



Nutrition and Dietetics for the Medical Student

"What does the medical student need to know about nutrition?" We are asking this question once again,¹⁻³ and we are asking how he might best gain the knowledge that will make him skillful in using this information in his future career.

Many events of recent years have deepened our appreciation of the significance of nutrition. Nutrition in its broadest scientific interpretation has permeated the specialties of medicine. Research in departments of medicine and nutrition is often interdependent. Medicine and nutrition share many of the same disciplines. It has been aptly said that the discipline of nutrition draws upon chemistry, physiology, endocrinology, bacteriology, cytology, genetics, mathematics and physics.⁴ At the present time more and more physicians are engaged in a medical specialty which requires much intensive preparation in nutrition.

The force of nutrition in the prevention and therapy of disease is a frequent reminder to the medical student of its vitality. A growing birth rate and larger numbers in the age group over sixty-five, plus increasing hospitalizations, have heightened the importance of nutrition.

The medical student is forming judgments about nutrition. We say that the medical student must know normal nutrition (its significance, its interpretation and the evidences of good nutrition) before he can recommend practices. When he recommends practices such as the diet prescription, he should know that a diet prescription needs to be developed within the framework of various considerations. The patient's budget, his intelligence, his physical capabilities and his occupation are some of these considerations. The medical student will note these influences when treating patients of all ages, but most particularly, when treating the increasing geriatric population.

Medical students often encounter dietetics in medicine. Dietetics is the application of nutrition to the feeding of individuals and groups. It is important to distinguish between nutrition and dietetics, a point to be developed further.

In many ways, the medical student has been exposed to the science of nutrition and its application. It may be a fair statement to say that he probably knows it best as a science. Dietetics, the application of the science of nutrition, includes the provision of practical dietaries.

DEFINING PRESENT CONTRIBUTIONS OF DIETETICS

In the hospital environment the medical student has opportunities to learn a great deal from dietetics which he will find useful when he is a practicing physician. What he gleans from dietetics will make much of his therapy workable. To illustrate, from dietetics he can learn food values, nutrition standards, rationale and content of dietary modifications. He can learn the importance of food palatability in promoting desirable consumption and acceptance of food. He can learn much about the values and technics of teaching the patient, the psychology of feeding and the need for careful assessment of actual consumption. He can learn about comparative costs of food which assume importance in making dietaries possible for many. He can learn about the symbolic and psychologic significance of food. He can learn about cultural and nationality food patterns. These and other insights will be invaluable in helping him to treat his patients.

DEFINING PRESENT CONTRIBUTIONS OF DIETITIANS

In a teaching hospital, the staff of a Department of Dietetics are diversified in professional

interests and responsibilities. As a unit, they contribute to the teaching, service and research functions of a university department. A common research contribution may encompass the dietetic supervision and execution of a research study. Each dietitian in the hospital has some teaching responsibility. She may teach patients, personnel, nursing students, dietetic interns or medical students. She may do mass communication teaching via the press, radio or television. An example of the assistance that she can give to the physician in teaching the public was called to mind recently when dietitians planned and participated in a series of broadcasts for homemakers presented over a university radio station. The purpose of the series: to better enable the homemaker to plan suitable menus for diabetic patients. Incidentally, this vehicle was a good opportunity to combat food faddism.

These are the major teaching functions of dietitians. Since medical students need to acquire some of the tools of dietetics, the hospital dietitian should be a key person in developing and executing this phase of their experience.

Students and medical staff may not be fully aware of the contributions which dietitians can make to their educational programs. It may be helpful to know that the course work of an undergraduate dietetics curriculum includes many of the sciences which medical students also study. For example, inorganic chemistry, organic chemistry, biochemistry, physics, bacteriology, anatomy and physiology are frequently required courses in the undergraduate curriculum of dietitians. In addition, many other courses such as advanced normal nutrition, maternal and child nutrition, nutrition in disease conditions and nutrition seminars make for a background of knowledge which enables the dietitian to appreciate and participate in medical education. Other phases of her education leading to a Bachelor of Science degree and an internship make the dietitian an especially adaptable person for the teaching of nutrition and dietetics as they apply to patient care and acceptance of therapy.

Many dietitians seek graduate study to increase their adeptness in certain phases of their

specialty. As an example, in our own department, among our present staff of ten dietitians, four hold Master's degrees in nutrition, two are working on Master's degrees and one on the PH.D. program in nutrition. Dietitians with specialized training and experience have an important role to fill in developing the nutrition curriculum of medical schools. It appears that it is in the medical school in which much of the groundwork in this subject should be laid.

THE DESIGN OF A PERSPECTIVE

Most meaningful change requires a plan and support of the plan. Before an educational plan can be developed, recognition of its need and administrative support must be obtained. Administrators will need to appreciate the many reasons for review and analysis. They must participate in the analysis and actively implement the program conceived.

When initial support is obtained, an academic department can begin a study of its own unique strengths, weaknesses and directions. Design is developed around structure. Structure includes staff, physical facilities, objectives and the means of reaching the objectives, the student body and graduates. Some of the structural units are semiflexible, some are permanent, others are always mutable. Consideration of each in its proper perspective is the beginning of the development of the plan. The plan for structure must be kindled by a dissatisfaction with the status quo. Aggressive constructive effort and an obsession with the belief that carefully thought-through changes will bring about improvement are all important.

A structured educational program is essential. Well spelled out plans for nutrition and dietetics course content, allotment of time and designation of personnel for teaching are a part of the program. Continuing careful evaluation is essential. In the medical school, the first step is to identify the objectives and, more specifically, what the student needs to know about nutrition and dietetics when he graduates. The second step is to fit these desired outcomes into a carefully analyzed curriculum so that one can clearly see the whole from the sum of its parts.



A case in point might illustrate. Some time ago a fourth year medical student asked where he could obtain printed special diet menus for use in his practice. He wanted convenience, but his manner of asking, and his question, suggested that he had much to learn about nutrition and dietetics. For one thing he had not as yet learned that the printed hospital menu might not be functional in the home. Where does understanding start and how does it develop? It might start in a basic science course with an introduction to the need for the food elements in these diets. It might develop during later course work and clinical experience, culminating in an active outpatient department in which the student has the opportunity to judge the effectiveness of his procedures. Somehow the educational program must be spelled out so that the desired results are provided through a continuity of cumulative experiences. Instructors who teach any phase of nutrition and dietetics must be alerted to their assigned individual responsibility. They must also be accepting of the program and enthusiastic about its value.

Effective communications are paramount. If dietitians are to assume a more active role in the teaching of medical students, the medical faculty must define the nature of the content to be taught by the dietitian. This implies that there should be two-way communication between dietitians and physicians, and mutual respect for the work of the other.

Working together should create respect. As the physician realizes the spectrum of contributions which can be made by competent dietitians, effective communication will be established. He will realize that the dietitian can make a greater contribution than simply to translate diet orders to grocery orders.

Likewise dietitians must be tolerant of medicine, with a stronger drive for participation and investigation plus willingness to accept an assignment when progress is slow. An encouraging trend in education has been the registration of numerous graduate dietitians in continuing education courses, workshops and other programs of study designed to provide meaningful postgraduate education.

A climate of cooperation will speed the

establishment of the dietetics phase of the medical curriculum. Dignity and satisfaction are great stimulators of activity. Attitudes of cooperation and understanding, willingness to share and learn together can make the physician-dietitian team a vital link in the overall educational program in the hospital.

Many resources can be helpful. Resources are persons, places and things. A home economist can be a resource. A diabetes clinic can be a resource. A recent article well illustrates that publications can be important resources.⁵

A natural reaction is to say there is no time to investigate resources either during training or during practice. Perhaps not. Certainly the student and practitioner cannot investigate all available resources. But initiative to investigate at least some resources is a beginning. For example, many physicians might be quite surprised to find the following individuals in their communities: dietitian-consultants, home economics extension nutritionists, journalists with a home economics background of training, dietitian-homemakers who would be willing participants in nutrition education programs. These persons would be sensitive to needs and because of their professional know-how could contribute much in the way of valuable dietetic support of the physician's work.

All that educators can hope to do is to plant the seed of appreciation for the value of resources. Beyond that, the graduate physician will need to develop his own reserve of changing resources.

Willingness to face change is necessary. When new programs, emphases, directions are accepted, the individuals involved must be willing to institute the necessary changes. Because conservatism in education is sometimes advantageous, and because people vary in their degree of resistance to change, a slow carefully delineated start may accelerate into a totally effective, enduring program.

Recruitment is imperative. If we are to widen the scope of nutrition and dietetics in the medical curriculum (using the horizontal or vertical approaches, or preferably both) qualified persons with appropriate academic and experience backgrounds must be available



to assist in this development. Women who have meaningful experience in hospital dietetics are one of the best sources of supply. Depending upon the level of competency expected of the dietitian-nutritionist, graduate work emphasizing heavy concentration in the basic sciences would seem to provide the best background of study for her participation in teaching and research programs in medicine.

Present needs invite future directions. The need for well qualified nutritionists in medical centers is acute. Every means should be taken to encourage graduate study in nutrition, preferably through the PH.D degree, so that enough personnel are available to participate in medical education and research.

The late Dr. Conrad A. Elvehjem, President of the University of Wisconsin, said shortly before his death: "There is great need in sciences for capable personnel, especially in rapidly expanding medical research. The need exists on all levels of training, from the Bachelor of Science degree to the Doctor of Medicine or Doctor of Philosophy degree."⁶

Persons who can blend the practical know-how of dietetics with the scientific acumen of

nutrition could assist medicine in perfecting its purpose which, ultimately is, the prevention of disease and the improvement of therapy.

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REFERENCES

1. GYÖRGY, P. Education and training in nutrition. *Am. J. Clin. Nutrition*, 10: 1, 1962.
2. Conference on Nutrition Teaching in Medical Schools. *Am. J. Clin. Nutrition*, 11: 84, 1962.
3. Teaching and Research in Diabetes. Edited by McCullagh, E. P. Springfield, Illinois, 1960. Charles C Thomas.
4. CRAMPTON, E. W. and LLOYD, L. E. Fundamentals of Nutrition. San Francisco and London, 1959. W. H. Freeman & Co.
5. PHIPARD, E. F. Guides to diet and nutrition from the United States Department of Agriculture. *Postgraduate Med.*, 32: 75, 1962.
6. Department of Dietetics, University of Wisconsin Dietetic Internship Brochure, 1962.

