

# New York City Stays Focused on Diabetes Care

BY MIRIAM E. TUCKER

Senior Writer

New York City's diabetes prevalence and control numbers paint a dismal picture, but public health officials hope that the now 3-year-old hemoglobin A<sub>1c</sub> registry will help brighten the future for the city's nearly 700,000 adult residents living with the condition.

Newly published data from the New York City Department of Health and Mental Hygiene suggest that one in every eight adult residents in the city has diabetes, more than a third don't know it, and even among those who are aware they have the condition, few achieve adequate control of glucose, blood pressure and cholesterol levels (*Diabetes Care* 2009;32:57-62).

"Adult New Yorkers are at least as overweight or obese as has been reported recently in [United States] national data, and the prevalence of diabetes and impaired fasting glucose causes great concern. The Big Apple is sugarcoated, and improvements in obesity and lifestyle will be needed to improve this situation in the future," Dr. Peter W.F. Wilson and Dr. K.M. Venkat Narayan, both of Emory University, Atlanta, said in an editorial accompanying the report (*Diabetes Care* 2009;32:204-5).

Indeed, improving the prospects for people with diabetes—and those at risk for it—has been deemed a high priority for the city's health department, under the leadership of Dr. Thomas Frieden. As part of that effort, on Jan. 15, 2006, the

city implemented a rule requiring clinical laboratories to report all hemoglobin A<sub>1c</sub> (HbA<sub>1c</sub>) testing results electronically to the health department. Since then, more than 3 million results have been collected from more than 1 million individuals, Dr. Shadi Chamany, director of the department's diabetes prevention and control program, said in an interview.

"The original goal of the registry was to use public health tools to support the clinical community and the patient community in improving diabetes outcomes. ... This is a starting point, a building block. It's the foundation," Dr. Chamany said.

Beyond merely collecting the data, the health department offers quarterly reports of HbA<sub>1c</sub> results to providers and patients who opt to receive them and is also working in person with practices and providers to support diabetes management. "One thing I think has been really great about this project is that we're learning so much as we go out to all the practices and people are telling us what's going on and what they really need. ... I think that as we're going out and reaching so many people, we're also raising awareness," Dr. Chamany said. "I think this mobilizing of resources and efforts is really going to make a change."

Clearly, improvement is needed. The newly released prevalence and control

data come from another New York City health department project, the first-ever community-level Health and Nutrition Examination Survey (NYC HANES), a cross-sectional examination survey modeled after the National Health and Nutrition Examination Survey (NHANES) conducted annually by the Centers for Disease Control and Prevention. The NYC HANES data were obtained from face-to-face surveys and physical examinations conducted during June-December 2004 with

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DR. WILSON

1,999 randomly selected adults aged 20 years and older (out of a total 3,047 eligible). Based on the NYC HANES data, the estimated prevalence of diabetes for all New Yorkers aged 20 years and older was 12.5%, representing a population of approximately 696,000. This prevalence is significantly higher than the published NHANES estimate of 9.3% from 1999-2002. This difference is not likely to be caused by an increase in the national number; rather, there was a 17% increase in self-reported diabetes among New Yorkers between 2002 and 2004, whereas national rates did not increase significantly. The high concentration of poverty and racial/ethnic diversity most likely contributes to New York City's increasing diabetes prevalence, Dr. Lorna E. Thorpe and her associates said. (See

sidebar for specific numbers.)

Given that these data are now 5 years old, the health department would like to conduct a follow-up, but it won't be easy because of current financial constraints, said Dr. Thorpe, deputy commissioner in charge of the division of epidemiology at the New York City health department. "We didn't get federal support for the first NYC HANES. It was done with New York City tax dollars only. We can't pull off a second one yet. We're exploring ways for how to do it," she noted.

But funding for the HbA<sub>1c</sub> registry is ongoing thus far, Dr. Chamany said. More than 90% of clinical laboratories in the city that conduct HbA<sub>1c</sub> testing and that already do electronic reporting for other diseases currently are reporting HbA<sub>1c</sub> results. Inclusion in the registry is mandatory for all patients with diabetes in the city, but receipt of the quarterly reports is voluntary for providers and patients. Initially, the reports were offered to just seven health care facilities serving the south Bronx, an area of the city with exceptionally high rates of diabetes. The offer now has been extended to 60 facilities around the city, and more than 1,000 individual providers are currently receiving the reports.

Patients of those providers also are receiving letters from the health department—imprinted with the name of the practice—indicating their HbA<sub>1c</sub> level, stratified by green (less than 7%), yellow (7%-9%), and red (above 9%). Patients can elect not to receive the letters, but fewer than 20 individuals have done so in the 3 years since the program began, Dr. Chamany said.

Indeed, while there was a great deal of concern voiced about privacy when the registry was launched, this doesn't appear to be a big problem now. "Whenever you have mandatory reporting, there is concern. We do get occasional questions about how the information is protected, but we're not getting a huge flood of opt-outs," she noted.

The health department is planning to conduct interviews with medical directors of health care facilities around the city to find out how the reports are being received and aims to publish that information—along with the first 3 years' worth of registry data—later this year, she said.

In the meantime, the agency is moving forward with a pilot project designed to bring diabetes self-management to local communities. The 16-week course will focus on goal-setting skills for patients with diabetes relating to lifestyle modification. It initially will be piloted in Harlem, then expanded if all goes well. "One thing physicians have told us is they need services to refer patients to, Dr. Chamany commented. "There are ... just not enough [providers] to do education," Dr. Chamany commented.

And, with regard to the less-than-optimal data indicated by the NYC HANES, "We need more creative ways to get self-management support out there. Otherwise, those numbers aren't going to move." ■



## NYC's Diabetes Numbers Show Room for Improvement

The NYC HANES data revealed some telling facts about New York City's diabetic population.

Diabetes prevalence in NYC HANES increased with age, from 2.5% among those aged 20-39 years to 28.3% among adults aged 60 years and older, but did not differ significantly by sex, race/ethnicity, or nativity. Diabetes prevalence was significantly higher among those with incomes less than \$20,000 versus those above that figure (17.0% vs. 9.1%).

The prevalence of diagnosed diabetes was 8.7% and undiagnosed diabetes, 3.8%, indicating that nearly one-third (30.4%) of adults with diabetes were undiagnosed. Blacks and Asians had the highest prevalence of diagnosed diabetes (12.1% and 11.4%, respectively), while the rate of diagnosed diabetes was significantly lower among whites (6.2%), compared with blacks.

Nearly one-fourth (23.5%) of the adults had impaired fasting glucose (defined as a fasting glucose level of 100-125 mg/dL). This also increased with age, reaching more than one-third of the population aged 60 years and older. Men had higher levels of IFG than did women (29.6% vs. 18.4%), and Asians had the highest rate of IFG of all racial

and ethnic groups, at 32.4%.

After adjustment for other risk factors, Asians and blacks with normal weight (body mass index of less than 25 kg/m<sup>2</sup>) were far more likely than were whites to have diabetes (8.3% and 7.6%, respectively, compared with 1.0%). Disparities between normal-weight Asians and other races/ethnicities were even more striking—1.5 to 2 times higher—when both diabetes and IFG were grouped together: 37% of normal-weight Asians had one or the other condition, compared with 24% of Hispanics, 22% of blacks, and 20% of whites.

Indeed, other published studies also have pointed to the fact that Asians—particularly those from south Asia, including India, Pakistan, and Bangladesh—tend to have higher levels of glucose impairment than do other races/ethnicities at lower BMIs. "It's very difficult to tease out, but there is probably a sufficient accumulation of literature suggesting that screening of these individuals should happen at lower weights, although the exact cutoff is not known," said Dr. Lorna E. Thorpe.

Looking beyond prevalence to risk factor control, NYC HANES revealed that more than half of the adults with

diagnosed diabetes (55.1%) had an HbA<sub>1c</sub> value of 7% or higher, and 17.1% had an HbA<sub>1c</sub> greater than 9%. A total of 12.3% were on insulin (with or without oral agents), 71.5% were on oral agents only, and 16.1% were not taking diabetes medications. Only 15.8% of those with HbA<sub>1c</sub> levels above 9% were taking insulin. "Our findings suggest that providers in New York City should consider insulin therapy earlier in the course of their patients' disease," the investigators wrote.

More than two-thirds (69.7%) the adults with diagnosed diabetes were identified as hypertensive, and half (50%) had elevated blood pressures at the time of the interview. Of those with diabetes and elevated blood pressure, 43.1% were not on antihypertensive medications and 35.4% had not been diagnosed with hypertension. Similarly, nearly two-thirds with diagnosed diabetes had elevated LDL cholesterol levels, of whom three-fourths were not taking cholesterol-lowering medications and 42.8% were undiagnosed for hypercholesterolemia.

"All in all, the 2004 NYC HANES picture does not look so nice," Dr. Peter W. F. Wilson and Dr. K.M. Venkat Narayan said in their editorial.