

Free Diabetes Screening Effort Finds Many at Risk

BY DOUG BRUNK
San Diego Bureau

Of 999 people who underwent free biometric screening for diabetes at Wal-Mart stores in five small towns between late September 2007 and early March 2008, many were found to be at high risk for the disease.

In fact, 78% of the participants had high blood pressure (greater than 140/90 mm/Hg), 56% had high cholesterol (greater than 240 mg/dL), and 41% had elevated blood glucose (greater than 101 mg/dL). In addition, 71% of participants were obese (26%-34% body fat measurement in men, 32%-39% in women) or morbidly obese (35% or more body fat for men, 40% or more for women).

"There were cases where a person's blood pressure was so high that we had to say, 'You probably should go to an emergency room today,' which was a reminder of how serious some of the health issues were," Joe Quinn, senior director of state health care policy for Wal-Mart Stores Inc., based in Bentonville, Ark., said in an interview.

The screenings were one component of a diabetes awareness program that targets communities in the Delta Regional Authority, a federal-state partnership that serves 240 counties and parishes in parts of Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee. The events included free biometric screenings, free blood pressure screenings, and other health information.

The program illustrates several important points, said Dr. Donald A. Bergman, past president of the American Association of Clinical Endocrinologists (AACE) and a creator of AACE's Power of Prevention program. "First, people are ready for a change in the way they view health care," he said. "Those attending this screening wanted to see if they had a medical problem before they were symp-

tomatic; this means that people are ready to spend the time preserving health rather than restoring health. Second, this project shows that many people are very unhealthy and are not being identified before they become ill. And third, this project demonstrates that when business professionals and health care professionals join together, large numbers of people can be helped by early intervention."

The program got started in 2007, when the Wal-Mart Foundation provided a gift of \$500,000 to the Delta Regional Authority in support of its Healthy Delta diabetes initiative (www.healthydelta.com). As part of the partnership, Wal-Mart agreed to host eight "Hometown Health Fairs" at some of its stores in the region on select Saturday mornings. Communities were chosen based on input from Delta Regional Authority representatives in each of the eight states. The eighth and final health fair took place in Carbondale, Ill., on March 29.

The partnership kicked off in late September 2007 with a series of radio and television ads that ran in the eight-state region. The ads urged people with clinically confirmed diabetes—as well as people who thought they might have diabetes—to call a toll-free number for more information about management of the disease.

People who called the toll-free number spoke to a bilingual diabetes expert who asked the caller to answer questions from the American Diabetes Association Risk Test. The caller was then offered a free diabetes kit with a brochure called "Taking Control of Your Diabetes," which included advice about how to talk to a physician or pharmacist about diabetes, as well as a list of affordable medications.

The diabetes experts followed up with the callers by phone at 60 and 120 days to check on their health status, asking questions such as: Are you getting some exercise? Have you changed how you're eating based on our previous conversation? Have



A technician administers a fingerstick blood test during a Wal-Mart Hometown Health Fair in Eufaula, Ala., held as part of the regional Healthy Delta initiative.

you seen a physician? This same follow-up was offered to people who attended the health fairs.

Mr. Quinn likened the program to smoking cessation models in the United States. "What the person with diabetes really needs is someone to talk to on a regular basis—someone to remind them that there are behavior or diet changes that can play a large role," he explained. "We're all aware that a busy physician in a small town has incredible demands on his time. So if there are other venues that are reminding people about healthy behavior, that certainly is a place where we can help."

As of early March, 2,598 people—47% of them African American—have enrolled in the program, including 1,593 callers previously diagnosed with diabetes. In addition, 671 callers have received a free blood glucose monitoring kit.

Results of the biometric screening tests on 999 people who attended the first five health fairs were "somewhat worse" than what Mr. Quinn and his associates ex-

pected in terms of the high incidence of high blood pressure, elevated cholesterol rates, obesity, and high BMI.

"The Saturday morning health screenings in a Wal-Mart parking lot reinforce what most of us in America know right now: that wellness has to become part of the national health care discussion," Mr. Quinn said. "The results we saw when we screened people backed that up and underlined the value of projects like this."

Although the long-term future of the diabetes awareness program is unclear, Mr. Quinn said that he's pleased that it has helped foster education and a dialogue about diabetes in communities where access to health care has been problematic. "[Members of] the Delta Regional Authority are firm believers that it's education plus quality of health in a small town that equals economic development," he said. "That is certainly an equation that Wal-Mart understands and agrees with. Hopefully we'll be able to find common ground and move ahead." ■

Maternal Hyperglycemia Tied to High Fetal Insulin, Weight

BY MARY ANN MOON
Contributing Writer

Maternal glucose levels that were high but below the diagnostic threshold for gestational diabetes were strongly associated with high fetal insulin levels and birth weights in a large international study, investigators reported in the *New England Journal of Medicine*.

There were also weaker—but still significant—associations between maternal hyperglycemia that fell short of overt gestational diabetes and a host of neonatal problems: hypoglycemia in the neonate, the need for cesarean delivery, premature delivery, shoulder dystocia or birth injury, the need for intensive neonatal care, hyperbilirubinemia, and preeclampsia.

These findings "indicate the need to reconsider current criteria for diagnosing and treating hyperglycemia during pregnancy," said Dr. Boyd E. Metzger of Northwestern University, Chicago, and his associates in the Hyperglycemia and Adverse Pregnancy Outcome study.



The researchers assessed 23,316 pregnant women "to clarify the risk of adverse outcomes associated with degrees of maternal glucose intolerance less severe than overt diabetes mellitus." The study subjects underwent standard oral glucose tolerance testing at 24-32 weeks' gestation at 15 medical centers in nine countries.

Cord blood specimens were obtained at delivery to assess serum C-peptide levels, an indicator of fetal β -cell function.

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DR. METZGER

High levels of fasting, 1-hour, and 2-hour plasma glucose were strongly correlated with birth weight above the 90th percentile and C-peptide levels above the 90th percentile, and the rates of these problems increased as plasma glucose levels increased. There were weaker but significant correlations between maternal hyperglycemia and two other primary outcomes of this study (cesarean delivery and clinical neonatal hyperglycemia), as well as five secondary outcomes. A similar dose-response relationship was seen between increasing maternal glucose level and rising rates of these problems, Dr. Metzger and his asso-

ciates said (*N. Engl. J. Med.* 2008;358:1991-2002).

In a separate study of gestational diabetes published in the same issue, Dr. Janet A. Rowan of Auckland City Hospital, New Zealand, and her associates in the Metformin in Gestational Diabetes trial found that metformin was "noninferior" to insulin in safety and efficacy, and was preferred by patients with overt disease. In that open-label study, Dr. Rowan and her associates compared oral metformin with insulin therapy in 733 women who had overt gestational diabetes and were followed at 10 New Zealand and Australian obstetric hospitals.

The composite outcome of numerous neonatal complications, including hypoglycemia in the infant, was no different between the metformin group and the insulin group, at 32% in both. There also were no differences between the two groups in neonatal anthropometric measures or in umbilical cord serum insulin concentrations.

The women preferred metformin to insulin. However, 46% of those who took metformin eventually required supplemental insulin as well, Dr. Rowan and her associates said (*N. Engl. J. Med.* 2008;358:2003-15).

Further follow-up data on the offspring are needed to determine the long-term safety of metformin use in pregnancy, they noted. ■