

Native American Diabetes Program Under Stress

BY JOYCE FRIEDEN

Editor

The 24-year-old woman who came into the Oklahoma City Indian Clinic in early November 2005 was pretty depressed, and for good reason: She weighed 324 pounds, smoked, and had blood pressure of 158/114 mm Hg. She also had very poorly controlled blood sugar, with a hemoglobin A_{1c} reading of 10.5%. She had been diagnosed with diabetes at a previous health care provider but seemed not to be paying attention to the diagnosis.

The clinic staff enrolled her in its diabetes program, known as BRAID (Being Responsible American Indians with Diabetes). She was given prescriptions for twice-daily metformin and for insulin, and she was told to test her blood sugar three times a day. She also began a series of five diabetes education sessions.

Less than a year later, her picture had brightened considerably. Her weight had dropped to 282 pounds, she had quit smoking, and her blood pressure was down to 132/82 mm Hg.

But the most dramatic improvement was in her blood sugar: Her hemoglobin A_{1c} (HbA_{1c}) was 5.7%. Her daily metformin dose had decreased from 2,000 mg to 500 mg, and she was off of insulin completely.

Such success stories are often cited by backers of the federal government's Special Program for Diabetes in Indians (SPDI), of which BRAID is a part. SPDI, an Indian Health Service (IHS) initiative, was first authorized by Congress in 1997 and renewed in 2001 and for several years thereafter. The program gives money to Native American tribes and private contractors who provide diabetes treatment and prevention services. It is funded through fiscal year 2008, then it will come up for reauthorization.

But SPDI faces a stiff challenge. American Indians and

Alaska Natives have an age-adjusted diabetes rate of 16.3%, the highest among all racial and ethnic groups in the United States. In some native communities, as many as 60% of adults have diabetes. Among Native Americans aged 15-19, the rate of diabetes increased 128% from 1990 to 2004, according to the IHS. Almost all of the cases are type 2 diabetes.

In February, the Senate Indian Affairs Committee held an oversight hearing on the SPDI program. Several witnesses testified to the great successes the program has had, especially in the areas of diabetes awareness, nutrition programs, and exercise.

But committee member Rep. Craig Thomas (R-Wyo.) was having none of it. He wanted to know only one thing.

"How effective have we been?" he asked Dr. Kelly Moore, clinical specialty consultant to the IHS division of diabetes treatment and prevention.

Dr. Moore cited improvements in blood pressure and blood sugar control, noting that the Native American community "has seen a decline during the SPDI program in A_{1c} levels from 8.9% to 7.9%." (See box.) She admitted that data from 2004 indicated that diabetes has been increasing among Native American youth, "but we've had more efforts directed toward screening for diabetes, which would also increase our rates. And it will take decades to reverse the epidemic of type 2 diabetes we're seeing in our population."

IHS director Charles Grim, D.D.S., also



Melissa Marks, a nurse at the Oklahoma City Indian Clinic, examines the foot of diabetes patient Henry Sleeper, a member of the Cheyenne/Arapaho tribe.

defended the increase. "We don't know what the rate of increase would have been if we didn't have this program," he said. "We believe the rate would have been higher [without it]."

Dr. Biron Baker, a family physician who worked for the IHS in North Dakota for 3 years, testified that medication options for IHS diabetes patients were problematic. "In the IHS, we see older insulin preparations, older oral medication preparations, and things being done we don't think work any more," he said.

Dr. Baker recommended to the committee that the IHS make it a priority to hire and retain competent administrators and medical staff. He also estimated that the IHS is currently funded at about 40% of the needed level.

"I don't usually advocate throwing money at a problem, but this is where I make an exception," he said.

Dr. James Brosseau, director of the Altru's Diabetes Center in Grand Forks, N.D., testified about

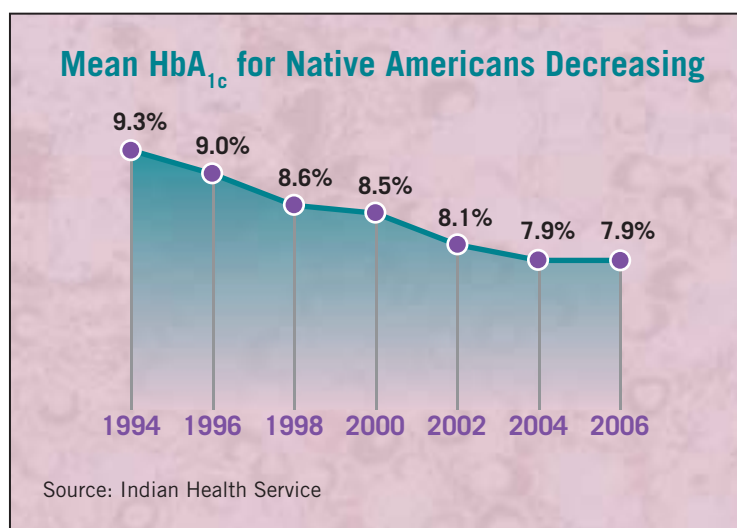
another problem: access to clinic care.

"Many patients are frustrated with a lack of service on evenings and weekends, long waits to see the doctor, and then the sense that you are just given a prescription and are sent out the door," he said. "We have to change the way we deal with chronic disease. A 10-minute visit is not going to work for a person with diabetes."

Despite these problems, many SPDI providers keep working to make a difference. Dr. Musarat Saeed, an internist at the Oklahoma City Indian Clinic, has been with the clinic for 12 years and spends 2 full days each week seeing diabetes patients.

The patients might not get the message about taking care of themselves if they hear it from just one provider, but by the time they are done talking to several people on the clinic's diabetes team, they often change their tune, Dr. Saeed said. "[After talking to] three or four people, the patient listens to somebody."

Melissa Marks, a nurse on the diabetes team, has an extra incentive to be effective: She was diagnosed with diabetes in 1990. "We didn't choose to have diabetes, but we can choose to be responsible and take care of ourselves," she said.



Growth Hormone Misuse Found to Cause a Case of Diabetes

BY JONATHAN GARDNER

London Bureau

British researchers said they have identified in a bodybuilder the first case of frank diabetes triggered by misuse of human growth hormone, suggesting that physicians need to check for hyperglycemia in athletes who use the substances and remind them of their dangers.

Researchers at University Hospital Coventry and Warwick Hospital (England) said the patient, a 36-year-old man who admitted to using anabolic steroids for 15 years and growth hormone for 3 years, presented to a hospital emergency department with impaired liver function and hyperglycemia.

His blood glucose levels were 30.2 mmol/L, and he had mild hepatomegaly.

He had lost 88 pounds and now weighed 198 pounds; the weight loss was associated with polyuria (12 L/day),

polydipsia, and polyphagia. There also was evidence of acute hepatitis.

During a 5-day hospital stay, the patient's biochemistry was stabilized with insulin and intravenous fluids. He was then discharged.

The patient stopped using steroids and growth hormone, and at a 6-weeks' follow-up his hyperglycemia had disappeared, confirmed by a glucose tolerance test.

"Treatment of these particular patients requires us to know their mind set, and to know what motivates them," wrote the researchers, Dr. James Young and Dr. Aresh Anwar. "This will allow us to identify, and therefore educate, them with regard to the potential pitfalls of using performance-enhancing drugs."

"We would recommend checking for hyperglycemia in those taking supraphysiological doses of growth hormone," they wrote. "Moreover, in those cases where diabetes resolves, we would recommend long-term follow-

up for diabetes mellitus screening."

Use of human growth hormone, which is undetectable in many assays used to screen for performance-enhancing drugs, is on the rise among athletes and bodybuilders, and is widely available through the Internet, they wrote.

Athletes who use growth hormones self-medicate with insulin, although the misuse of insulin may be intended as a performance-enhancing drug, not necessarily to counteract the insulin resistance that develops with use of growth hormone, according to the researchers.

It also is not clear whether the misuse of human growth hormone induces diabetes or reveals it at an early stage when it otherwise would be asymptomatic.

No studies have monitored the long-term effects of growth hormone misuse among healthy young people who have no hormone deficiency, they wrote (Br. J. Sports. Med. 2007 Feb. 26 [Epub doi:10.1136/bjism.2006.030585])