all children and the promotion of adequate services. The latter has been promoted through the gathering of data concerning school children by means of an inventory of physical condition, examinations by pediatricians, dental surveys, health habit surveys, health knowledge tests, and an informal accumulation of data concerning attitudes of teachers, parents, children, and general community conditions. One tangible result of the work of the fund in the Chicago Schools for the last seven years has been a course of study in health education adopted by the board of education. At the junior high school level particular attention is being given to the place of the lunchroom in the health program and this has been made the pivot for a vitalized program on health in relation to food.

Nutrition is at the core of all the work the fund is doing in the public schools, the interpretation placed upon the work including not only the condition of the child as dependent upon food but upon a complete program of living. An understanding of the real condition of the child

through an adequate medical examination is considered basic to this complete program.

At the preschool level the fund is carrying on nutrition service and studies in four nursery schools, one in Winnetka, Illinois; a public school in Chicago; and two nursery school units connected with a community housing project for Negroes. The fund's work includes provision of services of a pediatrician, and the supervisory service of a nutritionist who is responsible for menus, general supervision of the food situation, and direction of the physical health program. It is responsible, in addition, for the parent education program which includes both individual conference and group meetings. Studies within this nursery school field concerning growth and development, habits, and methods of parent education are being made.

Outside of the school system, nutrition service of two types is being carried on. There are units meeting weekly made up of children who are in poor physical condition and who are met by the nutritionist and physician at centers easily accessible to the groups. A regular growth record is kept for each child, a complete physical examination is made, and correction of defects is promoted. Attendance of parents is encouraged and there are, in addition, periodic meetings of parents for the consideration of problems of interest to the group as a whole. Several of these groups meet in social settlements although the individuals comprising the group are not drawn from the settlement group itself to any large extent. They are referred by various social and health agencies and are admitted to the group by means of a health inventory which includes weight and medical examination.

The other type of nutrition service is health supervision of family groups. This work is carried on mainly with two social agencies in Chicago, the United Charities and the Mother's Pension Department of the Juvenile Court. Such children are not cared for because they are undernourished but as a regular health check-up by fami-

lies of groups under the supervision of a welfare agency in constant touch with the family. This work is carried on in the closest cooperation with the social agency itself; regular reports pass back and forth between the social agency and the fund and the facts concerning the nutritional status of the family and the health needs are used as a basis for the social plan for the family. This work comprises a medical examination by a pediatrician from the fund, regular check on growth, and education of the children and the parents by the nutritionist. In weekly and monthly meetings among the undernourished group and the group under health supervision, devices to interest the children, and materials of interest to children and parents are used. While the emphasis is on nutrition, and food in relation to nutrition is made of paramount importance, the general program of healthy living is promoted and the medical service connected with this work is the important foundation for the entire program.

As part of the year-round service to the United Charities, the fund is responsible for the selection of children who go to the United Charities Camp for an eight weeks' period. These children are selected from among the groups which the fund supervises during the year plus other groups under the supervision of the United Charities, and are sent on the basis of their physical condition. The fund sends a resident nutritionist to the camp for the entire summer with part-time assistants; the fund's pediatrician visits the camp one day a week during the summer for a regular check-up on the condition of the children. The program of the camp is based largely upon the health status of the group as a whole with such individual variation of program as the condition of a particular child seems to indicate. Health education is a regular part of the program and an effort is made to develop it along the lines that will carry over into the homes to which the children return.

In its program of health education at the Michael

Reese Hospital and Dispensary, the fund has based much of its work upon its nutrition program carried on in the community and in the school, the worker in charge being trained as a nutritionist. This work includes work among the children in the hospital, programs in several of the clinics of the dispensary, and a weekly parent meeting.

The nutrition service of the fund has been drawn upon regularly in an advisory capacity for day nurseries, children's institutions, and child placing groups in Chicago and Illinois. This has, in several cases, resulted in surveys of the institutions by physicians and nutritionists of the fund with recommendations concerning food, program, and equipment as they relate specifically to the physical care of the children.

The workers responsible for these programs in the schools and centers, other than the physicians, are trained in home economics and nutrition and have, in some cases, additional training or experience in teaching or social service.

The work herein described as well as the other phases of the fund's program, is financed by an endowment which is a memorial to Elizabeth McCormick who was the daughter of Mr. and Mrs. Cyrus H. McCormick of Chicago. The work of the fund is not confined to Chicago itself although a large amount of its service has been in Chicago.

Elizabeth McCormick Memorial Fund, Chicago

MARY E. MURPHY,
Director.

Infant Welfare Society of Chicago

The Infant Welfare Society of Chicago was incorporated as a public health organization in 1911 with a program limited to teaching mothers the care and feeding of children under two years. The staff was composed of

doctors and nurses. During the year ten stations were opened in districts where the infant mortality rate was known to be highest. In 1917 a prenatal program was added.

The setting up of minimum standards for child health was one of the projects in the Child Welfare Conference called by President Wilson in 1919. Following this conference, in the same year, work with the preschool child was begun in one station in Chicago with a nutritionist added to the staff.

On October 1, 1925, out of a growing need to study behavior difficulties, which were interfering with the health development of children, a psychiatric social worker was added to the staff.

In January, 1931, there were 21 Infant Welfare stations, 18 of which had a nutrition service, and 10 a prenatal service. In these stations there was a total registration of 5,643 infants, 3,604 preschool children and 488 pregnant women. The staff included 48 nurses, 30 doctors at two conferences each week, and 15 nutritionists.

In the nutrition program as it has developed, the nutritionist carries the work with the child from two to six, just as the nurse carries the work with the child under two and with the prenatal patient. At the weekly or biweekly conference, the nutritionist talks to mothers of all children of preschool age, weighs and measures the children, and assists the doctor in the physical examination. She calls at the homes of all of the registered children at least once a month, and in many cases oftener. She also keeps a record of each child which includes the social history, the record of the doctor's examination, the report of her observation in the home and at the conference, and a *nutrition, personality, and progress sheet.* The record also contains a list of the other agencies interested in the family and reports from other agencies.

In addition to the individual work with the mother and

child at the conference and in the home, the nutritionist has group demonstrations which are concerned with cooking, body needs and food costs, and methods of procedure in building good habits of diet and health. The demonstrations are always given in the morning or in the evening so that the afternoon rest hour of the small children, who must come with their mothers, will not be disturbed.

In 1927 a play school was introduced in one station as a method of seeing what could be done with children who make little progress during the year and of helping mothers who are anxious to improve the condition of their children but who do have difficulty in carrying out the recommendations made by the nutritionist. Eight such children who had been registered at least a year were selected for the first play school. They came to the Infant Welfare station five days a week from ten until twelve-thirty for a period of eight weeks. The equipment was simple and included only such things as the mother could have at home. The two and a half hours were spent in outdoor activity, indoor play (largely centered around health and food habits), and the dinner period. Children in the play school now remain until the child and the mother are able to continue the improved habits of health and diet in the home. For an hour and a half each week the mothers met in the evening for cooking demonstrations and menu planning and for informal discussion of procedure in the play school and the carry-over in the home. The plan filled a definite need and it has become a part of the program of the Infant Welfare Society. After being in one station for a year or more, it is moved to another one where it serves the district and is helpful in staff education.

In 1929, after the entire program had been carefully examined, some conclusions were reached which resulted in the development of a different type of program in the district where the play school was being conducted. First the supervision of the child from birth to six years lacked continuity because of the change in the type of instruction

at the age of two years; too often the mother was being asked to reorganize her entire procedure; and too often the physical aspects of the preschool child were neglected. It was obvious that better work could be done for the family if one person were responsible. The well prepared public health nurse of today, with additional formal nutrition study, is equipped for family health education work. Also, if the district family is to be adequately served, the nutrition program should not stop with the child from two to six but should form a vital part of the health education work with every member of the family.

As a result the district was divided into four sections with a nurse in charge of the family service in each section. The nutritionist is now an integral part of the whole organization. During the first year of the combined program in this station, the nutritionist, assisted by a nurse, had charge of the play school; at the children's conferences held twice a week she sat down with the nurse and together they discussed with the mother the nutrition of her child; at the prenatal conference held once a week she again discussed with the nurse and with every pregnant woman the diet and general health regime. The conferences with the nurses gave the nutritionist an opportunity to know the problems presented and to point out the kind of problem that could best be handled by the nutritionist. In such cases she discussed the case with the nurse in whose division the family lived, and went into the home with her; together they decided whether the case should continue to be carried by the nurse with the help of the nutritionist or whether for a time the case should be carried by the nutritionist.

The nurses carrying the work in the combined program were given a course of normal nutrition, two hours a week for a period of eight weeks. Now, two years after the combined program was instituted, the nutritionist attends the conferences no longer and goes into the district only when a case is referred to her by the nurse whose

problem it is, or when she calls on the families with whom she works intensively.

The frequency with which the nutritionist is called by the nurses and the kinds of cases that are referred to her for help lead us to believe that, in continuing to develop the combined program, we are increasing our service to the community through a more complete use of the resources within the organization. The problems referred to the nutritionist include home management, meal planning, diet therapy and difficult problems in child care and training.

That there have been results is evidenced by better nutrition through improved health habits and food habits and the social and behavior adjustments through right guidance.

The Infant Welfare Society is supported by private subscriptions.

Infant Welfare Society of Chicago, Chicago

Alberta B. Childs,
Nutrition Supervisor.

The Philadelphia Child Health Society

The Philadelphia Child Health Society has been engaged in a program for the improvement of child health in Philadelphia since 1914. The work is done mainly by research to indicate local needs, special demonstrations of new methods in child health, and education of the community through the press, exhibits, lectures, and printed literature. These activities are carried on in coordination with all public and private social and health groups. Constant effort is made to secure the adoption of the best procedures to promote health for all children in the city.

The nutrition service of the society was started in 1919 in connection with the "Fourth Ward Social and Health Experiment" in which sixty-five agencies cooperated. One Nutritionist was appointed to the staff. Her

duties consisted of a two-year educational program with malnourished children in this section as an integrated part of the general health program developed for this particular experiment.

This work directed attention to the value of a nutritionist and requests for similar service came from other groups. The division of child hygiene of the department of public health was first to request help in having its nurses better understand food and nutrition in relation to child health. Later, the Babies' Hospital, the division of medical inspection of the public schools and the Visiting Nurse Society desired similar information and demonstrations for their staff nurses. Cooperative programs were worked out with each of these agencies fitting the type of work offered to meet individual needs and activities. A detailed summary of the early development of this service was published in the *Child Health Magazine* of June, 1924.

Gradually nutrition education was extended to all large social and health agencies in the city and this extensive, cooperating type of service is the basis of the present program. The aim has always been to have each organization add nutritionists to its staff rather than to increase the number employed by the Philadelphia Child Health Society. This procedure seemed wise as a means of making nutrition a coordinated, permanent feature of each agency's particular program. Nutritionists have been added slowly, but there has been steady progress. Consequently, the society's program, carried on by one experienced nutritionist, is essentially educational, consultant, and supervisory in nature. Cooperation is continued with groups who do not yet have nutritionists and new nutritionists are assisted in developing intensive education within their own agency.

The present community service has concentrated on three main objectives: to have nutrition courses a recognized part of the curriculum in training schools for pro-

fessional workers; to demonstrate methods of incorporating nutrition information in health programs throughout the city; to coordinate all nutrition work in the community.

Good nutrition as a fundamental for health at all ages is well recognized. Professional workers should, therefore, have opportunities while in training to learn the accepted facts in relation to their personal health and efficiency and their professional duties. When such information is given they not only benefit personally, but they bring certain interests and attitudes to their respective professions. Teachers are aware of the importance of right food and good nutrition for school progress. Dentists and dental hygienists appreciate that emphasizing correct nutrition facts is the basis of preventive dentistry. Nurses and social workers realize that physical and economic problems in families they serve are often caused by poor food and health habits. This understanding enables each worker to render more effective service and better to cooperate in a community health plan.

These facts have caused the society to emphasize nutrition courses in all training schools in Philadelphia as one of the most constructive features of its program. Since 1921 the Society's nutritionist has been giving special lectures on food and nutrition to medical students and nurses in training schools; and regular courses in schools for dental hygienists and at the Pennsylvania School of Social and Health Work, for public health nurses and for social workers. In 1930 a nutrition course was added to the curriculum for dental students at the University of Pennsylvania. At present all student dental hygienists, public health nurses and social workers in the city receive sixteen to twenty hours of instruction supplemented with field trips and case studies. During 1930 a total of 1,234 students was reached.

Additional instruction has been arranged for field workers who graduated before curricula included this type

of health education. Since 1921 nutrition courses of fifteen to forty hours have been given to all large groups of public health nurses, social workers and visiting housekeepers. Supplementary courses of six to twelve hours have been given periodically to these same agencies as personal changes and advances in subject matter warrant.

Each year the society's nutritionist meets the staff members of practically all social and health agencies who do not employ nutritionists. This offers opportunity to present the newer findings on food, to learn what printed materials are needed, and to discuss progress and methods in nutrition education.

During the past year 444 workers from ten different agencies were given forty-one hours of group instruction in addition to individual consultation.

To provide professional workers with outstanding nutrition facts is but one step in the program. They must also know how this information can be applied. Good food and health habits develop or improve slowly and only as a result of constant education. Better cookery methods, the need of well-balanced meals, wise budgeting and the selection of suitable economical foods for family health must be taught and emphasized in a variety of ways before being adopted by the family or any individual. The complexity of this problem requires the continuous services of a nutritionist if these workers are to do efficient health work.

Each year the society has offered various agencies the services of its nutritionist to demonstrate how nutrition may be incorporated into their health program. A series of talks, food demonstrations, and individual consultations is planned for groups of expectant mothers, well-baby or preschool clinics of various hospitals and health agencies. The demonstration may continue for three months, six months, one year or longer, depending upon the situation. Such cooperative work has been carried on in fifteen different hospitals, and with five other health agencies. As a

result, eight of these groups added nutritionists to their staff. In addition, the division of medical inspection appointed a full time physician for nutrition work in the public schools.

The division of child hygiene does not yet have a staff nutritionist. Because its work is most directly concerned with the periods from prenatal to school age, the most important years from the standpoint of health, extensive and continuous cooperation has been extended to this group. A carefully planned program for the sixty-five staff nurses as well as for direct educational work with mothers in the health centers has been carried on since 1921.

Some phase of nutrition, with much emphasis on food values, cookery and meal planning has been discussed once a month in a formal group meeting with the mothers attending each of the nine health centers and their twenty-three affiliated clinics. The society's nutritionist has worked out this program in cooperation with the director and supervisors and it is carried out under her supervision. The Child Guidance Clinic and Parents' Council have cooperated by providing speakers on child training and development. The local Dairy Council has assisted by preparing window exhibits each month to feature the selected nutrition topic, by having their nutritionists assist in giving the food demonstrations and through generous donations of milk for malnutrition cases. During 1930, there were 385 nutrition talks or food demonstrations, with a total attendance of 8,166 mothers representing 16,434 babies and preschool children. In addition to the formal monthly lesson each nurse in her daily home visits constantly emphasizes these same facts. Many additional food demonstrations are given in health centers to meet the needs of new clientele. Through these various ways, nutrition education should be a daily routine in all homes contacted by the division of child hygiene.

Continuous work has also been carried on with the children's institutions and day nurseries in Philadelphia.

For each of these groups, a three weeks' plan of meals for both winter and summer with recipes and the latest food facts has been prepared and kept up-to-date by the society's nutritionist. These outlines serve as the basis or guide for food service in these institutions. An educational program with interested board members, all the superintendents, matrons and case workers and for parents whose children attend the nurseries is constantly being carried on.

Varying types of demonstrations have been made with other groups. Methods differ but the aim is constantly to emphasize the place of nutrition in health and social work and to encourage the addition of nutritionists to the staff.

The city-wide educational program of the society offers constant opportunities to unify plans and coordinate work. Local agencies consider the society a central bureau for child health service and information. The same attitude prevails in relation to nutrition. The society's nutritionist has had direct personal contact with practically all social and health workers in the city through her courses in the professional schools and to the active field workers. Frequent demonstrations and talks, exhibits and food demonstrations to parent teacher associations, women's and mothers' clubs offer further opportunities for coordinating and extending nutrition information.

Practically all agencies use the literature prepared by the society's nutritionist in collaboration with its medical advisory board. Each piece is written with the idea of being widely useful. During the past year 388,107 pieces of educational literature were distributed.

For four years conferences for local nutritionists and others interested in health education have been held monthly from October to May as a means of keeping them informed on the newer knowledge and practices and the types of work various agencies are doing. These conferences provide further avenues for practical nutrition service.

The activities outlined briefly summarize the most im-

portant phases of the community program. Progress and results in educational work are evaluated with difficulty. The outstanding accomplishments to date seem to be:

Nutrition courses have been made a part of the curriculum in various city schools training professional workers.

Nutrition has been accepted as an integral, important phase of the program of an increasing number of health and social agencies.

Eight organizations now have nutritionists on their staff—several others are planning to add such workers as soon as finances permit. In the meantime, they are continuing to use the services of the Philadelphia Child Health Society.

There is a growing number of requests for reliable nutrition information from all types of people in the community.

Philadelphia Child Health Society, Philadelphia

Anna DePlanter Bowes,
In charge of Nutrition Education.

HOSPITALS, DISPENSARIES, AND DENTAL INFIRMARIES

University of Michigan Hospital

Hospitals are realizing that it is their duty as well as their opportunity to provide adequate instruction to the sick in order that corrective measures initiated in the hospital may be continued in the home. In the past few years a well organized nutrition service in a hospital has been recognized as an important aid to the treatment of many diseases. The dietetic staff strives to have well-balanced meals served in the hospital, as they see the possibilities of giving instruction to patients regarding general food habits and cultivating in them a desire to eat for their future well-being. It probably is the psychological time to

inculcate correct food habits, since indiscretions in diet, or ignorance about the selection of proper foods has in many cases directly or indirectly contributed to the illness.

Not all dietitians have the opportunity to give as much instruction to patients as might be desired. Every hospital dietitian does instruct patients, however, concerning therapeutic diets as prescribed by the physician. Here she has an opportunity to assist the patient in carrying out the physician's instructions through her scientific knowledge of the diet, and through her study of the patient and his home environment. All these points must be taken into consideration in the instruction of patients about their diets.

Children enjoy learning new things, and they are most responsive to attention and instruction in the hospital. The dietitian finds in the children a very fertile field for disseminating knowledge concerning proper food habits. Her first emphasis will be to encourage the children to eat the foods served on the hospital menu. This takes much time and ingenuity. Children enjoy learning the names of vegetables served them. The scrapbook made by children, of colorful pictures of foods cut out of magazines, increases their interest in foods. Sometimes they learn something about the use in the body of each food pasted in the scrapbook. This helps stimulate an interest in the new foods which are common in the hospital but unknown in the meals at home.

Giving rewards and prizes is often questioned, but one dietitian had unusual success in stimulating interest through the use of stars as rewards. A card was made for each child showing each day in the week, and three squares after each day denoted the meals. If the child ate well, the dietitian being the judge, a star was placed in the square for the meal. A child who had a red star for each meal received a gold star at the end of the week. This method proved most successful when the children had very faulty food habits. The result of it can best be summed up in the remark of one of the little boys to the dietitian,

—he was eating everything now and he didn't need the stars any longer.

Many children who have special diets in the hospital will need the same dietary requirement after returning home. The cooperation of the child can best be obtained by stimulating his interest in his diet and by explaining to him why he will still be on a special diet at home. Some diabetic children three years of age learn to recite the names of foods in their diets, and also learn the foods they must not have. Their knowledge of their disease and its dietary treatment is sometimes most amazing.

A mother who comes to the hospital to talk with the dietitian concerning the diet of her sick child often asks for information concerning food for other members of her family, and thus the dietitian is able to make a contribution to better nutrition in many homes.

The far reaching effect of the teaching which is done mostly through individual instruction on the wards justifies giving such service to outpatients in the hospital clinics. A Diet Therapy Clinic was established July 1, 1929, at the University of Michigan Hospital as a center for the dietary instruction of diabetic outpatients and diabetic inpatients and of other patients referred by physicians in various clinics in the outpatient department. It is organized as a sub-clinic of the medical clinic. Through a physician who is assigned to it, direct medical service is given to diabetic outpatients. All other patients are referred directly to the dietitian by the various clinics, such as those in pediatrics, surgery, bone and joint diseases, medicine, ophthalmology, otology, and physical therapy. Responsibility for the referred patient remains in the clinic from which he is referred and to which he is returned. To the Diet Therapy Clinic patients suffering from the following conditions are referred for instruction: overweight, underweight, sensitization, epilepsy, constipation, gastric and duodenal ulcers, arterial hypertension, nephritis, diabetes, and various other conditions including faulty food habits.

The physician and the dietitian hold a clinic each morning for all outpatient diabetics at which the treatment of each case is carefully considered. An average of ten patients attend. Daily a class is held for all diabetic outpatients, and as many inpatients as are able are also in attendance. The physician conducts the class twice weekly. In addition, the diabetic patient receives individual instruction until the dietitian feels that he thoroughly understands his diet. Material is available at all times in the clinic for the diabetic to read. Interesting literature, posters, and material emphasizing healthful living are always in evidence.

Diabetic children especially enjoy their classes, and there is much competition as to who is best able to answer questions about the classification of foods, the foods eliminated from the diet of a diabetic, and the five per cent and ten per cent vegetables and fruits. At one time a group of diabetic children gave a demonstration before a group of physicians showing that they had a surprising knowledge of the disease, the foods given and eliminated and the weighing of foods; and a child seven years old was able to prepare and administer his own does of insulin.

The Diet Therapy Clinic is financed by a credit of $1.00 per day from the income of each diabetic outpatient, and each patient referred from an outpatient clinic pays fifty cents when the reference slip is stamped at the business office. This sum is credited to the clinic.

Since the opening of the clinic less than two years ago, nearly eight thousand patients have been served. The value of the careful instruction of this number cannot be measured except that in many cases that have returned, the record shows that the instructions are understood and the desired results obtained. Approximately fifteen daily individual instructions are given.

The record of accomplishment of the clinic can best be shown by a summary of its functions. It aids medical treatment in the following ways: (1) by giving detailed

instruction to the patient about the diet prescribed by the physician, (2) by helping the patient adjust himself to new dietary habits under home conditions, (3) by recognizing the social and economic problems due to impaired health or increased expense of the diet and obtaining the necessary assistance, (4) through correspondence relative to the dietary problems of patients after they are discharged, and (5) by operating a follow-up system under the physician's direction for all patients instructed in the clinic. In addition to the function as an aid in medical treatment, the Diet Therapy Clinic has an educational responsibility not only to patients but, in a teaching hospital, also to dietetic interns, student nurses, and medical students.

The creative function should always be kept in mind, for it should cooperate in the development of new teaching material and methods adaptable to outpatient use.

The future plan of the Diet Therapy Clinic at the University of Michigan Hospital is, in addition to its above functions, to develop a plan for teaching methods of health education. This will be organized as soon as finances are available. Health education has become recognized as an aid to medical treatment. Its purpose in a medical institution is to present to all patients, by graphic methods of teaching, the meaning of good health, to interpret very simply the modern scientific principles underlying it, and to stimulate the thought and action necessary to the application of these theories in the conditions of daily living.

The activities under a health education program as proposed in the University of Michigan Hospital would include: (1) educational work with children awaiting examination in the outpatient department, and educational work with the mothers of the children in the clinic; (this teaching might be carried on by the student nurse under the supervision of the health education instructor); (2) special classes planned for the large numbers of children in the convalescent hospitals and a program of health education adapted to the present school program; (3) ar-

rangement of health exhibits and displays in suitable places throughout the hospital under the direction of the health education instructor; (4) instruction to dietician interns, student nurses, and perhaps medical students concerning the importance of health education and their opportunities and duty to use it as a contribution to preventive medicine. The medical institution is more and more being recognized as a place for the teaching of preventive medicine, and the nutrition service in the hospital should be alert to its opportunities.

University of Michigan Hospital,
Ann Arbor, Michigan

S. MARGARET GILLAM,
Director, Department of Dietetics.

Food Clinic of the Boston Dispensary

The food clinic as a part of medical service for the ambulatory patient was organized in the Boston Dispensary in 1918. It was born of the conviction, formed from close observation of the patient both in the clinic and at home, that, for successful medical treatment, food guidance and interpretation of the relation of food to the body's needs were as essential in the outpatient department as in the hospital. The opportunity came during war time to test the worth of this conviction, and with the cooperation of the Boston Dispensary, the first food clinic was opened.

In the Boston Dispensary the Food Clinic functions like other clinics, undertaking expressly the problems in its own field and affiliating itself with other clinics when there is need for joint service. Its patients, from whatever source sent, must first have passed through the medical clinic, for physical examination and all necessary laboratory tests, and must have been referred to the Food Clinic by the physician. The patient's record contains the findings from all clinics that the patient has visited, with the

physician's diagnosis and recommendation for food treatment.

To supplement the medical findings, the dietitian has an intimate conference with each patient, in which she obtains data necessary for a nutritional history. A special form is used for this purpose, which also becomes part of the general record. Information is secured concerning household equipment, food and health habits, community hygiene, recreation, occupation, school life, home lessons, extra lessons and activities, education, family relationships, daily food intake, hours and places of eating (whether at home, or in restaurants, or at school), the patient's mentality and ability to carry out a plan of treatment, his nationality, religious and racial customs and dietary laws, his economic status, and the family income. These findings are not only of present value; they are of interest in the observation of changes occasioned by food treatment.

In view of the great differences in the mental, physical, and social abilities of the patients, food treatment must obviously include individual instruction of both adult and child patients. Group teaching is also of benefit in stimulating exchange of ideas and experiences and engendering a feeling of comradeship with people having common problems, but it is most effective when it follows the individual conference. The patient must gain some knowledge of the principles underlying the diet laid down for his self-guidance, since he will be without supervision between visits to the clinic. Moreover, if he understands the reason for his diet, he will adhere to it far more readily than if it were given to him as an arbitrary order.

This information should include a true conception of the structure and needs of the body. If the patient understands that the body builds itself, generates power for its activities, and safeguards itself and promotes its well-being by means of food, he will realize the necessity for keeping a proper balance between body needs and the foods that supply them. The patient is taught that, in dis-

ease, either more or less of certain food is required according to conditions, and how he can include them in right amounts in the daily menu.

The dietitian teaches graphically. A crude sketch done with a few strokes of the pencil helps the patient to understand his body need or food allowance. A wealth of illustrative material is available from which to select appeals to different levels and types of intelligence. There are printed lists of foods for patients who can read; for those who can compute, tables stating the proportion of the various food constituents contained in household measures of common foods are available. Pasteboard cut-outs and wax models of foods demonstrate amounts and combinations of foods. Wax models are especially valuable in helping the patient to visualize the possibilities of varying the diet by choice among foods that are of equivalent values. The patient whose visual memory is trained in this way does not weigh out his foods when preparing his meals at home.

Upon this foundation of mutual understanding the dietitian builds a diet scheme for her patient, fulfilling in it all scientific requirements and at the same time adapting it to the patient's social necessities and possibilities. The various kinds and amounts of food for the day are written out for the patient, and, if necessary, menus and recipes are supplied. No printed diets are given. On return visits the patient is checked up by the dietitian, and goes away each time with greater understanding of his dietary treatment, his limitations, and his possibilities.

When it is found that the patient or his family is unable to provide the food that effective treatment requires, the food clinic turns to social service.

Meanwhile the patient is under constant supervision by the physician in the medical clinic. Thus the physician, the dietitian, and the social worker become a unit in service to the outpatient, the physician making the diagnosis, the dietitian translating his food recommendations into

a definite, understandable diet plan, and the social worker aiding the patient, when necessary, to carry out his diet at home.

Since the dietitian does not administer the home for the patient, but must stir him to take effective action in his own behalf, it will be seen that she must have the qualities of a good teacher. It is important that she have also an appreciation of the principles of mental hygiene, so that she may understand the cause of food dislikes and especially the deep-lying motive actuating the behavior that is detrimental to health and to the success of food treatment.

In the Boston Dispensary the Health Education Department, affiliated with the Food Clinic, extends the educational program in food and health habits to include all patients assembled in the various clinic waiting rooms. The instruction is supervised by a full time health educator, who is assisted on Saturdays by school teachers, and by volunteers on other week days. The health educator uses pictures, posters and other attractive furnishings, exhibits and motion pictures to create an environment that will be educational and stimulating. She does intensive educational work with the child patient. While waiting for treatment the children gather about teachers who are given space in several clinic waiting rooms, and who discuss with them a food or health principle. It is done happily and informally, with repeated emphasis of subject matter through things the child enjoys, story, game, experiment, motion picture and handiwork, and illustrated by materials that compel attention. The parent is often an observer. Teachers and volunteers are prepared for this work by a carefully worked out plan furnished them each week. The mothers' meeting which is called monthly is another means of extending health education to the parent, and thus reaching the child.

The food clinic offers an exceptional opportunity for teaching and training students in applied dietetics. The fol-

lowing types of students come to the Food Clinic of the Boston Dispensary, for lecture courses and for periods of observation and practice varying from three weeks to a semester in length:

Students in home economics
Dietitians
Student dietitians
Fellowship students
Nurses
Students in public health
Medical graduates
Medical undergraduates
Students in physical education
Students in social service
School teachers

The principle of food treatment for the ambulatory patient, adult and child, is now accepted throughout the country. At the present time, twelve food clinics are in operation and eight more are being organized.

The Food Clinic of the Boston Dispensary gave treatment to 1,061 individual patients in 1930, referred as follows:

Pregnancy
Faulty diet
Underweight
Anemia
Obesity
Diabetes
Constipation
Colitis
Peptic ulcer
Arterial hypertension
Nephritis
Epilepsy

It has demonstrated the practicability of teaching, in different degrees, to child and adult, patient and student of various levels of mental development, applied dietetics, the relationship of food to the body. It has developed teaching methods and prepared material that simplify subject matter both for patients and students. It has written much for publication on the many phases of its work. It has provided direct instruction for extra-mural groups of workers of many types. It is called upon to explain its principles of organization and procedure to workers from all parts of this country and from foreign countries, by letter and personal interview.

The fact that the Food Clinic of the Boston Dispensary is part of an institution that is training students and shares in the teaching program, affects its requirement in personnel. The number of dietitians required in a food clinic will depend upon the number of patients, and upon the proportion of these who are new; a new patient, with a new record to be studied, a nutritional history to be taken, and with the need of being taught first principles, will take much more time than will a patient making a return visit.

For several years the Boston Dispensary fully maintained the food clinic from its general funds. Since 1926, the South End Diet Kitchen, which was established in 1875 for the purpose of providing food for the sick poor, has contributed practically all of its funds to the food clinic, in the belief that it could do its work more effectively through a medical organization. Last year the total expense of the clinic (exclusive of overhead) was $12,627, of which $6,450 was contributed by the South End Diet Kitchen. Over 75 per cent of the cost was for salaries or dietitians, health education workers, and social service. Of the remainder, approximately one thousand seven hundred dollars was expended for food used to demonstrate diets to patients, and for food supplied patients as an aid to medical treatment.

Boston Dispensary,
Boston

FRANCES STERN,
Chief of Food Clinic.

Forsyth Dental Infirmary, Boston

Since 1915, Forsyth Dental Infirmary has been providing dental care for the children of Boston whose parents cannot afford the services of a private dentist. The generous endowment of the late Forsyth brothers has made the institution independent of public support and

has enabled it to assume a position of leadership in the field of preventive dentistry for children.

Forsyth Dental Infirmary under the direction of Percy R. Howe, D.D.S., has long been a pioneer in the belief that good nutrition is essential for sound teeth. It has been conclusively demonstrated that teeth are affected by general metabolism, being probably the most delicate indicators of the physical condition. The relationship of prenatal diet to the development of the dental arch, and of adequate amounts of calcium, phosphorus, and vitamins A, C, and D to the formation and preservation of the teeth have been extensively investigated by physicians. The necessity of vitamin C for healthy gums has become established. That there is circulation in the teeth has been demonstrated, although its exact nature is not understood.

It became clearly inconsistent with the findings of the research laboratory for an institution committed to prevention, to limit treatment to operative procedures. In 1922, therefore, a medical clinic was opened. Physical examinations were made and dietary advice given by the pediatrician. Two years later, this service had grown to such an extent that a part-time nutritionist was added to the staff to consult with the patients and to teach the students dental hygiene. At the end of the year, the full time of the nutritionist was required and the nutrition department has gradually become an integral part of the program of the institution.

The age limit for dental registration at Forsyth is thirteen years. With the growing appreciation of the importance of early treatment, an increasingly large number of preschool children are being registered, many as young as two years of age. Following the completion of a child's dental work, he is given an appointment for a physical examination and nutrition conference. When he reports, accompanied by his mother or father, a history is secured including brief social data and information as to general condition, diet and hygiene of the prenatal period, infant

feeding and diseases with sequelae. It is attempted to make this history-taking an educational experience for the parents, many of whom learn for the first time that the baby's teeth form before birth.

A dental examination is then made, in which such items as the condition of the gums, the occlusion, and the structure of the enamel are noted in addition to the prevalence of caries. The dentist makes an effort to have the parents and the child if old enough, share in the information which this survey reveals.

Following the physical examination by the pediatrician, the diet and health of each child are discussed in detail with the nutritionist. In these conferences, emphasis is given to the foods which build and preserve the teeth and protect the gums, but the mothers are taught that these foods are the same ones which are needed for the best development of the body as a whole. Whether the child himself is present at the discussion is determined by such factors as his age, the attitude of the mother toward him, and the problem which he presents. By the use of illustrative material, simple reporting systems and teaching devices, many children can be successfully motivated. Others seem to need indifference rather than the stimulus of further attention.

Supervision in both the medical and nutrition departments is continued by return appointments, the frequency varying with the condition of the child. Re-examination of the mouth is made at least once in six months.

Aside from those children who come to the nutrition department in the routine way, special cases are often referred from the extraction and orthodontia departments. In addition, children with inflammation of the gums, with extensive decay which is apparently of nutritional origin, with caries recurring to an unexpected degree, or with unusual tartar deposits may, with the permission of the dental clinic supervisor, be referred directly by the intern who has treated the child. Those interns who select chil-

dren for intensive study in this way have the privilege of being present at both initial and subsequent medical examinations and diet interviews. This method of allowing the dentists to follow the treatment of individual children has proven outstandingly successful in arousing interest in nutrition and in stimulating the interns to consider the mouth condition as systemic rather than local.

The public is beginning to demand that the dentist be intelligent on the subject of nutrition, but very little attention has as yet been given to this phase of his preparation. A recent survey of the curricula of thirty-nine of the leading dental schools in the country showed that apparently in only nine was an attempt made to treat the subject adequately either in a separate course or as part of a related one.

The dental institution which offers a postgraduate course, therefore, has a unique opportunity as far as nutrition teaching is concerned. Each year, about thirty-five interns come to Forsyth from various parts of the United States and from other countries. Ten lectures on nutrition are given to this group and on each clinic day two dentists are present to observe the relation between the mouth condition and the nutrition of the patients and to take part in the individual conferences. Interns who show special interest in this department may, after the assigned reading has been completed, have a clinic observation period of from six to ten weeks. This year (1930–1931) when notice was given that extra time might be spent in the department, twenty-three out of thirty-five men requested this opportunity.

It is the ideal of Forsyth to give members of its intern staff some conception of the dentists' opportunity in the public health field rather than to have them confine their interest to operative procedures alone. At the request of a public health nursing organization, talks to its classes of pregnant mothers are made by especially qualified Forsyth dentists. Lectures are also given to parent teacher as-

sociations and similar groups. The subject matter of these talks is carefully supervised by a staff dentist and the nutritionist.

Interest in dietetics is appreciable not only among students but among practicing dentists. The nutritionist is frequently called upon to lecture or to hold a "teaching clinic" at dental society meetings. A few practitioners have asked to visit the clinic for several consecutive periods. Since the dentist may logically become one of the most convincing agents in the spread of nutrition knowledge, it is hoped that this service may be further developed.

The forty-five student dental hygienists who are registered each year also receive instruction. In a course of twenty lectures, an attempt is made to give them an understanding of their own needs and of the nutrition principles which they should teach their patients whether in office or school. Through their work in the department they become familiar with the most common dietary faults and with the closely related social and economic conditions and problems in habit training. A course in health education is also given by the nutritionist, and the hygienists have experience in giving lessons, planning handwork and telling stories to children as they wait for the various clinics.

Two seniors in the household economics course at Simmons College spend one-half day each week in the department, and observation periods are constantly arranged for representatives of other schools, and for student dietetians from hospitals. Frequently lectures are given to teachers in training, public health nurses and other students who visit the infirmary.

While most of the educational work of the nutritionist is confined to Forsyth patients and students and to professional groups, there are many opportunities for reaching the general public. Lectures are given to various community organizations and several radio talks have recently been broadcast in a series sponsored by the Harvard Dental School Radio Clinic. Printed material is prepared both

independently and in collaboration with other health agencies.

Forsyth Dental Infirmary,
Boston
RUTH WHITE,
Chief, Nutrition Department.

Lakeside Hospital, Cleveland, Ohio

Because the majority of individuals connected with a hospital have daily contact with the service of the department of dietetics through meal hour regime, hospital dietetics frequently means preparation and service of food. Many of the activities of the dietetic department are obvious even to the point of triteness. Back of the well-worn ruts of dietetic routine, however, and occasionally obscured by horizons colored and defined by technical and utilitarian principles, are to be found the lightly travelled and often undiscerned paths of pioneering in the borderlands of education and preventive work. This type of work is definitely accepted as an essential part of a community-conscious program.

The educational work of a department of dietetics in a hospital dovetails in such a vital way into the whole corrective or curative scheme that its horizons are wide and its possibilities for development or resources are many. Since early in 1922 we have been interpreting and teaching dietetics where we felt the greatest good would result to the community. While we have kept in mind that our major function is that of aiding to rehabilitate, yet we are also well aware that it is necessary to continue instruction and help after the early routine has been established.

Our work started in a small way with the usual diabetic clinic, a group of patients coming once a week for routine examination and food demonstration. We have pursued our specific type of approach and, as a result, we are today in contact with all hospital and dispensary patients who need dietetic adjustment and with other hos-

pital patients through the medium of a selective menu system which opens a fine field for a natural presentation of normal dietary standards.

This work is the motivating idea back of each individual in the department and is financed by the department budget. Menu making, food ordering, food preparation and food service are all tied up to the end of service to the patient. The menus for ward patients are not "what can we get for twenty cents?" but they are an answer to our desire to present to these patients, as individuals, an adequate, normal diet of foods suitable for his or her daily intake at home, considering the probable amount to be spent for food and the conditions of home environment.

Our message is put across to our hospital patients by means of three meals, painstakingly offered, consisting of foods suitable for home service. It is supplemented with bedside instruction or demonstration in our teaching quarters. Our outpatients are reached by individual teaching, talks at group meetings, and most of all by our home visits.

Our system of home visits is probable our greatest point of departure from ordinary work. Certainly it is our best point. It is not a service to the patient to relieve him from coming to the clinic. It is our one best method of securing definite, accurate information about actual home conditions, equipment and food possibilities. The home interviews also bring to light pertinent facts which enable the dietitian to adjust the diet more closely to the particular needs of the individual and thus to carry through her plans when diet lists would fail.

It is difficult to say how many people are served. One person may pass on her new ideas to her relatives and friends. She has learned the value of simple things well done as the result of which home conditions are bettered with greater economic balance and the health standard for members of her family is improved.

Our work with children has been mainly with the children in the diabetic group. In 1928 we brought them together into a class of their own. This was done because we thought they should be taught dietary control and that self-reliance should be fostered. The work given in classes has been fundamental but given in ways which appealed to the youngsters. In 1929 one of our dietitians went with these youngsters for a week at Goodrich Camp, near Northfield, Ohio. This arrangement was achieved by a Big Sister and was financed by Goodrich House and the Big Sister organization. The children lived in a cottage, prepared their own meals under guidance, and took part in all the activities of the camp. This probably is the first time such a venture has been tried; camps for diabetic children are frequently mentioned but the outstanding feature of this contribution was the fostering of adjustment to normal conditions in such a way as to keep the child's mind away from its own illness. There was developed a fine sense of responsibility for each other's well being.

Hospitalization of any patient previously registered in either the diabetic clinic or the gastric clinic is at once a challenge to us and only by an analysis of the reasons for these patients being hospitalized may we have a sound basis for judging the effectiveness of the dietetic policies in these specialized groups. During the year 1929 there was a registration of 353 patients in the diabetic clinics. Of these four became hospital patients because of failure to follow dietetic regime. In this same year there were 427 patients registered in the gastric clinics. Of this number two were admitted to the hospital because of dietary indiscretions.

Lakeside Hospital,
Cleveland, Ohio

E. M. GERAGHTY,
Chief Dietitian.

Food Clinic of Mandel Clinic, Michael Reese Hospital, Chicago

It is a long step from the demands made upon the Food Clinic in its infancy to those made upon it at the present time. Formerly, the essential features were nutrition classes for underweight children; then special clinics for diabetic patients were added to its program, and gradually other diet problems were taken over by the Food Clinic. At present all diet problems are cared for in the Food Clinic of Mandel Clinic, the object being to assist the physician in carrying out the food treatment as part of the medical treatment given to the patient.

The Food Clinic of Mandel Clinic is part of the Dietary Department of Michael Reese Hospital. A group consisting of physicians, the director of the Mandel Clinic, the head of the Social Service Department, the dietitian of Michael Reese Hospital and the dietitian of Mandel Clinic act in an advisory capacity of the Food Clinic.

All departments of Mandel Clinic may refer patients to the Food Clinic, but, before they are referred, the patients must have complete physical examinations. Patients come with diagnoses of overweight, underweight, gastric disturbances, tuberculosis, epilepsy, hypertension, nephritis, diabetes, anemia, food allergy, cardiac disease, pregnancy, rickets, anorexia, faulty food habits and so forth. The dietitian learns from the physician's notes the diet necessary for the patient's welfare. From the patient and very often from the social worker she learns the nature of his social environment, dietary habits, occupation, financial status, and other influencing factors which reveal themselves in the course of the conference. Upon the medical findings, the recommendation, and the social picture, the dietitian builds her diet scheme, fulfilling in it the scientific requirements, adapting it to the patient's social necessities and possibilities, and at the same time making the diet as attractive and palatable as possible. The above in-

formation, significant laboratory findings, food intake, and diet prescriptions are recorded on the Food Clinic sheet which is filed with the medical record.

There is an outstanding difference between a patient in the hospital and one in the clinic. The former is sure to receive everything that is needed for medical and dietetic care, while the latter is sure only of medical treatment and medicine. Because his home is often unable to provide the food that effective treatment requires. Diet therapy is usually necessary for prolonged periods. The patient cannot be considered alone. As part of a family group, the diet must be so adjusted that it will cause neither an undue amount of extra work nor add greatly to the expense of the food. The Food Clinic turns to the social service department for assistance. The physician, social worker, and dietitian become a unit in service to the outpatient, the physician making the diagnosis and the recommendations, the dietitian translating the physician's food recommendations into a definite diet plan, and the social worker aiding the patient in following the treatment.

Patients receive individual instructions and a detailed written diet list for home use. The dietitian cannot administer their homes for them, but she must stimulate them to effective action in their own behalf and to understand their own problems so well that they will find the way to carry out remedial measures despite limitations and handicaps. If the patient is to be seen again, *Return to Dietitian* is stamped after the physician's notes, and, upon the following visit to the physician, the patient is again seen in the Food Clinic. If the dietitian wishes to see the patient before the next visit to the physician, an appointment for the Food Clinic is given to the patient and a careful follow-up system is closely observed. All findings of subsequent visits are recorded on the Food Clinic sheet. Informal consultations are constantly being held with the physician and the social worker regarding the progress of the patient.

The Food Clinic is essentially a teaching center, through lectures, demonstrations, food exhibits, individual and group instruction the patients are taught correct dietary habits, along the lines of both rational and therapeutic diets. Much stress is being placed upon visual education. For this the Food Clinic has a very fine set of wax food models made to exact measurements. The amount of carbohydrate which each contains can be concretely represented by a five-gram lump of sugar. To the diabetic patient their value need hardly be mentioned. These models are very effective with other patients as well. By means of these models the patient knows exactly what the dietitian means when she speaks of "a portion." To cite one example: A young man was quite obese and very anxious to reduce his weight. His food intake was carefully recorded and a low caloric diet prescribed. Two weeks later he returned not having lost an ounce in the interim. Through a review of his food intake it seemed as though he were following his prescribed diet. In the two weeks' interval, however, the food models had arrived. The patient was shown these models and for the first time the trouble was discovered. His conception of a portion was just three times as large as the dietitian's. After seeing as well as hearing what he should have, the difficulties were solved. The results which followed were gratifying.

Group work is stimulating. A patient realizes that he is not the only one afflicted and instead of indulging in self pity, he becomes interested in the talks and demonstrations. At the demonstrations, foods are prepared, recipes distributed and samples passed around to taste. Men are urged to bring their wives or anyone who takes care of the diet at home. If the latter cannot come during the regular clinic time, appointments are made for instruction and suggestions at a more convenient time.

The Food Clinic conducts classes in the hospital for patients who are on diabetic and gastro-intestinal diets. In this way, patients who have been sent in from the clinic

are followed up and taken care of when they return to the clinic for further treatment; similarly patients who come for after-care from the hospital to the clinic are given instruction. Private patients as well as ward patients attend these classes.

Statistical records are kept of the patients cared for, the department from which they are referred, and the diet prescribed. From these records it would not be difficult to make a study of the effect of a given diet for a given condition, or of some other interesting problem from a clinical viewpoint. In the past five years the Food Clinic has tripled its attendance. Records are kept of visits rather than of individual patients; the monthly average is 600 visits, making an average of over seven thousand visits per year.

The atmosphere of a food clinic is an important factor. The Food Clinic of Mandel Clinic has tried to make the place as inviting and as homelike as possible, and at the same time to fulfill its purpose. With these aims in view, the Food Clinic was furnished with small round tables, chairs, attractive curtains, colorful pictures, and interesting posters.

Besides administering to patients, the Food Clinic serves as a teaching center for student dietitians. There is a course for graduate dietitians who wish to specialize in food clinic work. It is the intention to widen the scope by giving talks pertaining to dietetics to the medical social workers and the interns.

Mandel Clinic wishes to aid its patients in every way possible. In addition to the regular medical treatment, the clinic is sponsoring a health education program for children which the Elizabeth McCormick Memorial Fund of Chicago is carrying on in the hospital and the clinic. The Food Clinic is very much interested in this project and works closely with the fund in this health education work.

The Food Clinic is not an entity in itself, but functions

as an integral part of Mandel Clinic. The other departments are aware of its existence and make the utmost use of its facilities. Not only is Mandel Clinic aware of its existence, but the community at large is made to feel its value. There is a constant interchange of ideas, benefits, and opportunities with other institutions and organizations interested in nutrition work.

Mandel Clinic,
Michael Reese Hospital, Chicago

SARAH ELKIN,
Dietician, Food Clinic.

SCHOOLS

The Elementary Schools of New York State

After the World War interest in many phases of health arose spontaneously throughout the country. Two lines of influence were converging to give emphasis to nutrition: (1) malnutrition as diagnosed by scales and weight tables (a method now discredited but then accepted by leaders in the crusade against malnutrition) was declared to be a problem in all classes of society; (2) from the nutrition research laboratories came an irresistible flood of evidence attesting the importance of good nutrition in growth and health.

In 1918 the legislature of New York State created in the State Education Department the position of Supervisor of Nutrition. The function of this supervisor was to construct and administer a system of education in nutrition in the public schools and teacher training institutions of the state.

This was the period when in many sections interest was centering on the nutrition class as a solution of the problem of malnutrition. It soon became evident, however, that the elaboration of a program for the correction of

malnutrition (even when satisfactorily diagnosed) would fall far short of the ideals underlying the creation of this state position. In the mind of the state supervisor one thought dominated all others, every child has a right to a knowledge of his nutritive requirements. The simplicity of this aim, however, gives no indication of the complexity of the problems involved in carrying it out. What was the best method of reaching the two million school children of New York State? The school child is a part of an intricate organization in the hands of teachers whose only knowledge of nutrition was obtained in chapters on digestion in a long-forgotten course in physiology, and controlled in general by administrators whose previous training, however admirable in other respects, included practically nothing on nutrition.

The teacher is the only person who is with the child throughout the school day, and therefore the only person who is in a position to watch his day-by-day development. In modern educational practices, especially in the elementary schools, the barriers between subjects are fast disappearing: the different parts of the curriculum are being integrated. In other words nutrition and the other phases of hygiene will no longer be taught as a separate subject in these grades, but will be made a part of all the child's experiences. If this principle is accepted (and it is accepted by all progressive educators today), then it follows that it is the classroom teacher and not the nurse, physical educator or any other person who visits the classroom occasionally who should be made responsible for teaching nutrition and general hygiene in the elementary schools. It becomes apparent also that it is impossible to teach nutrition without instruction about sunshine, rest, sleep, physical activity, mental hygiene and many other essentials of healthful living.

The teachers need much help of a very definite kind to prepare them to conduct the program of health teaching. The ten normal schools in New York State are now

giving a course in nutrition and other phases of health education to all their students. Twenty periods out of eighty health education periods are devoted to nutrition, an inadequate amount of time of course, but better than formerly. To reach the teachers in service is a more difficult problem. They need the guidance of a local supervisor of nutrition, one who by conferences, outlines and demonstration lessons can give them authentic subject matter and useful teaching methods. Several of the progressive schools have made appropriations for the services of a supervisor of health teaching. In several other communities the Red Cross or tuberculosis committee is paying the salary of such a supervisor to demonstrate the value of her services to the schools until the local boards of education are ready to include this item in their budget.

Much thought has been devoted to the qualifications of a supervisor of health teaching. If we accept the principles that the classroom teachers in the elementary schools are the persons who should conduct the health teaching program, then the official who supervises these teachers must be first an educator and second an educator who has had sound training in the sciences on which health practices are based. She must understand the modern educational philosophy of the elementary school and be able to work out a program of health teaching that is pedagogically sound. She will have to show teachers how to utilize actual situations, such as the school lunch, as a means of teaching health and she will have to teach them the value of pupil activities as a means of arousing their interest and cooperation. She must understand elementary teachers themselves, their possibilities as well as their limitations, and she must be able to convince these teachers that she has a first hand understanding of classroom problems. She must be able to serve on curriculum construction committees and see that nutrition and the other phases of hygiene are given their rightful place in the program. In addition the supervisor should have college or university

training in certain fundamental sciences. She will need courses in physiology and hygiene, bacteriology, nutrition, several courses in chemistry as prerequisites to her course in nutrition, mental hygiene, school sanitation and community sanitation. The supervisor of health teaching should not only have a knowledge of these sciences, but she should be prepared to follow research and extend or modify her program in accordance with new discoveries.

State education departments are in a position to establish definite qualifications for this position and they should set those standards high enough to secure competent persons. It is the function of the state supervisor of health teaching to formulate these standards for the state department. She also advises the local authorities to engage supervisors of health teaching for their schools.

In order to reach the large number of teachers who are not having the guidance of a local health teaching supervisor, the state supervisor should prepare literature that will be helpful in classroom procedure. Up to the present time the following bulletins have been issued by the New York State Education Department: *Nutrition Notes for Elementary Teachers, Suggested Nutrition Units for the Seventh and Eighth Grades, The Rural Hot Lunch as a Health and Social Activity, Suggestions to the Rural Teachers on the Selection of Their Own Diet, Motor Activities and Nutrition.* At the present time the state supervisor and her assistant are serving as members of a committee to formulate a state guide in health teaching for the kindergarten and first six grades. In addition to these other functions the state supervisor is available for lectures and conferences with groups of teachers. She also cooperates with outside organizations such as the Red Cross and tuberculosis committees, the organizations promoting the health demonstrations in the schools, the parent teacher association, the home bureau groups and the 4-H club leaders.

Briefly, the aim of a health teaching program in the

elementary schools is to help all children establish good health habits and develop the right attitude toward health. Emphasis on health information should be secondary to these two goals, especially in the early grades. Since we acquire habits not primarily by listening to exhortations but by having an opportunity to practice these habits with satisfaction, the school (and home) environment should be so arranged as to make the practice of these habits possible. We have gone a long way from the time when good health teaching was believed to be accomplished when an adult stood before a group of children and talked about health. Good eating habits are now learned through meals eaten at school, the noon lunch, the supplementary milk lunch, school parties, visits to the home economics room; good toilet habits are learned in connection with the toilet situation; good ventilation is learned by the control of classroom ventilation; the value of sunshine is learned on the playground.

The elementary teachers need the guidance of a well-qualified supervisor of health teaching. This supervisor should have the same rank and salary as the supervisors of art, music and social sciences. The supervisor of health teaching should be a member of the health staff of the school, the director of which ideally should be an educator. Behind the whole health staff stands the superintendent of schools whose public endorsement of the entire program is a sine qua non of success.

New York State Education Department,
Albany, New York

MARY G. MCCORMICK,
Supervisor of Health Teaching.

The Public Schools of Newark, New Jersey

The present program of nutrition in the public schools of Newark is the outgrowth of the open window classes which were instituted in the public schools to give special

care to those children who showed marked indications of poor nutrition. The first open window class was started in 1910, and thereafter, over a period of fifteen years, open window classes were instituted and conducted in many schools of the city. Each class had an average of thirty pupils to whom special care was given, including extra rest, supplementary feeding of milk or cocoa, and unlimited outdoor air. The tremendous cost of facilities and maintenance for the relatively small number of children who could be thus cared for during the few hours of the school day made such a program questionable for a public school system.

In 1921 the New Jersey Tuberculosis League had been permitted to organize and conduct a nutrition class as a demonstration in one of the public schools of the city. The success of the class as measured by the number of physical defects corrected, increased gain in weight, and general physical improvement of members of the class, seemed to excel that obtained through the work of the open window classes in comparable groups.

After careful consideration of the advantages and disadvantages, practicability, and results achieved in the open window classes, a plan for organizing nutrition classes of underweight children in the different schools to supersede the open window class was proposed. This plan called for persons who had special training in nutrition. In 1924 a Department of Nutrition was created as a subdivision of the Medical Inspection Department of the Board of Education with a staff comprised of one doctor, one nutrition supervisor, two nutrition teachers, and one nurse. Four years of college work with college degree, major training in foods and nutrition, and the educational qualifications of a teacher were the professional educational requirements established for the nutrition teachers. These requirements placed the nutrition teachers on the regular salary schedule of special teachers of the board of education.

Work in the schools was developed along three lines, the most specialized of which was the nutrition class. An average of about thirty underweight children within a reasonable age range were organized into a class which met once a week within the school building after school hours. In some of the schools larger groups of students were reached through health talks, illustrated with lantern slides or other materials, which were given in the school auditorium. The third approach was through the weight and height survey of the entire school after which health talks were given in the different classrooms by the nutrition teachers.

Over a period of five years these three methods of attacking the problems of nutrition and nutrition education were developed until in 1928 there were nutrition classes in forty-three schools and the staff of the department had grown to eighteen nutrition teachers, one nutrition supervisor, and five part-time pediatricians.

With the experience of five years' work along these lines, certain advantages and disadvantages were being realized. The advantages of the special nutrition class were based on the following conditions: the class consisted of a relatively small group of children in any one school; all of these children were chosen primarily on the basis of underweight, a factor which could be measured objectively; an intensive corrective program with supplementary feeding of milk and crackers was possible; weekly increases in weight were carefully noted. Much of the progress of the class work could be measured and reported objectively, and this was most important in the beginning of any new program. The value of the work was often judged by the immediate results which were measured in terms of gain in weight and number of defects corrected. Certain individual children made remarkable gains and showed such general improvement mentally as well as physically that the attention of the school was focused

upon them; thus the value of nutrition class work was established.

The trained nutrition teachers, who had a broader vision than just the correction of defects and gain in weight of a relatively small number, saw certain disadvantages in the special nutrition class. Throughout the five years no nutrition class had become a part of the regular school program. It was recognized as a special piece of corrective work to be carried out by a specialist. Weight as a factor in health was becoming all-important. This seemed inevitable since it was weight which was measured and kept before the children and used primarily as the basis for graduation. As nutrition classes consisted chiefly of a program of correction rather than prevention, it began to look like a hopeless task, for there were scores of children in every school ready and waiting always for the same corrective work.

More and more we became convinced that the nutritional status of any generation in a community could not be greatly influenced through the corrective nutrition class alone, and that all children, regardless of weight, must be given an interest in and a knowledge of the fundamental principles of nutrition if they were to use judgment and to make wise choices for themselves.

With this in view a more general nutrition education program was planned. This program was intended to reach all children of a given classroom with no segregation on the basis of weight, and to have the classroom teacher share responsibility in developing interest and conducting the work from week to week. Inasmuch as the average classroom teacher has had little or no study or training in the field of nutrition, the nutrition teacher must take the initiative in developing such a program. Individual and group conferences with the nutrition teachers and grade teachers are being developed to plan simple projects or units of activity through which nutrition educa-

tion may be achieved. As an individual classroom teacher shows sufficient interest and ability to assume the initiative, the nutrition teacher becomes an advisor and helper. All children of the class are weighed and measured at regular intervals throughout the school year by the classroom teacher and nutrition teacher working together. Emphasis is given to gains in weight and height as evidences of growth. The greatest value of the periodic weighing is the interest which it arouses in both the children and the teacher.

The child who needs individual help and guidance is not neglected through this more general program. The classroom teacher who has the closest association with the child outside his home is made more conscious of individual needs, and these children are referred to the proper persons for that help. The children referred to the nutrition teachers for help are referred by the school or clinic physicians, by classroom teachers, by parents, or by special departments. They are referred chiefly for poor general condition, loss in weight or failure to gain over a long period, irregular or improper food habits, food fads, arrested tuberculosis, or because they are tuberculosis contacts; also children who carry heavy responsibility in the home for the buying and preparing of meals for smaller brothers and sisters are referred to a nutrition teacher. A definite time is set aside for individual conferences with these children, plans for their own improvement and self-checking are worked out with them, and visits are made to many of their homes to advise the parents and to get a better understanding of the child's problem. The child returns at definite intervals for further conferences and to report any improvement or effort toward improvement.

Meetings for mothers of the younger school children are being developed as a definite part of the school nutrition program. These meetings are held in the school buildings, mostly during school hours, and a limited number of mothers are invited at a time. The objects are to discuss

some common problem, to acquaint the mothers with what the school is trying to do for the children from a health standpoint, or to present simple exhibits of inexpensive and nutritious foods or meals and simple demonstrations of ways of preparing inexpensive foods. The home economics teachers often cooperate in the demonstrations and exhibits.

At the present time the nutrition teachers are working in forty-five of the public schools of the city and thereby coming in touch, directly or indirectly, with approximately fifty thousand pupils and over one thousand classroom teachers. Most of the demonstration nutrition lessons are being taught in the intermediate grades by the nutrition teachers. In general, the nutrition teachers act as specialist advisors and helpers to the classroom teachers in the kindergarten, first, second, seventh, and eighth grades.

It is difficult to measure and report objectively the results of such a program in a short period of time. As stated earlier, while many of the results of the nutrition class could be reported in figures, no such report is adequate with this broader nutrition education program. We must look for our record of accomplishment in other things. Although we are unable to measure as much of it in immediate physical improvement as in the nutrition class, increased interest and favorable attitudes on the part of children, teachers and parents are growing steadily. This is shown by the increased number of nutrition activities being planned and developed in the classrooms; the ever increasing number of individual children who are referred by classroom teachers for individual help; records and checks kept by individual health problem children and the effort they make to improve themselves; the good attendance of mothers and fathers at the parents' meetings; and the number of parents who return to the school to confer with the nutrition teachers or ask them to come to their homes to discuss their particular nutrition problems.

No highly organized, stereotyped program has been

worked out in advance and imposed upon the schools. Rather, we have developed general policies and plans based on general needs that may be adapted in different schools as the specific needs and possibilities of a school are determined. Thus it is evident that the nutrition program in Newark public schools is in process of development and we have by no means a finished product to submit. We hope we are going in the right direction and we are able to see sufficient progress to encourage us to go forward. We do not wish to have a nutrition program as a separate entity but rather to let it assume its important and rightful place in the broader health education program of the school system.

Board of Education,
Newark, New Jersey

HARRIET STONE,
Supervisor of Nutrition.

COMMERCIAL ORGANIZATIONS

Medical Department of the Eastman Kodak Company

In 1921, a study of the causes of absences, due to sickness, convinced the directors of the medical and personnel departments of the Eastman Kodak Company that nutrition played an important role. Physical re-examinations of 3,280 employees at that same time showed that 55.7 per cent were malnourished. As a result of these studies, it was decided that someone should be added to the medical staff who would give her entire time to these nutritional problems. In July, 1922, this work was started.

It may be well to get a picture of the organization in Rochester before the work is discussed. There are four separate units, three devoted to manufacture, the fourth to office work. The research laboratory is in the largest factory. The twelve thousand (or more) employees live in widely scattered areas throughout the city and its en-

virons. They are English-speaking men and women, the majority being native born.

The first patients of the nutrition advisor were twenty-four undernourished office girls who had been advised by the examining physician to have a mid-morning and a mid-afternoon lunch of milk. Individual employees in the factory adjoining the main office were referred to the advisor by physician or nurse for consultation, but no group work was started in this plant until last year. Through the interest of the girls' employment manager and one of the matrons, work with an underweight group was started the second year in the largest manufacturing plant. A new nurse, who came to take charge of the dispensary in the smallest factory in 1926, made possible some intensive group work in that plant. From these beginnings, the work has continued to grow in each plant under the direction of the nutrition advisor and with the cooperation of doctors, nurses, employment managers, heads of departments and matrons.

The nutrition advisor is a member of the medical staff and is given full recognition and cooperation by physicians, nurses and all in the company.

From the first, individual conferences have played an important part in the work. When the patient is referred by physician or nurse or if he comes voluntarily, the medical record of his entrance physical examination and subsequent visits to the medical department is examined; a record is made of a day's food intake; inquiry is made as to his other health habits; and recommendations, based on these findings, are made. The patient is asked to return at a certain date, depending on the urgency of the case, and the number of his return visits is based on his progress.

In the first group work, individual conferences were held with each member before the serving of nourishment was started. More recently those underweight, or in a run-down condition, or subject to colds, or all three, have met

as a group. The subject of extra nourishment was discussed briefly, and an invitation extended to those interested. Over 65 per cent volunteered to join the group while the remainder constituted the control group. Later the former were met individually. To stimulate interest and to help focus attention on right health habits, body weights are taken at stated intervals and individual graphs discussed with the group. During succeeding weeks one or more letters are sent following up the recommendations previously made.

Last year three overweight groups were formed in as many departments at the request of the matrons and the superintendent. These groups continue as such for from six to eight months.

For three years a class has been formed in the main office for the instruction of new and young employees concerning company policies and personnel services. The nutrition advisor has met with each class for two sessions and has done follow-up work with those in need of her special attention.

Kodak Magazine, issued monthly, is the official employees magazine of the company, and every employee whether in Rochester or elsewhere receives a copy. Each number contains an illustrated, signed article on some timely nutrition topic written in a more or less popular style. These articles are prepared with the thought in mind that the magazine will be taken home in the majority of cases.

Three printed bulletins, *Right Foods for Better Health—How to Choose Your Daily Supply, What to Do to Gain Weight, What to Do to Lose Weight* are given out by physicians and nurses, and are also used as a basis of recommendation by the nutrition advisor in consultation work. They are placed in the racks in the medical waiting rooms with other health bulletins for free distribution. Aside from the printed diets there are special diets in mimeographed form.

In 1927, two exhibits were prepared and displayed in or near the eight cafeterias of the company. One of these showed the composition of the human body, the daily needs of the body in the way of protein, fats, carbohydrates, minerals, and vitamins, and sources of these foodstuffs. The other showed that energy requirement is influenced by muscular activity. Enlarged photographs of two men much in the public eye at that time, Gene Tunney and Colonel Lindbergh, with appropriate captions were used to attract attention.

These exhibits were counted a great success in the way of popularizing right diet. Many stopped to study the exhibits, often to return a second time with questions. The local branch of the tuberculosis and public health association asked permission to use them. They displayed them at the Rochester Exposition, in junior, senior and normal schools, and at the Young Women's Christian Association and Boy Scout organizations.

One of the series of health posters put out by the National Dairy Council was colored; captions were changed where necessary to fit adults and exhibited on the bulletin boards in all plants. These caused much comment.

Ten large water color posters mounted on easels were displayed in the cafeterias. These were made by students in the art department of Mechanics Institute to illustrate certain food facts. After the lapse of a year, they were retouched and displayed a second time.

In a series of posters on the prevention of common colds, one emphasized the value of right foods in building up resistance to infectious diseases. These were displayed on all of the bulletin boards.

There is no direct conrtol over the cafeterias, but a friendly relationship has been established with each cafeteria director. The general plan of menus is discussed from time to time, and there is always fine cooperation when the cafeteria is used for display of exhibits and

posters. The main office cafeteria is often used as an experiment station.

More than one hundred undernourished girls took milk between meals for seven months. Instruction in diet was given to each one. In 1927, a check was made on 51 of those who had been in the group for at least thirty weeks: 76 per cent had increased their weight and reported improved health; 80 per cent showed less absence in 1927 than in 1922.

From time to time the doctor or nutrition advisor orders extra nourishment for certain employees for a stated period. Thus a changing small group is taking a mid-morning and mid-afternoon lunch in the main office cafeteria.

A questionnaire sent in 1924, showed that 295 patients had made definite changes in their food habits after having been advised. The report showed that more milk, fruit, and vegetables were included in the diet, more exercise was taken, employees had more sleep, and fewer had digestive disturbances and constipation. The next year a similar check-up was made with corresponding results. This method has not been used since.

In the smallest plant, a group of 36 underweight men and women was formed in 1927. The extra nourishment provided was a commercial malted milk with a cupful of whole milk served each morning and afternoon. At the end of six months, it was found that over 50 per cent had made appreciable gains in weight. Each reported physical improvement and fewer colds. There was 55 per cent less absence from illness during this year, and diet seemed to be a leading cause.

Work was started in 1927 with a group of 28 undernourished girls in the largest factory to demonstrate that the addition of milk and cod liver oil to an adequate diet would help to increase body weight, reduce colds, correct certain abnormal physical functions, and improve efficiency.

A control group was organized. At the close of the

six months it was shown that the experimental group made greater gains in weight, had a higher efficiency record and fewer colds, and was absent from employment fewer hours a person a month than the control group.

The following December another volunteer group was started not only in this one room, but in another in the same department. Statistically similar results were shown as in the first year. The matron stated that an outstanding result was improved morale in the department.

In one year 116 girls in this department took cod liver oil and 136 in two other plants, 100 of them men. This is one tangible instance of the increased interest taken in right diet.

As a direct outcome of the work done in one room of this large department, requests came, through the matron, for all to be weighed and measured. This was done and a follow-up letter sent to the 600. Two other departments in this plant, hearing of this work, requested the same attention.

Perhaps the most convincing evidence of the value of this work is the changed attitude and manifest interest of individuals as they come for consultation to discuss their personal food habits.

The expense of the nutrition work is included in the budget of the medical department which in turn is a part of the industrial relations department of the company.

Eastman Kodak Company,
Rochester, New York

LAURA COMSTOCK,
Nutrition Adviser.

National Dairy Council

The National Dairy Council is the educational organization of the dairy industry. Its purpose is to increase the use of dairy products. Its work is based on the broad nutri-

tional program approved by recognized authorities in this field who agree that the consumption of milk and its products is necessary to human health and welfare.

The National Dairy Council began its activities through establishing local or regional unit organizations. Among the first so organized were one in New England and one in Philadelphia. At present there are 15 active coordinated unit councils located in metropolitan areas. These are locally supported and operated and are all affiliated with the national organization which is supported by all branches of the industry. Chicago is the headquarters. This office, through its various departments, conducts educational work in the unorganized territory, coordinates the work of the local units, prepares programs and indicates the scientific discoveries that may be used throughout the organization. At present the Council organization has 151 workers; 66 of these are staff members trained in nutrition. The national office in Chicago has the following departments through which nutrition information is presented to the public: Health Education and Research; Publicity, Industry Relations; Service Bureau, Exhibits.

The National Dairy Council was the first organization commercially supported, representing a food product or an industry, that based its activities entirely on educational publicity. As a pioneer in the field, the ideals to which it was pledged and the standards of work it set were such that leaders in public health education and science and all other professional groups interested in the improvement of living conditions could have confidence in its integrity.

The Dairy Council's beginning was almost coincident with the new movement to vitalize health teaching. Recognizing the basic importance of milk, the Dairy Council was invited to make its contribution to the movement by taking part in this program emphasizing nutrition.

It has not been necessary for the council to maintain research laboratories because noted investigators have given much of their time to the study of milk. The find-

ings of these studies and their interpretation by leaders in the scientific world have formed the basis of the nutrition work of the council.

Leaders in the fields of nutrition and education have acted as technical advisors to a staff of trained workers in the preparation of material and in the formation of the policies of the organization in its national and local relationships. The Dairy Council organization has always offered its service in cooperating with the health education programs of the established education and welfare organization already at work in the community.

At present the council is actively at work throughout the country, in cooperation with the following agencies; it is not possible to discuss the work with each agency in detail; certain projects are reported as typical:

Education groups

- Public, private and parochial schools
- Normal schools
- Teacher training institutions
- Colleges and universities
- United States Department of Agriculture, Extension
- 4-H club (boys and girls)
- Adult groups in extension clubs
- Federal Board of Vocational Education
- Vocational schools of agriculture and home economics
- Farm Bureau Federation
- Farmers unions
- Granges

Public health and other professional groups

- City and county health commissioners
- State boards of health
- Physicians
- Dentists
- Nurses

Welfare and city club groups
- Anti-tuberculosis association
- American Red Cross
- Health Center Clinics
- Settlement houses
- Women's clubs
- Boy and Girl Scouts
- Young Woman's Christian Association
- Young Men's Christian Association
- Camp Fire Girls

Industrial groups
- Health clubs for workers
- Factory and office employees

In regional council territory nutritionists work with the schools, supplementing the health program by:

Graphic presentation of health material in assemblies; at the present time the 15 regional councils are cooperating with 5,143 schools in 414 cities.

Distribution of graded health education material; 8,040,077 pieces of literature were distributed by the council last year.

Lending slides and films for use by the teacher in the classroom, one council unit responds to more than five hundred requests each year.

Working with the teachers and furnishing subject matter. In all areas not covered by unit organization the National Dairy Council in Chicago has developed, through correspondence, contacts with teachers throughout the country. During 1929, 46,000 such inquiries were received and advice and material supplied.

By providing the schools with simple factual material presented in attractive stimulating form, the Dairy Coun-

cil coooperates with the teachers in presenting to the child, nutrition information which will stimulate the regular practice of good food habits. Out of these contacts have come many opportunities to cooperate with health projects that have acted as patterns for schools all over the country.

The school lunch study completed last year is an example. This study was initiated in three schools in different parts of the United States where the local health education leaders wished to emphasize the way in which health teaching in the classroom could influence the choice of good lunches in the lunchroom.

The working plan of the study, adapted to suit existing conditions in each community, was as follows: A nutrition worker from the National Dairy Council cooperated with local agencies in making a preliminary survey of health conditions in each school. The children were weighed and measured and given a complete dental examination. A questionnaire was used to obtain facts about the children's diets and their other health practices. Teaching outlines on various health subjects were made to the school when it was necessary to aid in the health work. Before the lessons began, a library of nutrition reference books and pamphlets was presented to each school. Supplementary material was sent with each set of outlines to assist the teacher in conducting the lesson properly. Whenever possible, a demonstration lesson was given for the teachers. At the end of the school year, the national office cooperated again with local agencies in the final check-up and in the interpretation of the results of the health education program.

One evidence of improvement resulting from the nutrition program was the increase in percentage of children selecting good lunches in all three of the schools at the close of the year's work. The lunches selected were graded A, B, and so on. Outstanding was the gain in A lunches, from 8 per cent to 72 per cent during a seven-

month period in one of the schools. The increase in milk consumption corresponded to the improvement in the selection of lunches, the gain being from 11 per cent to 72 per cent of the children selecting milk for their lunch in a seven-month period. That the teaching had a lasting influence upon the children's judgment is shown by the fact that this year's reports from the schools in which the study was conducted indicated that interest in and choice of good lunches has not abated.

One county employed a full-time worker who has taken over the program as a part of the regular county health work. This worker has already started, in three of the county schools, complete health education programs in which she is emphasizing the lunch study as a practical aid in teaching health.

There is a continual demand for good supplementary health education material to place before prospective teachers. The councils have cooperated with normal schools and teacher training institutions in supplying its material prepared for use in schools. Staff members give demonstrations of the projects and material before the classes. When it is not possible for a member of the staff to present the material, portfolios with samples are furnished for the health instructor. More than two hundred such portfolios were used last year.

The Dairy Council has emphasized nutrition work for 4-H club boys and girls. It issues a regular bulletin devoted to stimulating material for group activities and club meetings that will emphasize the health phase of their program. This is distributed through the state extension leaders to the individual club leaders. Each month during the past year more than four thousand of these bulletins were distributed to club leaders in practically every state in the Union.

Last year the National Dairy Council offered a $200 scholarship fund to be used as the club wished, for the best county health program; 28 counties competed. This

year there are more than 1,024 clubs in 35 states representing 14,010 club members now enrolled.

Digest, issued monthly, which reviews and interprets new nutrition facts regarding dairy products, has proved valuable to the professional groups. Although intended originally for a specialized group there has been such demand for the regular issue of the *Digest* and often for back issues to be used in college classes for students, that in one year the circulation has increased five fold and is limited only by the size of the present printing.

All council units cooperate with factory and other industrial groups in their health programs. As a rule the medical director has some plan in which he asks the Dairy Council to take a part. Detailed description is not possible in this limited space.

Through the publicity department in the national office, nutrition information is provided to the newspapers in several different regular releases. The *Household Nutrition Clipsheet* containing fourteen popularly written articles on nutrition is sent each month to more than four thousand newspapers with a guaranteed circulation of 14,000,000.

The National Dairy Council has produced a number of motion pictures that are used not only in the schools but in regular moving picture theaters. During the past year it has cooperated with the Eastman Teaching Films in the preparation of a number of teaching films for young children that are intended for classroom use.

The Dairy Council organization has had a unique opportunity in its work because it represents an industry producing a basic food. Education in the importance of the daily use of milk in the diet is one of the objectives of every health education program. For this reason the Dairy Council through its trained personnel has been able to make a contribution to this program that is comparable with that of any organized welfare group, a contribution that does not duplicate the work of the schools. From the standpoint of the industry, this type of direct education

work has given more definite results than could have been obtained through other methods.

The National Dairy Council, Chicago

AUBYN CHINN,
Health Education Director.

TRAINING CENTERS

The University of Chicago

The Department of Home Economics of the University of Chicago offered its first special course for the training of nutritionists in the summer of 1917. From this early beginning the need for practical supervised experience in nutrition work has been recognized and a number of methods of providing it have been employed. Since each of these has both advantages and disadvantages, they may be briefly described.

The first group of students received their training in an outpatient clinic. The students observed and assisted in the various aspects of the nutrition work: medical examinations, taking of diet and health histories, weighing and measuring, class instruction in desirable health practices, follow-up work to assure the correction of physical defects, and home visits to assist the parents in adjusting the home conditions to favor health and good nutrition. Each student was assigned one particular child for her special study and responsibility. She followed him through all examinations, did the necessary follow-up work and wrote a complete report of the case, including an analysis of the causes of the child's condition, a record of work done on the case, the difficulties involved, and suggestions for further work needed.

Such a clinic class is seen to have many advantages for training students. The chief of these is the close contact with the various aspects of medical service, which

makes it possible for the student to follow children through the initial examinations and the follow-up treatment, and to learn the routine of dispensary service. The disadvantages are that regular attendance, which is so essential to successful class instruction, is difficult to secure when children come from so wide a territory, and that the dispensary nutrition patients are largely severe cases of malnutrition or ones complicated by other diseases or by extreme poverty. Results are therefore discouraging and the student rarely has the opportunity to see a striking demonstration of the improvements which may attend nutrition service in more favorable situations.

The Infant Welfare Station has also served as a training center. Here the work is confined to children of the preschool age and to well children in the sense that absence of specific illness is required. The student has the benefit of the routine medical examinations, but must follow her child to the clinic for any special examinations, as for diseased tonsils or teeth or other defect. The technique of nutrition service consists chiefly of work with the mothers by means of individual conference, class instruction and home visits; in some cases there are conferences with the children themselves. The student in training assists the station nutritionist in all these details and usually makes a special case-study of one child as outlined above. This type of apprenticeship is particularly valuable for students expecting to specialize in work with preschool children. In such case the work in the station can well be preceded by nursery school training and experience, especially in methods of handling problems of feeding, sleep, and other behavior difficulties.

For older children, it has long been agreed, the best method of attack is through the public school. Here all the children can be reached for continued instruction and supervision, and fundamental and widespread nutritional improvement can eventually be effected. The desirable place for training students in this type of nutrition-health

service than would be in a school in which an ideal nutrition program is being carried out. In the absence of such a situation we have attempted to demonstrate on a small scale the techniques involved in such an all-round nutrition program. In the summer of 1921 we set up for this purpose a Child Health School, consisting of twenty undernourished children, and attempted to provide for this small group all the conditions of health and good nutrition which it was believed should be included in a satisfactory school program. This included expert medical and dental service, supervised play and corrective physical exercise given by an orthopedist, a program of lessons in nutrition and related health factors, a cooking class in which the children learned to prepare the foods they were taught to consider essential in the diet, an adequate noon lunch eaten together under conditions which gave scope to its educational possibilities, a supervised rest period and such other school activities as could contribute to the health program. Home cooperation was secured through parent meetings, home visits, and individual conferences.

This School, which continued for ten weeks of the summer session, furnished an excellent means of giving the students training in the various techniques of nutrition service. In such a set-up the entire situation is under direct control. It is possible, therefore, to secure better results than by any of the other procedures and thus to give the students a more optimistic picture of what it is possible to accomplish when conditions can be fairly well controlled than can be done when the conditions are so extreme as to be almost irremediable. For this reason this type of experience is perhaps the most valuable for the student. The objection, however, is that it is extremely expensive in money, time, and number of workers. For these reasons the method was modified in succeeding years to the extent of having the children come only for weekly or bi-weekly classes and lunch, an attempt being made to include all the essentials of the former procedure.

In recent years further modifications have been made in our methods of furnishing experience to students. Instead of having one special group for demonstration, the various techniques have been taught in laboratory exercises, and through special demonstrations and directed observations. Training is thus given in methods of weighing and measuring, plotting of weight charts, taking diet and health histories, making dental examinations, and tabulating and graphing the results. The students are taken to a clinic or elsewhere to observe medical examinations. They visit the various types of nutrition work being conducted in the city, in clinics, infant welfare stations, settlements, preventoria, and schools, and they write critical reports of their visits according to outlines given them for the purpose. They also plan nutrition lessons to be used in school programs, and outline talks to be given to parents or teachers to secure their understanding and cooperation in the health program. Often the individual members of the class are apprenticed for one day a week to some one of the organizations listed previously as carrying on nutrition service.

Ideally the training of a nutritionist who expects to go into active work would include all the training described under the last procedure plus an intensive period of actual work in a real situation. If the latter cannot be secured while in training, the student should herself volunteer with some organization for a period of apprenticeship, similar to the diet internship of the prospective hospital dietitian, or secure a position as assistant where she can have supervision during the initial stages of her work.

Chicago University,
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A nutritionist may be defined as a professionally trained person, who is able to make nutrition function practically in the lives of other people, for their increased health and happiness.

The science of nutrition has developed with great rapidity and is continuing to develop at a rate which makes its best contribution to human welfare contingent upon scientific study. Nutrition is an outgrowth of chemistry and biology and thorough training in these subjects is necessary for every nutritionist to give balance and perspective as well as actual knowledge. Only rigorous training in scientific method and wide knowledge of the history, methods and results of nutrition investigations will enable one to discriminate between dietetic quackery and sound scientific practice.

Since the ultimate aim of the nutritionist is to teach people a better way of life, she must know something of the learning process and of the art of teaching. These are based on psychology. How to present a new idea in a way that will be well received; how to displace a bad habit with a better one; how to change emotional states which hinder the nutritive processes, are everyday problems of every nutritionist. Furthermore, the most important place for nutrition work is among children who need special care because they are so much more sensitive to good nutritional conditions than adults and because they should learn the principles of good nutrition when their habits are forming. Contacts with children are most successfully made in schools. Either directly, as the special teacher in the classroom, or indirectly, helping the regular teachers to incorporate suitable nutrition teaching in their programs, the nutritionist must be ready to fit into the modern educational situation. For this there must be supervised training in classroom instruction and understanding of the construction of the school curriculum, so that the nutrition pro-

gram will articulate smoothly and effectively with the rest of the program.

The nutritionist must be able to plan practical programs, adapted to all the people with whom she works. She must know how to make fact-finding surveys which will have reliability, whether of individuals, of homes, or of whole communities. If there be no money to buy food, a way must still be found to nourish the children. If the money will not quite reach, better food investment must make it go further. As one mother said, "Before you came I did not have enough money for food for my children and none for the little dresses. Now we are all well-fed and I have money for the little dresses, too."

The techniques of the trained social worker must be learned and applied to nutrition, with sociology added to give meaning and background. It is important to go into homes and study them first hand, under a trained guide. It is also necessary to go into clinics in order to learn what the manifold problems of the human race are and in what guises they present themselves, and how to begin to try to cope with them.

In the field of nutrition, knowledge of the nutritive values of many foods is essential, but that knowledge will never bring results unless the worker knows how to make food appeal to the palate. "It is not what is in the menu but what is in the family that counts." The class of mothers in the settlement house must be shown how to cook their food so it tastes better and is more interesting than ever before. The older children in school, both boys and girls, must be taught ways so simple that every child can get for himself, at low cost, a meal which is nutritionally adequate.

The nutritionist is winning her place in many communities. In the past her education has given her knowledge of subject matter, but relatively little other professional training. It takes more than four years of college training to make a first-class nutritionist. In addition to the four

undergraduate years with a carefuly directed nutrition program, including courses in chemistry, physics, biology, psychology, economics, sociology and principles of food preparation, of household management and of teaching, there should be at least a year of specialized professional training.

The following is quoted from the report of the Subcommittee on Training Standards of the Advisory Committee on Foods and Nutrition of the New York Nutrition Council, as it admirably summarizes the lines along which the nutritionist should be trained.

As a preliminary to specialized training in nutrition, all candidates should have extensive and thorough training in the fundamental sciences, physics, chemistry and biology.

The special training of nutrition workers should include:

The subjects that contribute to the science of nutrition, e.g., physical and chemical physiology.
The subjects which help to make practical the science of nutrition, e.g., dietetics and household management.
Experience which gives insight into the medical and social problems of nutrition work, e.g., practical work in a medical social service clinic, to include case work and record keeping.

In addition to the above essentials, training along the following lines is desirable:

A knowledge of social agencies and their correlation.

Training in the principles of education.
Practical work in sociology and economics.
Supervised practice in the nutrition field.
Training in bacteriology.

Communities in which successful nutrition work has been done are enthusiastic for the nutritionist, and there

are many able public-spirited young women who would gladly give their lives to this service. But as yet the financial rewards are very inadequate compared with the cost of preparation. It is to be earnestly hoped that the survey made for this White House Conference Report, of what has already been accomplished by nutritionists will increase appreciation of this fine type of health service, and lead to demand for a type of professional training which shall include carefully supervised field service as well as classroom instruction.

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MARY SWARTZ ROSE,
Professor of Nutrition.

CHILD HEALTH CENTERS: A SURVEY

VI For every child . . . promotion of health, including health instruction and a health program . . .

From THE CHILDREN'S CHARTER

CHILD HEALTH CENTERS: A SURVEY

REPORT OF THE SUBCOMMITTEE
ON HEALTH CENTERS
J. H. MASON KNOX, JR., *Chairman*
LILLIAN LASER STRAUSS, *Vice-Chairman*

WHITE HOUSE CONFERENCE ON
CHILD HEALTH AND PROTECTION

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CHILD HEALTH CENTERS: A SURVEY

CHILD HEALTH CENTERS: A SURVEY

DEFINITION

A CHILD health center may be defined as a place where infants and children are examined and the parents or guardians given such advice as will promote and protect the health of their children. The service in a typical center is preventive and does not include the treatment of disease. This service for children in the United States is offered at fixed and more or less thoroughly equipped centers,—the permanent child health centers,—or the examinations and advice are carried on by doctor or nurse at places temporarily engaged for the particular consultation. The latter type usually has been called the temporary or itinerant child health conference.

The child health conferences in the permanent centers naturally have been developed for the most part in the larger centers of population, often have been maintained by funds from private sources, in many instances have become centers for group teaching, and sometimes have provided examinations and advice by medical specialists other than pediatricians, together with the services of a variety of special workers.

The child health conferences in rural areas and in towns of less than 10,000 for the most part have been conducted under the auspices of official agencies, usually under the direction of bureaus of child hygiene in the departments of health of the several states.

In all cities of more than 10,000 the Subcommittee attempted, through inquiry from state and local health officers, through community fund committees, directories of social work and similar sources, to secure a complete list

of child health centers in each state; and through questionnaires to ascertain information concerning the directing agency, the source of support, and extent of the service rendered. It was a particularly difficult task as many of the unofficial centers are carrying on work along special lines and do not keep records that can be tabulated easily.

Questionnaires were sent to all organizations which gave prima facie evidence that they were conducting health centers. In a number of instances the replies either were too meager to admit of tabulation, or else they indicated that the activities were primarily not those of a health center in the general acceptation of the term. The latter, the majority of which reached only small numbers of children, are not included in the report. Replies were accepted, unfortunately not always complete, from 1,511 child health centers and the attempt was made to tabulate the information received.

It is felt that the first fairly complete list of the health centers conducted in the United States and its possessions has been secured. These, together with the consultations for children in the rural areas and smaller towns, comprise the health promotional activities which are associated with child health centers and carried on in behalf of infants and children.

DATES OF ESTABLISHMENT

The year in which the centers were established is shown in Table 1. It is evident that the health center method of

TABLE 1

HEALTH CENTERS BY DATE OF ESTABLISHMENT

YEAR ESTABLISHED	HEALTH CENTERS	
	Number	*Per cent*
Prior to 1900	20	1
1900–1904	97	6
1905–1909	76	5
1910–1914	258	17
1915–1919	230	15
1920–1924	439	29
1925–1929	359	24
1930	32	2

promoting the health of children is of recent date. It probably developed gradually from the infant consultations begun in France some forty years ago, which spread to other countries of Europe and to this country later. Doubtless the idea of a place where the well child could be helped to keep well was fostered also by the importance which has been given to the value of periodic examination of people of all ages in the prevention of disease and the promotion of good health, and by the disclosures of the examinations in this and other countries of serious physical and mental handicaps in young men supposedly well, presenting themselves for military service. Social workers have used health centers to determine the physical status of persons applying to them for aid, and insurance and security companies have emphasized the value of the physical examination of applicants.

It will be noticed that but 20 (1 per cent) of this group of centers were established prior to 1900, that over half were begun since 1920, and 87 per cent since 1910.

DISTRIBUTION

The geographic distribution of 1,511 health centers together with the source of support is indicated in Table 2.

This table also indicates the auspices under which these centers are carried on, 643 being conducted primarily by official agencies, 636 by non-official agencies and supported by voluntary funds, while 232 are called *cooperative* which means that both official and volunteer agencies are concerned with the support of the centers. The number of independent units conducting work at health centers is considerably larger than the table indicates as in a number of instances an organization in a large city may carry on work in several centers and make a single report embracing the total volume of work.

It will be noted that the child health centers are more numerous in the Middle Atlantic and New England States,

TABLE 2

NUMBER OF HEALTH CENTERS BY LOCATION AND SOURCES OF SUPPORT

LOCATION	SOURCES OF SUPPORT			
	Official (Municipal)	Non-official	Cooperative	Total
New England				
Maine	5	12	0	17
New Hampshire	6	7	3	16
Vermont	0	3	0	3
Massachusetts	26	59	17	102
Rhode Island	2	10	5	17
Connecticut	5	26	19	50
Middle Atlantic				
New York	129	97	26	252
Pennsylvania	46	115	42	203
New Jersey	61	22	12	95
East North Central				
Michigan	23	19	13	56
Wisconsin	15	18	4	37
Ohio	41	26	4	71
Indiana	1	13	0	14
Illinois	41	38	10	89
West North Central				
Minnesota	6	14	1	21
North Dakota	1	0	0	1
South Dakota	1	0	0	1
Nebraska	1	1	0	2
Iowa	0	11	3	14
Missouri	1	17	3	21
Kansas	2	0	1	3
South Atlantic				
District of Columbia	11	1	0	12
Delaware	0	2	0	2
Maryland	23	2	2	27
West Virginia	9	20	2	31
Virginia	6	14	4	24
North Carolina	5	2	7	14
South Carolina	5	6	2	13
Georgia	19	7	10	36
Florida	3	0	0	3
East South Central				
Kentucky	17	3	0	20
Tennessee	5	3	1	9
Alabama	5	6	6	17
Mississippi	2	1	0	3

TABLE 2 (Cont.)

LOCATION	SOURCES OF SUPPORT			
	Official (Municipal)	Non-official	Cooperative	Total
West South Central				
Arkansas	2	2	3	7
Oklahoma	3	2	0	5
Louisiana	2	6	0	8
Texas	27	9	3	39
Mountain				
Montana	1	0	1	2
Idaho	0	0	0	0
Wyoming	0	4	0	4
Colorado	2	5	2	9
Utah	18	0	0	18
Nevada	0	0	0	0
New Mexico	1	0	0	1
Arizona	0	4	2	6
Pacific				
Washington	5	9	2	16
Oregon	1	3	13	17
California	58	17	9	84
Total	643	636	232	1,511

but that this form of health center activity is represented in the child health program in nearly every state in the country.

ORGANIZATIONS CONDUCTING

The specific organizations conducting the health centers are shown in Table 3. This table represents an attempt to indicate the groups primarily responsible for health center activities, but the answers indicated so many combinations of "auspices" that they could not be interpreted with any degree of exactitude.

The total shown is greater than the total centers reporting because some showed joint or cooperative direction.

Seven hundred seventy-nine were directed by county or municipal departments of health, 725 by independent, i.e., non-official organizations, and considerably smaller numbers by the American Red Cross, various hospitals, child

TABLE 3

HEALTH CENTERS BY TYPE OF CONDUCTING ORGANIZATION

CONDUCTING AGENCY	HEALTH CENTERS	
	Number	*Per cent*
County department of health	135	9
Municipal department of health	644	43
Independent organization [a]	725	48
American Red Cross	116	8
Hospital	50	3
Child welfare organization	115	8
Tuberculosis association	85	6
No answer	42	3

[a] Independent means those non-official organizations set up for the specific purpose of conducting health centers.

welfare organizations, and tuberculosis associations. Many of the health centers conducted under the above auspices were in affiliation with other organizations official or voluntary. The complete list includes:

Parent Teachers' Associations
Kings' Daughters
Church and Religious Organizations
Fraternal Organizations
Missionary Societies
Community Centers and Settlements
Family and Child Welfare Organizations
Industrial Groups
Hospitals
University or Teaching Groups
National Tuberculosis Association
Young Women's Christian Associations
Women's Christian Temperance Unions
Junior Leagues
Women's Clubs
Schools
Visiting Nurse Associations
Red Cross Chapters

PERMANENCY

The replies would indicate that of the health centers tabulated, 1,286 or 85 per cent are permanently established and 164 or 11 per cent are "temporary" centers where children are seen at infrequent intervals. Four per cent did not answer.

The number of sessions per year for the examination of children in these "temporary" health centers (i.e., those not operating continuously as health centers) is shown in Table 4. Thus 13, or 8 per cent, of these itinerant or temporary centers held from but one to four sessions a year and 61, or 37 per cent, held fewer than 30 sessions a year.

TABLE 4

ITINERANT OR TEMPORARY HEALTH CENTERS—SESSIONS PER YEAR

NUMBER OF SESSIONS	HEALTH CENTERS	
	Number	*Per cent*
1– 4	13	8
5– 9	12	7
10– 19	22	13
20– 29	14	9
30– 39	7	4
40– 49	1	1
50– 59	22	13
60– 69	1	1
70– 79	0	0
80– 89	2	1
90– 99	0	0
100–199	21	13
200–299	0	0
300 and over	2	1
No answer	47	29
Total	164	100

SOURCE OF SUPPORT

The principal or main source of support of the health centers is indicated in Table 5. In 693 or 46 per cent the principal source was public funds. The remaining centers were supported primarily by community chests or from

TABLE 5

HEALTH CENTERS, PRINCIPAL OR MAIN SOURCE OF SUPPORT

SOURCES	HEALTH CENTERS	
	Number	*Per cent*
Public funds	693	46
Community fund chest	264	17
Private funds	339	22
No answer	215	14

private or voluntary funds. Two hundred fifteen failed to give information concerning this subject.

The questionnaire, besides asking for the principal source of support, asked for other sources of revenue and the replies, showing all sources of support, are shown in Table 6. This is interesting when taken in connection with Table 5, as indicating very great cooperation between public and private agencies.

TABLE 6

HEALTH CENTERS RECEIVING SUPPORT FROM VARIOUS SOURCES

ALL SOURCES	HEALTH CENTERS	
	Number	*Per cent*
Public funds	938	62
Community fund chest	389	26
Private funds	618	41
No answer	33	2

BUDGET

Replies to questions as to the total budget for the last fiscal year were so unsatisfactory as not to permit tabulation. This most important matter deserves a special and detailed study. There are at present no adequate figures as to comparative costs of the health examination service in health centers.

COMMUNITIES SERVED

The type of community served by the health centers is shown in Table 7. It is to be noticed that 1,180 centers

TABLE 7

NUMBER OF HEALTH CENTERS SERVING VARIOUS TYPES OF COMMUNITIES

TYPE OF COMMUNITY	HEALTH CENTERS	
	Number	*Per cent*
Chiefly rural	203	13
Urban (2,500–10,000)	273	18
Urban (over 10,000)	917	61
No answer	118	8

or 79 per cent minister to children in urban populations and that 203 or 13 per cent to children chiefly in rural areas. Many of these rural centers are conducted as auxiliaries to larger centers maintained in the adjoining cities. They are not included in the rural centers to be referred to later.

NUMBERS IN RELATION TO POPULATION

Table 8 includes the total population of all cities in the United States of more than 10,000. It shows both the number of health centers in all cities of various sizes

TABLE 8

NUMBER OF HEALTH CENTERS IN CITIES OF VARIOUS SIZES AND RATIO TO POPULATION

Population of Cities (in thousands)	CENTERS		Total Population	Ratio: Center to Population
	Number	*Per cent*		
10 and under 50	173	19	15,162,708	1 : 87,645
50 " " 100	156	17	6,548,213	1 : 41,975
100 " " 200	146	16	6,685,110	1 : 45,788
200 " " 300	81	9	4,124,703	1 : 50,922
300 " " 400	43	5	2,383,897	1 : 55,439
400 " " 500	20	2	2,303,484	1 : 115,174
500 " " 600	6	1	1,151,325	1 : 191,887
600 " " 700	41	4	1,304,211	1 : 31,810
700 " " 800	9	1	781,188	1 : 86,798
800 " " 900	7	1	1,626,834	1 : 232,405
900 " " 1,000	17	2	900,429	1 : 52,966
1,000 " " 2,000	54	6	4,757,671	1 : 88,105
2,000 " " 3,000	0	0	.....	.....
3,000 " " 4,000	47	5	3,376,438	1 : 71,839
4,000 " " 5,000	0	0	.....	.....
5,000 " " 6,000	0	0	.....	.....
6,000 " " 7,000	117	13	6,930,446	1 : 59,234

and the ratio of health centers to total population in each group of cities. The largest number of centers, 173, or 19 per cent of all centers replying are in cities from 10,000 to 50,000, but this does not mean that cities of this size are more adequately served than the larger cities, since the total population of cities of this size is 15,162,708. There is, therefore, but one center in such cities to 87,645 people. While some cities in this group are very well served, many have no health centers at all. In cities from 50,000 to 100,000, with a total population of 6,548,213, there are 156 centers, one to 41,975 people; 146 centers in cities of from 100,000 to 200,000 serve 6,685,110, one center to 45,788 people; 81 centers in cities from 200,000 to 300,000 with a population of 4,124,703 serve 50,922 people each. There is even greater variation in some of the larger cities. The average ratio of health centers to population in all cities above 10,000 in the United States is one center to 63,290 population.

RACIAL GROUPS SERVED

TABLE 9

PREDOMINANT RACIAL GROUP SERVED BY HEALTH CENTERS

RACIAL GROUP	HEALTH CENTERS	
	Number	*Per cent*
Native white	839	56
Indian	2	0.1
Negro	67	4
Oriental	1	0
Foreign white	201	13
Mexican	7	0.5
Some national group	60	4
No answer	334	22

The white, native and foreign, form 69 per cent of the major population served. The Negro is the predominant group reached in 67, or but 4.4 per cent, of the centers. A further tabulation, however, indicates that 649, or 43 per cent, of all the centers receive some Negro children, 161 or 11 per cent receive Oriental, and 159, or 11 per

cent Mexican children in addition to the predominant racial group. This refers to the policy of the centers and not to the number of children in the groups served.

OCCUPATIONAL STATUS OF POPULATIONS SERVED

The occupational status of the population served by the health centers is indicated in Table 10. Many centers re-

TABLE 10

PREDOMINANT OCCUPATIONS OF POPULATIONS SERVED BY HEALTH CENTERS

OCCUPATIONS	HEALTH CENTERS	
	Number	*Per cent*
Industrial	1,282	85
Agricultural	220	15
Mining	85	6
Professional	51	3
Other	151	10
No answer	61	4

ported two or even more predominant groups. As might be expected, the largest proportion of these centers (85 per cent), which are for the most part in urban areas, serves the children of industrial groups. In a much smaller number of centers the predominant groups served are agricultural, mining and professional.

PERSONNEL

The character and extent of the work at the centers is suggested by the number and variety of workers on the staffs. The various groups of paid workers, full and part time, employed in the health centers are shown in Table 11. The number of full-time workers in the centers is considerably in excess of the figures given in the table, but by just how many is not known. Many of the centers simply stated that they were using full-time physicians, nurses, and so forth, without indicating the actual number. By adding one in each case, the numbers given in Table 12

TABLE 11

NUMBER OF PAID WORKERS

TYPE OF WORKER	NUMBER OF WORKERS	
	Full Time	Part Time
Physicians	246	1,261
Registered nurses	2,960	683
Orthopedists	26	26
Psychiatrists	10	24
Psychologists	16	23
Dentists	60	187
Nutritionists	60	47
Social workers	167	46
Lay helpers	86	82
Clerks	431	114

were obtained. It shows more centers employing some types of workers than is shown in Table 11 because all did not indicate actual numbers.

Apparently 213 centers, or 14 per cent of the total are sufficiently extensive to require the whole time of one

TABLE 12

PAID WORKERS ON FULL OR PART TIME

TYPE OF WORKER	HEALTH CENTERS			
	Full Time		Part Time	
	Number	*Per cent*	*Number*	*Per cent*
Physician	213	14	971	64
Registered nurse	1,013	67	512	34
Orthopedist	27	2	41	3
Psychiatrist	8	0.5	29	2
Psychologist	32	2	26	2
Dentist	85	6	174	12
Nutritionist	90	6	89	6
Social worker	151	10	71	5
Lay helper	59	4	85	6
Clerk	321	21	201	13
Others	152	10	151	10

or more physicians and 1,013 or 67 per cent of the centers require the whole time of one or more registered nurses, 151 centers or 10 per cent employ social workers on full time, 90 or 6 per cent employ nutritionists, and 85 or 6 per cent one or more dentists on full time.

A larger number of centers, 971 or 64 per cent employ a physician on part time and 174, or 12 per cent employ a dentist on part time. The registered nurse on the other hand is more often employed on full time than on part time.

By consulting Table 13 it will be noted that only a small number of health centers have volunteer workers on full time. On the other hand, a considerable part of the work of the centers is carried on by volunteer workers on part time. Thus 368 centers or 24 per cent are served by volunteer physicians on part time and 469 centers or 31 per cent by lay helpers on part time.

TABLE 13

VOLUNTEER WORKERS ON FULL OR PART TIME

TYPE OF WORKER	HEALTH CENTERS			
	Full Time		Part Time	
	Number	*Per cent*	*Number*	*Per cent*
Physician	29	2	368	24
Registered nurse	18	1	78	5
Orthopedist	13	1	50	3
Psychiatrist	12	1	50	3
Psychologist	0	0	47	3
Dentist	4	0.3	108	7
Nutritionist	2	0.1	37	2
Social worker	14	1	54	4
Lay helper	20	1	469	31
Clerk	13	1	114	8
Others	4	0.3	19	1

TYPE OF SERVICE

In order to obtain a conception of the type of service rendered to the different age groups, the health centers were asked to supply information as to whether a physical examination or advice was given by a physician, or advice was given by the nurse or by others, to the various age groups attending the center. The replies are shown in Table 14. It will be noted that in three-fourths of the health centers physical examination is given by physicians to infants and preschool children. In a smaller number of

TABLE 14

EXAMINATION AND ADVICE BY PHYSICIANS OR OTHERS

TYPE OF CASE	EXAMINATION BY PHYSICIAN		ADVICE BY PHYSICIAN	
	Number	*Per cent*	*Number*	*Per cent*
Prenatal cases [a]	440	29	540	36
Infants under 1	1,151	76	1,091	72
Infants, 1–2	1,118	74	1,064	70
Preschool, 2–6	1,120	74	1,034	68
School children [a]	485	32	404	27
Adults [a]	241	16	267	18

	ADVICE BY NURSE		ADVICE BY OTHERS	
	Number	*Per cent*	*Number*	*Per cent*
Prenatal cases [a]	867	57	88	6
Infants under 1	1,146	76	109	7
Infants, 1–2	1,124	74	114	8
Preschool, 2–6	1,082	72	166	11
School children [a]	473	31	138	9
Adults [a]	356	24	76	5

[a] These totals and percentages are taken on the entire group of 1,511 centers. Only a part of them serve prenatal, school age and adult cases. Therefore this does not mean that physicians examine such cases in only 29, 32 and 16 per cent of the centers handling such cases.

centers prenatal examinations and examinations of school children and adults are also made by physicians. In approximately an equal number of centers, in addition to the examination, advice is given by both the physician and nurse to the same groups. Apparently in a number of centers prenatal advice is given by the nurse alone. In a much smaller number of stations advice is furnished by other groups, and presumably these are the special workers, orthopedists, phychiatrists, dentists, nutrition workers, and so forth, referred to in the preceding tables.

PERIODIC RE-EXAMINATIONS

An effort was made to determine whether the health centers studied made re-examinations of children at regular intervals (Table 15). The indication is that two-thirds of the health centers perform this service for young

TABLE 15

RE-EXAMINATIONS AT REGULAR INTERVALS

AGE GROUPS	HEALTH CENTERS	
	Number	*Per cent*
Infants under 1	1,007	66
Infants 1–2	976	55
Preschool 2–6	910	60
School children	361	24
No answer	338	22

infants and children through the preschool age and one-fourth of the centers performed the same service for school children. This would suggest that a large majority of the centers studied followed their cases continuously.

FORMAL INSTRUCTION

An attempt was also made to learn how many of the centers were giving formal class instruction to parents in various phases of child care. The number of centers and the subjects taught are shown in Table 16. It will be noted

TABLE 16

CLASS INSTRUCTION IN PHASES OF CHILD CARE

SUBJECTS TAUGHT	HEALTH CENTERS	
	Number	*Per cent*
Prenatal care	395	26
Care of the Newborn	387	26
Normal feeding of infants	414	27
Feeding of the preschool child	448	30
Feeding of older children	251	17
Body growth and development	332	22
Mental growth and development	261	17
Care of the mouth and teeth	370	24
Other important health habits	312	21
Vocational guidance	271	18
No instruction	681	45
No answer	34	2

that approximately one-fourth of these centers are giving this instruction in some of the subjects indicated in the list. These centers have therefore become, in addition to

being places for the examination of individual children, formal teaching centers for parents.

To what extent health centers give instruction to both parents and children in the prevention of certain diseases and conditions is shown in Table 17. A rather small num-

TABLE 17

INSTRUCTION IN PREVENTION OF VARIOUS DISEASES AND CONDITIONS

SUBJECTS	HEALTH CENTERS					
	To Children		To Parents		To Lay Public	
	Number	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*
Tuberculosis	129	9	168	11	89	6
Venereal disease	38	3	88	6	66	4
Rickets	100	7	185	12	53	4
Cardiac disease	32	2	85	6	30	2
Postural defects	157	10	175	12	45	3
Abnormal mental traits	33	2	116	8	24	2
Defective vision	99	7	152	10	52	3
Defective hearing	91	6	151	10	52	3
No instruction to group	161	11	114	8	1,129	75
No answer	1,129	75	1,129	75	278	18

ber of centers give instruction to children in the prevention of certain specific diseases, or of physical defects. In a somewhat larger number of centers this instruction is given to parents. In a very small number of centers instruction is given to the general lay public.

For instance, in a condition in which the public has the largest interest, viz., tuberculosis, only 89, or 6 per cent, were engaged in furnishing formal community instruction in this subject, and but 66 of the centers, or 4 per cent, gave instruction to the public in the prevention of venereal disease. A still smaller number of centers gave instruction to the public in the other conditions specified.

INSTRUCTION OF PROFESSIONAL GROUPS

The amount of professional instruction reported given by physicians, nurses, nutritionists, dentists, psychiatrists, psychologists and social workers at the health centers together with the groups so instructed is indicated in Table 18.

It will be noted that this instruction was given by

TABLE 18

INSTRUCTION TO VARIOUS PROFESSIONAL GROUPS

GIVEN BY	GIVEN TO: Medical Students		Physicians		Nurses	
	Number	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*
Physicians	93	6	185	12	270	18
Nurses	32	2	43	3	436	29
Nutritionists	1	0	4	0.3	118	8
Dentists	7	0.5	36	2	58	4
Psychiatrists	2	0.1	5	0.3	52	3
Psychologists	3	0.1	1	0	56	4
Social workers	3	0.1	19	1	111	7

GIVEN BY	GIVEN TO: Midwives		Lay Helpers		None	
	Number	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*
Physicians	41	3	44	3	1,047	69
Nurses	75	5	127	8	971	64
Nutritionists	1	0	19	1	1,380	91
Dentists	0	0	24	2	1,394	92
Psychiatrists	0	0	6	0.3	1,451	96
Psychologists	0	0	6	0.3	1,451	96
Social workers	8	0.5	39	3	1,353	90

physicians to nurses in 270, or 18 per cent, of the health centers; to physicians in 185, or 12 per cent, and to medical students in 93, or 6 per cent. In 436 stations, or 29 per cent, instruction was given by nurses to nurses, in 127, or 8 per cent, by nurses to lay workers, in 75 stations, or 5 per cent, by nurses to midwives. Nutritionists largely confine their instructions to nurses. This is the case in 118, or 8 per cent, of the stations.

Dentists instruct medical students, physicians and nurses at 101 centers, or 6.5 per cent. Instruction by psychiatrists, or psychologists is given to nurses in a few stations, rarely to other groups. Instruction by social workers is given for the most part to nurses. This occurs in 111, or 7 per cent, of the stations. In more than 90 per cent of the stations no formal instruction is given to professional workers. Most of the centers in which professional instruction is given to professional groups are

those affiliated with university hospitals, schools of public health and other organizations which are using these facilities to train their personnel and students in public health practice.

IMMUNIZATION

The practice regarding immunization against smallpox, diphtheria and typhoid is detailed in Table 19.

TABLE 19

IMMUNIZATION OF CHILDREN AGAINST SMALLPOX, DIPHTHERIA AND TYPHOID

PROPORTION IMMUNIZED	HEALTH CENTERS IMMUNIZING					
	Against Smallpox		Against Diphtheria		Against Typhoid	
	Number	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*
None	177	12	151	10	399	26
A few	221	15	255	17	158	10
About half	123	8	260	17	16	1
The majority	336	22	465	31	39	3
All	99	7	59	4	15	1
No answer	555	37	321	21	884	59

The immunization of the children attending the centers is not made an important feature of the health center work. In only 336 or 22 per cent of the stations is vaccination against smallpox carried out for the "majority" of children.

In 465, or 31 per cent, a "majority" are immunized against diphtheria. Immunization against typhoid plays an inconspicuous rôle in the work of the health center. In more than a quarter of the centers immunization is carried out only in exceptional cases. It must be remembered, however, that in many of the larger cities the center depends upon the official health departments to immunize their clientele, therefore these small percentages do not necessarily represent the attitude of the health center toward immunization. By cross checking it was found that only 288 centers fail to indicate anything about any type of immunization. In addition to those centers replying specifically, as indicated in Table 19, 154 note that one

or the other type of immunization is carried out for their patients by family physicians, schools or local departments of health. (See Appendix.)

REFERRING OF CASES

The agencies to which health centers refer cases outside of their jurisdiction is indicated in Table 20. It will

TABLE 20

TO WHOM CHILDREN ARE REFERRED FOR CARE BY HEALTH CENTERS

TO WHOM REFERRED	HEALTH CENTERS	
	Number	*Per cent*
Family physician	1,406	93
Hospital or dispensary	1,225	81
Child caring agency	875	58
Family welfare agency	988	65
Public health nursing agency	842	56
Institution for handicapped	808	53
No answer	29	2

be seen that it is the general practice of the centers to refer to the family physician or to various agencies of the community for such necessary treatment or care of the child as is not carried out in the center. Thus, 1,406, or 93 per cent of the centers, make a practice of referring patients examined to the family physician when possible, presumably for subsequent treatment; 1,225, or 81 per cent, refer some cases to hospitals or dispensaries. Child caring agencies, family welfare agencies, and public health nursing agencies and institutions for the handicapped are each employed by more than half of the total number of health centers.

Apparently it is the general practice of the centers to make use of all the facilities in the community for the subsequent treatment of their patients.

CORRECTION OF DEFECTS

The correction of defects discovered is accomplished through the activity of health centers in many cases. Ap-

parently it is the practice of health centers to refer patients requiring the correction of defects to physicians, dispensaries and other agencies as indicated in Table 20. The amount of difficulty in securing correction of physical defects in children as reported by health centers is shown in Table 21. The reasons for difficulty in securing the correction of physical defects in children as reported by health centers are outlined in Table 22.

TABLE 21

CASES DIFFICULT TO SECURE CORRECTION OF DEFECTS

PROPORTION	HEALTH CENTERS	
	Number	*Per cent*
None	54	4
A few	708	47
About half	295	20
Nearly all	90	6
No answer	364	24

TABLE 22

REASONS FOR DIFFICULTY IN SECURING CORRECTION OF DEFECTS

REASONS GIVEN	HEALTH CENTERS	
	Number	*Per cent*
Facilities for correction not available	332	22
Facilities for follow-up inadequate	274	18
Diagnosis by health center examiner not confirmed by private practitioner or clinic physician	152	10
Lack of cooperation on part of private practitioner	252	17
Lack of cooperation on part of clinics	27	2
Parents cannot afford to pay	752	50
Parents indifferent	940	62
No answer	251	17

The reasons given in a majority of instances is that the parents are indifferent or cannot afford to pay. It seems probable that there is a feeling on the part of those conducting health centers that they are not responsible for securing the correction of defects found in the examinations conducted at the centers. It appears also that there are inadequate facilities for following the cases through

their correctional treatment and for keeping adequate records of such treatment.

RECORDS

The replies indicated that in 1,259, or 83 per cent, of the health centers results of examination are recorded; 584, or 39 per cent, of the centers report that the result of the findings on physical examination and diagnosis are sent with the patient when he is referred to a family physician; 649, or 46 per cent, of the centers send a similar summary and statement with the child to the hospital when he is referred there. Of the 1,259 health centers recording the results of physical examination, 358, or 28 per cent, send a copy of the record of this health examination to the school authorities when the child enters school.

LIMITATION OF SERVICE

The replies would indicate that the services of the health centers are restricted to those persons who are not under the regular supervision of a physician in 542, or 36 per cent, of the centers, whereas this service is not so restricted in 810, or 54 per cent, of the health centers; 159, or 11 per cent, failed to supply information on this point.

It will be recalled, however, that no treatment is undertaken at the health centers and that over 90 per cent refer children in need of curative or corrective treatment to physicians or hospitals (Table 20).

CONFERENCES AND CENTERS CONDUCTED UNDER STATE BUREAUS OF CHILD HYGIENE

In addition to the 1,511 child health centers, largely in urban areas, whose activities have been thus far summarized, a large number of permanent child health cen-

ters and itinerant child health conferences have been established in the several states cooperating with the federal Children's Bureau of the Department of Labor and receiving grants under the Sheppard-Towner Act. These activities were carried on in each state under the direction of the state bureaus of child hygiene or similar agencies and operate for the most part in rural areas and in communities of less than 10,000 inhabitants.

The Committee has accepted a report made by the health departments of the various states, using these funds, to the United States Children's Bureau as comprising work conducted for a year at itinerant and permanent health centers throughout the country in rural and semi-rural areas. Under the Maternity and Infancy Act during a six-year period, 1924 to 1929, the following permanent health centers were established in the country.

TABLE 23

PERMANENT HEALTH CENTERS ESTABLISHED UNDER MATERNITY AND INFANCY ACT

Year Established	Prenatal and Child Health	Child Health	
	Number	*Number*	
1924	.....	1,084	
1925	.....	506	
1926	135	140	
1927	70	235	
1928	103	202	
1929	65	127	
	373	2,294	2,667

The actual number of centers operating during the fiscal year July, 1928 to July, 1929, is not known, but it is certain from reports of heads of state departments of health, that since federal funds under the Maternity and Infancy Act have been discontinued (June 30, 1929) a part of this work has been discontinued in some states. Of 38 state departments of health replying to this question,

18 stated that their maternity and infancy work had not been hampered, and 20 stated that the work had been decreased or seriously handicapped.

In the permanent and itinerant centers conducted in 45 states with the assistance of federal funds during the year preceding June 30, 1929 there were conducted 6,118 combined prenatal and child health conferences at which 3,810 expectant mothers and 49,151 children were registered; and 16,089 conferences for children only, at which 159,781 children were registered. Only those centers and conferences at which a physician was present were included, as the conferences with nurses only were not considered to fall within the plan of this report on health centers.

The number of children seen in the above mentioned child health centers and child health conferences carried on under the Maternity and Infancy Act, together with the children registered at the 1,511 health centers analyzed or studied, would indicate approximately the number of infants and young children reached through health center activities in the United States, for which Table 23 is a complete summary.

Figures for the Possessions are given in the Appendix.

If information were available concerning the number of children registered at the 558 centers which did not give the information requested, it would be a conservative statement to say that more than one million two hundred fifty thousand children in the country are registered in all child health conferences of centers.

Prenatal cases are not included in columns 3 and 5 as it was the intention here to estimate as nearly as possible only the number of children served.

A type of service which affects the lives of such a large number of children should receive sympathetic consideration on the part of all organizations, public and private, and of individuals who are concerned in promoting the health of children.

Table 24

Summary of All Centers

State	1 Number Counties	2 Total Counties Served by All Types Rural and Urban	3 Total Patients Served Urban (Official and Non-official)	4 Children Served M & I Centers (All Rural)	5 Total Served (Columns 3 and 4)	6 Total Number Health Centers Not under M & I Funds	7 Number Conferences in Rural Areas M & I Funds to June 30, 1929
Alabama	67	52	16,238	3,998	20,236	17	1,402
Arizona	14	...	.....	451	451	6	28
Arkansas	75	30	4,956	4,199	9,155	7	261
California	58	54	38,046	8,801	46,847	84	811
Colorado	63	8	2,261	2,274	4,535	9	93
Connecticut †	8	8	16,061	1,860	17,921	50	385
Delaware	3	3	234	1,208	1,442	2	349
District of Columbia	...	...	15,913	.....	15,913	12	...
Florida	67	11	830	2,212	3,042	3	89
Georgia	161	18	5,496	3,825	9,321	36	529
Idaho	44	11	.....	2,447	2,447	.....	68
Illinois †	102	63	37,183	22,091	59,274	89	97
Indiana	92	76	6,572	13,217	19,789	14	572
Iowa	99	11	9,895	3,927	13,822	14	187
Kansas	105	20	4,441	4,854	9,295	3	176
Kentucky	120	50	3,980	4,258	8,238	20	156
Louisiana	64	24	10,060	2,692	12,752	8	132
Maine	16	14	23,946	1,458	25,404	17	184
Maryland	23	23	25,607	7,199	32,806	27	456
Massachusetts †	14	14	17,669	2,755	20,424	102	106
Michigan	83	32	23,587	987	24,574	55	14
Minnesota	87	38	11,438	414	11,852	21	15
Mississippi	82	23	737	6,728	7,465	3	429
Missouri	114	49	34,515	10,188	44,703	21	553
Montana	56	5	6,197	.....	6,197	2	170

Nebraska	93	2	2,559	1,163	3,722	2	38
Nevada	17	...	.....	201	201	.....	32
New Hampshire	10	10	5,381	2,968	8,349	16	98
New Jersey	21	20	53,753	5,600	59,353	95	.....
New Mexico	31	5	136	121	9,257	1	11
New York	62	62	146,363	14,271	160,634	252	1,939
North Carolina	100	9	4,736	15,323	20,059	14	3,436
North Dakota	53	31	357	7,226	7,583	1	246
Ohio	88	27	57,168	4,343	61,511	71	92
Oklahoma	77	45	400	4,978	5,378	5	144
Oregon	36	22	6,968	2,315	9,283	17	208
Pennsylvania	67	57	96,650	16,706	113,356	203	5,322
Rhode Island	5	5	1,069	728	1,797	17	226
South Carolina	46	32	1,399	2,944	4,343	13	119
South Dakota	64	52	.....	3,102	3,102	1	90
Tennessee	95	35	3,715	5,791	9,506	9	593
Texas	254	74	21,952	4,967	26,919	39	284
Utah	29	8	1,555	10,216	11,771	18	541
Vermont	14	10	.....	609	609	3	23
Virginia	100	41	6,890	9,752	16,642	24	965
Washington	39	33	5,781	5,601	11,382	16	90
West Virginia	55	38	1,241	6,042	7,283	31	469
Wisconsin	71	48	12,633	7,094	19,727	37	541
Wyoming	24	16	.....	2,827	2,827	4	124
	3,068	1,319	746,568	246,931	993,499	1,511	22,793

Column 1 presents the number of counties in each state.

Column 2 presents the number of counties in each state in which health examinations of children are made under the supervision of a physician in permanent or itinerant health centers. It will, therefore, be seen that of 3,068 counties of the United States, 1,749 show no service of this kind whatsoever.

Column 3 shows the number of children registered in the urban centers, official and non-official; 746,568 represents reports from only 953 out of the 1,511 centers. These figures are therefore incomplete. (Other centers did not have adequate records to give this informatino.)

Column 4 presents the total number of children reached in rural areas by permanent and itinerant centers conducted by physicians under official, state and county auspices. This group presents no picture of the large amount of work done intermittently by nurses working without the immediate supervision of physicians.

Column 5 is the total of Columns 3 and 4 (993,499), the total number of children given an examination under the supervision of physicians in all health centers during one year.

States marked † did not accept federal funds under the Maternity and Infancy Act; figures are given directly by state Health departments. Total rural figures for Connecticut are not available.

The estimated number of children under six years of age in the United States according to the 1920 census is 13,921,069 [1] made up as follows:

Under 1 year	2,257,255
1 year	2,300,605
2 years	2,331,110
3 years	2,370,426
4 years	2,313,834
5 years	2,347,839

The suggestion is ventured, therefore, that health center activities reach approximately one-tenth of all the children in the country. It will be noted that of the 3,068 counties in all the states of the country, health center activities were conducted in less than half, or 1,319.

SUMMARY AND RECOMMENDATIONS

It is evident from this review of the development of child health centers and conferences in this country and from a partial analysis of their activities, that this form of health service for children has become an approved adjunct in the field of child hygiene.

An Approved Means of Health Promotion

The child health consultation, whether at a permanent or temporary locale, is becoming an accepted means of bringing the infant or young child to an accredited physician for physical examination and advice, for the promotion of health and for the detection of disease or of bodily defects. Treatment is not undertaken in a child health center. If disease or remediable abnormality is discovered, the patient is referred to a physician or hospital for the desired curative treatment, but continuous advice for the maintenance of health is an essential part of the program.

[1] 1930 Census by age distribution not available at time of going to press.

A Help to Physicians

It is believed that only a small proportion of the children examined at these consultations have been under regular medical supervision before, that the practice of the physicians of the community is rarely interfered with by the examinations conducted at a health center; but on the contrary that as the result of the health center, local physicians receive at their offices many patients who would not otherwise have consulted them. Moreover these referred children in need of treatment are in the average suffering from less advanced disease and from less severe physical defects than would have been the case had they deferred coming until brought by their parents without the suggestion of the health center.

Preventive Care a Community Responsibility

The majority of the children brought to the average health center are from families of limited means. A determination of their physical condition and the furnishing of advice in health matters is as much a community responsibility as is the offer of free elementary education. The latter is frequently hindered or nullified because the physical or mental status of the pupil has not been ascertained.

As has been true in other kinds of philanthropic endeavor, the first child health centers were the result of the vision and interest of private individuals or of various charitable organizations, industrial plants, hospitals, and similar groups. This accounts in part for the many variations in the emphasis which is placed upon certain forms of activity carried on in different centers and for the variation in the composition of the staffs. Each has developed as the special needs of the child population of the given community impressed the parents.

This method of development in the main has been of advantage for it has led to the trial of many forms of ser-

vice in the centers, the value of which could only be determined by experience.

The experimental stage is nearing its end. There seems to be general agreement that the periodic physical examination of the young child throughout its formative years is desirable and that the health center provides a method for accomplishing this purpose for those children in families of limited means.

Public Financial Aid

Gradually the wisdom of expending public money for this purpose, either as grants to existing centers or for the establishment and maintenance of child health centers or consultations as part of a public health program has been recognized.

In addition to the 6,198 child health centers and itinerant conferences maintained by the bureaus of child hygiene, 693 of the 1,511 permanent centers studied by the Subcommittee are supported entirely by public funds and a total of 938 receive some support from the same sources (Tables 5 and 6).

Need of Comparable Standards

It would appear that further attempts should be made to set up certain standards of operation in order that the work of the many centers may be comparable.

Relations With Health Officials and Community Organizations

The studies indicate that even where the centers are established and maintained by private funds they very generally cooperate actively with neighboring agencies operating in the fields of health and social service. It would seem advisable to go further and make each health center,

whether official or non-official, a coordinated part of the local public health program under the supervision of the local official health agency, certainly in those instances where there is a full-time health officer responsible for health conditions in his territory. Such an official should use the center or the consultation as far as practicable in determining the physical condition of young children who are not under the regular care of their own physicians. This official use of the center will broaden its work and make it of greater value in improving the health standards of the child population.

Importance of Regular Supervision

It is recommended that newborn babies, born to parents of limited means, whose existence is ascertained through birth registration, be brought to the health center and thereafter that they be followed regularly in the center throughout infancy and early childhood.

Centers Receive Only Well Children

The centers or conferences should receive only infants and children supposedly well. Sick children and those in need of corrective treatment should be referred promptly to physicians or hospitals.

Physical Examination

A complete physical examination of each child received should be made by a physician and entered on the record form. The subsequent condition of the child should be described in follow-up notes from observations made on return visits to the center, or from information obtained by a nurse or other delegated visitor to the home. Formal physical examinations may be repeated at least once each year and oftener as the physician indicates.

Responsibility for Correction of Defects or Disease

As shown in Table 22, there are inadequate facilities or there is lack of cooperation on the part of individuals or agencies in a few cases, but the indifference or inability of parents to pay is the principal reason for failure in securing correction of defects. It would seem that a closer cooperation on the part of the health centers with local departments of health and with welfare organizations would help this situation. Certainly it is the immediate duty of the center to overcome the indifference of parents by individual and by group instruction.

Record Forms

A record form used in a health center or conference should be kept for each infant or child. It should include a statement concerning the health of parents and other members of the family, information concerning the economic status of the family and the sanitary conditions existing in the home. It should state the important facts concerning the pregnancies and labors of the mother, and her ability to nurse, and so forth. The previous diseases of the child, with dates, his habits, usual diet, and any other facts bearing upon his health should be recorded.

If the child is temporarily referred to a physician or hospital for curative or corrective treatment, a record of the important findings at the center should accompany the patient and later a note made at the center as to the nature of the treatment received.

Preschool Record for Schools

Likewise a summary, perhaps a transcript of the health center record, should be sent to the school authorities when the child begins his educational career. In short, the health center should have a record of the feeding, habits, development, illness, accidents, and corrective treatment

of the child from the time of its first visit and as long as it returns to the center for examination and advice.

Comparable Record Forms and Terminology

It is advisable that health centers and conferences use comparable forms and terminology. (See Appendix.)

Attitude of Health Center Physician

The attitude of the physician examining in a health center differs from that in a hospital dispensary. In the latter the physician is primarily concerned in the detection of the disease, in the former with the preservation of health. In the health center the physician's first aim is to help each child to develop his potential capacity of body and mind in order that he can render his best service to the community. The embryo future citizen is ever in mind. When the environment is unfavorable the center, through cooperation with social agencies, should seek to alter it.

Added Services in Large Centers

In the larger centers the services to the child are increased by special examinations by various specialists such as enumerated in Table 11. These examinations should be looked upon merely as an elaboration of the physical examination of the smaller centers and the additional advice given, such as that by a nutritionist to parent or child, as not differing in kind from that given in a simple conference.

Primary Object of Centers

The object of the center or conference is to "keep well children well." The periodic weighing, measuring and the physical examinations assist the physician in determining whether the object is being attained and if not, they should disclose what additional measures should be undertaken.

It is unnecessary to emphasize that hasty, incomplete examinations may give a false idea of the condition of the child and may be worse than useless.

Prenatal Service

In some communities the child health centers receive, examine, and give prenatal advice to expectant mothers. This important group should be served by competent obstetricians who are in close touch with a delivery service. A prenatal service may be an ideal arrangement from the standpoint of the child, for it brings his case under the supervision of the center from the foetal period through birth and throughout the postnatal childhood.

Pay or Free Service

The large majority of health centers and conferences receive no pay from their clientele which is composed of persons who cannot afford the preventive medical service. It is conceivable that this service may be so desirable as to be sought by parents who are willing and able to pay for it. Whether or not pay should be received for certain children is a decision which must be determined by the community itself in relation to local conditions. In general, the centers and conferences are for children of limited resources and others should be received only with the approval of health officers, responsible members of the community and the medical profession.

Educational Value of Centers

Probably the greatest value of the child health center is in the field of education. The conference affords an opportunity to demonstrate to the parents and others that children can be kept well by periodic examinations and it can point out also the imperative need of medical service concerning feeding, clothing and daily regime and for

the early correction of defects. It brings to the attention of the public the importance of prevention measures in early childhood.[1]

Teaching Centers

A number of child health centers, especially those connected with medical schools and teaching hospitals, have been used to good purpose for group instruction in the various phases of preventive medical work for children.

In most children's hospitals and in the teaching of pediatrics in many medical schools, on the contrary, the instruction to students and nurses centers about the sick child, the diagnosis of its ailments and their treatment, and but scant attention is devoted to the examination and routine care of the well child for the purpose of avoiding unnecessary illness and assisting in his optimum development.

The child health consultations for well children should be made to serve much more than at present as teaching centers in which stress is laid upon the growth and development of the normal child.

The Need for Centers

Every community, where there are children growing up without medical supervision, needs an agency or organized plan through which parents with little or no funds can bring their young children for examination and advice. It should not be necessary for these citizens to depend upon the charity of individual physicians. It is just as true that the busy practitioner with his living to make should not be obliged to devote an undue amount of his time

[1] Certain members of the Subcommittee on Health Centers consider that, because of the educational value to parents and to the public, the centers should be open to all; and if that can be done in any community, of course with the approval of the physicians, with the understanding that no treatment is undertaken, the Subcommittee members are quite in accord with this suggestion.

to the routine examination and advice of patients who cannot remunerate him for his services.

The child health consultation fills this need. It promotes the health of the indigent child, relieves the practicing physician of an unfair burden, and assists in bringing the knowledge of preventive medicine within the reach of all classes. For this reason and with a proper guarding against their abuse by people of means, health centers deserve to be made an integral part of a community health program under the direction of the constituted public health officials. The employment of the family physician by parents able to pay him for his services will not be interfered with because of the establishment of health centers for that portion of the population unable to meet his bills, any more than the establishment of free schools has interfered with the private schools which are becoming more numerous every year.

It would seem that the child health center or conference conducted under proper auspices should receive the approval and support of all those who wish to bring the advantages of personal hygiene and preventive medicine within the reach of every future citizen.

APPENDIX

I. ANALYSIS OF FIGURES RELATING TO NEGRO CHILDREN

Every effort was made to obtain specific figures concerning the amount of service offered by health centers to Negro children. This succeeded only partially, because there was no separation of white and Negro in the reports from rural communities to the Federal Children's Bureau. Of the 1,134 centers in urban areas, which reported registration figures, 610 designated that they received some Negro children and 39 that they received Negro children only. These centers altogether, reported the registration and examination of 48,492 Negro children, nearly fourteen thousand of whom were received in the 39 exclusively Negro centers.

However, the largest number of centers receiving Negroes and those registering the most Negro children were not in those states having either the largest Negro population or the greatest proportion of Negro population but were for the most part in the industrial centers of the north and east.

Insufficient opportunity for health examination and instructions is offered to the Negro mothers and children of the country and this should be a matter of great concern to the states having large Negro populations.

Official and Non-Official Centers Receiving White and Negro Children

Of the 1,134 clinics reporting this information, 610 receive both white and Negro children, 509 only white children and 39 are exclusively for Negro children. This information is tabulated according to states in Table 1.

Column 3 is included in column 1, but the sums of 1 and 2 do not always equal the totals in column 4 because

some few centers did not indicate whether they saw Negro patients or not.

TABLE 1

URBAN CENTERS RECEIVING WHITE OR NEGRO CHILDREN

State	Centers Receiving Negro Children	Centers for Whites Only	Centers for Negroes Only	Total
Alabama	7	5	2	12
Arizona	.....	.....	.....	2
Arkansas	1	2	.....	3
California	18	47	1	66
Colorado	2	21	.....	23
Connecticut	38	8	.....	46
Delaware	1	.....	.....	1
District of Columbia	12	.....	1	12
Florida	.....	2	.....	2
Georgia	13	24	2	37
Idaho	.....	.....	.....	....
Illinois	63	11	1	74
Indiana	10	1	.....	11
Iowa	8	3	1	11
Kansas	2	1	.....	3
Kentucky	19	.....	.....	19
Louisiana	4	.....	.....	4
Maine	.....	24	.....	24
Maryland	11	3	4	19
Massachusetts	23	38	.....	62
Michigan	26	15	1	41
Minnesota	4	4	.....	8
Mississippi	1	1	.....	2
Missouri	9	8	1	18
Montana	.....	1	.....	1
Nebraska	1	.....	.....	1
Nevada	.....	.....	.....	....
New Hampshire	1	7	.....	8
New Jersey	55	10	3	65
New Mexico	.....	1	.....	1
New York	67	106	3	173
North Carolina	7	4	4	11
North Dakota	.....	1	.....	1
Ohio	44	7	2	51
Oklahoma	1	.....	1	3
Oregon	9	12	.....	21
Pennsylvania	93	70	3	163
Rhode Island	5	5	.....	10
South Carolina	2	4	1	6
South Dakota	.....	.....	.....	....
Tennessee	6	2	.....	8
Texas	18	11	3	29
Utah	.....	15	.....	15
Vermont	.....	3	.....	3
Virginia	11	8	4	19
Washington	3	3	.....	6
West Virginia	7	2	1	11
Wisconsin	8	15	.....	24
Wyoming	.....	4	.....	4
Total	610	509	39	1,134

Official and Non-Official Centers, Number of White and Negro Children Examined

Table 2 indicates the population of each state and the number of white and Negro children registered, the number of clinic visits white and Negro, and the number of stations reporting each item. These figures are from 1,134 centers, as all of the 1,511 did not answer questions concerning registrations and the number of visits, or answered in such manner that information could not be safely used for tabular purposes.

TABLE 2

CHILDREN IN URBAN AND NON-OFFICIAL CENTERS

State	Population	CHILDREN REGISTERED			CLINIC VISITS		
		White	Negro	Total	White	Negro	Total
Alabama	2,646,248	5,246	1,546	16,238	9,706	4,544	52,947
Arizona	435,573	.....	.....	.....	.....	.....	1,007
Arkansas	1,854,482	4,880	76	4,956	1,907	.....	1,907
California	5,677,251	16,190	120	38,046	136,494	565	205,081
Colorado	1,035,791	500	.....	2,261	.....	.....	377
Connecticut	1,606,903	5,194	500	16,061	23,226	2,000	84,673
Delaware	238,380	.....	.....	234	.....	.....	2,880
District of Columbia	486,869	6,202	4,241	15,913	41,758	20,936	67,580
Florida	1,468,211	830	.....	830	2,898	.....	2,898
Georgia	2,908,506	2,295	201	5,496	7,585	806	30,751
Idaho	445,032	.....	.....	.....	.....	.....	.....
Illinois	7,630,654	16,891	1,202	37,183	12,422	1,761	232,258
Indiana	3,238,503	4,878	1,154	6,572	7,855	1,501	21,688
Iowa	2,470,909	5,197	1,250	9,895	12,210	2,022	42,994
Kansas	1,880,999	.....	.....	4,441	.....	.....	4,343
Kentucky	2,614,589	3,109	500	3,980	15,165	2,450	19,763
Louisiana	2,101,593	8,733	1,327	10,060	32,781	4,582	37,363
Maine	797,423	23,946	.....	23,946	7,179	.....	8,393
Maryland	1,631,526	8,947	1,036	25,607	69,641	11,809	88,195
Massachusetts	4,249,614	10,404	.....	17,669	54,412	16	147,362
Michigan	4,842,325	12,392	3,738	23,587	19,925	13,983	80,094
Minnesota	2,563,953	6,634	70	11,438	22,667	325	35,877
Mississippi	2,009,821	.....	.....	737	.....	.....	.....
Missouri	3,629,367	8,149	1,207	34,515	30,036	2,316	66,236
Montana	537,606	.....	.....	6,197	.....	.....	6,834
Nebraska	1,377,963	2,119	440	2,559	6,945	1,394	8,339
Nevada	91,058	.....	.....	.....	.....	.....	.....
New Hampshire	465,293	5,102	.....	5,381	6,177	.....	7,680
New Jersey	4,041,334	3,050	836	53,753	10,230	4,149	108,547
New Mexico	423,317	136	.....	136	.....	.....	.....
New York	12,588,066	94,172	3,331	146,363	651,607	14,301	982,698
North Carolina	3,170,276	2,711	2,025	4,736	7,278	4,435	13,077
North Dakota	680,845	357	.....	357	910	.....	910
Ohio	6,646,697	33,330	10,267	57,168	56,863	16,050	121,102
Oklahoma	2,396,040	.....	.....	400	5,766	1,816	9,752
Oregon	953,786	3,422	.....	6,968	.....	.....	10,446
Pennsylvania	9,631,350	23,265	1,805	96,650	108,481	2,218	495,573
Rhode Island	687,497	596	6	1,069	6,165	40	23,109
South Carolina	1,738,765	693	606	1,399	1,000	2,507	5,695
South Dakota	692,849	.....	.....	.....	.....	.....	.....
Tennessee	2,616,556	863	1,308	3,715	1,803	3,604	10,136
Texas	5,824,715	15,179	6,773	21,952	41,559	14,111	83,971
Utah	507,847	1,555	.....	1,555	.....	.....	.....
Vermont	359,611	.....	.....	.....	1,080	.....	1,080
Virginia	2,421,851	4,179	2,711	6,890	13,987	7,733	25,070
Washington	1,563,396	.....	.....	5,781	1,072	.....	14,743
West Virginia	1,729,205	1,045	196	1,241	1,624	448	6,179
Wisconsin	2,939,006	6,630	20	12,633	19,922	30	88,955
Wyoming	225,565	.....	.....	.....	.....	.....	456
Totals	.....	349,021	48,492	746,568	1,450,336	142,452	3,259,019
Number of centers reporting each item		(597)	(256)	(953)	(520)	(201)	(997)

Note: 1,134 centers gave some figures, either, number patients registered or number visits to centers.

All Negro Children Examined

Table 3 indicates the number of Negro children in those centers examining Negroes only in relation to the number of Negro children in those centers seeing *some* Negro children and in relation to Negro population of each state. Of the 1,134 centers giving any figures concerning registrations, only 39 are shown to be entirely for Negro children and of these only 30 were able to supply accurate figures as to the number of children being handled.

TABLE 3

NEGRO CHILDREN IN HEALTH CENTERS

State	Negro Population	Centers Serving Some Negroes	Registrations in Centers for Negroes Only	CENTERS SERVING NEGROES ONLY	
				Number	Registration not Given
Alabama	897,500	7	330	2	.....
Arizona	47,200	.....	.....	.....	.....
Arkansas	485,600	1	.....	.....	.....
California	181,600	18	.....	.....	1
Colorado	15,200	2	.....	.....	.....
Connecticut	24,100	38	.....	.....	.....
Delaware	30,100	1	.....	.....	.....
District of Columbia	117,300	12	1,277	1	.....
Florida	380,900	.....	.....	.....	.....
Georgia	1,219,100	13	201	2	.....
Idaho	6,500	.....	.....	.....	.....
Illinois	218,100	63	312	1	.....
Indiana	90,500	10	.....	.....	.....
Iowa	20,200	8	96	1	.....
Kansas	66,700	2	.....	.....	.....
Kentucky	224,400	19	.....	.....	.....
Louisiana	696,400	4	.....	.....	.....
Maine	1,800	.....	.....	.....	.....
Maryland	250,000	11	811	4	.....
Massachusetts	51,900	23	.....	.....	.....
Michigan	96,300	26	932	1	.....
Minnesota	19,200	4	.....	.....	.....
Mississippi	936,656	1	.....	.....	.....
Missouri	188,300	9	787	1	.....
Montana	13,800	.....	.....	.....	.....
Nebraska	19,400	1	.....	.....	.....
Nevada	6,708	.....	.....	.....	.....
New Hampshire	1,200	1	.....	.....	.....
New Jersey	130,700	55	180	1	2
New York	239,200	67	3,107	3	.....
North Carolina	806,200	7	497	2	2
North Dakota	5,900	.....	.....	.....	.....
Ohio	220,300	44	174	1	1
Oklahoma	204,900	1	.....	.....	1
Oregon	12,600	9	.....	.....	.....
Pennsylvania	326,500	93	217	2	1
Rhode Island	11,200	5	.....	.....	.....
South Carolina	877,600	2	606	1	.....
South Dakota	20,100	.....	.....	.....	.....
Tennessee	442,500	6	.....	.....	.....
Texas	768,300	18	3,788	2	1
Utah	8,100	.....	.....	.....	.....
Vermont	611	.....	.....	.....	.....
Virginia	700,300	11	621	4	.....
Washington	39,000	3	.....	.....	.....
West Virginia	96,100	7	24	1	.....
Wisconsin	15,200	8	.....	.....	.....
Wyoming	3,900	.....	.....	.....	.....
New Mexico	27,200	.....	.....	.....	.....
Total	.....	610	13,960	30	9

II. HEALTH CENTERS IN ALASKA AND THE ISLAND POSSESSIONS

An attempt was made to obtain information regarding health centers and health examinations for children in Alaska and the Island Possessions of the United States.

Hawaii, Population 368,336

Hawaii received federal appropriation under the Maternity and Infancy Act and had for the year prior to June, 1929, 112 permanent health centers as follows:

CONDUCTED UNDER BOARD OF HEALTH, BY COUNTIES	
County of Hawaii	31
County of Maui, including Molokai	12
County of Kauai	9
County of Honolulu—Rural Oahu	9
Total	61
CONDUCTED BY PLANTATIONS	
County of Maui	18
County of Kaui	13
County of Honolulu—Rural Oahu	7
Total	38
Palama Settlement, Honolulu City County of Honolulu	13
Grand Total	112

There were 846 conferences conducted by physicians in the official group at which 4,083 infants and children were registered and examined and at which there were 16,444 visits.

Prenatal work is conducted in separate clinics. The greater part is handled through visits made by nurses to prenatal cases in their homes. In Hawaii there is a health center to every 3,288 population, while in the Philippines there is only 1 to every 55,674.

Porto Rico, Population 1,543,913

Porto Rico has no separate health centers but has six public health units in municipalities and thirteen in the

counties. There is no report as to the number of registrations for health examination but all units report that the health examination is part of their program. They are necessarily engaged both in the prevention and cure of specific diseases.

Philippines, Population 12,082,366

The Philippines have a Division of Maternity and Child Hygiene somewhat similar in its activities to the state divisions of child hygiene under our state departments of health. This division is extremely active and the prenatal work and consultation for infants and children is carried out in a very large group of centers, descriptively called *Puericulture Centers.*

There are 6 centers in Manila and 5 sub-centers, and 206 active centers in the provinces according to the last available report. Of these there are 71 having a physician in charge and at least one full-time nurse; the others have a full-time nurse and at times the services of a physician; a very few have only a part-time nurse. The following table gives a brief picture of the amount of work accomplished:

	Provinces	Manila	Total
Registration.....	137,634	32,587	170,221
Visits.....	661,365	217,337	878,702

A little more than half of the above registrations and visits were mothers, as the Puericulture Centers lay great stress on prenatal, natal and postnatal work.

In addition there is an enormous amount of home visiting and midwifery service. There is dental work and demonstrations of bathing and formulae making. But it is impossible to analyze these figures in the way that they were analyzed in the health centers of the United States.

Alaska, Population 59,278

Alaska has no health centers. The nearest approach is the Health Boat, maintained under the Bureau of Educa-

tion, which goes up the Yukon every summer. This boat offers the only available health service for many hundreds of square miles so that although it attempts to offer health education in the feeding and care of children, its staff is necessarily occupied almost completely with medical, dental and surgical service.

Alaska has no public health centers under its health division, has never had a survey of its infant and maternal mortality, nor has any prenatal health work ever been undertaken there. (This statement was made by the Territorial Commissioner of Health.)

III. CENTERS AND HOSPITALS

The Subcommittee hoped to learn to what extent hospitals have set up health and examination departments or health clinics as a part of their programs. There has been much discussion at various times as to the advantage of this procedure, because of the hospital facilities for following cases immediately for the correction and cure of defects and disease conditions.

Only 50 health centers reported that they were under the auspices of, or directly associated with hospitals. This of a total of 1,469 centers reporting on this point. In an analysis of the replies given it is interesting to note that 17 per cent of the 50 are conducted by hospitals associated with local departments of health, which conduct the health examination as part of the total health program for their cities. About 33 per cent are connected with university hospitals, which have apparently organized the health center and preventive health program for the instruction of medical students and nurses in the field of public health.

Of these centers associated with hospitals which gave sufficient information to analyze their staffs, 46 per cent or nearly half, maintain paid staffs of physicians and nurses for their health prevention work. Therefore, it can be deduced that nearly half the health centers, which are

maintained in hospitals or in connection with hospitals, feel that the health examination cannot be made satisfactorily by the regular clinic staffs of the hospital, that is, with the volunteer staffs generally available for regular hospital service.

Unfortunately, of the centers associated with hospitals reporting, only 13 per cent were able to give separate figures as to the cost of maintaining their health centers. Therefore, it was impossible to ascertain even in a general way whether or not the association of the health center with the hospital effects an economic saving.

Whether the future trend of health centers will be toward hospital affiliation, it is too soon to say. But in the sudden and rapid recent growth of their development, that has evidently not been their practice thus far.

IV. CENTERS AND INDUSTRIAL GROUPS

Another interesting phase of health center affiliation, which was not anticipated, presents itself in the number of health centers maintained by industrial organizations in both rural and urban communities. A number of industrial groups in various parts of the country are using the health center as a means of protecting the health of their employees and the families of employees. In many instances, where almost the entire community is associated with a large local industry, this seems to be almost the only type of health work offered. In a few communities, the industrial agency is cooperating with the local department of health for the service of the entire local community without restricting the service to employees.

In the health centers sponsored by industrial organizations there is considerably more immunization against smallpox, diphtheria and typhoid than in the total group of health centers. One is led to suppose that it has been found to be of economic advantage to provide health examinations and immunization against disease as part of

an industrial program, especially when a local population is composed principally of the families of employees. An interesting subject for future study would be the amount of health service furnished by industrial groups throughout the country and its relation to official health work.

V. CENTERS AND UNIVERSITIES

The analysis of replies from health centers showed that a number of universities, particularly the state universities, were working from different angles in the health center field. There is not enough information from this study to make any statement, but it seems worth while to note what some of the universities are doing.

One university is cooperating with state and county departments of health, and is maintaining a staff including nurses, orthopedists, psychiatrists, psychologists, dentists and social workers, as a group, which moves from town to town making health examinations and health studies.

Other universities are cooperating with city, state, or county departments of health in health examinations for children in local communities. Others use the health center as a demonstration center for medical or lay students preparing for service in public health fields.

The majority of returns from universities that came through this study, were from health centers conducted in connection with university hospitals under departments of pediatrics, in which medical students and nurses receive their training in the health examination.

An interesting study at some later date would be to discover just what universities are doing in connection with the health examination of children.

VI. CENTERS AND WELFARE ORGANIZATIONS

The final point which stood out boldly in the health center replies, was the number related to family and child-care groups.

One hundred and fifteen of the 1,469 health centers reporting auspices under which they were directed, indicated that they were maintained directly by case-working organizations.

This would seem to indicate a growing belief on the part of these agencies, that the health examination and a complete knowledge of the physical condition of all families are a necessary background for creating a welfare program.

The very large number of cases for whom medical findings are not followed up because of inability of parents to pay (as indicated in the general report on "Correction of Defects")—would seem to offer proof of the need for case-working agencies to cooperate more closely with all health centers, whether or not they are maintained by their own organizations.

Neither the case-working agency nor the health center has accomplished its full purpose until children under their care are as nearly fit, mentally and physically, to cope with life, as their native capacity warrants.

VII. NOMENCLATURE

In attempting to obtain information from health centers there was found to be such a confusion of terms that it seems worth while to note here some of the conflicts so that they may be avoided in the future.

It would seem best to avoid the word *welfare* in the title of any organization which is primarily a health center, since this word has come almost universally to connote general case supervision in child caring and family agencies.

The word *conference* is another confusing one. Certainly the health examination plus the instruction to mother and child is an individual *conference,* but the term has been used to designate the number of *sessions,* unfortunately, sometimes called *clinics,* held daily or weekly by a health center. Shall its use be limited to this latter mean-

ing and no longer be used as a general descriptive title to designate consultation or for the title of the temporary or itinerant set-up which may conduct a number of *sessions* at a given time or place? The word *clinic* should apparently be dropped in connection with health centers, as it causes great confusion over the country.

Is it practical to call a single meeting, a *session;* the examination and instruction to an individual, a *consultation,* and the temporary or itinerant set-up, a *conference*?

Shall the children, mothers and other adults seen in the centers be termed *patients* or shall they be called *clients,* to distinguish them from the patients received by hospitals, dispensaries and physicians?

Perhaps a group of health centers in the near future will combine their experience on this matter and will set up a standard nomenclature which will be easily recognizable as pertaining to the health examination field and can be adopted by all health centers.

VIII. IMMUNIZATION

Although it is obvious that the health centers are not accepting enough responsibility for immunization, as noted in Table 19 on page 20, there were evidences in statements that could not be tabulated that they were more aware of their obligation in this connection than was shown by the *Yes* and *No* replies to the questionnaire. Therefore a little further analysis of such replies as did not lend themselves to tabular material was made.

Table 19 shows that 472 centers do not immunize or answer the question concerning diphtheria; 1,283 do not immunize, or do not answer concerning typhoid and 732 do not immunize or do not answer concerning smallpox. It was found that 442 did nothing, or did not answer concerning any of the three forms of immunization, that is, do not do one or the other.

The analysis of this group of 442 centers showed the following:

283 do nothing at all in regard to immunization.

159 do some immunizing, but did not reply so that their answers could be used. Their memoranda on the subject are as follows:

- 37 refer to the board of health for immunizing.
- 27 refer to the schools for immunizing.
- 27 refer to the family physician.
- 18 refer to the family physician or to a private clinic.
- 20 immunize, but have no record of number for the present group.
- 11 refer to other agencies.
- 11 have the immunization done at a central health center of their group, where all immunizing is done.
- 2 immunize only in emergencies.
- 1 immunizes where need is indicated.
- 5 do not immunize, but do educational work to persuade parents to have it done.

Of this group of 159, 131 do not indicate which of the three types of immunization is done, 25 immunize for diphtheria, 11 immunize for smallpox, and 3 immunize for typhoid.

Even this would seem to be an under-estimate, as many which did not answer, or answered *no immunization* were from large city health centers where it is reasonably certain that immunization is done by the departments of health.

THE FOLLOWING QUESTIONNAIRE WAS SENT OUT BY THE SUBCOMMITTEE ON HEALTH CENTERS

Please Read this Questionnaire Through Before Starting to Answer Questions

Return to
Room 1722
370 Seventh Avenue
New York City

Qn. 18
H. C.
Sec. I. C.

WHITE HOUSE CONFERENCE
ON CHILD HEALTH AND PROTECTION
COMMITTEE ON MEDICAL CARE FOR CHILDREN

HEALTH CENTERS

(INCLUDING WELL BABY CLINICS, CHILD HEALTH CONFERENCES, PREVENTIVE CLINICS, ETC.)

Please answer these Questions *Fully* and *Frankly*, and *Return Promptly*.

1. In what year was your HEALTH CENTER established?.....

2. DIRECTION, OR AUSPICES, AND AFFILIATION
(*Indicate by* X *in appropriate spaces*)

	Direction or Auspices	Affiliation
a. Independent Organization. (Specify.....)	.....	.....
b. County Department of Health	.....	.....
c. Local Department of Health	.....	.....
d. American Red Cross	.....	.....
e. Hospital	.....	.....
f. Child Welfare Organization	.....	.....
g. Tuberculosis Association	.....	.....

3. PERMANENCY OF CENTER
(*Indicate by* X *in appropriate space*)

a. Permanently established center, continuously occupied, open daily, with clinics held daily or several times weekly. .....

b. Temporary or intermittent center, clinics held by traveling group at infrequent intervals. .....

A. If *b* is checked, specify in figures approximately the number of clinic sessions held yearly. .....

4. SOURCES OF SUPPORT
(*Underline sources and place X after Principal Source*)
Community Fund Chest Public Funds Private Funds

5. Total HEALTH CENTER BUDGET for last fiscal year, excluding only capital outlay for buildings .....

6. AREA SERVED by Health Center.
(*Underline*) Chiefly Rural Urban (2,500–10,000) Urban (Over 10,000)

7. RACES AND NATIONALITIES SERVED
(*Indicate by* X. *Mark predominant group* XX)

Native White	.....	Foreign White	.....
Indian	.....	(State principal nationalities)	
Negro	.....	.....	
Oriental	.....	.....	

8. PREDOMINANT OCCUPATIONAL STATUS of the population served.
(*Indicate by* X. *Write in any not mentioned*)

Industrial	.....	.....
Agricultural	.....	.....
Mining	.....	.....

9. HEALTH CENTER STAFF

	Number Of			
	Paid Workers		Volunteer Workers	
	Full Time	Part Time	Full Time	Part Time
a. Physicians	.....	.....	.....	.....
b. Registered Nurses	.....	.....	.....	.....
c. Orthopedists	.....	.....	.....	.....
d. Psychiatrists	.....	.....	.....	.....
e. Psychologists	.....	.....	.....	.....
f. Dentists	.....	.....	.....	.....
g. Nutritionists	.....	.....	.....	.....
h. Social Workers	.....	.....	.....	.....
i. Lay Helpers	.....	.....	.....	.....
j. Clerks	.....	.....	.....	.....
k.	.....	.....	.....	.....
l.	.....	.....	.....	.....

10. TYPE OF SERVICE RENDERED to Different Age Groups
(*Indicate by X in appropriate spaces*)

	Physical Examination Given by Physician	Advice Given by Physician	Advice Given by Nurse	Advice Given by Others	A*
a. Prenatal Cases	.....	.....	.....	.....	.....
b. Infants under 1	.....	.....	.....	.....	.....
c. Infants 1–2	.....	.....	.....	.....	.....
d. Preschool 2–6	.....	.....	.....	.....	.....
e. School children	.....	.....	.....	.....	.....
f. Adults (other than Expectant Mothers)	.....	.....	.....	.....	.....

A Where you have indicated "Advice Given by Others" insert in Column A, the type of worker giving advice, such as Dentist, Psychiatrist, etc.*

11. AMOUNT OF SERVICE RENDERED

	Number of Clinics Per Week	Number of patients Registered in Last Fiscal Year			Number of Clinic Visits in Last Fiscal Year (Clinic Attendance)		
		White	Negro	Total	White	Negro	Total
For All Groups	.....	....	....	....	....	....	....
If POSSIBLE give facts subdivided by Age Groups as follows:							
a. Prenatal	.....	....	....	....	....	....	....
b. Infants under 1	.....	....	....	....	....	....	....
c. Infants 1–2	.....	....	....	....	....	....	....
d. Preschool 2–6	.....	....	....	....	....	....	....
e. School	.....	....	....	....	....	....	....
f. Adults (other than Prenatal)	.....	....	....	....	....	....	....

12. PERIODIC HEALTH EXAMINATIONS

Do you make re-examinations at regular intervals of the following age groups?
(*Underline*)

a. Infants under 1
b. Infants 1–2
c. Preschool 2–6
d. School children

13. CLASS INSTRUCTION TO PARENTS IN CHILD CARE

(*Underline Subjects covered*)

a. Prenatal Care
b. Care of the Newly Born
c. Normal Feeding of Infants
d. Feeding of the Preschool Child
e. Feeding of Older Children
f. Body Growth and Development
g. Mental Growth and Development
h. Care of the Mouth and Teeth
i. Other Important Health Habits
j. Vocational Guidance

Note: If you offer NO class instruction to parents, mark X here ....

14. INSTRUCTION IN PREVENTION OF DISEASE OR DEFECTS
To which groups do you give CLASS Instruction in the prevention of the following:

(*Indicate by* X *in appropriate spaces*)

	To Children	To Parents	To General Lay Public
a. Tuberculosis	.....	.....	.....
b. Venereal Disease	.....	.....	.....
c. Rickets	.....	.....	.....
d. Cardiac Disease	.....	.....	.....
e. Postural Defects	.....	.....	.....
f. Abnormal Mental Traits	.....	.....	.....
g. Defective Vision	.....	.....	.....
h. Defective Hearing	.....	.....	.....

15. PROFESSIONAL INSTRUCTION given in Health Center

(*Indicate by* X *in appropriate spaces, groups receiving instruction and type of instructor*)

Type of INSTRUCTOR

	Physician	Nurse	Nutritionist	Dentist	Psychiatrist	Psychologist	Social Worker
a. Medical Students	.....	....	.....	.....	.....	.....	.....
b. Physicians	.....	....	.....	.....	.....	.....	.....
c. Nurses	.....	....	.....	.....	.....	.....	.....
d. Midwives	.....	....	.....	.....	.....	.....	.....
e. Lay Workers	.....	....	.....	.....	.....	.....	.....

16. IMMUNIZATION

Of all the children who come to your Health Center, indicate the proportion which you immunize against certain diseases.

(*Mark X in appropriate spaces*)

	None	A Few	About Half	The Majority	All
a. Smallpox	.....	.....	.....	.....	.....
b. Diphtheria	.....	.....	.....	.....	.....
c. Typhoid	.....	.....	.....	.....	.....

17. REFERRING OF CASES

When service is needed beyond the function of your organization, do you regularly refer the child to one of the agencies listed?

(*Indicate by marking X on the appropriate lines*)

a. Family Physician .....

b. Hospital or Dispensary .....

c. Child Caring Agency .....

d. Family Welfare Agency .....

e. Public Health Nursing Agency .....

f. Institution for Handicapped .....

18. CORRECTION OF DEFECTS

In what proportion of Children's Cases do you have difficulty in securing correction of the defects reported by the examiners in the Health Center?

(*Underline*) None A Few About Half Nearly All

A. For the cases in which you DO have difficulty, indicate by X the chief reason or reasons for the difficulty.

a. Facilities for Correction Not Available .....

b. Facilities for Follow-up Inadequate .....

c. Diagnosis by Health Center examiner not confirmed by private practitioner or clinic examiner .....

d. Lack of Cooperation on part of Private Practitioner .....

e. Lack of Cooperation on part of Clinics .....

f. Parents cannot afford to pay .....

g. Parents indifferent .....

19. RECORDS

(*Answer by Underlining YES or NO*)

a. Are results of Physical Examination RECORDED? YES NO

b. When a patient is sent to the FAMILY PHYSICIAN, does your Health Center send a summary of findings and a statement of the physical diagnosis? YES NO

c. When a patient is sent to the HOSPITAL, does your Health Center send a summary of findings and a statement of the physical diagnosis? YES NO

d. When a child enters SCHOOL, is a copy of his health record sent to the School Authorities? YES NO

20. HOME VISITS

	Number of Home Visits in last fiscal Year	Purpose of Visit (*Indicate by* X. *If information lacking write* Not Available *across table*) General	Pre-natal	Supervision of Infant Care and Feeding	Social Investigation	To Secure Return Visits
By						
Physicians	.....	.....	.....	.....	.....	.....
Trained Nurse	.....	.....	.....	.....	.....	.....
Social Worker	.....	.....	.....	.....	.....	.....
Nutritionist	.....	.....	.....	.....	.....	.....
Lay Volunteer	.....	.....	.....	.....	.....	.....

21. LIMITATION OF SERVICE

Are the services of your organization restricted to those who are not under regular supervision by a physician?

(*Underline*) YES NO

Signature.....

(Please Print or Type)

Title (Position).....

Organization.....

(Exact Name of Health Center)

Address—St. and No.....City or Town.....State.....

(Please return completed questionnaire as quickly as possible to Committee on Health Centers, Room 1722, 370 Seventh Ave., New York City, N. Y.)


Alaska
The Philippine Islands
The Hawaiian Islands


W
E
The White House
Porto Rico
and Virgin Islands