The Challenge of Obesity-related Chronic Diseases

Type 2 diabetes mellitus, hypertension, and hypercholesterolemia are common chronic diseases in the United States that are extremely costly to our society in terms of both health care expenditures and premature morbidity and mortality. Because all three diseases are strongly influenced by adiposity, clinical guidelines for each, as well as for obesity, recommend lifestyle modification as first-line management.[1–4] However, physicians do not routinely counsel their patients about lifestyle modification.[5–7]

In this issue of the *Journal*, Marrero et al. describe primary care providers' beliefs, practices, and barriers to providing nutritional therapy for their diabetic patients.[8] Sixty-two percent of respondents referred their patients for nutritional counseling while 28% provided it on their own. These physicians perceived patient-centered factors as the most important barriers to nutritional management, including patient lack of interest, noncompliance, education level, and lack of family support. Marrero et al. conclude that while physicians have accepted nutritional therapy, it is "tempered by a realistic view of the extent to which nutritional therapy by itself can adequately control glycemia."[8]

What is a realistic view for practicing physicians? Multiple studies have proven that lifestyle modification aimed primarily at weight loss can achieve significant improvement in glycemic control in overweight diabetics.[9–11] Furthermore, lifestyle changes are also effective in improving blood pressure control and hypercholesterolemia.[12–15] Many of these studies do not look at outcomes beyond 12 months (except in the TONE trial where patients were followed for a median of 29 months),[13] and patients who enter clinical trials are clearly different from the average patient in the office. Current management and control of diabetes[16] and hypertension[17] are less than optimal. Helping patients with chronic disease care for themselves optimally is always more difficult in practice than in the controlled setting of trials.

Why is management of these chronic diseases so important? Besides the associated increased morbidity and mortality and health care expenditures, they also impact patients' quality of life.[18–20] In this issue of the *Journal*, Katz et al. add to the growing body of literature that shows that obesity has a significant negative impact on health-related quality of life.[21] Overweight and obese subjects had lower scores in physical functioning, health perceptions, and vitality. For patients with Class II–III obesity (body mass index >35 kg/m^2), these decrements were similar to those seen in patients with congestive heart failure. Furthermore, the effects of obesity on quality of life were different across groups; women and African Americans seemed to be affected more than men or whites. Other studies have reported diminished health-related quality of life in overweight and obese individuals.[22–23] Yet there is some hope. A study by Schiller et al. showed that patients often felt better emotionally and physically after dietary counseling sessions and felt an increased sense of control over their disease.[24] Another study indicated that quality of life measures improved with weight loss in obese patients treated with surgery.[25]

Why then, is there such a discrepancy between clinical guidelines, clinical trial data, and practice patterns? If lifestyle modifications are effective in management of these chronic diseases and can potentially improve quality of life and satisfaction with care, why aren't they routinely incorporated into practice? Marrero et al. report that insurance reimbursement is perceived as a significant barrier.[8] While some states, like Indiana, now mandate coverage of nutritional therapy for diabetics, this is not true nationwide. Furthermore, dietary counseling is not always covered for hypertension or hypercholesterolemia and is only rarely covered for obesity. In the absence of reimbursement, it is left to the good will of physicians to counsel patients on their own, despite inadequate medical education in nutrition and behavioral counseling and limited office visit time. It is apparent that we need to do better. Lack of reimbursement should simply put a higher premium on providing these aspects of care more efficiently and at a lower cost.

Fortunately, physicians and researchers are working to find solutions to this problem by designing and evaluating office interventions to help with chronic disease management. In this issue of the *Journal*, Piette describes an effort to combine telephone medicine and nurse case management into something less labor intensive and less expensive.[26] A group of diabetic adults in public clinics were randomized to a telephone-based intervention combining automated assessments with nurse-educator follow-up or usual care. In this patient population, access to care is an important barrier that is caused by both financial and nonfinancial problems. At follow-up, those in the intervention group were significantly less likely to report not receiving health care because of perceived barriers. The strongest effects were observed in behaviors and beliefs related to obtaining medication and to obtaining medical advice over the phone. Finally, Piette demonstrated that those without access barriers reported fewer symptoms at follow-up and had lower hemoglobin A1c levels.

In addition to making changes in the process of care at the office level, it is also important to try to make changes in insurance reimbursement policies. However, to effect such changes will likely take more than expert opinion. The link between lifestyle changes and long-term outcomes including mortality is weak at best. Large-scale trials are needed to examine the long-term effectiveness of lifestyle modification on hard endpoints, such as mortality and serious morbidity, health care utilization and expenditures, as well as quality of life. The Study of Health Outcomes with Weight Loss (SHOW) is a multicenter, National Institutes of Health–sponsored trial aimed at evaluating the long-term outcomes of an intervention aimed at

weight loss in overweight diabetics. Recruitment for SHOW is due to begin in 2001, and follow-up will continue through 2013. This trial of secondary prevention should answer many of the questions that remain about the effectiveness of lifestyle modification and weight loss. Others like it are needed to provide the evidence for future practice and to guide policy.

Unfortunately, however well we learn to manage chronic diseases in the office, the ultimate goal of primary care providers should be to prevent them. Although the underlying pathophysiology is complex and may include significant genetic predisposition, lifestyle plays a substantial role in the development of type 2 diabetes, hypertension, hypercholesterolemia, and obesity. Education at a societal or community level, in addition to the individual patient level, is crucial if we are to stem the rising tide of obesity and the associated increase in type 2 diabetes, hypertension, and high cholesterol in this country. As our society becomes more and more sedentary, health care providers and public health practitioners should work fervently toward solutions to the epidemic of lifestyle diseases we are facing in this new millennium.—**JEANNE M. CLARK, MD, MPH** *and* **FREDERICK L. BRANCATI, MD, MHS,** *The Johns Hopkins University School of Medicine, Baltimore, Md.*

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