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"The Indian Health Service and Diabetes Prevention and Treatment"

by

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Good Morning! Welcome to the National Conference on "Reducing Health Disparities in American Indians and Alaska Natives by Preventing Diabetes Throughout the Life Cycle." I appreciate the opportunity to be here today to speak about the Indian health system and the strategies we are implementing to provide access to high-quality diabetes care and prevention services for American Indian and Alaska Native individuals and communities.

This is a very important issue for all of us in Indian health right now, since we know that the rates of diabetes have increased to epidemic proportions in Indian Country. And we have all seen the devastating effects of diabetes on individuals and communities in Indian Country. We see younger and younger children getting diabetes, and we see adults and elders losing limbs and eyesight to diabetes and suffering from the final stages of renal failure. But we know there is hope; that there are definite actions we can take to prevent and control diabetes.

And we have only to look at what we have already accomplished in Indian health to see that real progress is possible, even when we are faced with very difficult health challenges. The dramatic results of Indian Health Service (IHS) and Tribal health care efforts can be seen in the significant reductions in American Indian and Alaska Native mortality rates over the years.

For example, since 1973, deaths due to accidental injuries have declined by about 60%; maternal deaths have declined by 64%; and infant deaths have declined by 66%. Tuberculosis, once the major cause of morbidity and mortality among Indian people, and in some respects the reason the IHS was established in 1955, has declined over 80% since 1973.

Unfortunately, what we haven't seen is a decrease in diabetes rates. That is because, in spite of our best efforts and successes so far in treating diabetes, the epidemic of diabetes continues to increase. Although diabetes is also increasing in the U.S. population as a whole, the

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increase in the Indian population is even more dramatic, as we see in this chart showing the relative increases from 1980 to 2004 between the two populations.

There are still wide gaps in general health status between Indian people and the rest of the U.S. population, with the rate for diabetes being almost 3 times the U.S. All-Races rate. In fact, American Indians and Alaska Natives have the highest prevalence of type 2 diabetes in the world.

Although infectious diseases were once the major health problem of Indian people, today's health challenges mainly involve chronic conditions, such as diabetes, that are heavily impacted by lifestyle and behavioral health issues. We know that lifestyle-related issues such as obesity, physical inactivity, poor diet, and substance abuse, along with a number of other issues, are the underlying causes for the increase in chronic diseases and conditions. These kinds of lifestyle issues cannot be addressed solely through improving *treatment* measures – we also need to incorporate a holistic approach into *preventing* those conditions that lead to poor health status.

I firmly believe that prevention is the key to confronting these challenges, which is why it's an integral part of the three main health initiatives we have established for the IHS. These initiatives are Health Promotion/Disease Prevention, Chronic Disease Management, and Behavioral Health.

Some of you are already aware of and involved in these initiatives, as they all are addressing some aspect of diabetes care and prevention. The IHS Diabetes Program has led the way as we develop a coordinated and systematic approach to enhance preventive health programs at the local, regional, and national levels, and I am very proud of their efforts and their successes.

The IHS Division of Diabetes Treatment and Prevention has received national and international recognition as a leader in the area of diabetes quality improvement, including developing and monitoring systems of diabetes clinical care through its *Annual IHS Diabetes Care and Outcomes Audit*, and creating diabetes surveillance systems for tracking diabetes prevalence and complications. Publications documenting our ability to improve care with low tech, low cost approaches have been numerous.

The costs of providing quality diabetes care are extremely high. Estimates from the American Diabetes Association suggest that the average cost of diabetes care is over $13,000 per patient per year, much of this due to the costs of pharmaceuticals. Yet the IHS per capita personal health care expenditure for American Indian and Alaska Native patients is $2133. This tells us two things – that prevention is not only the key to eliminating diabetes, it is also much cheaper than treatment . . . and that we are doing a great job with relatively few resources.

I would like to go back in time now and trace some of the history of diabetes prevention and care in the Indian Health Service, Tribal, and Urban Indian (I/T/U) health programs, to give you a perspective on how far we have come.

Most of us are aware that diabetes was virtually unknown in Indian communities at the turn of the century. Yet 100 years later we have a full blown epidemic. The full story on this problem is still being written, but I can tell you some of the history and highlights so far.

It was in the 1960s that we first began to hear about the diabetes epidemic in American Indian and Alaska Native communities, mostly through the studies in the Pima community. In the 1970s we began to realize that this epidemic appeared to affect all Tribes. Most of this we believe is due to the adaptation of a western diet, high in calories and fat, and a more sedentary lifestyle, combined with a possible genetic predisposition.

In 1978, national recognition of this problem began with the National Commission on Diabetes recommendations to Congress on the growing problem of diabetes in Indian people.

In 1979, Congress responded to these recommendations by establishing the IHS National Diabetes Program to help address the diabetes epidemic that had begun to have a devastating effect on Indian communities.

Administered nationally from Albuquerque, the IHS Diabetes Program promoted and mobilized an extensive network of government and non-government organizations, scientific experts, health care professionals, and community members to pioneer a public health approach to diabetes. In 1979, the first five Model Diabetes Programs were established in service units. Between 1979 and 1995, a total of 19 Model Diabetes Programs were established in IHS Areas. The purpose of these programs was to determine how best to address this epidemic in American Indian and Alaska Native communities. They are still in existence today and many of the diabetes care practices that we use today were developed in the Model Programs. In 1988, Congress also created Diabetes Control Officers in each Area to oversee surveillance and coordinate diabetes care issues.

In 1986, the IHS National Diabetes Program developed the first IHS *Standards of Care for Diabetes*. During this time, they also began to measure diabetes care through chart audits and began publishing some of the first diabetes epidemiologic surveillance data on American Indians and Alaska Natives. By 1989, all IHS Areas were participating in the IHS Diabetes Care and Outcomes Audit.

For nearly three decades, the IHS has served as a leader in the fight against the growing diabetes epidemic. The program's accomplishments were many, even before the Special Diabetes Program for Indians came about in 1997. These accomplishments include:

- Organizing and improving care of diabetes in Indian communities;
- Creating the first national *Standards of Care for Diabetes* in the U.S.;
- Increasing provider awareness of the diabetes epidemic;
- Improving data quality and disease surveillance;
- Measuring and enhancing the delivery and quality of diabetes care;
- Using both a clinical and public health approach to the disease, with Community Health Representatives and Public Health Nurses included as vital members of the team approach;
- Creating an extensive national Diabetes Network for rapid translation of new scientific findings.

In the 1997 Balanced Budget Act, Congress authorized the initial Special Diabetes Program for Indians appropriation in response to alarming trends showing the disproportionately high rate of type 2 diabetes in American Indians and Alaska Natives. The funding for the program has evolved over the years. The legislative intent of the Special Diabetes Program for Indians was to establish a grant program for the "prevention and treatment of diabetes" in American Indians and Alaska Natives. A comprehensive program evaluation is required.

In the Consolidated Appropriations Act of 2001, IHS was directed to implement a best practices approach to diabetes and build upon what the diabetes grant programs from the Balanced Budget Act of 1997 had learned.

Subsequent legislation has called for the strengthening of the IHS data infrastructure and the development and implementation of new competitive targeted demonstration projects for the primary prevention of diabetes and cardiovascular risk reduction.

Since 1998, the IHS has provided funds from the Special Diabetes Program for Indians to 333 I/T/U programs in 35 states to begin or enhance diabetes prevention and treatment programs

in Indian communities; 81% of the funding went to Tribal programs. Also, 66 competitive demonstrations projects were awarded in late 2004 to I/T/U programs; 36 of these were for the Diabetes Prevention programs, and 30 for the Healthy Heart Project, which addresses cardiovascular disease (CVD) risk reduction in people with diabetes. (We know that there is a strong link between CVD and diabetes.)

The Diabetes Prevention Program and the Healthy Heart Project were not designed to conduct new scientific research. Instead, they were designed to translate findings from scientific studies into the real world settings of American Indian and Alaska Native communities and their health care systems.

The original 333 grant programs were established in 1997, based on their own local priorities and objectives. They participate in local as well as national evaluation activities. The Area Diabetes Consultants serve a vital role as project officers and in providing technical assistance. And a Best Practices approach has been used for the past 5 years with the development of 14 Indian health-specific best practices.

The Special Diabetes Program for Indians also includes competitive targeted demonstration projects. Both groups of targeted demonstration projects are off to a great start. They are recruiting patients who are making lifestyle changes, losing weight, and changing their lives.

Primary prevention programs such as these target the prevention of diabetes in those who do not already have it. The diabetes grant programs have established primary prevention activities that are now commonplace in over 80% of Indian communities.

Many of us don't think of secondary or tertiary care as prevention activities. But they are – secondary prevention targets the **prevention** of complications in those who already have diabetes, and tertiary prevention refers to the **prevention** of a lessening of quality of life in those who have complications, such as trying to prevent amputations in those who already have nerve damage in their feet or trying to prevent blindness in those who already have impaired vision.

The IHS also used administrative funding from the Special Diabetes Program for Indians that was set aside for data improvement to strengthen the diabetes infrastructure at the national and regional levels, and to support the electronic health record and software applications like the Diabetes Management System.

Before the Special Diabetes Program for Indians, most of our resources were directed towards the care of adults with diabetes. Now, a majority of our programs are focusing on both youth and adults. These types of primary prevention activities are targeted at the development and maintenance of healthy lifestyles to prevent the onset of diabetes and other chronic diseases.

Prior to the Special Diabetes Program for Indians, only 10% of programs focused on primary prevention in youth. Now over 80% of programs focus on prevention in children and youth, and 67% have weight management programs targeted for them!

This brings home the importance of weight management programs in the prevention of diabetes. We see some evidence of the increase in obesity in Indian communities coinciding with an increase in diabetes. Studies have shown both an increase in body mass index and diabetes rates in Indian adults during approximately the same time period (from 1994 – 2005).

Studies have shown that overweight individuals can lower their blood pressure, lower their blood glucose levels, and improve blood fat levels (cholesterol or lipid levels) by losing as little as 5 – 15% of their body weight.

The availability of community nutrition services has increased under the Special Diabetes Program for Indians. Blending traditional and local nutrition and fitness activities can help families and communities make the lifestyle changes needed to lose weight. Providing nutrition

services is an excellent secondary prevention strategy for people with diabetes. Services have increased under the Special Diabetes Program for Indians for both adults and for youth.

Research has shown that Medical Nutrition Therapy is an essential part of successful diabetes management. Registered Dietitians, along with the patient, family, and other clinical providers, play a key role in clinical decision-making for quality diabetes care, from prevention of diabetes though reducing complications in patients with end-stage renal disease.

Exercise is a cornerstone in the treatment and prevention of type 2 diabetes. Regular exercise and physical fitness promote weight loss, improve insulin sensitivity, increase muscle strength, reduce stress, enhance self-esteem, and improve the overall quality of life. People of all ages benefit from moderate physical activity. And physical activity can range from strenuous sports to daily walks. Walking for as little as 30 minutes 5 days a week can be beneficial. The proportion of diabetes programs in Indian country that report having physical activity services available keeps increasing over time.

Screening programs to identify people who have diabetes or who are at risk for developing diabetes is an important step in preventing and treating diabetes. Screening for pre-diabetes provides an opportunity for primary prevention by encouraging individuals to make lifestyle changes that can prevent or delay the onset of diabetes. Since over one-third of people with diabetes do not know that they have the disease, screening also provides an opportunity for secondary prevention by diagnosing diabetes as early as possible to prevent or delay complications. Under the Special Diabetes Program for Indians, almost all our diabetes programs screen for diabetes, and over 80% screen for pre-diabetes.

Quality diabetes care has improved under the Special Diabetes Program for Indians; care for people with diabetes in most sites now includes yearly examination of the eyes and feet to prevent complications. This is important since we know that comprehensive foot care programs can reduce amputations by 45-85%, and that detecting and treating diabetic eye disease with laser therapy can reduce severe vision loss by 50-60%.

Before the Special Diabetes Program for Indians, there was not much focus on or resources devoted to behavioral health issues related to the prevention of diabetes and it complications. Now more and more diabetes programs are focusing on improving behavioral health services.

Behavioral health is considered to be the largest component of today's health problems. In many ways, it's one of the hardest and most complex issues to address, and it requires direct intervention through a holistic, multi-disciplinary approach to health care provision that addresses all the contributing factors to health and wellness.

In order to effectively combat diabetes and other chronic conditions, we must address a host of contributing factors, ranging from socioeconomic status to lifestyle changes. That is why it is important to have all federal, Tribal, Urban Indian, and state health agencies and organizations, as well as other relevant public and private entities, working together as part of a continuum of care to promote health and wellness and eliminate health disparities.

We need to continue to develop and support both community-based efforts and high-quality clinical programs if we are to continue to effectively address the diabetes epidemic in our communities.

To this end, the IHS has established many health promotion partnerships with private and public entities to focus on promoting healthy lifestyles, clinical interventions, research efforts, and building healthy communities. Many of these partnership efforts address risk factors for diabetes, including obesity, physical inactivity, and poor nutrition; as well as related factors such as self-esteem, community health, and general wellness.

One of the many wellness partnership efforts lead by the IHS Diabetes Program is a collaboration to adapt the BodyWorks toolkit, developed by the Office on Women's Health to prevent overweight and obesity in adolescent girls, for use in the American Indian and Alaska Native population. The purpose of the toolkit is to improve the eating and activity habits of adolescent girls and their families, and to provide parents/caregivers with tools to make lifestyle changes. The revised toolkit will be distributed and disseminated by the IHS Diabetes Program as part of our Health Promotion and Disease Prevention initiative.

The IHS Division of Diabetes Treatment and Prevention is also working on a partnership effort with the National Institute of Diabetes and Digestive and Kidney Diseases, in collaboration with eight Tribal colleges and the Centers for Disease Control Native Diabetes Wellness Project. Together, they are developing a national science-based diabetes prevention education curriculum for Indian students in grades K-12 entitled *Diabetes Based Science Education in Tribal Schools*. Through the development of culturally appropriate activities and biomedical career awareness opportunities, the curriculum is directed at increasing understanding and appreciation of the devastating impact of diabetes among Indian youth, and stimulate student interest in pursuing a career in the health sciences, especially in diabetes-based biomedical science.

And of course we are in a continual partnership relationship with Tribes and Tribal Leaders in addressing the epidemic of diabetes. The Trial Leaders Diabetes Committee advises me and our national diabetes program on diabetes-related issues, as well as advising other federal agencies on issues related to diabetes in Indian communities. They also do some great advocacy work on behalf of the diabetes treatment and prevention needs in Indian Country.

And a study published last year shows that some of our prevention efforts may be paying off! Since 1996 the rate of new cases of patients with diabetes in the Southwest who are going on to dialysis leveled off and then actually decreased. This is great news; perhaps it means we are turning the tide on diabetic kidney disease!

I want to end on that happy note, and thank all of you for attending this important conference, and for your various contributions to ending the diabetes epidemic among our people. I would like to especially recognize and thank Dr. Kelly Acton and all of her team in the Division of Diabetes Treatment and Prevention for the outstanding job they are doing, and have done, over the years to address the devastation this disease causes in Indian communities and people. I would also like to congratulate Dr. Kelly Moore for her recent selection as the Association of American Indian Physicians "Indian Physician of the Year" for the work she has done in combating diabetes in Indian communities. Congratulations Kelly! This is certainly an indication of the great work and progress being made by the IHS Diabetes Program team.

Thank you, and I hope you all enjoy the rest of the conference.