National Diabetes Prevention Center for American Indians/Alaska Natives: Issues and Challenges

The following is the first of three papers that were written during the authors’ participation in the Kaiser Family Foundation’s Native American Health Policy Fellowship last year. Ms. Atcitty is currently serving as a legislative assistant to Senator Peter Domenici, working on American Indian and Housing issues. Please see the Call for Applications elsewhere in this issue if you would be interested in applying for one of these fellowships for the 2002-2003 program.


Introduction

In 1997, Congress appropriated $2 million to the Centers for Disease Control and Prevention (CDC) to establish a national diabetes prevention research center in Gallup, New Mexico to address the problem of diabetes mellitus in the southwestern United States.1 In 1998, the University of New Mexico Prevention Research Center was awarded $2.3 million from the CDC to establish a National Diabetes Prevention Center (NDPC) in partnership with the Navajo and Zuni Tribes. The NDPC was established to provide guidance and technical support and to serve as a focal point for developing and testing new prevention and control strategies to address the burden of diabetes in Native Americans.2 The purpose of this paper is to examine the effectiveness of the National Diabetes Prevention Center in reference to its original legislative intent and from the perspectives of Federal and local stakeholders.

Background

Diabetes and American Indians and Alaska Natives. Diabetes is the nation’s seventh leading cause of death and was the primary cause of more than 59,200 deaths in 1995, according to the National Center for Health Statistics. Diabetes contributes to major causes of morbidity such as blindness, kidney failure, lower extremity amputation, and cardiovascular disease, resulting in disability, decreased quality of life, and premature mortality.3

Alarmingly, on average, American Indians/Alaska Natives (AI/AN) are 2.8 times more likely to be diagnosed as having diabetes compared to non-Hispanic whites of similar ages.4 In less than 50 years, rates of diabetes have risen from uncommon to epidemic proportions among AI/AN. Between 1990 and 1997, the number of American Indians and Alaska Natives of all ages with diagnosed diabetes increased by 29%.5 In all 12 Indian Health Service Areas, diabetes is reported as one of the top ten major health problems.6 Diabetes is most common among middle-aged and older AI/AN.6 Until recently, type 2 diabetes was rarely diagnosed in children and adolescents. An alarming recent development is the occurrence of
type 2 diabetes, once called “adult-onset” diabetes, with much greater frequency among children, especially minority children, including Native American youth.\(^7\)

**Balanced Budget Act of 1997.** Through the efforts of U.S. Senator Pete Domenici of New Mexico, as well as other key legislators, American Indians have received much needed support in their fight against this deadly disease. The Balanced Budget Act of 1997 appropriated $150 million of new funding to the Indian Health Service through the Special Diabetes Programs for Indians. This funding was distributed to Indian health programs and tribes for new prevention and treatment activities over a five-year period at a rate of $30 million per year.\(^6\) In addition, at the conclusion of December 2000, Congress approved and the President signed into law H.R. 4577, which provided an additional $240 million in new diabetes funds for American Indian and Alaska Native communities. The new funding was appropriated over three fiscal years and increased the Special Diabetes Program for Indians funding to $100 million in fiscal years FY 2001 through FY 2003.\(^8\)

**National Diabetes Prevention Research Center - Report Language/Initial Funding.** The Departments of Labor, Health and Human Services, Education, and Related Agencies Appropriations Act, H.R. 2264, 1998 Conference Report includes an appropriation of $2 million a year for five years for the Centers for Disease Control and Prevention to establish a National Diabetes Prevention Center. In addition, the activities were to initially focus on the Navajo and Zuni tribes, and then expand to all tribes and eventually all minorities in the southwest.

In addition to the CDC funding, the Indian Health Service agreed to contribute $1 million each year for the activities of this new center, at the request of the Indian Health Diabetes Workgroup, which was charged with determining a formula for distribution of the Special Diabetes Program for Indians funding.\(^6\) The intent of this additional funding was to ensure that the center’s activities benefitted all tribes. Therefore, the total amount of funding available for the new National Diabetes Prevention Center to be established in Gallup was $3 million per year for five years.

**Congressional Intent.** In the report language and other documents, the intent of the center was reaffirmed. United States Senator Domenici said, “There is no cure for diabetes yet, but our investment in diabetes research, treatment and prevention is paving the way toward eventually finding a cure. This is especially important in an era where diabetes is a burgeoning disease in the United States, and is alarmingly rampant in the Native American community. This new influx of resources will help us gain a foothold in controlling diabetes cases, and should help us continue grassroots approaches to prevention and treatment.”\(^9\)

Senator Domenici worked with the Indian Health Service and the Centers for Disease Control and Prevention envisioning the development of one of the finest national programs for the prevention and treatment of diabetes in Indian country. “The primary intention of a national diabetes prevention center is to see the center begin a serious and vigorous effort to control the diabetes epidemic among the American Indians that will eventually benefit large Hispanic populations in the States of New Mexico, Arizona, Texas, and California, and all minority communities nationwide” stated Senator Domenici.\(^9\)

**Award Language.** The CDC announced the availability of fiscal year 1998 funds for a cooperative agreement program for a National Diabetes Prevention Center whose functions would be to provide guidance and technical support regarding diabetes in Native American communities throughout the United States. Initial activities were to target the challenges of diabetes in the Navajo Nation and the Zuni Pueblo tribe in the southwestern United States. If additional funds became available, the CDC intended to expand this program to other Native American populations through collaboration with other Federal agencies, such as the Indian Health Service.\(^2\)

**National Diabetes Prevention Center.** In 1998, the University of New Mexico was awarded the funding for the National Diabetes Prevention Center from the CDC. The NDPC partners initially engaged in a process to develop its organizational structure and evaluation components. A steer-
The National Diabetes Prevention Center (NDPC) was established in 1998 by the Indian Health Service (IHS) in response to the successful partnership between IHS and tribal leaders in deciding the process for distribution of the Balanced Budget Act of 1997 Special Diabetes Program for Indians. The Tribal Leaders Diabetes Committee (TLDC) was established in 1998 by the IHS Director in response to the successful partnership between IHS and tribal leaders in deciding the process for distribution of the Balanced Budget Act of 1997 Special Diabetes Program for Indians. The TLDC is comprised of one elected tribal official from each IHS Area and two members-at-large. The former Chief Medical Officer of the IHS, Dr. Kermit Smith, and one elected tribal leader, Councilman Alvin Windy Boy Sr., serve as Co-Chairs of the committee. The TLDC meets quarterly with intermittent conference calls as needed between meetings. This valuable collaboration between the IHS and tribal leaders has been an unexpected, but very important, outcome of the Special Diabetes Program for Indians, and has contributed significantly to the success achieved in Indian communities thus far. From the beginning, there was much discussion and concern regarding the development and activities of the National Diabetes Prevention Center (NDPC). The most notable concern was related to the eventual expansion of the NDPC to serve all tribes, while the NDPC was concentrating on the organization, development, and establishment of the center in the southwest. Many tribes complained that the NDPC was not efficiently meeting the needs of the AI/AN communities, were not expending all of their resources, and had money available while many issues and problems regarding diabetes were still affecting the American Indian communities. This was a significant issue because the original intent of the IHS’s $1 million set aside each year of the five-year program for the NDPC was to ensure that the center would eventually serve all tribes and would support primary, secondary, and tertiary diabetes prevention research. In a number of regional meetings, the Tribal Leaders Diabetes Committee reaffirmed this intent. The NDPC acknowledged that initially there were also many struggles in starting up the center, including acquiring a building, completing job descriptions, recruiting and obtaining qualified personnel for the center, difficulty obtaining funding during the first year, and the challenge of establishing the location of center. The NPDC efforts focused on the local tribes of
the Navajo and Zuni communities. However, the issue of when the NDPC would develop “national” activities that benefitted all tribes continued to be a concern for a number of stakeholders, both on the national and local levels.

**Stakeholder Perspectives**

The formation of the National Diabetes Prevention Center was established without any specific bill language and was developed based on brief report language. This resulted in differing interpretations of the intent of the NDPC by the different entities involved in its development.

**Indian Health Service.** The Indian Health Service set aside $1 million each year for the five-year period for a National Diabetes Prevention Research Center intended to serve all tribes. This investment was intended to support primary, secondary, and tertiary prevention research in the development of the center or research effort. The design and functioning of the NDPC was to include local IHS, tribal, and urban program representatives in the policy setting and oversight process.6

The IHS decision to set aside funding recommended the establishment of a Tribal Advisory Committee to provide advice and consultation in the development and operation of the center. Dr. Michael Trujillo, Director, IHS, stated in his January 8, 1998 letter to tribal leaders “The workgroup and I believe that collaborative efforts with the Centers for Disease Control and Prevention are paramount in establishing and continuing the Center.”

**Tribal Leaders Diabetes Committee.** The IHS recommended that a Tribal Advisory Committee provide advice and consultation in the development and operation of the NDPC consistent with the Presidential Executive Memorandum regarding Tribal Consultation, dated April 29, 1994.6 The TLDC made the initial recommendation to the Indian Health Service to give the NDPC $1 million per year, but also stipulated that the NDPC should serve all tribes, functioning as a national center, focusing on prevention and treatment of diabetes. The TLDC was concerned that the NDPC was not developing national activities.

As a result of these concerns, the TLDC, the CDC, and the IHS agreed to obtain widespread tribal input on the future growth of the NDPC. Through a series of regional meetings, input was obtained regarding the role and effectiveness of the National Diabetes Prevention Center.

Various areas were identified for NDPC expansion, including expansion of staff to include representatives from many tribes; expansion of the advisory board to include more tribal representatives; formation of a committee that would include the NDPC and all sites; holding regional meetings; traveling off-site to visit other diabetes programs; building additional regional centers; and provision of services or programs for tribes.11 Participants from all locations envisioned real benefits from the Center, specifically, that it focused on the American Indian/Alaska Native populations. Participants also felt that the centralization of data, information, and educational materials, as well as the potential for national advocacy for the issue of diabetes in AI/AN would lead to improved strategies and funding in the fight against diabetes.

Although there are many benefits to a national center, there remained concerns from tribes outside of the southwestern region. They were concerned that the Center would favor the southwest tribes in research and funding issues. Some of the comments were as follows: the Center is isolated and encapsulated; all tribes will not have access to a national center; and Gallup in not a central or “hub” location. Participants were concerned about the location, and they were apprehensive that the Center would become a large government bureaucracy and have little impact as a result.11

**The National Diabetes Prevention Center.** The NDPC activities are organized into six areas: Administration, Research and Evaluation, Education and Training, Networking and Collaboration, Information and Resources, and other updates. The NDPC’s key accomplishments to date include the formation of an expert panel; development of a formative evaluation process for the center; collaborations with Dine College and other tribal colleges; information sharing at national conferences; sponsorship of a southwest regional conference that showcased local diabetes activities and projects; offering technical assistance workshops to the general audience; providing expert panel technical assistance

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to answer specific research questions; and solicitation of prevention research projects for the Pueblo of Zuni, Zuni-Ramah IHS Service Unit, Navajo Nation, Dine College, and Gallup Indian Medical Center. While national expansion was a future plan, the NDPC and the University of New Mexico chose to focus on the local southwestern tribes.

**Centers for Disease Control and Prevention.** The CDC has experience with public health perspective and networks with community and national organizations. With its scientific and programmatic resources, surveillance system capacity, and national health policy linkages, it is capable of translating diabetes research into action. In the request for award language, the intent of the NDPC was to eventually serve all tribes to address the problem of diabetes. After review of the regional meeting reports and discussion with multiple stakeholders, the CDC reviewed the NDPC’s activities and acknowledged the need for more national efforts.

Due to the perceived need for expansion of the activities of the NDPC to other tribes and the wishes of the University of New Mexico to concentrate activities on southwestern tribes, the CDC, in collaboration with the IHS and the TLDC, decided to no longer fund the NDPC through the University of New Mexico, given its significant amount of carry over funds still available for local efforts. The University of New Mexico local partnership with the Navajo and Zuni tribes will now become a diabetes prevention center focusing only on the southwest, now known as the Southwest Diabetes Prevention Center. Appropriate fiscal and programmatic accountability by CDC of UNM’s activities would continue.

**Conclusions**

The NDPC’s primary intent was to provide a serious and vigorous effort to control the diabetes epidemic among American Indians through greatly improved, culturally relevant diagnosis and prevention. The goal of the NDPC was to find better prevention strategies that have positive outcomes, first with the Navajo Nation and Zuni Pueblo Tribe in the southwestern U.S., with the intention of extending their services and information to the larger, national American Indian population in the future. However, based on input from tribes and in regional meetings, the expansion of the NDPC to activities that benefitted all tribes was an immediate and critical need. Because the local partner wished to continue working with the two local tribes, the CDC, IHS, and TLDC now are developing national activities with the funding for the National Diabetes Prevention Center separately from the Southwest Diabetes Prevention Center activities.

**Issues That Still Need To Be Addressed.** During the TLDC meeting held on May 1, 2001 in Washington, D.C., the group discussed and decided not to support any new diabetes set aside funding for the NDPC or the new University of Colorado Health Sciences Center Diabetes Research Center, as proposed by Senator Ben Nighthorse Campbell as a possible new special initiative.

One of the major components of the decision not to support the NDPC or the new Campbell Center with new funding set asides was that little information was known about these proposed centers and the services or information they would provide. The TLDC was also skeptical about whether these programs would only be beneficial to the local southwestern region. These discussions raised the issue of whether diabetes efforts are best addressed by funding local, regional, or national centers.

There is some debate as to whether a national diabetes center is more effective in meeting the needs of the AI/AN communities versus regional diabetes centers. Duplication of efforts, services, and research already implemented by other organizations or tribes was an issue that worried tribes. Participants in the regional meetings were concerned that the NDPC would “reinvent the wheel” when communities were already engaging in certain research or prevention efforts, and that resources would be taken away from local communities.

Benefits of a national center include the potential for systematic data collection, reporting, and dissemination; provision of information on advances in diabetes care; prevention research geared toward all American Indians; and technical assistance.

Benefits of developing regional centers to address the problem of diabetes include the potential for culturally relevant and specific prevention mechanisms; local accessibility; and the capacity to address tribal-specific needs. Given the movement towards self-governance and self-determination, more tribes are taking over the responsibility and decision-making regarding the health care resources for their tribes. Regional diabetes centers allow for tailoring activities to the needs of the local tribes. The development of the NDPC and the resulting issues and concerns clearly indicate the need for both local and national efforts to address the problem of diabetes in American Indians and Alaska Natives.

With diabetes continuing to be a significant problem among American Indians, further efforts are clearly needed to advocate for more funding and resources. Senator Domenici requested $4 million to support the National Diabetes Prevention Center in Gallup to be included in the FY 2002 Labor-HHS appropriation bill. “Diabetes and substance abuse are chronic health problems in the Four Corners region. I hope that with Federal investments in research and treatments we will be able to slow the spread of diabetes and alcoholism, and help those who already suffer these dreaded diseases from getting worse,” Domenici said. “These programs will provide prevention, preliminary and enhanced intervention, and sustained treatment and reintegration to the community.”

**Future Directions**

In order to better serve the largest number of tribes in the U.S., the NDPC was restructured in FY 2001 by the Division of Diabetes Translation at the CDC. In collaboration with the Tribal Leaders Diabetes Committee and the IHS National Diabetes Program, and based on extensive input from tribes, national activities were planned for FY02 and FY03. These
national activities include gathering, connecting, and disseminating information about “what works” in diabetes care and prevention for all American Indian and Alaska Native communities. Presently, the NDPC and its partners are developing a variety of user-friendly tools, resources, curricula, and data approaches to assist in diabetes care and prevention efforts; a series of reports about “what works” in information technology, community diabetes care, and prevention planning activities; and educational resources.

American Indian and Alaska Native communities are leading the world in “what works” for innovative and effective community diabetes care and prevention. It is everyone’s hope that the national activities of the NDPC, initially focused on Native American populations, will have wide-ranging application for the benefit of diabetes care and prevention in all communities throughout the U.S.

References
1. Departments of Labor, Health and Human Services (LHHS), and Education and Related Agencies Appropriation Bill, 1998. Report 105-58, p. 56.
Yakama Health Fair Promotes Wellness and Prevention

Margaret L. Bolte, MPH, REHS, Public Health Educator, Yakama Service Unit, Toppenish, Washington; and Marjorie L. Witman, MN, ARNP, Yakama Service Unit, Toppenish, Washington

Due to their rural, remote location, some reservations, like that of the Yakama Nation in central Washington State, face significant challenges in creating awareness of and access to health services and community resources. A highly successful approach to address some of these issues has been an annual health fair. During the past three years, the Yakama Health Fair has been redesigned and has expanded greatly in diversity and quantity of exhibitors and health screening services. In 1998, this one-day event offered only a dozen table displays and informational booths with an attendance of 80 people. At the June 2002 Health Fair, seventy health and safety exhibitors were on site, with an attendance of approximately 700 people.

The Yakama Nation Reservation covers 1.4 million acres, which includes the several small communities in the south central, rural area of Washington. The total enrollment of the Yakamas is estimated to be nearly 9,500; however, there are 22,000 active medical charts of eligible Native Americans served at the Yakama Indian Health Center, in Toppenish, Washington.

As a major community outreach effort, this Health Fair plays a vital role in providing health and safety information and resources to this widely dispersed population. Sponsored by the Yakama Nation and the Yakama Indian Health Center (Yakama Service Unit – YSU), the Health Fair’s goals are the promotion of healthy lifestyles and increased awareness of community resources, including available health services. This non-profit annual event is open to anyone interested in obtaining allied health, safety, and injury prevention information.

The health fair planning committee meets monthly, starting early in the year. Committee members include representatives from the Yakama Nation members, tribal program...
The community Yakama Health Fair was recently held in the new event center that is adjacent to the tribal Legends Casino. This facility provided plenty of space for exhibitors and attendees of all ages. The casino donated the space and usage of the facility at no cost.

Vendors/exhibitors represented diverse organizations, including Federal, state, regional, local, and private organizations and agencies. Some of the organizations that sponsor exhibits in the health fair included Wellness on Wheels, American Lung Association, Yakima County Safe Kids, tribal health programs (Diabetes Program, Maternal Child Care – child safety seat education, Community Health Representatives, Tribal Cancer Support Group, etc.), Indian Health Service programs (Environmental Health and Engineering, Audiology Services, Mental Health, Dental, etc.), Yakima Health District, Mothers Against Drunk Driving, Central Washington Osteoporosis Center, and more. Additionally, this one-day community event attracted vendors from Warm Springs, Oregon (a health education program), Chinle, Arizona (an Indian Health Service career recruiter); and the Fred Hutchinson Cancer Institute in Seattle, Washington.

Critical health screening services are offered at the health fair such as blood sugar screening, blood pressure checks, bone (foot) density tests, immunizations, dental care information, fire safety with Smokey the Bear, HIV education, and prenatal education. Health screenings are a convenient and economical way to detect potential problems before they become major health issues. When individuals are identified with medical or dental concerns, they are referred for further evaluation. Educational literature is available from the various health service organizations. Information is given on proper health care and health habits (American Lung Association, Smile Savers, Yakama Nation Nutrition Services, Tribal Child Safety Seat Program) and for disease prevention through vaccination and education (Indian Health Service Public Health Nursing, Northwest Portland Area Indian Health Board Women’s Health/Injury Prevention, Polio Outreach of Washington, Tribal WIC Program).

A kickoff to the health fair begins with a two-mile walk/run activity in the morning, which is sponsored by a different local health agency each year. Each participant is given a free tee shirt after completion of the two-mile walk or run. At this year’s walk/run event at the Tribal Nation RV Park, over 220 participants took part in the activity.

Participating agencies donate facilities, supplies, advertising, and personnel time. In addition, various organizations contribute door and raffle prizes that are given to attendees. As evidence of cultural diversity of this event, exhibitors as well as attendees are both Native and non-Native Americans.

An overview of the planning and organization process for this successful health outreach activity is provided below.

Committee members volunteer their expertise and energy in many areas:
- An assessment is conducted of the local population’s primary health and safety issues and the pertinent local and regional health resources available to the community. Contacts to potential vendors/exhibitors are made; there is no cost for their participation in the health fair.
- The health fair planning committee requests a tribal proclamation from the tribe. The committee members coordinate with the Tribal Council to obtain their support for the goal of promoting health education through the joint mission of the community health fair. The tribal proclamation is requested from the Yakama Nation Tribal Council, and the HEW Tribal Committee. Once signed and supported by the Tribal Council, the proclamation decrees and acknowledges the Tribal Health Fair Day in the community, promotes public attendance, and allows administrative time for tribal employees to attend the event.
- Public Service Announcements (at no cost) are published in the local tribal newspaper to advertise the health fair day’s activities. Public Service Announcements are also sent to local community newspapers and television stations. The Yakama
Nation Radio Station airs public service announcements that have been taped by a committee member. In previous years, the public service announcements on the radio have been taped in the Yakama language and in English. This year, the Yakama Health Fair event/activity was posted on the Washington State, Department of Health Website.

- Local merchants are contacted for donations for raffle prizes. The Heritage Cultural Center Gift Shop and Legends Casino are among the local organizations that generously contribute items for prizes such as jackets, souvenir cups, Native crafts, etc.
- The local casino donates funds for health fair posters, which feature the unique health fair logo promoting the community event with its theme of “Total Health - Mind, Body, Spirit, Present, and Future.” Committee members distribute the posters throughout the community.
- Coordinated by clinic tribal programs, bake sales are held throughout the year; proceeds are utilized for raffle prizes and for gifts that are presented to health fair attendees.
- Overall costs are minimal due to the various donated items from multiple services, as well time and effort from tribal employees. Indian Health Service employees contribute their time for assisting and planning of the health fair. The local tribal Legends Casino donates the location and use of the facility for the health fair at no cost.
- Within eight weeks before the event, application forms and an invitation letter are mailed out to prospective vendors for the health fair. Vendors are not charged for their participation or for space at the fair. The committee suggests that exhibitors donate a door prize, but that is optional for the event.
- The walk/run activity is coordinated and overseen by its sponsor. The Yakama Nation Diabetes Program sponsored this year’s two-mile walk/run. On site during this exercise, White Swan Tribal Ambulance and its staff provided their assistance and were also available throughout the health fair.
- Job Corps and Salmon Corps youth programs are contacted to assist with arranging tables, setting up booths, and providing assistance to vendors during the health fair event. In appreciation for their assistance, the youth receive a free lunch from the casino management.
- The Yakama Nation Radio announcer is on site throughout the health fair and broadcasts live interviews with vendors.
- Approximately a week to two weeks after the health fair, a summary closeout meeting is held for the committee members with the purpose of discussing the health fair. Discussion topics focus on attendance data, overall lessons learned from the health fair, identification of positive outcomes, and suggestions for changes or improvements for the following year. Certificates of appreciation are signed by the Yakama Service Unit Director and the Yakama Nation Council Chairperson. During the closeout meeting, the certificates are presented to committee members and volunteers. Lunch is also served during this meeting; the lunch is provided through donations of local organizations and committee members.
- During the past three years, the Yakama Health Fair has become a signature event and a well-known community outreach health activity. With the goals of improving access to health and safety education, health screening, and increasing awareness of community health resources, the Yakama Health Fair has been redesigned accordingly. This day-long event encourages healthy lifestyles, safety, injury prevention and health education to individuals of all ages. Participating vendors and organizations offer a wide diversity of services and resources available to the community. With a team approach of collaboration and support, these organizations represent state, Federal, tribal, non-tribal, and private agencies. From the planning stages through its culmination, the Yakama Health Fair truly demonstrates people reaching to people to encourage optimal health and safety.

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GERIATRIC PEARLS

This is the first in an intermittent series of clinical pearls from clinician with expertise in geriatric care.

Tips on Prescribing Carbidopa/L-dopa (Sinemet)

Julie McCole Phillips, MD, Internist and Geriatrician, Chinle IHS Hospital, Chinle, Arizona.

L-dopa combined with carbidopa (Sinemet) is typically the first line drug of choice in elders who have Parkinson’s disease. Many newer medications exist. These include the dopamine agonists such as pergolide (Permax), pramipexole (Mirapex) and ropinirole (Requip). The COMT (catechol-O-methyltransferase) inhibitors, such as entacapone (Comptan), have also enhanced the available armamentarium. Unfortunately, elders, especially the frail elderly or those with cognitive impairment, often are highly susceptible to the psychiatric side effects of these medications. As a result, L-dopa is the medication that is most commonly used in this age group.

Deciding when to initiate symptomatic treatment with L-dopa depends on a number of considerations. As this medication is not a disease modifying medication but rather is used for symptom relief, it is essential to assess the degree of functional impairment caused by the Parkinson’s disease. Interference with work or activities of daily living may, for example, warrant initiation. The adage “Start low and go slow” applies. One possible way to start Sinemet is to begin with one half tablet of the 25/100 (carbidopa/levodopa) three times a day and titrate up by half a pill each week. A follow-up appointment at one month will provide an opportunity to assess the efficacy of one full tablet three times a day. A clearcut response is seen in well over ninety percent of patients initially, so the absence of a response calls into question the diagnosis of Parkinson’s disease.

Sinemet, literally “sin-emet” (without emesis), is a combination of carbidopa and L-dopa. Dopamine is the culprit that causes nausea by stimulating the chemoreceptor trigger zone. Carbidopa is added to the formulation because it inhibits the peripheral conversion of L-dopa to dopamine. Nonetheless, nausea can still be a common side effect. Unfortunately, taking the pill with food is not the answer because amino acids compete with Sinemet for absorption. It is, therefore, recommended to take the Sinemet on an empty stomach or two to three hours after a meal. Occasionally, it needs to be taken with a snack of crackers or dry bread in order to be tolerated. Another potential remedy for the accompanying nausea is the addition of extra carbidopa. It generally requires 75 to 100 mg of carbidopa to sufficiently inhibit peripheral dopa decarboxylation. Prescribing carbidopa (Lodosyn) 25 mg along with each Sinemet dose can sometimes help eliminate nausea.

Determination of the correct dosing is essential. Noting the time relationship of one’s physical examination with regard to when the Sinemet was last taken can help. The peak effect of immediate release Sinemet is felt to be at approximately one hour. If there are still pronounced parkinsonian symptoms one hour after taking the medicine, the dose should be increased. The point of diminishing returns occurs approximately at an individual dose of two and a half tablets of the 25/100 strength medication. Of course, side effects such as choreiform dyskinesias also signal the approach of the maximum tolerated dose. Once the optimal dose has been identified, the duration of the response can determine the dosing interval. The optimal dose should usually be the same throughout the day. If premature wearing off occurs, as may happen during periods of increased exercise, doses may be moved up accordingly. “Liquid” Sinemet can also act as a rescue therapy for freezing episodes. A tablet of Sinemet dissolved in juice or water, immediately consumed can start to work within twenty minutes and will last sixty to ninety minutes. Other multi-tablet concoctions with vitamin C as a preservative have been used but ultimately prove cumbersome for the majority of people to take them long term.

For troublesome nocturnal symptoms, a dose of immediate release medication may need to be taken at bedtime. If the person awakens in the middle of the night and is unable to return to sleep because of Parkinson’s symptoms, one could consider trying a CR (continuous release) formulation of Sinemet at the hour of sleep. Another option is to take a dose of immediate release Sinemet in the early hours of the morning. Silk pajamas and silk sheets can also facilitate bed mobility.

Peak-dose dyskinesias, chorea, and dystonias can be very troublesome. The effect is due to the peak of the individual dose and not the total daily dose. For this reason, lowering the dose and increasing the frequency of dosing can be tried. Unfortunately, the required dose reductions usually exacerbate the Parkinson’s symptoms. A switch to sustained release formulations may be useful. Amantadine (Symetrel), at 300 to 400 mg daily is an alternate option. At lower doses, it can be used short-term as a monotherapy in people with mild disease. At the higher dose, it can be an antidykinetic. Its main advantage is that it is associated with relatively few side effects, livedo reticularis or ankle edema being among the more common. However, practically speaking, the fact that it is excreted unchanged in the urine limits its use in elders who universally experience a decrease in creatinine clearance with aging.

Motor fluctuations and dyskinesias increase over time. It is felt that over one half of patients will experience them after five years of therapy. This is probably due to the progressive degeneration of the nigrostriatal dopamine terminals. Controversy exists, however, and some believe that the deterioration is not due to disease progression but rather the toxicity of L-dopa. This belief has sometimes led to the practice of delaying the initiation of Sinemet. In symptomatic elders, however, other medications are usually not well tolerated and L-dopa frequently remains the first-line drug.
The Henry J. Kaiser Family Foundation Announces the Native American Health Policy Fellowship Program 2003: Call for Applications

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The application deadline for 2003 fellowships is September 15, 2002 (contact the program manager for deadline extensions). Direct inquiries to:

The Program Manager
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The Henry J. Kaiser Family Foundation
1450 G Street, NW, Suite 250
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Information is also available on the Foundation’s website at www.kff.org; search Native American Fellowships.

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For more information, contact Luella Azule, Project Coordinator, Northwest Tribal Research Center, Northwest Portland Area Indian Health Board, 527 SW Hall St., Suite 300, Portland, Oregon 97201; telephone (503) 228-4185.
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