NUTRITION IN THE MEDICAL CURRICULUM

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Introduction

There is a clear need for nutrition as a necessary component of education in medicine. The science of nutrition, with its basic and applied components, is very amenable to being introduced into the medical curriculum, both as a vertical as well as horizontal integrated course. Textbooks now emphasize the issue of malnutrition in hospital settings (the skeleton in the hospital closet), and the community aspect of nutrition is equally well known. Why then, is nutrition not accorded its rightful place in the medical curriculum? Is it due to a misplaced consideration that all subjects touch upon nutrition and this serves the purpose of education in nutrition? This is probably the case. It seems critical at this juncture in the country's burden of disease, as well as in terms of the mounting costs of hospital care, to create a systematic nutrition training method in the medical curriculum at an undergraduate level. This development should take place against the broader background of the fundamental changes taking place in the undergraduate training of clinicians. The reasons for introducing nutrition into the medical curriculum can be summarized as follows:

- Nutrition is a major component of the lifestyle desirable for preservation and promotion of health, slowing the process of aging, and prevention of disease.
- India has a sizeable "double burden" of nutrition related disorders: those due to deficiency disease and those that are due to over-nutrition.
- Indian patients, due to cultural reasons, are particularly keen to know from the doctor what foods to eat and what to avoid during acute illness, or during the management of chronic disease.
- The role of non-formal sources of information, such as the Internet, in informing patients about lifestyle and diet choices, has increased. Medical students and practicing doctors need to be more informed about nutrition.

Nutrition cannot be inserted into the curriculum simply as additional courses. There is simply no time in the curriculum for this and one has to be mindful of not overburdening the undergraduate student. Further, an additional isolated course will simply marginalize nutrition even more. Nutrition is by nature an integrative discipline, and therefore, needs a creative strategy for an appropriate, systematic and effective insertion into the curriculum on a longitudinal basis through the entire medical course.

This paper deals with possible options through a series of questions asked, and answered, below.

What are the Obstacles?

The insertion of new nutrition content into the curriculum will have the obstacle of misperceptions of the importance of nutrition by policy makers, and their own perceptions of the lack of time in the existing curriculum. There will have to be a change in attitudes at the very top for this obstacle to be overcome. Another obstacle is the lack of expertise or interest in faculty. It is critical that a physician-educationist is at the core of the program; this means someone from the department of medicine or gastroenterology (but this is not exclusively so) who has an interest in teaching students at different points in their medical course, as well as willing to steer a committee of teachers from other departments, notably the pre- and paraclinical departments. However, the difficulties of integrative teaching are well known, but this obstacle needs to be overcome, since it is very essential in for effective nutrition teaching. As the “disease centered” focus of teaching moves to a “public health/ preventive or comprehensive” approach, it is likely that nutrition will face fewer obstacles for its introduction into the medical curriculum, since lifestyle centered approaches to several disease groups involve nutrition.

What Could Form the Core of the Strategy?

The primary part of the strategy is to sensitize education policy towards the need for nutrition in the curriculum through documentation of clinical issues such as the alarming effects of malnutrition in hospital settings and the community, the preventive benefits of nutrition in the clinical setting and the cost effectiveness of nutrition in the clinical setting. The sensitization could also include community issues such as the particular role of nutrition in India with its dual burden of under and over nutrition in the community, and the community role of nutrition and prevention

It is also critical to plan the curriculum design effort carefully, so that materials for teaching are available. For example, more comprehensive but concise textbooks, evaluation of approaches to learning, developing a bank of clinical cases to illustrate nutrition problems; and developing a bank of multiple choice questions for evaluation. All this takes time, and it is necessary for educationists, curriculum development experts, nutritionists and physicians to sit together to work out how to do this. Such efforts have been in place in other countries in the last 20 years or more.

Another core element of the strategy is to recognize that although nutritionists should have overall responsibility for the content of nutrition training of medical undergraduates, it is better to have a physician-educator as the leader of the program in medical colleges. Further, because nutrition impacts disease and treatments across disciplines, it will be necessary to identify a multi-disciplinary team approach, to take best advantage of professionals with specialist skills.

The integration strategy should recognize that there is no need to have a stand-alone nutrition course. Certainly, there is no time for this within the course. Therefore, nutrition should be incorporated into the course as a vertically integrative theme, to link pre- and para-clinical disciplines with clinical disciplines, while maintaining a community or public health focus. Horizontal integration can also be applied through problem based learning approaches. This also means moving away from a 'disease management" perspective alone, to a "health promotion" perspective that includes disease prevention and holistic care.

Finally, nothing makes student want to absorb information more than the realization that the information is part of an evaluation process. Therefore, it is critical to have a part of the evaluation/examination process devoted to nutrition, and further, to assess the ability of current educators to deliver such content, and the need, if necessary, for the training of current educators, or creation of new posts.

What are the Challenges?

The strategies above define the challenges. First, time must be created in the existing curriculum for the insertion of nutrition content. This requires informed policy making; the information that is particularly required is: "How much time?" The team with complementary skills referred to above, would need to define this, and it is not a trivial task. It will be impossible to cover all the ground required: appropriate examples of key areas are required for insertion into the curriculum. Another challenge is to leverage newer techniques for teaching. This means creating innovative methods that keeps student and faculty interest high: in turn, this means emphasis on "non-lecture" and practical/demonstration methods. Further, teachers need to keep themselves trained, and have aids for teaching students: this means creating materials, integrated teaching sessions and methods.

Are there Existing Objectives that Endorse the Teaching of Nutrition in the Medical Curriculum, as It Exists Today?

Not in explicit terms. However, the new regulations of the MCI (1997) recommend, among others, that…the medical curriculum should be oriented towards educating students to take up responsibilities of physicians of first contact, and that maximum efforts be made to encourage integrated teaching and every effort be made to decompartmentalize discipline.

The Institutional goals include that the undergraduate students coming out of a medical institution should be…competent in diagnosis and management of common health problems of the individual and community, and competent to practice preventive, promotive, curative and rehabilitative medicine in respect to commonly encountered medical problem.

These words suggest that the MCI is cognizant of the need to educate students in basic and integrative disciplines like nutrition. It appears that a systematic approach to the formal insertion of nutrition into the medical curriculum is required.

Is Nutrition Education Already A Part of the Existing Curriculum?

The present curriculum does not address the needs of a nutrition base in a systematic way. First, there is considerable overlap between disciplines (an example is how 3 hours in didactic teaching of biochemistry on digestion and absorption overlaps with 1 hour in physiology on the same topic). Second, while a considerable effort is put into nutrients and disease, not a lot is put into translating these into foods, dietetics or RDA's. Only in vitamins is there a mention of RDA and deficiency. Third, there is no integrated teaching (horizontal or vertical), no case studies or problem based learning. Fourth, no emphasis is laid on practical training.

Are there Any Solutions?

- Solutions have to be suggested with the caveat that expert planning is required. In broad brush-strokes however, one could consider the following:
- Planning with not only nutritionists, but also curriculum development experts, physicians and educationists.
- Define objectives for each year in both content and process.
- Identify existing expertise within existing faculty structure
- Have a physician educator coordinate the clinical teaching of nutrition from II year onward.
- Reducing overlap in didactic lectures, through coordinated teaching.
- Increase the time spent in "non-lecture" teaching for nutrition. Group discussions could be held on specific topics, along with a "workshop" like approach to issues like dietary assessment and measurement of body composition. This will not place a burden on the practical/demonstration time.
- Increase integrative teaching. In this, a lead department is recognized to conduct a session (typically 2 hours) on a particular topic using the help of other departments.
- Expand the practical role of nutrition education during Community Medicine.
- Introduce a 'case examination' approach and bedside teaching – the integration of dietitians into the process can be considered.
- Identify how evaluation of the student and course can be done.

Further Reading:

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