



Analysis: New York gets serious about tracking diabetes

January 12, 2006 from Talk of the Nation

page 1

FRANK STASIO, host: This is TALK OF THE NATION. I'm Frank Stasio in Washington sitting in for Neal Conan.

'Sugar' is a common nickname for diabetes, but there's nothing sweet about this chronic disease that infects more than 20 million Americans. If not managed properly, diabetes can lead to blindness, kidney disease, lower-limb amputations and deaths. It also costs billions of dollars each year in health care costs alone and in lost productivity. In the last few days, New York City has begun tracking diabetics and requiring most of the city's medical laboratories to report the results of an annual blood test given to known diabetics. It'll be the first time at any level of American government that they've tracked a chronic disease as opposed to infectious ones, like flu or AIDS. Today we take a closer look at New York's program and the disease itself and how it affects some groups, such as Native Americans.

We'd like to hear from you. Are you a teacher or a caregiver, a public health worker? Have you seen an increase in diabetes? If you have questions about the disease or its complications, you can join the conversation; our number, (800) 989-8255, (800) 989-TALK. E-mail address, totn@npr.org. Later in the program we'll talk about James Fry and his memoir. But, first, diabetes.

Our first guest is Dr. Thomas Frieden, New York City's health commissioner. He joins us from his office in New York City.

Welcome to the program.

Dr. THOMAS FRIEDEN (Health Commissioner, New York City): Thank you. And good afternoon.

STASIO: Why has New York City decided to track diabetes?

Dr. FRIEDEN: Diabetes is epidemic in New York City and throughout the United States. And what we've decided to do is to begin to apply traditional public health tools to this emerging epidemic.

STASIO: There are other, though, serious chronic diseases. Do--is this the one that is most serious? Aren't there other chronic diseases, hypertension, others that are growing at the same rate?

Dr. FRIEDEN: Diabetes, following the epidemic of obesity, is the only major health problem in this city or in this country that's getting worse and getting worse quickly. In addition, in diabetes, we have a single blood test known as the A1c, or glycosylated hemoglobin, test, which measures the degree of control over a three-month period. We don't have a similar type of test or situation in other chronic diseases, although I would note that public health has traditionally monitored not only communicable but also non-



Analysis: New York gets serious about tracking diabetes

January 12, 2006 from Talk of the Nation

page 2

communicable diseases, such as lead poisoning, cancer and other non-communicable diseases.

STASIO: And you talked about this test measuring the level of control, so maybe this is the time to explain how diabetes works and what patients who have diabetes have to do to control, not cure, the disease.

Dr. FRIEDEN: Absolutely. So diabetes is an error of metabolism or how the body handles sugar. There are two types: Type 1, which is not what's epidemic--it accounts for maybe only 5 or 10 percent of all cases--and Type 2, which is directly related to obesity and increases substantially with age, although we're seeing an increasing number of children with Type 2, which used to be called adult onset diabetes. In diabetes, patients may often have no symptoms, and yet they have high levels of sugar, and that damages their eyes, their kidneys and their own vascular system to increase the risk of stroke, heart attack and other very serious health problems.

STASIO: And medical science has gotten pretty good at controlling the disease.

Dr. FRIEDEN: Well, medical science is pretty good at it, but the health care system and the public health system aren't because it turns out that more than two-thirds of all Americans with diabetes don't have their blood sugar under control. And that's a reflection of a variety of things; one of them is that it's not easy. First off, people often don't feel sick, and so without knowledge of what the blood test shows, they don't know that their sugar is out of control. Another is that it requires medication and/or injections every day for the rest of someone's life and sometimes many times a day, and that's very difficult.

STASIO: And not only are you injecting--are there injections involved, or possibly, but then the testing, the constant checking for blood sugar, right?

Dr. FRIEDEN: That's right.

STASIO: Yeah. How many people in New York City are now affected by diabetes?

Dr. FRIEDEN: We believe there are more than three-quarters of a million people...

STASIO: Yeah.

Dr. FRIEDEN: ...with diabetes in New York City; that's approximately one out of every eight adults.

STASIO: And you talked about the dramatic increase and the fact that it is increasing rapidly. What's going on?



Analysis: New York gets serious about tracking diabetes

January 12, 2006 from Talk of the Nation

page 3

Dr. FRIEDEN: Diabetes has more than doubled in the past decade, and that's a direct reflection of the increase in overweight and obesity. Diabetes goes up substantially with increasing weight. People in higher weight groups are much more likely to have diabetes. In addition, it's much more common among African-American and Latinos. And because New York City is made up in large part of African-American, some Latinos--in fact, that's the majority of the population here--our overall citywide rate is a reflection of that demographic pattern.

STASIO: And do we know why that's true?

Dr. FRIEDEN: Not really. We know that there's a tight correlation between obesity and poverty, and we know that there are some theories on why that occurs. But we don't have definitive proof of what the cause is. Clearly not only is obesity and diabetes bad, but it's exacerbating what are already serious health disparities in the city and in the country.

STASIO: I'm talking with New York City Health Commissioner Thomas Frieden, talking today about diabetes. The city of New York is going to begin tracking the blood sugar levels of its diabetics. You can join our conversation by calling us at (800) 989-8255. Ron has done that. He's in South Carolina.

Hi, Ron.

RON (Caller): Hi. How are you? Thanks for taking my call.

STASIO: Sure.

RON: We can talk about Type 2 diabetes--I'm a nursing student--and it all correlates directly back to lack of physical activity.

STASIO: Well, we'll get a comment on that. Thank you, Ron.

RON: Thank you.

Dr. FRIEDEN: Physical activity is a very important part of the equation, but it's only one of two parts; the first is how many calories you expend, physical activity; the second is how many calories you consume, nutrition. And both of those things have gotten worse. But, actually, the more important part of that equation has been the rise in calorie consumption in the US, and that's a reflection of food being cheaper and calories being cheaper. It's also true that physical activity appears to be less than it was in the past, and it's important to increase physical activity.

People, even if they're overweight--if you get regular physical activity, at least 30 minutes four days a week, even of a brisk walk, that is enough, even if you don't lose weight, to help you avoid diabetes or, if you've got it, control it better and improve your health in

many other ways as well. So physical activity is very important. In terms of the obesity epidemic, it's the increase in calories that's probably the bigger part of the equation.

STASIO: Now we've come to think of public health problems in terms of infectious disease, things that can from one person to another. Why is diabetes, in your mind, a public health problem?

Dr. FRIEDEN: Well, if you go back a little farther, it's quite clear that public health started with safe food and safe water and safe things to drink. And, in fact, that's what we're talking about again: how our society and how the context of our society has changed to force us, really, to address some basic issues of what's happening.

STASIO: Well, tell us a little bit about how this tracking program is going to work.

Dr. FRIEDEN: What we'll do is no doctors will have to report anything, and any person living with diabetes who doesn't ever want to be contacted will never be contacted. What we'll do is work with laboratories that do the tests to have them electronically report it to us. Once we have that information, we will be able to track on a citywide basis what--the number of people and the risk factors for having diabetes that's severely out of control. We'll be able to reach out to doctors' offices, hospitals, health centers and clinics and offer additional support for the doctors, administrators and their patients to provide them with better care, whether it's for diabetes or hypertension, which so many diabetics have, or assistance quitting smoking because that's particularly toxic to everyone and even more so to people with diabetes.

STASIO: If I'm a diabetic in New York, how do you know about that?

Dr. FRIEDEN: We will know through the laboratory. The laboratory will report to us. We've been keeping confidential medical information for 100 years; we have not had a breach in confidentiality. And in this case, in fact, our board of health approved the proposal, which has even tighter confidentiality controls than it does in the case of communicable disease. So there is no way an insurance company or even another doctor, other than the one who is caring for you, will get access to this information if you're a diabetic in New York City.

In fact, because we're so concerned about people--you know, might be asked to sign many forms when they sign up for insurance or some other reason, we don't even allow information to go out--we won't allow the information to go out to other parties, even if the patient asked. We'll send it to a patient anytime they want, and they can send it to wherever they want, but we're very, very carefully protecting confidentiality so that no one, other than the patient and the doctor who's caring for that patient, has access to it.

STASIO: Let's go out to Charlottesville, Virginia. Robby's on the line.

Hi, Robby.



Analysis: New York gets serious about tracking diabetes

January 12, 2006 from Talk of the Nation

page 5

ROBBY (Caller): Hey, how are you?

STASIO: Good. You have a question?

ROBBY: Well, I had a comment. I think diet--and this obviously comes up during the course of the conversation--plays a major role in both the control of diabetes and whether you get diabetes as an adult. I had a grandmother on my father's side who had diabetes, and also I have a cousin on my mother's side who has diabetes; he got it as a child. But, obviously, diet is just, I think, the major--it plays a major role. And I grew up on an organic farm in California, worked with Whole Foods for many years and had a lot of folks that shop there. And I think eating a pure diet, or pure as it can be, really helps control diabetes. And I think that, like you mentioned on the program, you have a lot of Latinos and it's a lot of the poverty in New York where you're seeing the issue. And I think it's a lack of either information on healthy diet or healthy eating or maybe not being able to afford those types of foods. And I'm not saying it has to be organic, but choosing whole grains vs. white or choosing, you know, fresh vegetables vs. canned, that type of thing. I do think that that makes a big different.

STASIO: All right. Thanks, Robby.

What can the city do about that? If that's true and if you accept that, what would the city do to help, you know, people find a better diet?

Dr. FRIEDEN: Nutrition is clearly very important. Some of the things that we know make a difference are having smaller portions. Portion size has increased enormously in this country and kind of proliferation of value meals and all you can eat and free refills on sodas. This is clearly a contributing factor. Similarly, if you look at the food industry in this country, I think nationally we need to look at the incentives that are in place. We continue to subsidize sugar-sweetened foods in the middle of an obesity epidemic, and we continue to allow food companies to aggressively market junk food to young children when it's been shown quite clearly that kids at a very young age have no concept of the difference...

STASIO: Right.

Dr. FRIEDEN: ...between a National Geographic nature show and an advertisement for junk food.

STASIO: Dr. Thomas Frieden, thank you very much.

New York City Health Commissioner Dr. Thomas Frieden. Our conversation on diabetes continues. I'm Frank Stasio. It's TALK OF THE NATION from NPR News.

(Soundbite of music)

STASIO: This is TALK OF THE NATION. I'm Frank Stasio in Washington sitting in for Neal Conan.

Today we're talking about diabetes. It's a disease that is easily preventable, and the risks of diabetes can be reduced substantially through simple lifestyle changes. Yet the rate of infection, the rate of the disease keeps growing, especially among young people, Native Americans, blacks and Latinos. If you are a health professional, we'd like to hear from you. What changes have you seen among your diabetic patients? How difficult is it to help bring control to this disease once people have it? Give us a call at (800) 989-TALK. Our e-mail address, totn@npr.org.

It does not strike all Americans equally. People of color--Hispanics, African-American, Native Americans--are more likely than whites to suffer from diabetes and its complications. For more on diabetes and its impact on Native Americans, we turn now to Craig Vanderwagen. The chief medical officer for the Indian Health Service joins us from an office in Rockville, Maryland.

Craig, welcome to TALK OF THE NATION.

Dr. CRAIG VANDERWAGEN (Chief Medical Officer, Indian Health Service): Thank you, Frank.

STASIO: To what extent does diabetes affect Native Americans?

Dr. VANDERWAGEN: Well, diabetes has affected Native Americans about three times what it affects the general US population. And we've seen it make a march, if you will, from the Southwest up into Alaska. Twenty years ago Alaskan Natives didn't really perceive diabetes as a problem, but now the rates up there also are two- and three-fold what it is in the general population.

STASIO: And what's going on?

Dr. VANDERWAGEN: Well, our belief--and NIH, our colleagues in the Department of Health and Human Services, have worked with us closely on this for a number of years. And we don't have any good genetic data that would suggest that there's a genetic difference. But certainly the change in diet and the decline in exercise as a daily phenomenon has clearly been associated with a change in the rate of diabetes in the population we serve.

STASIO: So--but is that any different, do you think, than the population at large?

Dr. VANDERWAGEN: Well, I think not. I think that the issues that have made it unique in Indian country probably have been that because of the rates of poverty and so on, access to the kind of more balanced diet that we think of as being most healthful has been



Analysis: New York gets serious about tracking diabetes

January 12, 2006 from Talk of the Nation

page 7

something difficult for Indian people to acquire, both in terms of what's available from stores and that sort of thing as well as the fact that in many communities, commodities foods historically were a mainstay of their diet. And up until the last 10 years or so, those commodities foods were extremely high in carbohydrates and fats.

STASIO: What about treatment? Is that hard to come by as well?

Dr. VANDERWAGEN: Well, no. Frank, this is a success story, and we feel very positive about it, and that is Congress has provided us some additional funds to take a very aggressive approach to managing diabetes. And in the mid-1980s, because of the frequency of the problem, with consultation with the American Diabetes Association, NIH and others, we established standards at that point and began a very aggressive process of both primary prevention and very active treatment. And because we have an electronic medical record, we've been able to use that record to follow the course of the disease in our population and guide and support our providers in assuring that they are using the best practices for treatment and management of the disease.

STASIO: Is there any better compliance among the Native population than there is at--the nation, you know, as a whole?

Dr. VANDERWAGEN: Well, our data would suggest, particularly since the late '90s when tribal leaderships themselves got actively involved in this and began to share with their communities that the only way this would be solved is by their active change in lifestyle--beginning in that time period, we have seen very active compliance, a real decline in hemoglobin A1cs, which is sort of a blood measure of how well their blood sugar is being controlled. And, in fact, it's begun to show a slight downturn in the mortality rate associated with diabetes and end-stage renal disease, which is a very common secondary disease that occurs in diabetes.

STASIO: Talking with Craig Vanderwagen. He's a doctor and chief medical officer of the Indian Health Service. Talking about diabetes today on TALK OF THE NATION, (800) 989-8255.

Darren is on the line from Rockford, Missouri?

DARREN (Caller): Rockford, Michigan.

STASIO: Yes, sir.

DARREN: Thank you. I was curious as to the physiological mechanism between the obesity and the increase in Type 2 diabetes, if it's just the body's inability to deal with the extra sugar that people are bringing in or if it's more complicated than that--I'm sure it is...

STASIO: OK.

DARREN: ...and what the ...(unintelligible) percent is to childhood increase in Type 2 diabetes. Is that linked to the obesity?

STASIO: Thank you.

DARREN: I'll take my answer off the air. Thank you.

Dr. VANDERWAGEN: Frank, I think that that mechanism is pretty well understood in the sense that as extra carbohydrates are deposited as fat cells, the resistance to insulin, which is the secretion that your body produces to help you use glucose to the best effect--resistance to that naturally occurring helper becomes higher because those fat cells actually may be binding the insulin, so that as you develop more fat cells, in effect, in most people you begin to see a greater increase in resistance to the body's own natural use of glucose.

And as far as children go, the same phenomenon occurs there. And one of the things that we've been encouraging very strongly in Indian country is breast feeding in early life because the scientific data shows that children who are breast fed up to six months of age--longer would be nice but up to six months of age--have a lower risk of diabetes Type II later in life. And we're not sure exactly why, although a strongly suggested mechanism is that they develop less early fat cell development in that early stage of life, and therefore they develop less insulin resistance as they grow older.

STASIO: Any indication that the effort to promote breast feeding is working?

Dr. VANDERWAGEN: Well, we believe that slowly and incrementally our younger moms in particular are seeing this as something that they really want to do to protect their children in the future. And we are seeing small increases, although we don't have a broad database at the moment on that particular question. That's something that I think in '06 and '07 we're looking to study.

STASIO: All right. Let's go out to western Michigan. Greg is on the line. Hello, Greg.

GREG (Caller): Hi. Good afternoon, gentlemen. Just a quick comment. I was at my doctor's within the past year for an annual physical, and he was debating with me on getting on the cholesterol-lowering drug. And then he showed me a study that indicated that if you took all of the risk factors for having a fatal heart attack combined--this study indicated that being diabetic was actually--presented a larger risk of having a fatal heart attack than all of the other normal risk factors that we associate with smoking, obesity, hypertension, family history and so on. I was shocked. I'm not diabetic, but I will do everything that I can to make sure that I try to avoid it. I thought that it was an amazing statistic.

STASIO: Thank you, Greg. Let's get a response. Have you seen that, Dr. Vanderwagen?

Dr. VANDERWAGEN: Well, yeah, it's interesting because in diabetes, it's not infrequent for lipids to go up and heart disease to develop, so that you end up with a multisystem problem that's not just limited to the fact that your blood sugar is elevated; that change in blood sugar management leads frequently to these other secondary effects in the target organs if you will: the heart, the kidneys, the blood vessels. And one of the standards that we hold our people accountable to--and I think the American Diabetic Association is also supportive of--is monitoring a wide variety of these kinds of things: lipids, hypertension and kidney function as you manage the diabetes because it's not just a matter of the blood sugar. It's the secondary organ involvements that ultimately are going to lead to multisystem failure.

STASIO: And not only is the diabetes impact on the organs, but talk about the difficulty of treating patients for anything that they come to the hospital for to see a doctor for if they have diabetes as well as whatever they came to see the doctor about.

Dr. VANDERWAGEN: Well, diabetes, of course--because your blood sugar is elevated, what that indicates is that your cells are not getting all the sugar they need to function properly. And that leads to a wide variety of problems, everything from your white cells not being able to react as effectively to infections to, as I've suggested, your kidneys not functioning properly; the blood supply to the retina of your eye can be problematic, and you have problems with vision and so on. Every cell in your body, in effect, becomes starved because the proper levels of glucose are not entering into the cell and, therefore, not available for the cell to do its business.

STASIO: So it becomes complicated and difficult for you to treat other things...

Dr. VANDERWAGEN: Sure.

STASIO: ...because the medications change and all that.

Dr. VANDERWAGEN: The system failure is sort of the end product of unmanaged diabetes.

STASIO: I have an e-mail from Nadine in Alaska, who would like you to clarify your statement that diabetes is preventable. She says, 'Type 2 is preventable, but for children like my daughter and many others, Type 1 is not preventable.'

Dr. VANDERWAGEN: Well, indeed, Type 1 is a different disease, really. Although it's about glucose management, it is a different disease in its origin and in the course of the disease. And, yeah, I was referring specifically to Type 2 diabetes.

STASIO: Talk about the cost of treatment for us a little bit. There's medicine involved, lifestyle changes and, also, medication.

Dr. VANDERWAGEN: Well, medication I--and, you know, I'm on a little bit of shaky ground here, but I think the last numbers that I saw were that average diabetics could expect as much as \$9,000 a year in costs for the management of that disease. And that's not inconsequential if you're living on an average sort of income. And for elders who end up on fixed income, that amount on an annual basis for costs, including pharmaceuticals and laboratory and the gas to get to and from the doctor and so on--all those things add up and can be a significant financial burden on individuals, particularly on fixed income.

STASIO: A burden on the individual. And you heard in New York City they're looking at it as a public health problem. To what extent is the--should the public take this seriously? In other words, what is the cost to the public in letting this go untreated?

Dr. VANDERWAGEN: Well, it--in our system in Indian country--and we are obviously relatively small; we have about 1,600,000 or so patients that we see on a routine base. The cost in terms of end-of-life care alone becomes extremely huge when you consider renal failure. I mean, dialysis on average can run 35 to \$40,000 a year, and that's covered by Medicare, but that's a cost that we absorb as a society. And it's those kind of end organ changes, amputations leading to disability leading to the inability to work and, therefore, those people have to be sustained through other community assets and resources, the cost of this disease is huge.

STASIO: We're talking today about diabetes, a disease that is rapidly increasing, owing in large part to the increase in obesity in the United States. Diet has a huge role to play in the increased incidence of this disease. In New York City, it's become a public health problem. The city will begin to monitor its diabetics to see how well-controlled they are. You're listening to TALK OF THE NATION from NPR News.

I'm Frank Stasio, and I'm talking with Craig Vanderwagen right now. He's an MD and chief medical officer with the Indian Health Service.

You talked earlier about management improving, and when we say management, we're talking about both compliance in using the medicines and using them on a regular basis and, also, those lifestyle changes. Are you seeing compliance in both areas? People are using their medicine and changing their lifestyle?

Dr. VANDERWAGEN: Yeah. I think, Frank, that one of the things that impressed people in the Indian country was a research project that was funded by NIH in the '90s. It was called the Diabetes Prevention Project, and they looked at the effectiveness of medical treatment vs. diet and exercise. And a part of the folks who were involved in the study were out in Navajo country, so there was a significant Indian cohort to this study. And what that study demonstrated was that individuals who had a personal coach and participated in active exercise and changed their diet has as good an outcome as individuals who were treated with the usual medications that we provide for diabetes.

This information went through Indian country pretty dramatically, in part because there were Indian people involved in the study and, in part, because community leadership recognized immediately that there was a real potential there for a more natural approach to the care and prevention of the disease. So, yeah, we have seen a rising acceptance and participation in those kind of prevention strategies. And for folks who are interested in seeing what some of this looks like, on our Web site there is documentation of not only the treatment from the medical perspective but, also, some of their prevention programs and the levels of participation that we've seen rising over the last 10 years or so.

STASIO: Let's go out to Athens, Ohio. Adrian is on the line.

Hi, Adrian.

ADRIAN (Caller): Hi. I'm a medical student in Ohio, and I was just wondering how important you think it is to identify people with metabolic syndrome or insulin resistance before they get diabetes? And do you think that doctors are educated enough to deal with that kind of thing?

STASIO: Thanks, Adrian.

Dr. VANDERWAGEN: Well, Adrian raises a critical question, and one--our approach to that is that we are changing the way we deliver health services and focusing more on the community and patients, which is where New York is headed, in a way that does these kind of risk assessments. And then the whole team of providers and health professionals--nutrition, optometrists, exercise physiologists, nurses and so on--engage the community and individuals in programs that will mitigate the risk factors that we identified, including sort of the pre-diabetes, where they may have some slight elevation in their blood sugar or where they may appear to have the beginnings of insulin resistance.

And, yes, we believe that if you focus properly and you think about your service delivery program as focused on those patients in a community, that you have a much greater chance of being able to intervene successful in mitigating those risk factors, even though there's physiology that suggests a problem.

STASIO: Very briefly, we have an e-mail from Gary in Cincinnati, who wants to know something about the glycemic index and whether it can provide early warning. Did I get that right?

Dr. VANDERWAGEN: Glycemic index, I think...

STASIO: Yeah.

Dr. VANDERWAGEN: ...perhaps is...



Analysis: New York gets serious about tracking diabetes

January 12, 2006 from Talk of the Nation

page 12

STASIO: Yeah.

Dr. VANDERWAGEN: ...what I'm thinking.

STASIO: OK.

Dr. VANDERWAGEN: Well, I'm not familiar with that term directly. We look at the hemoglobin A1c, which tells you over the course of the last two or three months how their blood sugar has been controlled. And we use that as a primary indicator rather than simply relying on a random sample of their blood sugar. Now patients on a day-to-day basis may monitor their glucose throughout the course of the day and adjust medications, exercise and diet based on that kind of information. And I think that is important on a day-to-day basis.

STASIO: All right. Well, Dr. Vanderwagen, we appreciate it. Thank you very much for joining us.

Dr. VANDERWAGEN: Thank you, Frank.

STASIO: Craig Vanderwagen is chief medical officer for the Indian Health Service and joined us from Rockville, Maryland.

When we come back from a short break, the ethics around memoir writing. Is it OK to embellish the events in your life, to provide a more exciting tale? We'll hear from two writers.

I'm Frank Stasio. It's TALK OF THE NATION from NPR News.