NYC Diabetes Registry Perseveres After First Year

BY CHRISTINE KILGORE
Contributing Writer

One year into a landmark diabetes monitoring program, hemoglobin A_{1c} test results are streaming from New York City laboratories into the city's health department and, in a sampling of cases, on to medical directors for distribution to clinicians.

City health officials, in the meantime, are working with a national advisory group of diabetes experts to analyze the data in the city's novel A_{1c} registry—900,000 A_{1c} test results covering 600,000 individuals, as of last month—and to design subsequent interventions.

The registry, which was launched in January 2006, is being watched by health officials across the country who want to reduce diabetes complications and control what they increasingly view as one of their largest public health crises.

The New York City program mandates that laboratories already reporting communicable diseases must also report results of hemoglobin A_{1c} tests directly to the city's Department of Health and Mental Hygiene.

As the program develops, the health department plans to routinely provide information to clinicians on their patients with diabetes and offer services and interventions to patients with poor glycemic control.

"The essence [is] to have it be more than just a surveillance system," said Dr. Diana Berger, who is the medical director of the city's Diabetes Prevention and Control Program.

"We already have a robust system to establish the prevalence of diabetes," she said. "We wanted a two-pronged initiative: Surveillance plus some sort of intervention."

For now, in a pilot phase of the program, the city has begun sending quarterly reports to medical directors of seven practices in Manhattan and the South Bronx.

The medical directors are then responsible for distributing the practice reports—which list patients stratified by A_{1c} levels—to the 274 clinicians in the practices, Dr. Berger said.

The city plans to expand the pilot project to cover all

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of the South Bronx (approximately 100 practices) this summer, followed by other high-risk neighborhoods later in the year—a roll-out that officials hope will be helpful for fine-tuning reports and eventually designing interventions.

Interpreting the growing body of registry data, in the meantime, has been a significant undertaking.

Test results come in with the patient's full name, date of birth, and address, as well as the date the test was taken and the name and location of the ordering facility and clinician.

This information may be enough for providing profiles to providers, but it's probably not enough to fully understand the epidemic and design optimal interventions, Dr. Berger said.

"The problem is, there's no diagnostic code attached to [the results]," she said. "We don't know whether a patient has diabetes or not [or what type of diabetes it is]. … The database needs a lot of cleaning [and interpretation]—it's a complex process."

Also complicating the analysis is the fact that the registry, by including all hemoglobin A_{1c} test results, captures tests used for diabetes screening as well as for monitoring, Dr. Berger said.

"There's a current practice of using A_{1c} to screen for diabetes," even though it's not recommended by the American Diabetes Association, she said. "We're estimating that anywhere from 10% to 20% of the A_{1c} results [coming in] are for screening purposes. … We need to be able to wean these out."
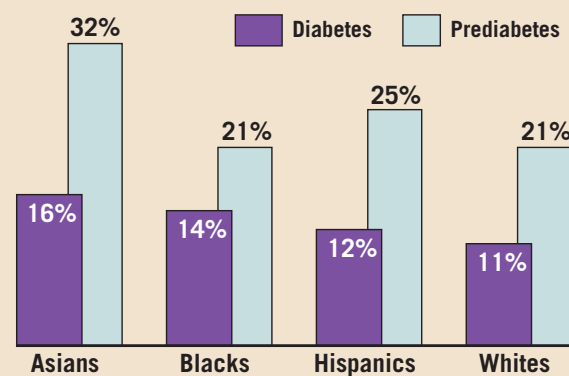
Another unanswered question is how much hemoglobin A_{1c} testing is left out of the registry.

As of last month, almost three-fourths of the clinical laboratories required to report all results of blood test hemoglobin A_{1c}—28 of 38 labs—are now doing so.

Dr. Berger said she anticipates that 100% of labora-

Asians Have the Highest Prevalence of Diabetes and Prediabetes in New York City

Legend: Diabetes / Prediabetes

Asians: 16% Diabetes, 32% Prediabetes
Blacks: 14% Diabetes, 21% Prediabetes
Hispanics: 12% Diabetes, 25% Prediabetes
Whites: 11% Diabetes, 21% Prediabetes

Note: Data based on the NYC HANES survey of about 2,000 New Yorkers.
Source: New York City Department of Health and Mental Hygiene

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tories will be reporting test results shortly.

The registry does not, however, include results obtained in office laboratories. Dr. Zachary Bloomgarden of Mount Sinai School of Medicine, New York, said his practice is excluded from the program because he does blood draws and A_{1c} testing right in his office lab.

Dr. Bloomgarden said he doesn't "have any real sense" of how many other practices perform in-office A_{1c} testing, and Dr. Berger said she's actively seeking an answer to that question.

"I'm in the process of studying that, trying to get a sense of what we're missing," Dr. Berger said.

Some practices, she said, utilize finger-stick A_{1c} testing to be able to present results immediately to patients, "but just anecdotally, I know that some robust endocrinology practices don't actually trust their figures from the A_{1c} machines and will also get a [blood] draw."

Dr. Berger said that she hopes to release the first "surveillance report"—a description, in essence, of all the data in the registry—later this spring, after she and others involved in the program have finished analyzing the data with the help of the advisory group.

The seven practices participating in the pilot project are of varying types, ranging from a large practice linked with an academic medical center to a small community health center and a small private practice.

Patients are stratified by success of glycemic control, with hemoglobin A_{1c} levels less than 7% representing "good control" (the target recommended by the ADA), levels between 7% and 9% reflecting "poorly controlled" diabetes, and levels over 9% representing "very poorly controlled" diabetes.

"It's still very arbitrary," Dr. Berger said. "We're [providing] a population-based snapshot of the provider's panel. … A provider [can look at the report] and say, 'here are my 15 patients who are doing particularly poorly. Maybe they need to be on insulin, or maybe they need to see a nutritionist.' "

It is too early to know, she and others say, exactly what the practices will do with the reports and what impact the information will have on disease outcomes.

Dr. Donald A. Smith of Mount Sinai School of Medicine said he's hopeful that the program will spur physicians to "get the patients who are lost and out of control back in" for help.

"It will be interesting to see how the sophistication of the report [evolves]," he said. "Publishing the average A_{1c} by physician would be interesting. … It's incredible how, with stenting and angioplasty, [such physician profiling] has stimulated competitive efforts to improve."

Dr. Berger said she has received calls from health officials in other municipalities who are seeking advice on starting similar registries.

"My advice is, wait to see what our experience is first. … It has great potential, but we need to implement it and evaluate it first." ■

Survey: 13% of Adult New Yorkers Are Diabetic

Those who are awaiting an official description of data being collected in New York City's hemoglobin A_{1c} registry have some other striking data to digest while they wait: A new citywide survey modeled after a well-known national survey finds that nearly 13% of the city's adults have diabetes and that about one-third of them—almost 4% of city residents—do not know it.

The first New York City Health and Nutrition Examination Survey (HANES)—and the first community-level HANES survey in the country, health department officials say—used a one-time screening test to estimate diabetes prevalence among approximately 2,000 randomly selected New Yorkers from 144 neighborhoods across all boroughs.

The survey findings confirm past estimates from telephone surveys that about 9% of adults in the city have been diagnosed with

diabetes, slightly higher than the 7.3% of adults who have diagnosed diabetes nationwide.

But the laboratory results obtained as part of the HANES survey go further, revealing that an additional 3.8% of adults in New York City have undiagnosed diabetes (compared with 3% of adults nationally).

The survey also shows that another 23.5% of adults have prediabetes and that nearly half of all Asian New Yorkers have either diabetes or prediabetes, according to press officials at the New York City Department of Health and Mental Hygiene.

The prevalence of diabetes among Asians, the survey shows, is 16% (nearly 1 in 6). Significantly more Asians—32%—have prediabetes compared with other ethnic groups. (See chart.)

The higher overall prevalence numbers are "not surprising, [since] we have an extremely eth-

nically diverse population," said Dr. Berger.

The high prevalence among Asians specifically, she said, is "somewhat" surprising, though some Asian groups, particularly Southeast Asians, are known to be susceptible to the development of diabetes. "Unfortunately our sample size wasn't large enough to tease out the various Asian groups," she said.

Among men and women of all ethnicities who have diabetes, the findings show, 52% have well-controlled diabetes (A_{1c} less than 7), 32% have moderately poorly controlled blood sugar, and about 16% have very poorly controlled blood sugar (A_{1c} greater than 9%).

Poor diabetes control appears to be common even among people with access to health care. Of New Yorkers with diagnosed diabetes that is uncontrolled, 94% have some sort of health insurance, including Medicaid.