



Diabetes Patients Make Significant Gains in Disease Control; Still, Nearly Half Fail to Reach ADA Treatment Goals

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Gains come soon after diagnosis then plateau; young male adults fare worse than females

Test results found to worsen in winter

Six-year data released from nation's largest laboratory testing database

CHICAGO, June 23 /PRNewswire/ -- Over the last six years, Americans being treated for diabetes improved control of their disease by a significant 44.4 percent. As of December, 2006, more than half (54.6 percent) had reached treatment goals for glycemic control, established by the American Diabetes Association (ADA), compared to 37.8 percent in 2001. This finding is according to the Quest Diagnostics Health Trends Report on Diabetes, (NYSE: DGX) presented here today at the ADA annual scientific conference (posters # 21-LB and 22-LB). Despite these overall gains, hemoglobin A1c (HbA1c or A1c) values have plateaued since 2004 with 45 percent of patients in 2006 failing to reach treatment targets of HbA1c levels less than seven percent.

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A companion analysis of HbA1c tests revealed a significant seasonal variation in blood glucose control with HbA1c levels peaking in the winter (January-March) and falling in the summer (July-October.) These seasonal differences depended on patient age and level of A1c control, but were most apparent in the elderly (greater than or equal to 80) and those with the highest levels of HbA1c (greater than or equal to 9 percent).

The Quest Diagnostics Health Trends Report on Diabetes is based on findings from 22.7 million de-identified HbA1c tests, a key indicator of diabetes control, performed by Quest Diagnostics between 2001 and 2006 on 4.8 million patients who saw a healthcare professional and were classified as having diabetes. The number of tests reported is more than 50 times that of other published reports on diabetes health.

"These data demonstrate incredibly significant improvements in diabetes management in the last six years, probably due to improved education, new medications and adherence to treatment guidelines," said study co-author Francine R. Kaufman, M.D., professor of pediatrics at the Keck School of Medicine, University of Southern California, and past president of the ADA. "But more than four in 10 people with diabetes still fail to reach treatment goals, which indicate physicians and patients must continue to be committed to management of medication, physical activity, food intake and glucose monitoring."

The HbA1c test measures the amount of sugar attached to hemoglobin, the primary protein in red blood cells, and indicates a patient's average blood sugar level over the previous two to three months. The ADA recommends that people with diabetes maintain their hemoglobin A1c levels below seven percent of the total hemoglobin in red blood cells. According to the National Diabetes Information Clearinghouse, studies have found that, in general, every percentage point drop in HbA1c levels (from eight percent to seven percent for example) reduces a patient's risk of eye, kidney, or nerve related complications by 40 percent.

In patients with Type 2 diabetes, the overall mean HbA1c values declined from 7.6 percent in 2001 to 7.3 percent in 2003. The rate of decline slowed significantly thereafter, stabilizing at 7.2 percent in 2006 -- a five-percent drop over five years. Men with diabetes between the ages of 20 and 39 fared the worst, and the study authors suggested that strategies targeting this group may be especially beneficial.

"The HbA1c plateau mirrors the clinical progression of the disease and treatment patterns," said study co-author Richard W. Furlanetto, M. D. Ph.D., medical director, Endocrinology, Quest Diagnostics, Nichols Institute. "The newly diagnosed patient tends to be diligent and first-year treatment tends to be aggressive, so we often see relatively large improvements in blood sugar control and HbA1c levels. In subsequent years the diabetes itself worsens and the therapy gets less effective. Also, as blood sugar control improves, the risk of hypoglycemia or low blood sugar, increases and this limits therapy. Finally, over time patients may become less diligent in following their treatment plan. It is in these post-diagnosis years that we must stress patient monitoring and treatment compliance," Furlanetto continued.

The seasonality shifts are among the most striking finding in the data, authors said, and may allow physicians to exert more control over testing and treatment schedules. According to study authors, serial HbA1c levels should be obtained in late spring and autumn to minimize the impact of seasonal fluctuations on the interpretation of HbA1c levels.

Diabetes is a growing public health concern in the U.S. More than 20 million Americans -- 10 percent of all men and 8.8 percent of all women - are currently diagnosed with diabetes, according to the U.S. Centers for Disease Control and Prevention. A chronic condition in which the body does not produce or properly use insulin to convert sugar into energy, diabetes can lead to serious complications such as heart attack, stroke, blindness, amputation and kidney failure if it is undiagnosed or poorly managed.

Study Methodology

The Quest Diagnostics Health Trends (TM) Diabetes Report is based on an initial review of 44.4 million de-identified hemoglobin A1c test results performed from 2001 through 2006 by Quest Diagnostics laboratories in the United States on patients whose physicians classified them as having diabetes through the use of specific diagnostic (ICD-9) codes. This classification yielded 110,000 subjects with Type 1 diabetes, 1.9 million with Type 2 diabetes, and 2.8 million subjects with no clear classification for diabetes. These patients had a total of 22.7 million test results from 2001-2006. For the longitudinal analyses by season, age and gender, at least two HbA1c tests results were required for each subject.

Quest Diagnostics Health Trends

Quest Diagnostics maintains the largest private clinical laboratory data warehouse in the United States. Consisting of 17 billion data points, and growing by 10 million a day, the database provides laboratory information on the vast majority of conditions and diseases affecting Americans today. Quest Diagnostics provides these data to health plans to help manage the health of their members, and to state and local government to help monitor population health. Quest Diagnostics Health Trends Reports identify and track disease and wellness benchmarks. De-identified data are made available as a public service to inform patients, health professionals, and policy-makers about the current status of the nation's health.

About Quest Diagnostics

Quest Diagnostics is the leading provider of diagnostic testing, information and services that patients and doctors need to make better healthcare decisions. The company offers the broadest access to diagnostic testing services through its national network of laboratories and patient service centers, and provides interpretive consultation through its extensive medical and scientific staff. Quest Diagnostics is a pioneer in developing innovative new diagnostic tests and advanced healthcare information technology solutions that help improve patient care. Additional company information is available at: <http://www.questdiagnostics.com>.

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