Indian Health Service
University of Colorado School of Public Health
Centers for American Indian and Alaska Native Health
Research Speakers Series

September 6, 2012

Preventing and Treating Diabetes and its Complications in American Indians and Alaska Natives

by

Yvette Roubideaux, M.D., M.P.H.
Director, Indian Health Service

Good morning. I am Dr. Yvette Roubideaux, Director of the Indian Health Service (IHS). I appreciate this opportunity to speak about the successful things we are doing to treat and prevent diabetes in the American Indian and Alaska Native communities we serve.

It is good to be here today – I spent so many hours in this auditorium working with Dr. Manson and his team on diabetes programs and American Indian research issues! Thank you, Dr. Manson, for the invitation to speak today.

First, a brief overview of the IHS, which is an agency within the Department of Health and Human Services.

The mission of IHS is to raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level.

The Indian health system provides a comprehensive health service delivery system for approximately 2 million American Indians and Alaska Natives. It serves members of 566 federally recognized Tribes through a network of hospitals, clinics and health stations that are managed by the IHS, Tribes, or urban Indian health programs. The IHS fiscal year 2012 appropriation is approximately $4.3 billion. The IHS has a total of about 15,920 employees, which includes approximately 2,590 nurses, 860 physicians, 660 pharmacists, 640 engineers and sanitarians, 340 physician assistants and nurse practitioners, and 310 dentists.

The IHS system consists of 12 Area offices, which are further divided down into 157 Service Units that provide care at the local level in over 600 hospitals, clinics, and health stations in 35 states. The IHS is predominantly a rural primary care system, although we do have some urban locations.

IHS has helped improve the health of American Indians and Alaska Natives since it was established in 1955, but we still face significant challenges as we work to fulfill our mission. Health disparities continue to persist for American Indians and Alaska Natives compared to other populations. For example, diabetes mortality rates are still nearly three times higher for American Indians and Alaska Natives than for the general U.S. population.

Addressing these disparities is complicated. In addition to the challenges of delivering health care in a primarily rural location, the Indian health care system also faces a number of other challenges that are driven by a host of medical, cultural, and socio-economic factors, including:

- Population growth, which results in an increased demand for services;
- Medical Inflation, with the rising costs of delivering services – especially in rural areas;
- Difficulty recruiting and retaining medical providers, especially in our remote sites;
- Increased rates of chronic diseases – such as diabetes and cancer, which are more complicated to address;
- Old facilities and equipment;
- Lack of sufficient resources to meet demand for services;
- And balancing the needs of patients served in our diverse network of IHS, tribal, rural, and urban Indian health programs.

It is clear that a lack of adequate resources is a huge barrier to fully meeting the mission of the IHS. Per capita expenditures for IHS are much lower than those for other federal healthcare sources, such as Medicare, Department of Veterans Affairs, Medicaid, etc.

Despite all these challenges, we are working to change and improve the IHS, and our work over the past few years has been guided by our four priorities:

- To renew and strengthen our partnership with Tribes;
- To reform the IHS;
- To improve the quality of and access to care for patients who are served by IHS; and
- To have everything we do be as transparent, accountable, fair, and inclusive as possible.

Although there is still much to do, I am pleased to report that we are definitely making progress on these priorities. And these priorities are helping us address the epidemic of diabetes in the communities we serve.

It is well known that American Indians and Alaska Natives have the highest age-adjusted rate of diagnosed diabetes among all racial and ethnic groups in the United States—roughly twice the rate of the general population. And, as I mentioned before, the diabetes-related mortality rate for American Indians and Alaska Natives is nearly three times that of the general population. In some communities, more than half of adults ages 18 and older have diabetes, with prevalence rates reaching as high as 60 percent.

Once exclusively a disease of adults, type 2 diabetes is also increasingly common among Native youth, threatening the health, well-being, and quality of life of future generations. Therefore, diabetes prevention and treatment efforts are an urgent IHS priority.

Our priorities are helping us address the epidemic of diabetes. Our first priority, to renew and strengthen our partnership with Tribes, emphasizes our belief that the only way we are going to improve the health of our communities is to work in partnership with them. As a health care system, we can provide the best care to our patients in the context of the patient's family and community. Tribal consultation on all our efforts is a priority.

Tribal consultation is a priority of President Obama, who has expressed a commitment to honoring treaty rights and making tribal consultation a priority. The President has held three White House Tribal Nations Conferences so far and an historic meeting with Tribes in the Roosevelt Room of the White House.

I spend a lot of time consulting and meeting with Tribes. It is important to hear their perspectives and issues. In terms of diabetes, the IHS Tribal Leaders Diabetes Committee advises the IHS Director on diabetes treatment and prevention activities.

Our second priority is to reform the IHS. This is our most popular priority; when I first was appointed IHS Director, I heard from Tribes and staff that we needed to change and improve. While you might think that the input would be about clinical care, actually it was more about the need to improve as a business and how we lead and manage people. We have made several improvements in overall management and more consistent business practices and have improved our financial management and accountability.

Accountability is important for all our programs and staff, especially for our diabetes-related efforts because we are addressing the problem of diabetes through a targeted congressional appropriation called the Special Diabetes Program for Indians (SDPI), which I will talk about in a minute.

Our third priority is to improve the quality of and access to care. We are focusing on improvements in customer service, improving patient care through our patient-center medical home initiative in 90 of our sites so far, and a better systems approach to accreditation and certification of our facilities.

Our efforts to address diabetes are a part of our larger efforts to address the problem of obesity and overweight in American Indians and Alaska Natives, which is of course a major contributor to diabetes and other chronic conditions.

We launched the Healthy Weight for Life initiative to unify all our efforts to promote a healthy weight among American Indians and Alaska Natives. We now have a website with information on evidence-based, proven approaches to help fight the obesity epidemic that is threatening the health and well-being of Indian people.

We are also helping to promote the HBO series "The Weight of the Nation." It makes the point that obesity is a public health emergency and everyone's help is needed to reverse this alarming trend. Obesity is a major risk factors for chronic diseases, such as diabetes, heart disease, and cancer.

And we have joined the First Lady's Let's Move! in Indian Country initiative, which includes our IHS Baby-Friendly Hospital initiative. We are promoting breastfeeding in our IHS hospitals because it has been shown that breastfeeding can reduce childhood obesity.

We are working to make all IHS hospitals Baby-Friendly and to encourage all tribally-managed hospitals to join us in this effort. The Rosebud IHS Hospital is the first facility to undergo the designation process and they recently became the first IHS hospital to achieve this designation.

Specific to diabetes, the epidemic of diabetes hit American Indian communities first, and in 1979, Congress established the IHS National Diabetes Program. The mission is to develop, document, and sustain clinical and public health efforts to treat and prevent diabetes in American Indians and Alaska Natives.

The program is now called the IHS Division of Diabetes Treatment and Prevention and its activities include:

- Supporting a network of diabetes resources in the Indian health system nationally; in all 12 IHS Areas and in each local facility.
- Development of culturally relevant clinical guidelines, best practices, and educational materials.
- Trainings via meetings and conferences and web- and computer-based training on diabetes prevention and treatment.
- Leadership and oversight of the SDPI.

Even with a focus on diabetes in IHS for decades, the epidemic of diabetes continued, so Congress established the SDPI in the balanced Budget Act of 1997. The Act provided $150 million over 5 years for "the prevention and treatment of diabetes in American Indians and Alaska Natives." Funds have been reauthorized at $150 million per year through fiscal year 2013.

The SDPI currently provides grants for 404 diabetes treatment and prevention programs in IHS, tribal, and urban Indian health programs in 35 states across the Indian health system. The SDPI has two major components: 338 community-driven programs and 66 diabetes prevention and healthy heart initiatives.

The first major component of the SDPI is the original 338 community-directed diabetes programs started in 1998 that are implementing diabetes treatment and prevention programs based on scientifically proven Best Practices. These programs are designed to address local community priorities so the specific diabetes prevention and treatment activities vary among communities.

These programs have successfully and dramatically increased access to services such as:

- Diabetes clinics, teams, and registries;
- Weight loss programs for adults and youth;
- Infrastructure to promote physical activity; and
- Access to experts in nutrition and physical activity.

Each grant program has used its funding for activities that address specific needs in its community. The Division of Diabetes Treatment and Prevention has evaluated these programs and tracks their

progress through grant program data and the annual IHS Diabetes Care and Outcomes Audit. We have specific data on increases in access to services from the 1997 baseline before the SDPI funding was available to 2010. For example, access to diabetes clinics has increased from 31% to 71% of grant programs.

Based on local needs and priorities, the SDPI grant programs have implemented proven interventions to address the diabetes epidemic, often where few resources existed before.

As access to diabetes services increased, diabetes health outcomes improved significantly in American Indian and Alaska Native communities. One of the most important improvements has been a 13.7 percent decrease in the mean blood sugar level of American Indians and Alaska Natives with diagnosed diabetes, a major achievement over 15 years. The average blood sugar level decreased from 9% in 1996 to 8% in 2011 as measured by the A1C test. Decreases of this magnitude translate to an almost 40 percent reduction in diabetes-related complications.

Average LDL cholesterol has declined from 118 mg/dL in 1998 to 94 mg/dL in 2011. Improved control of LDL cholesterol can reduce cardiovascular complications by 20-50%.

Use of blood pressure-lowering medications increased from 42% in 1997 to 72% in 2011. Treatment with angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers has shown to be more effective in reducing the decline in kidney function than has treatment with other blood pressure-lowering medications.

The most important impact of these combined and sustained clinical improvements is seen in the dramatic drop in the rate of end stage renal disease (ESRD) in American Indian and Alaska Native people with diabetes when compared with other racial and ethnic groups in the U.S. Between 1995 and 2006, the incident rate of ESRD in American Indian and Alaska Native people with diabetes fell by 27.7% – a greater decline than for any other racial or ethnic group.

Given that Medicare costs per year for one patient on hemodialysis were $82,285 in 2009, this reduction in new cases of ESRD means a decrease in the number of patients requiring dialysis—translating into millions of dollars in cost savings for Medicare, IHS, and other third-party payers.

The second major component of the SDPI has been the 66 grantees of the SDPI Demonstration Projects that have successfully completed a 6-year program translating the results of diabetes prevention and cardiovascular disease risk reduction research into diverse, real world Indian health settings. The University of Colorado served as the Coordinating Center for this $27 million initiative.

For the Diabetes Prevention demonstration project, the grantees focused on implementing the 16-week Diabetes Prevention Program curriculum to promote lifestyle changes such as healthier eating, physical activity, and weight loss in patients at risk for diabetes.

For the Healthy Heart demonstration project, the grantees focused on implementing a team-based, clinical case management approach using evidence-based strategies to reduce cardiovascular disease risk factors in patients with diabetes.

They worked together as a collaborative, using peer-to-peer learning to help each other and to design the program, and participated in an intensive evaluation of their work. Dr. Manson really helped push us to have the grantees help teach each other, which is one of the hallmarks of this program. Their work was based on research, and the goal was translation of those evidence-based strategies. The programs adapted common strategies to their communities in creative and culturally appropriate ways.

The results have been incredible – for instance, you would expect that a translational effort would only achieve about 40% of the results of a randomized controlled research trial. However, our 36 Diabetes Prevention projects successfully achieved the same level of reduction in diabetes incidence as the original NIH-funded Diabetes Prevention Program Research study's lifestyle intervention group. In doing so, they reduced the risk of diabetes in high-risk American Indian and Alaska Native people at a rate similar to the NIH study. And the 30 programs in the Healthy Heart Initiative demonstrated significant decreases in cardiovascular disease risk factors in people with diabetes through intensive case management and a team approach to care.

As a result of their work, we now know that it is possible to reduce risk factors for diabetes and cardiovascular disease in American Indian and Alaska Native communities.

The Demonstration projects have been successfully transitioned to the Diabetes Prevention and Healthy Heart Initiatives in the last two years to continue implementing their successful programs, documenting activities and outcomes, and disseminating information and best practices from the original Demonstration Projects.

The goal is to have all SDPI programs learn about the successful activities of the demonstration projects and to share materials and resources throughout Indian country – and the rest of the world!

In November, I attended the Special Diabetes Program for Indians Diabetes Prevention and Healthy Heart Initiatives Meeting in Albuquerque, New Mexico. I viewed posters from each of the grant programs that documented their successful prevention activities through photos, activity summaries, and client testimonials. It was very inspiring to see the creativity, innovation, enthusiasm, and expertise of our grant program activities.

The overall data, while it shows great results, doesn't even tell half of the story – the story about these programs is in the community and patient-level achievements – and I am glad the programs are now working on how to disseminate their successes.

This afternoon, I get to visit their poster session again and hear more about their innovative activities. Through their screening activities, patient education for individuals and groups, and focus on healthy lifestyle changes, they are showing that we can prevent and treat diabetes.

I was also so proud of the IHS Pine Ridge Service Unit Diabetes Prevention Program staff who got to talk with Secretary Sebelius on our recent trip to South Dakota about how their program has helped individuals reduce their risk for diabetes. The program presented information on their

activities, and participants in the program got to present their personal stories of how they have adopted a healthier lifestyle.

The IHS SDPI has shown that in partnership with our communities, we can reduce diabetes and cardiovascular disease risk factors in Indian country with innovative and culturally appropriate activities. They are continuing their activities through the current authorization of the program through FY 2013. We are hoping that Congress will reauthorize the program and tribal advocates are working very hard to continue this important program.

The IHS is also working to strengthen its diabetes infrastructure at the Headquarters and Area office levels to maintain and improve diabetes surveillance, technical assistance, provider networks, and clinical monitoring.

In summary, we are making progress on changing and improving the IHS. Tribal consultation is essential to our reform efforts, and diabetes prevention and treatment efforts are a priority. The SDPI funding is enabling the Indian health system to make tremendous changes in the diabetes landscape in American Indian and Alaska Native communities, which was the vision of Congress when they first appropriated the funding. We are now working on more dissemination of these successful programs.

Thank you for the opportunity to share what we are doing to change and improve the IHS and address the epidemic of diabetes in the communities that we serve.