Local Interventions Lower HbA_{1c}, Blood Pressure

BY KATE JOHNSON

MONTREAL — Locally designed and delivered lifestyle interventions can result in clinically meaningful improvements in patient health, according to preliminary findings from a statewide initiative aimed at decreasing health disparities.

People who live and work in a community "know the most about what might work best," said Lauren Whetstone, Ph.D., who presented the findings in a poster at the annual meeting of the North American Primary Care Research Group.

Using a $9.2 million grant from the North Carolina Health and Wellness Trust Fund, 18 local governments and nonprofit organizations developed local interventions targeting obesity, cardiovascular disease, diabetes, and lifestyle issues in the specific communities.

Most of the communities had large African American or Native American populations that were underserved and had poor access to health care, explained Dr. Whetstone of East Carolina University, Greenville, N.C.

Some of the interventions involved health systems implementing home medical visits for diabetic patients. Other interventions involved churches establishing physical exercise and nutrition classes before Bible study.

In each community, a cohort of participants were followed longitudinally for an average of 19.5 months. Data were collected on biologic and behavioral outcomes such as blood pressure, blood glucose and cholesterol levels, dietary habits, physical activity, and smoking. Several of the communities had lay health advisers who were trained to collect some of the clinical information, or who arranged for the data to be collected by a health professional.

Each individual community had different needs, so the interventions were different and the specific measures for determining outcomes varied. However, a collective analysis of the combined data for 2,504 participants (average age 53 years) showed a positive impact.

Among 67 diabetic patients, mean hemoglobin A_{1c} levels dropped from a baseline level of 8.9% to 8.0% by the end of the study period.

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Among 203 hypertensive patients, mean systolic blood pressure dropped from a baseline of 141.62 mm Hg to 137.24 mm Hg.

Mean body mass index did not change, but data from the first half of the study period showed significant increases in self-reported daily fruit and vegetable intake (2.34 to 2.88 servings), mean days of physical activity per week (3.22 to 3.56), and mean self-rated health. There was a slight decrease in the number of current smokers (13.9% to 13.2%).

Although the study had significant limitations, including possible selection bias and lack of controls, improvements of this magnitude, if sustained, have been associated with reductions in diabetes and cardiovascular morbidity and mortality, Dr. Whetstone said.

"We've learned a lot about the differences in how organizers work within one population compared to another," she said. For example, within the Native American population, communication and the development of trust were rooted in the tribal circle, where all community organization and business is centered.

"I think going directly to communities is going to be the way we can make the most change," said Dr. Sally P. Weaver, director of research for the Family Health Center at the McLennan County Medical Education and Research Foundation in Waco, Tex. "Interventions need to somehow get into the broader community for people who are not seeing physicians, because I think so much of our health problems are community based with the availability of fast foods and lack of safe places to exercise." ■