

Promoting Behavioral Science Research in Diabetes

Diabetes is unique among chronic illnesses in the degree that patient behavior influences both the application and outcomes of therapy. Indeed, there is emerging evidence suggesting that in order to effectively implement intensive regimens designed to achieve optimal glycemic control, it is necessary to address a variety of behavioral issues among diabetic patients. Despite this observation, federal agencies have historically funded a disproportionately small amount of behavioral science research in diabetes. On 18 and 19 November 1999, the National Institutes of Health addressed this issue by hosting an invitational conference focusing specifically on behavioral science research in diabetes. The goals of the conference were 1) to illuminate the integral role that behavioral science has played in the success of research designed to reduce the considerable personal, social, and fiscal burden associated with diabetes (notably, this includes large clinical trials such as the Diabetes Control and Complications Trial, the U.K. Prospective Diabetes Study, and the Diabetes Prevention Program); 2) to demonstrate how behavioral science has successfully contributed to improved health outcomes in other health fields, such as smoking prevention/reduction, medical office-based smoking cessation programs, management of cardiovascular disease, and substance abuse; and 3) to illustrate how more systematic behavioral science research can contribute to emerging primary and secondary diabetes prevention activities in the future. Priority was given to diabetes-related topics that may apply to other diseases.

The conference format combined presentations of research by noted scientists in the fields of diabetes and other chronic illnesses with presentations of reports developed by working panels comprised of distinguished researchers. The presentations provided specific examples of relevant and effective behavioral research within one of four domains: lifestyle modification, psychosocial therapies, health care delivery, and the assessment of risk and primary prevention. These specific domains were

chosen because they represented areas in which there was a history of well-designed research and evaluation. In addition, they reflect areas in which significant advances would contribute to reducing the burden of diabetes if additional research support was made available. Presentations in each topic domain included diabetes-specific research as well as innovative approaches in other diseases relevant to diabetes research.

After the working panels were selected, they worked for several weeks before the conference date. They were responsible for providing a broader overview of important research relevant to the four topic domains. In addition, each working group was expected to develop suggestions concerning which critical issues and barriers need to be addressed in order to advance research that will decrease the burden of diabetes. Finally, each group was asked to make recommendations for future research priorities within their topic domain. The chair(s) of each working group presented a summary of these reports during the conference, with emphasis on the recommended research priorities.

In this issue of *Diabetes Care*, we present two of the four reports developed by the conference working groups. The first, "Behavioral Science Research in Diabetes: Lifestyle changes related to obesity, eating behavior, and physical activity" by Wing et al. (1), follows a presentation format adopted by all of the working groups. The article defines the topic domain and discusses why this topic area is important and provides a review of key research studies, barriers to progress being made in this research domain, and specific recommendations for future research. In this article, four key topics are described that should be given high priority in future research efforts: 1) environmental factors related to obesity, eating, and physical activity; 2) adoption and maintenance of healthy eating, physical activity, and weight management; 3) etiology of eating and physical activity; and 4) making multiple behavior changes. The working group concludes that given the strong association between lifestyle behaviors and the prevention and

treatment of type 2 diabetes, greater research attention must be paid to issues concerning how to develop healthy eating and physical activity habits as well as strategies for modifying unhealthy behaviors.

The second report, "Behavioral Research Related to the Establishment of a Chronic Disease Model for Diabetes Care" by Glasgow et al. (2), reports the deliberations of the working panel on health care delivery. This article summarizes the literature on patient-provider interactions, diabetes care, self-management support among underserved and minority populations, and the implementation of chronic care management systems for diabetes. The working group's review suggests that the less-than-optimal quality of diabetes care delivery is due in part to the influence of the acute illness model of care that dominates medicine. In this context, the article discusses examples of proactive population-based chronic care management programs incorporating behavioral principles.

Diabetes Care is publishing these reports in the hope that they will stimulate further discussion of research and funding priorities for behavioral research in diabetes and eventually expand the frontiers of such research. We anticipate the publication of the two other conference reports in *Diabetes Care* at a later date.

DAVID G. MARRERO, PHD
MARK PEYROT, PHD
SANFORD GARFIELD, PHD

From the National Institute for Fitness and Sport (D.G.M.), Indianapolis, Indiana; Loyola College (M.P.), Baltimore; and the Division of Diabetes, Endocrinology, and Metabolic Diseases (S.G.), National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland.

Address correspondence to David G. Marrero, National Institute for Fitness and Sport, NIFS-IF122, 250 University Blvd., Indianapolis, IN 46202. E-mail: dgmarrer@iupui.edu.

References

1. Wing RR, Goldstein MG, Acton KJ, Birch LL, Jakicic JM, Sallis JF Jr, Smith West D, Jeffery RW, Surwit RS: Behavioral science

research in diabetes: lifestyle changes related to obesity, eating behavior, and physical activity. *Diabetes Care* 24:117–123, 2001

2. Glasgow RE, Hiss RG, Anderson RM, Friedman NM, Hayward RA, Marrero DG, Barr Taylor C, Vinicor F: Behavioral research

related to the establishment of a chronic disease model for diabetes care. *Diabetes Care* 24:124–130, 2001