The nutritionist caring for malnourished children

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Food plays an important role in the recuperation of a malnourished child, but it is not enough. Attention must be given also to improving the conditions of the family that led to malnutrition.

In 1933, Cicely Williams first described (1) the malnourished child syndrome. Today, a review of the literature provides a clear definition of the syndrome, its epidemiology, treatment, and the different dietary recommendations and regimens (2-9).

Recommended hospital treatment has included blood and plasma transfusions, acidified milk, skim milk, vegetable formulas, and vitamins and mineral supplements (10-15). A few years ago, high-protein diets, administered after the child showed signs of recovery, became the most popular treatment; since then, emphasis gradually has been placed on administration of a more normal diet (16, 17).

Parallel to increased knowledge of the nature of the disease and more efficient dietary treatments, the role of home environment in permanent recovery has gradually been recognized. Nutritionists are now more aware that, in essence, malnutrition constitutes a family disease. A malnourished child is only a symptom of long-term ignorance and its tremendous socioeconomic implications. In addition, precipitating biologic or social factors, such as infection or death of a parent, override the importance of other conditions and severely affect the child's food intake, inducing a clinical condition that necessitates hospitalization.

In consequence, the hospital treatment of a malnourished child must obviously include the family. Modification of the environment to which the child will return after hospitalization is imperative, if recurrence of malnutrition is to be prevented. This is particularly true in areas where this syndrome is most common, where almost all patients in a pediatric ward are malnourished. Nutritionists are expected to play an important role in the hospital care of malnourished children. However, this will not be possible until health personnel are convinced of the need for a comprehensive approach to the problem.

With these concepts in mind, the curriculum for dietetic interns at the INCAP/University of San Carlos de Guatemala School of Nutrition includes training in the pediatric wards of the Roosevelt Hospital, a state institution that serves as one of the university's teaching centers. There, they have the opportunity to act as nutritionists and to participate in

each step considered essential to improve the nutritional status of the malnourished child and of his family. The experiences offered to our nutritionists cover, among other areas, child care, family care, and supportive activities; they could be easily implemented in any pediatric ward where nutritionist-dietitians participate in the care of malnourished children.

Child care

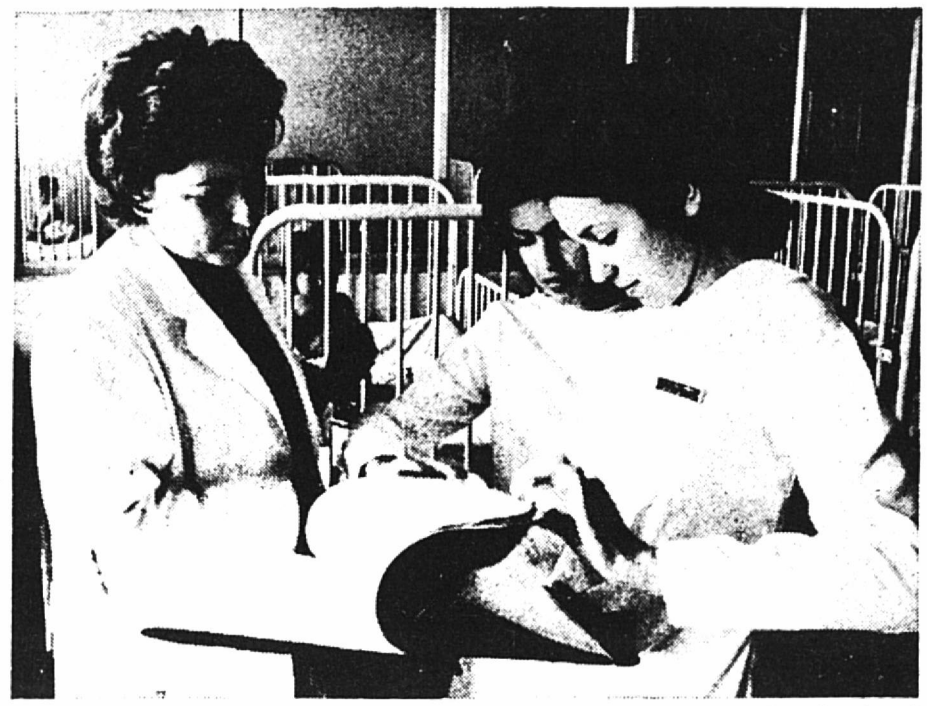
Basically, child care activities cover the following aspects:

FAMILY INTERVIEWS. Family interviews are conducted with the mother or the family member responsible for the child's care. During this person-to-person communication, nutritionists learn about the family's food habits, particularly the diets administered to the child during the weaning period and after, as well as during illness. These interviews afford an excellent opportunity to obtain information about local availability of foods, popular ways of preparing them, and beliefs about which foods are best for children, both in health and disease. Such information is essential when attempting to improve the general diet of the family. Nutritionists also learn which are the general symptoms, as well as the causes, of the disease as perceived by the mother, and about other children who may be suffering from similar conditions, either in the same home or in the neighborhood.

Family interviews are sometimes difficult, because parents who work and live outside the city are not always able to visit their children at the hospital.

DIET CONTROL. Diet control includes (a) interpretation of the diet prescribed and preparation of the menus; (b) control of the food served to the patient by auxiliary personnel, and (c) control of sanitary conditions of the milk formulas.

FOOD INTAKE RECORD. Malnourished children present a series of problems in taking food orally. Some of them are so weak that they are unable to eat by themselves; many more are apathetic and



Nutrition students and supervisor examining children's food intake records.

anorexic and dislike to be disturbed. Others are too young or unskilled to eat their own food. Therefore, nutritionists must devise special forms to record the actual food intake. These records help the physician and the nutritionist to adapt the total treatment to the individual patient, and the ward personnel to concentrate on providing the child with better care, in order to assure adequate food intake. As the wards are understaffed, the need to enlist the services of voluntary workers is evident.

PATIENT FOLLOW-UP. The recovery pattern varies according to the situation. It is important, therefore, that the nutritionist participate as a member of the hospital team in the study of special cases, so as to be aware of the different patterns of recovery and the ways to improve them. Follow-up of patients is essential, and it can be accomplished through the Dietetics Clinic, where parents bring their children for periodic checkups after they are discharged from the hospital.

REFERRAL TO MOTHERCRAFT OR NUTRITION EDUCATION AND RECUPERATION CENTERS. Because of the high cost of hospitalization, malnourished children are discharged after the acute stage has passed. This permits the child to be in a more pleasant environment, with less opportunity for infection. Neverthe-

less, in some cases, home conditions can be adverse to a child's nutritional status, and he needs to be referred to a community day center, dedicated to the care of malnourished children without serious complications. These centers provide education in child feeding practices for the parents. Hospitals are in a position to refer discharged malnourished patients to the centers, and nutritionists should prepare parents for participation in the center's educational program.

Family care

Family care, obviously interrelated with steps taken in child care, covers the following activities:

EVALUATING SOCIOECONOMIC CONDITIONS. The socioeconomic evaluation includes the family as a whole —its educational level, nutritional knowledge, and dietary practices. It is important to establish the fact that the child can be provided an adequate diet in the home, as well as to determine the ability of each family to comprehend new information and their attitudes toward change. Only then is the nutritionist in a position to make sound recommendations and to devise a nutrition education program suitable for the prevailing circumstances.

EDUCATING PARENTS. Parent education comprises the following individual and group teaching programs:

(a) During hospitalization, parents who visit their child are eager to learn about the causes and prognosis of the disease. Nutritionists can take advantage of this opportunity to emphasize the importance of an adequate diet. So far, our nutritionists have been teaching parents in groups, but some efforts are being directed toward more individualized teaching methods, using food models and flannelgraph drawings.

(b) When the child is discharged from the hospital, parents are asked to meet with the nutritionist. At this time, they seem more relaxed and eager to accept advice about how to care for their child to prevent a recurrence of the disease. Parents are counseled in child feeding practices and requested to attend the out-patient clinic.

(c) While attending the out-patient clinic, parents of young children, as well as women who receive pre- or postnatal care, are divided into groups by the social worker for instruction on selection and preparation of an adequate diet, both for themselves and their children. While many more parents can be reached in this way, the concentration per person is still extremely low, which makes evaluation of the results impractical. Obviously, there is a great need for more efficient methods of teaching parents.

(d) In our hospital, the Dietetics Clinic has been in operation for eighteen months. The demand for service continues to grow in terms of number of patients and types of diet requested. A patient requiring a modified diet is referred by the out-patient service to the Dietetics Clinic, which employs a full-time nutritionist. Sometimes the reason for referral is the need for special instruction on how to plan a normal diet, as happens in the case of parents of malnourished children.

FAMILY FOLLOW-UP. As stated in the discussion of patient follow-up, knowledge acquired by parents during the educational sessions constitutes only part of the benefit derived from the nutrition education program. More important is what they can do with the information received. Thus, nutritionists need to follow-up selected families of malnourished children to learn what changes have been achieved in the home situation, especially regarding the child's diet.

REFERRAL TO SUPPLEMENTARY FEEDING PROGRAMS. Some families can improve their child's diet through their own resources, while others need assistance with additional food, at least for a while. Nutritionists are in a position to refer families to the nearest food distribution program and to encourage their participation in local nutrition programs, which sell highly nutritious food supplements, such as "Incaparina," at a low price. It is most important that these programs emphasize the use of foods that are not only locally produced but are permanently available.

Supportive activities

To accomplish the objectives described, the following supportive activities are considered of primary importance:

TRAINING PROGRAMS. There are numerous opportunities for training personnel as well as students:

(a) Medical students attend the hospital during several years of their training. Consequently, nutritionists have the opportunity to instruct them in dietetics. For example, in our school, nutrition students instruct second-year medical students on the nutritive value of foods and the nutritional requirements for health. In the third year of study, the emphasis is on modified diet prescriptions and the most common types of therapeutic diets. Finally, during their internship in pediatrics, they are taught pediatric dietetics.

(b) Nursing students attend the Roosevelt Hospital during their three years of study, which includes a one-semester course in nutrition. During this time, the nutritionist organizes seminars on nutrition topics, especially those related to maternal and child health.

(c) Food supervisors and dietetic auxiliary personnel are responsible for the food distribution and tray service in the wards. The nutritionist conducts the training programs for this group.

(d) Nursing aides keep records of the children's food intake. It is the nutritionist's responsibility to

train them to perform this task adequately.

(e) Volunteers are being used in our hospitals to relieve the tremendous shortage of personnel. Nutritionists are testing a new plan that involves high school students as volunteers in the pediatric wards.

The high school curriculum in Guatemala includes a course in home economics, with a unit on child care. Recently, a group of students taking this course came to the hospital each day for two weeks for 1 hr. of class and 1 hr. of practice in feeding malnourished children. A pre- and post-test was administered, and the students had an opportunity to express their comments at the end of the course. Knowledge gained was satisfactory, and all comments were most favorable. The home economiccs teacher was enthusiastic about the opportunity granted her students.

In a country where 80 per cent of the children under five years of age present some signs of malnutrition, home economics courses evidently should include actual experience in feeding malnourished children. The program described will be repeated, and, the results will be presented to the Ministry of Education with the hope that this type of experience can be provided for more students.

RESEARCH ACTIVITIES. Hospital care of malnourished children provides numerous opportunities for research projects: the effectiveness of different types of diet and the sequence of their administration; means of teaching and motivating parents; methods of interviewing patients and relatives; keeping adequate food intake records and taking dietary histories; feeding children; controlling diets; and training volunteers. Nutritionists may search for new methods for organizing their educational activities, i.e., motivating the learner, presenting the program content, and testing the knowledge acquired.

Last year, a nutritionist conducted a study in which two diets were tested in treating malnourished children. Results demonstrated (18) that the children who received adequate attention and normal amounts of protein and calories grew better than those who were fed only higher amounts of protein. Another nutritionist developed Exchange lists of foods available in Guatemala (19), considering local food habits and nutritional problems, for faster calculation of diets at the clinic. Another nutritionist organized the Dietetics Clinic and developed a questionnaire for obtaining dietary histories, which was tested and standardized with six interviewers and proved to be adequate for the clinic patients (20).

In short, our nutritionists are increasingly involved in the development of research projects, since they are convinced of their fundamental importance in the fulfillment of their program objectives.

Summary

Hospital care of malnourished children, in essence, means a single-purpose, multiple approach, i.e., to obtain the cooperation of the health team in solving a family problem. Nutritionists must be aware of this goal. They must participate actively in obtaining team cooperation and discover new methods for enhancing the productivity of their effort.

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P-2126