

# Review of nutritional attitudes and counseling practices of primary care physicians<sup>1,2</sup>

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**ABSTRACT** I review major issues covered at the International Workshop on Nutritional Attitudes and Practices of Primary Care Physicians and synthesize some of the key findings presented at this workshop and found in the scientific literature. After presenting the rationale for managing nutritional problems in primary health care, I discuss the extent of both practice and international differences. Next, the determinants of attitudes and practices, in terms of both individual and system-level factors, are examined. Various types of interventions and the available data regarding their efficacy are reviewed. I then raise a variety of considerations regarding research methodologies and describe work in progress. Finally, suggestions are advanced regarding opportunities for increasing and improving physician efforts to manage nutritional concerns and for pursuing promising future directions for better health through nutrition. *Am J Clin Nutr* 1997;65(suppl):2016S–9S.

**KEY WORDS** Nutrition counseling, nutrition attitudes, primary care physicians, nutrition education, international nutrition

## INTRODUCTION

This workshop is of particular importance because of the premise that there is substantial nutrition-related mortality and morbidity among adults in numerous industrialized countries. A further assumption is that these problems, along with human suffering and unnecessary health care costs, could be reduced substantially if primary care physicians identify, manage, and educate their patients for better nutrition. Indeed, there is now broad consensus among health scientists that nutrition plays an important role in reducing the risks of chronic illnesses and their sequelae (1). Eating patterns contribute to 5 of the 10 leading causes of death in the United States, including coronary artery disease, some cancers, stroke, diabetes mellitus, and atherosclerosis (2). Nutrition-sensitive morbidity and mortality have been identified in both acute and chronic illnesses and across all age and sex groups (3, 4). Data from the United Kingdom (5), the Netherlands (3), Germany (6), and Norway (7) provide but a few of the many international examples available to underscore the role of nutrition in highly prevalent health problems. Thus, dietary change is both a prevention and a treatment goal for a broad spectrum of acute and chronic diseases and risk factors.

Given the wide potential applicability of nutrition in primary health care settings, the question of what focus or focuses are

promising and worthy of special attention arises. Three areas that warrant emphasis and that have been considered in some depth at this workshop are chronic disease prevention and control, nutrition for persons at high risk of chronic diseases, and nutrition in pregnancy and lactation. In each of these areas, nutrition can make a significant, measurable difference in a large population. Furthermore, the most affected groups can and should be identified in the course of routine health care, and timely risk identification and management hold great potential for improving health outcomes.

There are, of course, other important nonepidemiologic reasons for attempting to understand and enhance the way nutrition is managed in primary care practice. A high proportion of all adults and children have contact with primary care providers each year, thus offering convenient opportunities for assessment and education. Physicians are perceived as highly credible sources of health information (8). In societies where nutrition information is promulgated by qualified experts and self-proclaimed lay experts, medical advice can make an important difference. Finally, consumers have begun to demand and expect that their physicians attend to both treatment of risk factors and prevention, and are looking to physicians for nutrition-related advice and guidance (8).

## NUTRITION PRACTICES IN PRIMARY CARE

Several studies of the extent of nutrition counseling in the United States and Europe have been carried out over the past 10 to 15 y. Most studies focused primarily on counseling for high blood cholesterol and obesity and revealed that 50–75% of primary care physicians report conducting some nutrition counseling in their practices (6, 9–11). There appears to have been a trend toward more frequent nutrition counseling since the early 1980s, but according to one recent study some aspects of nutrition (eg, intake of salts and sugar, excess energy consumption, and consumption of a balanced diet) are considered to be less important than they were a decade ago (12). Also, physicians often use ancillary office staff such as dietitians and nurses to provide nutrition counseling and report usually

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spending no more than 5 min discussing dietary change at a single visit (10).

The data cited thus far are all based on the self-reported extent of nutrition practice in primary care; that is, physicians' responses to survey questions about what they usually do. Alternative methods of data collection, such as observations, chart audits, and surveys of patients may be more valid and less biased for estimating the actual frequency of physician practices. We recently reviewed nine studies that used these data collection methods in studies of cholesterol management and counseling (9). These investigations found widely varying rates regarding physicians' practices, due in part to the varied study populations and data sources. For example, rates of nutrition counseling ranged from 17% to 70%. Equally important was the finding that all of the studies indicated substantial discrepancies between guidelines for clinical management of elevated cholesterol and actual practices. Also, these studies, unlike the survey data, did not show clear trends toward improved practice over time. The findings of these investigations, although limited in number, suggest an important methodologic consideration that I will revisit later in this discussion.

This workshop represents one of the first opportunities to examine the extent of nutrition practice in primary care on an international scale. Representatives from Australia, Belgium, Brazil, Denmark, Germany, Italy, the Netherlands, Norway, and the United Kingdom have helped to expand our understanding of international trends in nutrition management in health care. Several studies reported at the workshop underscore the need for effective interventions to improve nutrition counseling practices. A survey of general practitioners and internists in Germany concluded that beliefs about the importance of nutrition in prevention exceeded the actual practice of counseling (6). Opportunities and needs for further training of general practitioners were identified in Italy (13). It was also reported that Danish general practitioners appear inclined to provide counseling advice about some nutritional issues differentially to their male and female patients (4). Other surveys focused more specifically on the determinants of physicians' nutrition practices, which are discussed in the next section.

#### **DETERMINANTS OF NUTRITION PRACTICES IN PRIMARY CARE**

To design and evaluate effective interventions, including education and policies, we first need a clear understanding of the determinants of nutrition practices in primary care. Although there is likely to be variation across countries, there are some general issues that appear to transcend national borders. A most important distinction should first be made between two broad types of determinants: 1) individual factors and 2) system factors. This distinction warrants ongoing attention because different strategies and combinations of strategies are needed to address these types of determinants. Individual factors can be modified through education, information, persuasion, and role models. However, changing system factors usually requires changes in professional education, guidelines, and health services policy. Most often a combination of factors deserves attention; thus, a multi-level intervention strategy can be most effective.

#### **Individual determinants of nutrition practices**

Individual factors found to be associated with nutrition practices of primary care physicians include sociodemographic factors, knowledge of nutrition, training in counseling, personal interest in nutrition, self-efficacy and perceived skills, and attitudes about nutrition. Although age and specialty were not associated with attitudes or practices in some studies, a few reports indicate that physicians who are younger, female, or had healthier personal diets were more likely to be knowledgeable and to undertake nutrition counseling in their practices (9). Factors found to correlate with recommended nutrition management practices include belief in the efficacy of diet and of nutrition counseling, good relationships with patients, and self-efficacy or physicians' confidence in their ability to effectively counsel patients to change eating patterns (4, 10, 14–17). Belief in the importance of some aspects of nutrition for health has increased over the past decade (12, 18, 19).

#### **System factors affecting nutrition practices**

The lack of training in human nutrition and health promotion in most medical education curricula has long been cited as a barrier to physicians' nutrition management and counseling practices (13, 17, 20, 21). Other key barriers are frequently noted by respondents to surveys: lack of time, staff, payment, or insurance coverage and referral source availability (6, 9, 17). Lack of supportive office systems is often also problematic because most primary care offices neither routinely track preventive care nor prompt physicians to review these issues with their patients (9, 10, 22).

#### **INTERVENTION OPPORTUNITIES AND EFFICACY OF INTERVENTIONS**

Interventions to teach and train physicians to better attend to nutritional needs and risk factors of their patients have been conducted for medical students, residents, and practicing physicians (continuing medical education) (9) and are also carried out through provision of new resources and practice guidelines (23). A modest number of these interventions have been tested in experimental trials and a few others have been empirically evaluated through use of nonexperimental designs. Up until now, interventions that emphasized information sometimes improved nutrition attitudes but did not result in better physician practices (9). In experiments involving medical residents, lectures, co-counseling, checklists, and patient-specific feedback strategies resulted in improved dietary counseling practices (24, 25). A study reported by Lazarus et al (26) made use of a physician nutrition specialist who provided specific recommendations for faculty members and residents in a family practice residency program ( $n = 16$ ). A pre-post evaluation showed that this strategy effectively increased nutrition knowledge and the frequency with which physicians discussed nutrition and recommended diets for their patients.

There are clearly further needs to expand interventions to reduce barriers to nutrition counseling through organizational changes and innovative policies. For example, studies should examine the relative costs and effects of delivering clinical nutrition interventions by various professionals (eg, doctors, nurses, dietitians, and health educators) and in various modes (eg, face-to-face counseling, print media, audiovisual media,



and telephone). Nutrition experts should also adopt strategies used to promote health behavior counseling, generally in health care practice (eg, smoking counseling and hypertension control).

## RESEARCH METHODS CONSIDERATIONS

Participants in this international workshop have many opportunities to advance the status of nutrition within primary care practice, both within their own countries and across borders. It is likely, however, that time and energy will limit the range of actions taken in the immediate future. Choices will need to be made about which directions to pursue: whether to emphasize bringing about changes in practice through professional associations, whether to attempt to influence health care policies that impede effective nutrition practice, or whether to conduct more rigorous research to evaluate the efficacy of intervention strategies or the diffusion of well established approaches.

If research is selected as a priority, then methodologic considerations must be a central focus of attention. With respect to measurement, the data sources, wording of questionnaire items, and response rates are all potential sources of bias. Whenever possible, objective sources of data (eg, chart audits and observations) should be included to establish the criterion of validity of self-reported data. Ideally, similar questions should be asked across studies and countries to increase comparability of findings. Vigorous follow-up, and possibly incentives, should be used to achieve high response rates. Sampling concerns are important to establish the generalizability of findings; thus, investigators are encouraged to collaborate across institutions and even across countries. Designs should be primarily experimental, with process-implementation data and qualitative assessments available to provide additional in-depth information. Randomized trials are most likely to yield important results if they compare more than one condition and not merely a control or usual care condition with a multicomponent intervention strategy.

It is challenging to conduct controlled research in medical education and health care practice settings, and it is likely that compromises will be necessary. Nevertheless, the needs of the field are pressing enough that we should no longer make recommendations based solely on expert opinion, precedent, or data derived from methodologically weak research.

## WORK IN PROGRESS AND OPPORTUNITIES

Substantial work in progress, both in nutrition intervention and in health promotion in primary health care, suggests exciting possibilities for the future. Cost containment continues to be a focus of health care and thus coordinated health team approaches should be examined for their effectiveness and efficiency. Efforts to change health care delivery systems for integrated disease prevention programs should be high on the agenda.

Brief counseling strategies have been found to be successful for some types of health behavior changes and are suitable to medical settings; they may be supplemented by print materials to extend the reach of counseling beyond the office (27, 28). Tailored messages and strategies that are responsive to the

beliefs and habits of patients have been studied and appear to be especially promising (29, 30). Stage-based counseling, which adapts messages and strategies on the basis of the patient's readiness to change, is a tailored strategy that is gaining attention (22, 29). Other innovations for nutrition intervention in health care include cooking classes, demonstration kitchens, supermarket tours, and computer-based automated telephone counseling and follow-up. The use of new media such as interactive CD-ROMs and electronic mail are also beginning to be tested in areas as diverse as nutrition education for children and for diabetes management (31).

Physician leadership is central to the credibility and success of nutrition interventions in health care. Despite the significant remaining obstacles to widespread availability of effective nutrition interventions, the opportunities are greater and more timely than ever before. Although there are no simplistic answers, creativity, persistence, and scientific rigor are the ingredients for future success. International collaboration and cooperation can accelerate the pace of innovation and implementation. Toward that end, this workshop is a beginning and not an endpoint on the road to better health through nutrition. ■

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