



vention to the health care system appears reasonable. Since the lifestyle intervention was the most effective strategy for preventing diabetes, it would appear to be the preferred approach. Compared with the cost of the less effective metformin arm, the direct costs of the lifestyle intervention seem modest. Yet there are at least three important barriers to delivering these services within our current health care system. First, the intensive behavioral services are not generally available in most primary care practice settings, and the organizational and human infrastructure to deliver these services is sorely needed. Second, and undoubtedly related to the first, few health care plans provide reimbursement for lifestyle interventions. We know that at least in the general population, behavioral counseling in the primary care setting, without intensive systems for follow-up and management, has not been shown to be effective (5). Third, helping people understand the benefits of healthy lifestyles is much easier than actually having them make healthy choices consistently. In fact, recent information tends to suggest that we are actually moving in the wrong direction (6). These barriers need to be addressed.

The direct nonmedical costs of the DPP include the time costs in seeking and receiving care as well as the value of time actually exercising. These costs are highly sensitive to the hourly cost used for physical activity. The dollar value of leisure time is particularly difficult to assess. The authors value leisure at half the hourly wage rate and, in a novel approach, fur-

ther adjust the value based on whether individuals like or dislike to exercise. Thus, those who like to exercise have a lower "cost" for each hour they exercise. Interestingly, individuals in the lifestyle group were more likely to enjoy exercising and a better quality of life; perhaps paradoxically, then, the "cost" of their exercise was relatively reduced.

Although this study provides some preliminary evidence that the costs of the DPP interventions are reasonable, we need to know the other side of the equation—the long-term health and cost impact. The appropriate next step is to develop decision models that look at longer-term time horizons, adjust for adherence, and examine the long-term health consequences, including changes in quality of life. We know that lifestyle changes can have a substantial impact on health (7). Improving our understanding of the best strategies to promote long-term acceptance of such changes cost-effectively is critical for reducing the growing epidemic of diabetes and associated disorders. An analysis using DPP data that summarizes all of the costs and all of the benefits and harms over time will provide health care and public health decision makers with a clearer understanding of the value of these interventions and will lead to policies that enhance the prevention of diabetes.

STEVEN TEUTSCH, MD, MPH

From Outcomes Research and Management, Merck & Co., Inc., West Point, Pennsylvania.

Address correspondence to Steven Teutsch, MD,

MPH, Executive Director, Outcomes Research and Management, P.O. Box 4, WP39-168, Merck & Co., Inc., West Point, PA 19486-0004. E-mail: steven\_teutsch@merck.com.

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