THE IHS PRIMARY CARE PROVIDER

A journal for health professionals working with American Indians and Alaska Natives

December 2004 **Volume 29 Number 12**

A Community-Based Intervention to Improve the Quality of Life of Navajo Patients Living with Spinal Cord Injuries in Indian Country

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Physical disabilities have long been inadequately addressed in American Indian populations, particularly those living on rural reservations. The 2003 report by the National Council on Disability (NCD) finds that American Indians and Alaska Natives have higher rates of physical and mental disability than the general population. Multiple features of reservation life, including extreme poverty, geographic isolation, limited employment opportunities, and exemption from much of the federal disability rights legislation exacerbate the challenges faced by Native Americans with handicaps. In Kayenta, on the northwestern corner of the Navajo Reservation, we have initiated a group of new programs to improve the medical, physical rehabilitation, and social opportunities for people living with spinal cord injuries. We have created a multidisciplinary team that coordinates with existing community programs to improve integration of people with disabilities into mainstream activities.

In August 2003, the NCD published a groundbreaking report on the status of people living with disabilities in the American Indian/Alaskan Native (AI/AN) communities. In addition to reviewing census data, the NCD sent teams to examine ten Indian communities in greater detail, including the Navajo Nation. Data collected from the 1997 Survey of Income and Program Participation found that 22 percent of AI/AN reported one or more disabilities. This compares with a national rate of 17 percent. This was also higher than any other minority group, including blacks (20 percent), Hispanics (15 percent), and Asian and Pacific Islanders (10 percent). Disabilities are over-represented in working age AI/AN, where the rate of one or more disabilities reached 27 percent. The 2000 census reports a rate of 27.1 percent among Navajo

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between 21 and 64 years of age. The most commonly reported disabilities were spinal cord injury, diabetes complications, blindness, mobility disability, traumatic brain injury, deafness, orthopedic conditions, arthralgias, mental illness, and substance abuse. Data from 1997 found that alcohol abuse was the most common cause of disability.

The NCD report identified what it felt were the most important barriers preventing government implementation of improved services for AI/AN living with disabilities. These were: poor coordination among federal, state, and tribal programs; limited federal staff understanding of specific AI/AN programs as well as cultural barriers; restricted enforcement of federal disability legislation because of the principle of tribal sovereignty; and finally, scarce tribal programs because of lack of funding and lack of awareness. The NCD also identified the historical distrust of the government and federal programs by AI/AN.

The various tribes have limited responsibility to comply with the Americans with Disabilities Act (ADA) and the Rehabilitation Act. Even when tribes are required to comply, there is no mechanism for enforcement because tribal sovereignty prevents private suits against the tribe in federal court. Title I of the ADA requires employers with 15 or more employees to provide equal employment opportunities for people with disabilities. However, Title I specifically exempts tribal governments. Private companies on the reservations must still comply with Title I. Title II of the ADA requires states to provide the least restrictive level of care for people with disabilities. Although the tribes are not specifically exempted from this requirement, cases are still pending in the Supreme Court to determine whether tribal governments must comply. Title III of the ADA prevents discrimination in public places. While the tribes are specifically required to comply with this legislation, it is difficult to take the tribe to court to prosecute lapses. The Eleventh Circuit Court found that tribal sovereignty still prohibits private suits against the tribe in federal court, although the US Department of Justice is able to enforce the legislation. This has not yet been tested in the Supreme Court. Title VII of the Rehabilitation Act provides state funding for independent living centers.

People living on rural reservations also grapple with social barriers to accessing health care. Public transportation is less commonly available, and distances to health care facilities are generally long. Once patients arrive at a healthcare facility, culturally sensitive services may not be available. Child care programs are less prevalent. Since most families have children, this also creates barriers to accessing care.

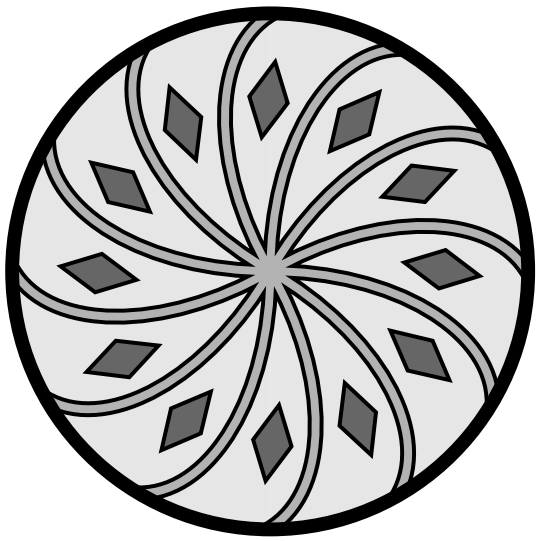
AI/AN living in rural areas also contend with inadequate housing. The NDC reports that 24 percent of AI/AN households do not have a telephone. Fewer than 30 percent of households have a computer, and fewer than 20 percent have Internet access.

Many of these difficulties are particularly acute in more isolated American Indian communities, like the Kayenta Service Unit on the Navajo Nation. The NCD report concurred, stating that while AI/AN communities are among the most impoverished in the country, this is particularly true for those who live in Indian Country. Kayenta is a town of approximately 5,000 on the western corner of the reservation. Our service unit, which includes two other satellite outpatient clinics, has a user population of nearly 18,000 patients. We are located more than 100 miles from the nearest border town and 70 miles from the nearest inpatient facility. The Kayenta Health Center consists of outpatient clinics and a 24-hour full-service emergency department staffed by 12 primary care physicians and one mid-level provider.

On the Navajo Reservation, only 53.1 percent of adults over 16 years of age are employed, and 31.3 percent of families earn less than $14,999 according to the 2000 census. In our area, nearly 50 percent of households live without full utilities and 80 percent lack phone service. On the Navajo Reservation as a whole, 43.4 percent lack a phone and 22.3 percent lack plumbing based on 2000 census data. Only 27.7 percent of all Navajos have a high school degree or equivalency as compared to 75.2 percent of the general population. There is very limited public transportation service in our area, provided by Navajo Transit. Although Navajo Transit is required to provide transportation to people with disabilities, in practice this has been difficult to achieve.

Another challenge our patients face is the lack of available personal care providers in our area. Even when insurance approves a certain number of personal care hours, it can be difficult or impossible to find someone locally to provide those services.

While Navajo with all types of disabilities face challenges in Kayenta, our pilot program specifically focused on patients with traumatic spinal cord injuries. We chose this group as a



small group with relatively uniform needs that were currently not being met by either our medical or local community. Our program has several elements aimed at improving the physical, emotional, and social well-being of our patients.

Health Care

We have created a multidisciplinary team to monitor the care of all patients with spinal cord injuries. One physician heads the committee, which also includes public health nurses, a health promotion and disease prevention specialist, and a medical social worker. Together, the team ensures that each patient receives yearly specialty care at one of four regional multidisciplinary clinics. We schedule local clinic days for patients to obtain all required lab and x-ray data prior to their visit to the multidisciplinary clinic. The public health nurses make extensive use of home visits to make sure that patients are aware of appointments and to provide short-term medical care, such as management of decubitus ulcers.

These patients have complex medical needs and rely heavily on specialist care obtained at other facilities. One critical role of this team is to ensure that all the recommendations from outside visits are accomplished. Our team obtains all reports and follows up on the plan for each patient. We also lack an inpatient facility, so the multidisciplinary team follows up on discharge recommendations from other facilities, including obtaining medications, ordering special items, and arranging follow-up appointments and consults.

Advocacy

Possibly the most significant program implemented by this team is the Toodineszhe Support Group for Navajo Living with Disabilities (Toodineszhe is Navajo for Kayenta). The group meets monthly at the home of one of the members. Patients, their caregivers, and our multidisciplinary team attend the meetings. We devote the first part of the meeting to a speaker from a service provider, such as the Native American Protection and Advocacy Program or the Navajo Housing Authority. During the second part of the meeting, patients and caregivers informally discuss personal issues and challenges or just chat. The patients have begun to take more initiative in planning advocacy projects. They have created a brochure and mission statement for their group and plan to march in a local parade to raise community awareness of disability issues.

Physical Rehabilitation Opportunities

We have networked extensively with local programs to provide new opportunities for physical rehabilitation. Providing recreational opportunities not only allows patients to pursue their physical rehabilitation goals, but also improves social and emotional wellbeing. Prior to our programs, there were no recreational opportunities for patients with physical disabilities in our area.

Our newest program is a wheelchair basketball league. In June 2004, we received an $18,000 Quality of Life grant from the Christopher Reeve Paralysis Foundation. We have purchased 10 Quickie All-Court athletic wheelchairs and plan to use a small amount of additional funding to sponsor another wheelchair basketball team to travel to Kayenta to hold a clinic. We also plan to stage a short demonstration game at half-time during the high school basketball season to increase awareness in the community of disability issues.

In November 2003, the Kayenta Unified School District (KUSD) completed work on a new pool. While the building is ADA compliant, the pool itself was not easily accessible for people with physical disabilities. We raised funds from community sources to purchase a portable ADA-compliant lift, which we gifted to the school. The school was able to find funding in its education budget to bring in an aqua therapist to train its staff to work with patients with special needs in the water. Now the pool runs two special physical education classes, and our exercise therapist from the clinic takes adult patients in the pool on a monthly basis.

We have also organized several day trips with the Durango Adapted Sports Association, based in Durango, Colorado, approximately 200 miles away. In January 2004, we took six patients and their caregivers downhill skiing. This summer we organized a river-rafting trip as well as a day spent canoeing and fishing. For many of our patients, these trips provided their first trip out of Kayenta and certainly their first time participating in a recreational sports activity since their injury. One quadriplegic patient commented after rafting that “My whole body felt alive for the first time since my accident.”

Fund Raising and Community Resources

Vigorous fund raising has been a necessary component of our program. Since Kayenta remains a federal facility, it is not able to accept outside grants easily. Our health board recently became incorporated as a not-for-profit entity. The board has performed a key role in our program, accepting grants in our behalf and administering the funds.

As with the other facets of our program, networking within the community has been essential to our success. Assist! To Independence, the only independent living center on the Navajo Nation, has been extremely supportive of our endeavors. For example, this organization provides gas vouchers for patients attending monthly support group meetings, supports our patients’ advocacy projects, and in some instances provides individual case management. Local groups such as the schools, the Catholic Church, and several local businesses have donated funds and provided other forms of assistance. The Catholic Church, for instance, was willing to accept and hold grant funds for our projects prior to incorporation of our health board.

Social Outlet

Perhaps the most rewarding aspect of our overall efforts has been the provision of a social outlet for our patients. Previously, most of our spinal cord injured patients remained at home most of the time. Now, they enjoy meeting at the monthly support group and the other events. We have also planned purely social occasions, such as a movie day at the local movie theater (which normally limits entry for individuals in wheelchairs because of space requirements). The owners graciously welcomed our group and deeply discounted the movie tickets. Afterwards one of our teenage members commented that it was the first time she had been out of her house since her injury 18 months previously. This has been a rewarding program for the clinical staff as well. Becoming involved with this group has raised our awareness of the severe privation our patients live with daily. Watching the patients enjoy the activities and begin to take the initiative to create their own projects has been tremendously fulfilling.

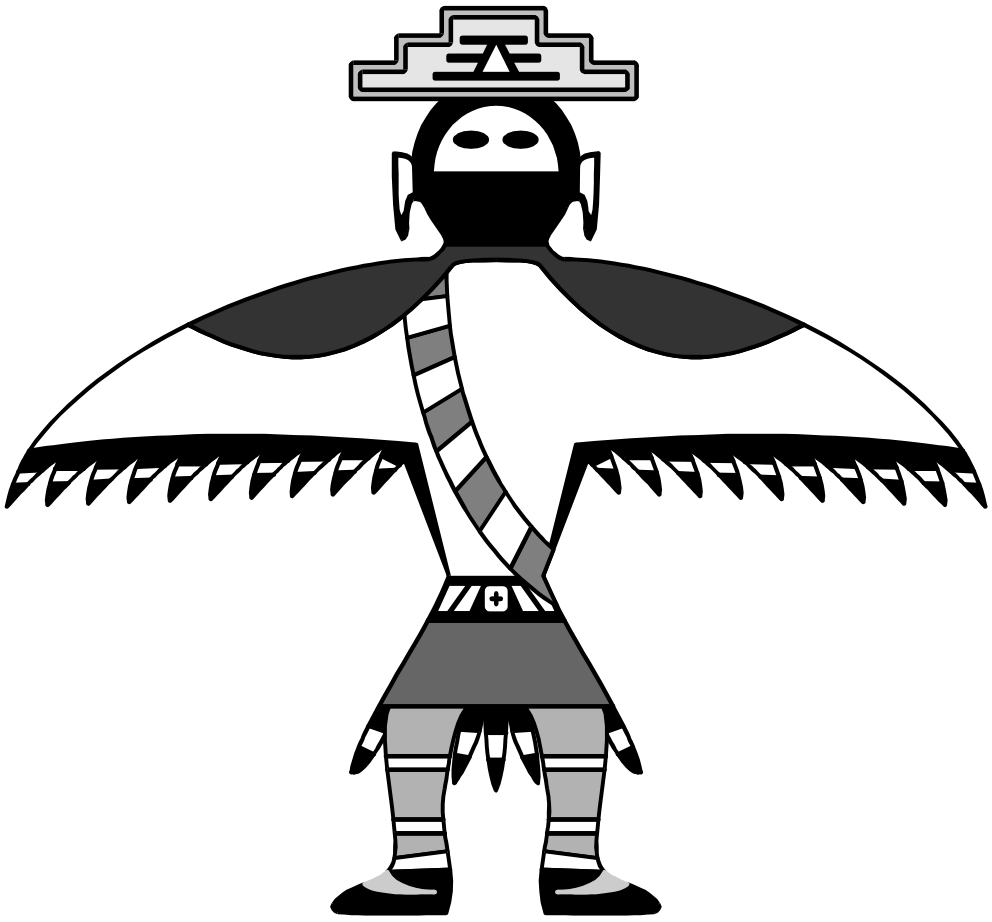
Summary

The lack of services for Native Americans with physical disabilities has recently come to national attention. In Kayenta, we have initiated a group of programs designed to improve the physical, social, and emotional well-being of Navajo patients living with spinal cord injuries. Our goal has been to empower our patients to envision a life rich with opportunities for themselves. The key elements of our success have been 1) the formation of a multidisciplinary team with shared responsibilities, 2) the empowerment of patients, particularly through the institution of a support group, 3) the acquisition of outside grants and funding sources, and 4) the coordination with other local and regional community resources such as schools, the health board, churches, and regional organizations that cater to the disabled. Expanding programs such as this one to other locations and to other groups of disabled patients can begin to address the many challenges facing AI/AN individuals with disabilities.

References

All general data and statistics came from "People with Disabilities on Tribal Lands: Education, Health Care, Vocational Rehabilitation, and Independent Living," published by the National Council on Disability on August 1, 2003. This is available on the Internet at *www.ncd.gov*.

Additional Statistics about Navajo are from the 2000 Census and the Navajo Area Orientation Manual.



Improving Dialysis Care in Indian Country

American Indians experience high rates of chronic kidney disease (CKD), often resulting in end-stage renal disease (ESRD). The incidence of ESRD for Native Americans has been noted to be as high as 2.7 times the Caucasian rate. In the Zuni Pueblo, a community of 10,000 in western New Mexico, the prevalence of ESRD is 17,400 per million population. This is 4.5, 5.7, and 21.3 fold higher than the rates for African Americans, American Indians, and European Americans respectively.

The public health issue of chronic renal disease in the Native American population has been well demonstrated in *The Provider* over the past 15 years. *The Provider* recently reviewed evidence-based guidelines, developed by the National Kidney Foundation. Developed from results from the Kidney Disease Outcome Quality Initiative (K/DoQI) and published in *The American Journal of Kidney Disease*, these guidelines can be found at *www.kidney.org/professionals/doqi/guidelineindex.cfm*.

Although *The Provider* can offer guidelines on important issues like this, the clinician also faces other, logistical challenges in regard to patients currently receiving hemodialysis treatment.

Several approaches have been utilized at the Zuni Service unit. In one recent initiative, the Zuni Pharmacy Department conducted biannual reviews of the charts of each dialysis patient. This review audited both the IHS chart and the Rehoboth McKinley Christian Health (RMCH) chart, and then created an "Extended Medication Sheet" that included all "approved medications" for a patient, authorizing six months of refills. The primary physician for each patient would then review and sign this Extended Medication Sheets; a copy was filed in both the Zuni and RMCH charts.

Advantages to this system included a thorough chart review of therapy every six months and an authorizing, legal prescription for the pharmacy department to reference on refill requests. The disadvantages of this system are significant and become more apparent as the number of patients increases. This is labor intensive for the reviewing pharmacist but manageable if there is a limited number of dialysis patients. Poor appointment show rates with primary providers leave resolving discrepancies to providers who are not familiar with the patient, did not know the patients' current medications, or did not have have knowledge of why some of the prescriptions were ordered by the nephrologists. In addition, medication changes made after the chart review were rarely noted on the existing Extended Medication Sheet, making this tool outdated quickly.

Given the increasing number of hemodialysis patients, and what with multiple providers from different facilities all writing orders for these patients, the pharmacy staff realized the Pharmacy Department-driven Extended Mediation Sheet was no longer an effective management tool.

In August 2002, the Zuni Pharmacy Department conducted a retrospective review of charts of those dialysis patients cared for at both Rehobeth McKinley Dialysis Center and the Zuni IHS facility, looking at medication discrepancies. The average number of prescription medications was 9.8, with a standard deviation of 3.59. The average number of discrepancies was 2.72, with a standard deviation of 2.39.

A more effective, multi-disciplinary approach was needed with increased involvement of the primary physicians. An aggressive effort to educate the patient regarding the need to visit their primary physician was made by the pharmacy department. Each and every hemodialysis patient was given an appointment with their primary physician, and counseled by the pharmacist. The pharmacist counseled the patient on proper medication usage, but also counseled the patient on the benefits of primary physician involvement, and handed each patient their scheduled appointment. The intent was to increase visits to the primary physician, who would then resolve medication discrepancies during the visit. The physician would also write a chronic medication list during the visit, and this would become a clear authorization for current medication eligible to be refilled. Copies of these visits would be given to the RMCH dialysis center to be filed for consistency between units.

Advantages of this system included greater familiarity with patients by the primary providers and a more team-oriented approach to resolving issues. Disadvantages were also significant. Dialysis patients receiving three- or four-hour treatments three days a week have a high no show rate for primary provider visits. Even after extensive counseling about the potential benefit, no show rates continued to be high. Many dialysis patients refer to their nephrologists as their doctor (for all care) and these high no show rates reflect that mentality. This system also requires diligence in sending copies of records of interval visits and medication changes between facilities; this is difficult to monitor. In addition, on some occasions when medication changes were forwarded, they were up to two months old. Results of the retrospective review showed no improvement using the Extended Medication Sheet approach. Because of the no show rates, this approach was also abandoned.

Dr. Andrew Narva, IHS Nephrologist, suggested attending the RMCH dialysis care conferences. Care Conferences are required every 60 days by Medicaid for each patient receiving hemodialysis. They include reviews by nursing, social services, dietary and the nephrologist. Medicaid also requires that the hemodialysis patient be invited to attend. An IHS pharmacist at these conferences could review the IHS and RMCH charts, and discrepancies could be addressed at that time. In addition, copies of the care conference notes could be entered in each chart, thus providing a common order for both facilities. Once these care conference notes are signed, they are also considered a legal order for pharmacy purposes for medication refills.

In addition to providing a shared, common therapy regimen, these records include the most recent results of laboratory tests done at the dialysis center, sometimes the most recent available.

The Zuni pharmacy implemented this plan and sent a representative to each RMCH care conference for one year. The following article details this effort.

Evaluating the Effectiveness of Pharmacist Participation in Care Conferences of Hemodialysis Patients

Andrew Narva, MD, IHS Chief Nephrologist, Albuquerque, New Mexico; Tom Horeis, RPh, Staff Pharmacist, Zuni Public Health Hospital, Zuni, New Mexico; and Melissa Neumann and Kevin Norton, both pharmacy students, University of Wisconsin-Madison, Madison, Wisconsin

Objective: To determine the effectiveness of pharmacist participation in reducing medication discrepancies between Rehoboth McKinley Christian Health (RMCH) Dialysis Center and Zuni Comprehensive Community Health Center (CCHC), and identify non-adherence with chronic medications.

Methods: We participated in monthly patient care conferences and retrospective chart reviews of patient medication history at the Zuni CCHC and RMCH Dialysis Center. One-hundred and ten end-stage renal disease patients receiving hemodialysis at RMCH Dialysis Center as of July 31, 2004 were included. The pharmacist printed a medication profile for each patient discussed at a Care Conference. In addition, the patient's Zuni IHS chart was requested from Medical Records for review on the day of the Care Conference. With the medication profile and IHS chart, the pharmacy representative attended the Care Conference at the RMCH dialysis center. Medication regimens were compared between both charting systems. Adherence to therapy was reviewed prior to any changes. Copies of Care Conference notes were printed and filed in both the RMCH and Zuni charts.

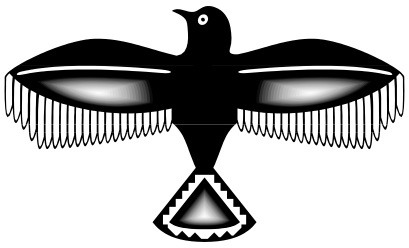
Results: Fifty-six of the 110 hemodialysis patients (51%) had zero medication discrepancies compared to 7% in 2003 and 15% in 2002. Only one (0.9%) of the participants had more than four medication discrepancies in contrast to 20% in 2003 and 18% in 2002. The average number of discrepancies was 0.9 ± 1.2 per patient, which was much lower than the previous two year's results of 3.2 ± 2.6 and 2.7 ± 2.4, respectively. Fifty-six of the 110 patients (51%) were completely adherent to their medication regimens compared to 7% in 2003 and 9% in 2002. Approximately 21% were non-adherent to two or more medications versus 77% and 64%, respectively. Average number of non-adherent medications decreased from 4.7 ± 2.6 in 2003 and 3.95 ± 2.8 in 2002 to 1.4 ± 2.2 in 2004.

Conclusions: Since the implementation of patient care conference meetings between pharmacists and physicians in August 2003, medication discrepancies and non-adherence have drastically declined. These results illustrate the importance of working together as a health care team and the need for pharmacists to educate patients about the benefits of prescribed medications to improve adherence.

The effectiveness of attending the Care Conferences is self evident. Following Medicaid requirements, hemodialysis patients' medications are reviewed and updated bimonthly. In addition, communication between facilities was improved. Medications not taken by the patient were discussed, and in many cases discontinued. This resulted in much more accurate information for both facilities. Often an increase in the dosage of phosphate binder was delayed until after discussing adherence issues with the patient first. This also applied to hypertension, hyperlipidemia and diabetes medications as well. The multidisciplinary approach showed much better results than previous attempts relying on one discipline.

Problems noted with the new system included pharmacy staff time required for care conferences at an outside facility, timeliness of getting care conference notes filed in Zuni charts, and changes made in between care conferences not being shared between facilities. Also of note, Care Conference notes signed by an uncredentialed nephrologist need authorization internally before being legitimate for filling purposes, depending on each pharmacy's policy.

Overall, pharmacy attendance at the RMCH care conference has been considered a success. Medications not being taken have been discontinued; inappropriate changes have been avoided; and the number of discrepancies has been reduced. Considering the fact that Care Conferences are required by Medicaid, and given the history of poor results with other approaches, attendance at these care conferences has been beneficial and has made a positive difference for this facility.



Native American and Alaska Native Health Internet Resources

Diane Cooper, MSLS, Informationist for the Indian Health Service, NIH Library, Bethesda, Maryland

In previous columns, we reviewed sources for evidence-based medicine, including the Cochrane Collection. Now we delve into the wide, wide world of the Internet. Our focus here is websites that may be relevant to the mission of the Indian Health Service.

Risk Factor Statistics

The Racial and Ethnic Approaches to Community Health (REACH) 2010 Risk Factor Survey is conducted annually in minority communities in the United States. In the most recent survey, for 2001-2002, interviews were conducted with over 1,000 minority individuals: Blacks, Hispanics, Asians/Pacific Islanders, and American Indians. Data were compared with national statistics. Here are some results: 38% of American Indian men and women were obese, compared to 20% of the national sample. Cigarette smoking was common in American Indian communities at 42% for men and 37% for women compared to 30% of the national sample. American Indian communities also had higher prevalence rates of self-reported heart disease, hypertension, high blood cholesterol, and diabetes. You can reach this report at *http://www.cdc.gov/mmwr/PDF/ss/ss5306.pdf*.

American Indian Health

As a starting place, this would be a good site for most people. Developed by the National Library of Medicine, this site presents information on topics including policies, consumer health, and research. Results of pre-defined PubMed® searches on clinical and consumer information, traditional medicine, and health care access are updated monthly. The MedlinePlus Native American Health section provides public interest topics. This website provides links to many other sites including some of the ones listed below. Go to *http://americanindianhealth.nlm.nih.gov/intro.html*.

Code Talk

A federal interagency website designed to deliver information from government agencies and other organizations to Native Americans. Go to *http://www.codetalk.fed.us/*.

Traditional Food, Health and Nutrition

"It isn't practical to recommend now for most of us that we eat buffalo, harvest wild rice, farm corn in single hills, gather waupatoo or teepsinna." With that introduction, this site recommends a healthy diet within today's availabilities**.** *Go to http://www.kstrom.net/isk/food/foodmenu.html.*

Women's Health

"Health Problems in American Indian/Alaska Native Women" is the title of this page. It contains a list of relevant publications and organizations. Go to *http://www.4woman.gov/minority/native.htm*.

Native Elder Health

This national resource center for information on older American Indians and Alaska Natives is now maintained at the University of Colorado Health Sciences Center. It includes a database of articles and reports specific to the health status and care of the elderly. Go to *http://www.uchsc.edu/ai/nehcrc/*.

Diabetes

A fact sheet from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) with statistics, risk factors, complications, future research in diabetes can be found at *http://diabetes.niddk.nih.gov/dm/pubs/americanindian/index.htm*.

Child Health

The website of the Committee on Native American Child Health, appointed by the American Academy of Pediatrics presents policies and programs that improve the health of Native American children. Go to *http://www.aap.org/nach/*.

Substance Abuse

For a site that presents links to newspapers, organizations, cultural sites, and other networks related to substance abuse and Native Americans, go to *http://www.oneskycenter.org/*.

Alaska Native Knowledge Network

"This site includes materials describing traditional health, medicine and healing practices of Alaska Native people and their applicability today." Go to *http://www.ankn.uaf.edu/health.html.*

Native Health Databases

The site presents a grand list of links including a series of predefined expert searches, e.g., kidney diseases and American Indians. There are also links to funding and tribal libraries. Go to *http://hsc.unm.edu/library/nhd/links.cfm*.

Bibliography on Traditional Healing

Presented here are traditional medicine and ethnobotany sources from AGRICOLA, a database of the National Agricultural Library. It is not up to date, covering 1990-1999, but it is a good background source for those years. Go to *http://www.nal.usda.gov/outreach/Medicine.htm***.**

Editor's Note: The following is a digest of the monthly Obstetrics and Gynecology Chief Clinical Consultant's Newsletter (Volume 2, No. 11, November 2004) available on the Internet at http://www.ihs.gov/MedicalPrograms/MCH/M/OBGYN01.cfm. *We wanted to make our readers aware of this resource, and encourage those who are interested to use it on a regular basis. You may also subscribe to a listserv to receive reminders about this service. If you have any questions, please contact Dr. Neil Murphy, Chief Clinical Consultant in Obstetrics and Gynecology, at* nmurphy@anmc.org.

OB/GYN Chief Clinical Consultant's Corner Digest

Abstract of the Month

Results of the National Study of Vaginal Birth after Cesarean in Birth Centers

Objective: Some women wish to avoid a repeat cesarean delivery and believe that a midwife-supported vaginal birth after cesarean (VBAC) in a nonhospital setting represents their best chance to do so; there is a small, persistent demand for out-of-hospital VBACs. We conducted a study to obtain the data necessary to formulate an evidence-based policy on this practice.

Methods: We prospectively collected data on pregnancy outcomes of 1,913 women intending to attempt VBACs in 41 participating birth centers between 1990 and 2000.

Results: A total of 1,453 of the 1,913 women presented to the birth center in labor. Twenty-four percent of them were transferred to hospitals during labor; 87% of these had vaginal births. There were 6 uterine ruptures (0.4%), 1 hysterectomy (0.1%), 15 infants with 5-minute Apgar scores less than 7 (1.0%), and 7 fetal/neonatal deaths (0.5%). Most fetal deaths (5/7) occurred in women who did not have uterine ruptures. Half of uterine ruptures and 57% of perinatal deaths involved the 10% of women with more than 1 previous cesarean delivery or who had reached a gestational age of 42 weeks. Rates of uterine rupture and fetal/neonatal death were 0.2% each in women with neither of these risks.

Conclusion: Despite a high rate of vaginal births and few uterine ruptures among women attempting VBACs in birth centers, a cesarean-scarred uterus was associated with increases in complications that require hospital management. Therefore, birth centers should refer women who have undergone previous cesarean deliveries to hospitals for delivery. Hospitals should increase access to in-hospital care provided by midwife/obstetrician teams during VBACs.

Lieberman E, Ernst EK, Rooks JP, Stapleton S, Flamm B. Results of the national study of vaginal birth after cesarean in birth centers. *Obstet Gynecol*. 2004 Nov;104(5):933-42.

OB/GYN CCC Editorial comment

I realize you don't necessarily work in a "birthing center," but many Indian health system deliveries occur in remote, low risk centers, so this applies to many of our patients/staff.

The Indian Health Biennial Women's Health and MCH meeting presented several venues for discussion of VBAC and its application in Indian Country. I highly recommend reviewing the material that Dr. Michele Lauria has allowed us to post on our MCH web site.

- Low risk: Spontaneous onset of labor, normal tracing, 1 prior cesarean delivery
- Medium risk: Augmented labor, 2 prior cesarean deliveries, induction of labor, last CD < 18 months prior
- High risk: Abnormal FHR – not resolving, no change despite 2 hours of adequate labor, bleeding like an abruption

From your colleagues

From Bonnie Bishop-Stark, Anchorage

Total Cr/P useful for ruling out preeclampsia, but not for diagnosing significant proteinuria.

Conclusion: The random urine protein-creatinine ratio was a poor predictor for significant proteinuria in patients with new-onset mild hypertension in late pregnancy.

Al RA, Baykal C, Karacay O, Geyik PO, Altun S, Dolen I. Random urine protein-creatinine ratio to predict proteinuria in new-onset mild hypertension in late pregnancy. *Obstet Gynecol*. 2004 Aug;104(2):367-71.

OB/GYN CCC Editorial comment

At this juncture in our understanding, the key to the use of this test in pregnancy is that the total Cr/P accurately excludes significant proteinuria and may be useful for ruling out preeclampsia. On the whole, the random urine protein-creatinine ratio was a poor predictor for significant proteinuria in patients with new-onset mild hypertension in late pregnancy.

For example, with use of a 0.19 cut-off, the test had a good negative predictive value (95%) in excluding significant proteinuria. However, the positive predictive value of the test was only 46%, and a test result above the cutoff point was not diagnostic for significant proteinuria.

From Kat Franklin, Sante Fe, and Marsha Tahquechi, GIMC

Easy access to Patient Education materials. How would you like to improve the nationwide Indian health system access to patient education material? A great deal of this work already exists, but we seek your help to improve access. Isn't that a good idea? Contact *Marsha.Tahquechi@ihs.gov* or *kfranklin@abq.ihs.gov*.

From Ty Reidhead, Whiteriver

Easier access to Clinical Guidelines in Indian Health. A great deal of this work already exists (see site below) but we seek your help to improve the existing Clinical Guidelines page. Do you have clinical guidelines you want to share? Can you think of any clinical guidelines that are a 'must' to be posted on the Indian health website? Contact Ty Reidhead at *Charles.Reidhead@ihs.gov*.

From Judy Thierry, HQE

Overweight and obese women had a significantly slower labor (see also Stillwater, below).

Overweight and obese women had a significantly slower labor from 4 to 10 cm, compared with that of normal weight women. The prevalence of overweight and obesity is increasing among women of childbearing age, yet few studies have explored in depth the effect of maternal overweight and obesity on labor progression.

- Compared with normal weight women, both overweight and obese women were admitted earlier to labor and delivery, more frequently reported no or irregular uterine contractions, more frequently had their labor induced, and received oxytocin more often.
- Primary emergent cesarean delivery rates were higher for overweight and obese women compared with normal weight women. The majority of these deliveries were performed during the first stage of labor because of an indication of dystocia and fetal distress.
- Overweight and obese women had a significantly longer median duration of labor from 4 to 10 cm compared with normal weight women (7.5, 7.9, and 6.2 hours, respectively), after adjusting for maternal height, net weight gain, labor induction, membrane rupture, the timing and use of epidural analgesia, oxytocin use, and fetal size.
- Compared with normal weight women, the trend of a slower labor from 4 to 6 cm persisted in overweight women, and the trend of a slower labor before 7 cm persisted in obese women.
- Given that nearly one half of women of childbearing age are either overweight or obese, it is critical to consider differences in labor progression by maternal prepregnancy BMI before additional interventions are performed.

Vahratian A, Zhang J, Troendle JF, et al. 2004. Maternal prepregnancy overweight and obesity and the pattern of labor progression in term nulliparous women. *Obstetrics and Gynecology*. 104(5, Part 1):943-951.

OB/GYN CCC Editorial comment

This article and Ehrenberg HM, et al (see Stillwater, below) report on the detrimental effects of maternal obesity on the normal labor process. In Ehrenberg HM, et al., records for 12,303 deliveries showed pregravid obesity and diabetes independently increase the risk for CD. Given the disparate prevalence of obesity and diabetes in the United States, body habitus has a significantly larger impact on CD risk.

Along with ACOG, we should strongly recommend exercise to our pregnant patients, especially those with pregravid obesity and diabetes in pregnancy. In the absence of medical or obstetrical complications, pregnant women should be encouraged to continue and maintain an active lifestyle during their pregnancies. Some modification in exercise routines or activity patterns may be necessary because of maternal physiological changes and fetal requirements.

Basically only moderate exercise is needed. As a rough rule of thumb, the "talk-sing test" may be used: the patient should be able to talk while exercising; if she can sing, the pace can be increased. The current guidelines for diabetes in pregnancy give an example of a tested exercise program successfully used in AI/AN pregnant women (see Appendix F, below).

For optimal outcome, the Institute of Medicine advises a weight gain of

Underweight women (BMI <19.8)	12.5 to 18 kg (28 to 40 lb)
Average weight (BMI 19.8 to 26.0)	11.5 to 16 kg (25 to 35 lb)
Overweight women (BMI >26)	7 to 11.5 kg (15 to 25 lb)

These can be achieved with an additional 300 Kcal per day for average weight women

ACOG

Exercise During Pregnancy and the Postpartum Period Committee Opinion Number 267, January 2002

Appendix F

Exercise guidelines to improve glucose control

Type of activities:

Aerobic activities such as walking, stationary cycling, or swimming

Frequency:

At least 3 days per week

Duration:

20-45 minutes per session

Intensity:

Moderate: The "talk-sing test" may be used – the patient should be able to talk while exercising; if she can sing, the pace can be increased. If using rating of perceived exertion (RPE), exertion level should feel "fairly light" to "somewhat hard."

Patient should warm-up before and cool down after exercise, drink plenty of water, and have snacks nearby if needed.

Initial exercise consult:

Assessment of current physical activities and level of readiness for exercise
Education/Information on exercise and GDM
Individualized exercise plan
Supervised exercise:
Measure blood glucose pre and post exercise
Exercise on treadmill and/or recumbent cycle
Monitor perceived exertion
Monitor blood pressure and/or heart rate as needed

Hot Topics

Obstetrics

Three Articles on CenteringPregnancy.

CenteringPregnancy and the Current State of Prenatal Care. Prenatal care is often credited with improving pregnancy outcomes. Yet rates of low birth weight (LBW) and prematurity have risen in recent decades, calling into question the efficacy of traditional prenatal routines. Proposals have included broadening the objectives of prenatal care beyond prevention of LBW and enriching care to provide education and support for pregnant women. CenteringPregnancy, an innovative model of prenatal care that integrates extensive health education and group support with the standard prenatal exam, incorporates many of these elements. Impediments to wider implementation of CenteringPregnancy are explored, as well as proposals for addressing these challenges.

Novick G. CenteringPregnancy and the current state of prenatal care. *J Midwifery Womens Health*. 2004 Sep-Oct;49(5):405-11.

Pregnancy Outcomes of Adolescents Enrolled in a CenteringPregnancy Program. Adolescent pregnancy remains a significant social, economic, and health issue in the United States. The unique developmental needs of the pregnant adolescent require attention when designing prenatal care services. The CenteringPregnancy model of group prenatal care provides education and support for young women in an active and developmentally appropriate environment. Thirteen groups of adolescents (N = 124) have completed the Centering program at the Teen Pregnancy Center at Barnes Jewish Hospital in St. Louis, Missouri. Evaluation data suggest that the model has encouraged excellent health care compliance, satisfaction with prenatal care, and low rates of preterm birth and low birth weight infants.

Grady MA, Bloom KC. Pregnancy outcomes of adolescents enrolled in a CenteringPregnancy program. *J Midwifery Womens Health*. 2004 Sep-Oct;49(5):412-20.

Redesigning prenatal care through CenteringPregnancy. CenteringPregnancy is a model of group prenatal care that provides more than 20 hours of contact time between the childbearing care provider and a cohort of pregnant women with similar due dates. During this time, each woman has the opportunity to build community with other pregnant women, learn self-care skills, get assurance about the progression of her pregnancy, and gain knowledge about pregnancy, birth, and parenting. Ten essential elements have been defined, which contribute to the success of this model of prenatal care delivery. These elements correspond with the Institute of Medicine's 2001 challenge to improve the quality of health care in the United States. Foundational perspectives provide potential explanations for the model's growing influence and success. Implications for clinical practice and further research to link it with perinatal health outcomes are suggested.

Rising SS, Kennedy HP, Klima CS. Redesigning prenatal care through CenteringPregnancy. *J Midwifery Womens Health*. 2004 Sep-Oct;49(5):398-404.

OB/GYN CCC Editorial comment

CenteringPregnancy has been used successfully throughout the Indian health system, as well as at the University of New Mexico. To date, the paucity of funded and published research on Centering is one of the great impediments to demonstrating its value, as well as to disseminating the model. Despite the lack of evidence that traditional, one-on-one prenatal care is effective, as a challenger to the status quo, a burden of demonstrating effectiveness rests on Centering's shoulders. Other innovative approaches to care have faced this challenge too, such as freestanding birth centers compared to hospital birth.

I encourage randomized studies in the AI/AN population. If you are interested in further discussion about CenteringPregnancy in Indian health, contact Yolanda Meza, CNM, (ANMC) at *ymeza@anmc.org* or Judy Whitecrane (PIMC) at *Judy.Whitecrane@ihs.gov*.

Data support the routine use of antibiotics for women with PROM. Amoxicillin/clavulanate should be avoided due to increased risk of neonatal necrotizing enterocolitis. *Conclusion*: The administration of antibiotics after PROM is associated with a delay in delivery and a reduction in maternal and neonatal morbidity. These data support the routine use of antibiotics for women with PROM. Penicillins and erythromycin were associated with similar benefits, but erythromycin was used in larger trials and, thus, the results are more robust. Amoxicillin/clavulanate should be avoided in women at risk of preterm delivery because of the increased risk of neonatal necrotizing enterocolitis. Antibiotic administration after PROM is beneficial for both women and neonates.

Kenyon S, Boulvain M, Neilson J. Antibiotics for preterm rupture of the membranes: a systematic review. *Obstet Gynecol*. 2004 Nov;104(5):1051-7.

Features

American Family Physician

Trial of Labor After Cesarean Section Is Relatively Safe. Clinical Question: How risky is a trial of labor after cesarean delivery for uterine rupture and other patient-oriented outcomes? Bottom Line: Based on the best research, as compared with trial of labor, approximately 370 elective repeat cesarean sections would have to be performed to avoid one symptomatic uterine rupture. More than 7,000 elective repeat cesarean sections would be needed to prevent one perinatal death associated with uterine rupture, and almost 3,000 elective repeat cesarean sections would be needed to prevent one hysterectomy. No maternal deaths occurred among women who chose trial of labor or elective repeat cesarean section in the studies included in this review. There is insufficient evidence to judge whether induction of labor with oxytocin or prostaglandins increases the risk of symptomatic uterine rupture. This information should be included in the consent process for women who must choose between trial of labor and elective repeat cesarean section. (Level of Evidence: 2a)

ACOG

Prenatal and perinatal human immunodeficiency virus (HIV) testing: expanded recommendations. The Committee on Obstetric Practice makes the following recommendations:

- follow an opt-out prenatal HIV testing approach where legally possible
- repeat offer of HIV testing in the third trimester to women
  - in areas with high HIV prevalence
  - women known to be at high risk for HIV infection
  - women who declined testing earlier in pregnancy
  - as allowed by state laws and regulations
- Use conventional HIV testing for women who are candidates for third-trimester testing
- use rapid HIV testing in labor for women with undocumented HIV status
- if a rapid HIV test result is positive, initiate antiretroviral prophylaxis (with consent) without waiting for the results of the confirmatory test

Prenatal and perinatal human immunodeficiency virus testing: expanded recommendations. ACOG Committee Opinion No. 304. American College of Obstetricians and Gynecologists. *Obstet Gynecol*. 2004;104:1119–24.

Primary Care Discussion Forum

February 1, 2005: Surgery for obesity?
Moderator: Hope Baluh
This discussion will include:

- Is it time for obesity surgery in the IHS?
- How are primary care providers addressing the obesity epidemic now?
- Would non-surgical programs to address this issue be safer? easier? more effective?
- Cost effectiveness: what's cheaper? what about results?

Questions on how to subscribe: contact *nmurphy@anmc.org* directly.

This is a page for sharing "what works" as seen in the published literature as well as what is being done at sites that care for American Indian/Alaskan Native children. If you have any suggestions, comments or questions please contact Steve Holve, MD, Chief Clinical Consultant in Pediatrics at sholve@tcimc.ihs.gov.

IHS Child Health Notes

Quote of the month

"*When so many hours have been spent in convincing myself that I am right, is there not some reason to fear I may be wrong?"*

Jane Austen

Articles of Interest

Oral prednisolone in the acute management of children age 6 to 35 months with viral respiratory infection-induced lower airway disease: a randomized, placebo-controlled trial. *J Pediatr*. 2003 Dec;143(6):725-30. *http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=14657816&itool=iconabstr*

- A 2 mg/kg dose of oral prednisolone given in the emergency department did not decrease the need for admission to the hospital for young children with viral respiratory infection induced wheezing.
- However, the above dose at emergency department presentation and continued for three days did decrease the severity and duration of symptoms and decreased the length of hospital stay.
- An accompanying editorial suggest that for steroids to be effective in bronchiolitis they need to be given early in the onset of disease to prevent airway inflammation.

A randomized trial of a single dose of oral dexamethasone for mild croup. *N Engl J Med*. 2004 Sep 23;351(13):1306-13. *http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15385657*

- It is known that dexamethasone is beneficial in severe croup. This study showed that oral dexamethasone was beneficial even in mild croup.
- Dexamethasone treated patients were only half as likely to need to be seen for a follow-up visit (7% versus 15%).
- The authors admit that the benefits per patient were small. However, they point out that the benefits may not be "small" to parents who had to make fewer return trips to the emergency room and whose children slept better.

Editorial Comment

When I was in residency the faculty spent a lot of energy making sure we didn't overuse steroids. Only patients who really had documented asthma should receive them. Perhaps we were trying too hard to convince ourselves. If only Jane Austen had been an attending.

The debate about how to best treat bronchiolitis is unlikely to end any time soon. For hospitalized patients, hydration and oxygen are most important. Nebulized albuterol or epinephrine may benefit some subsets of patients. Should all wheezing infants be treated with prednisolone? I don't think this paper definitively answers that question. It does raise the issue that if patients are to be treated, perhaps they need treatment early in the course of illness. Once there has been significant airway inflammation and desquamation, steroids may not have much benefit.

However, the second paper extends the use of steroids for treating croup. There is good evidence to treat all patients with croup, mild to severe, with steroids. In addition, the steroid may be given by mouth or by injection with equal results.

Recent literature on American Indian/Alaskan Native Health

Prevalence of dental caries among 7- and 13-year-old First Nations children, District of Manitoulin, Ontario. *J Can Dent Assoc*. 2004 Jun;70(6):382.*http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15175117*

Prevalence of early childhood caries among First Nations children, District of Manitoulin, Ontario. *Int J Paediatr Dent*. 2004 Mar;14(2):101-10.*http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15005698*

- Two dental studies from First Nation children in Canada show that the caries rate is higher in Aboriginal children compared to the overall caries prevalence in Canadian children. This is similar to the finding in the U.S. in which American Indian and Alaskan Native children had a higher caries rate than the overall population.
- This raises the question of what factors make the caries rate higher in both of these populations. We know that caries are an infectious disease, and we know from multiple studies that crowding, poverty, and *Streptococcus mutans* carriage rates in mothers are all risk factors. How much is diet a factor? Is there a genetic component?

- Despite the increase in caries in First Nations children, the rates in Canada were not nearly as high as in American Indian children. The average number of decayed, missing, and filled surfaces (dmfs) in three year old Canadian Aboriginals was 7.5. In many tribes in the U.S., American Indian young children have a dmfs rate of 20. What factors make early childhood caries an even greater problem in U.S. Native children compared with Canada?

Meetings of Interest for Child Health
Annual Midwinter Maternal Child Health Conference
February 25 – 27, 2005; Telluride, Colorado

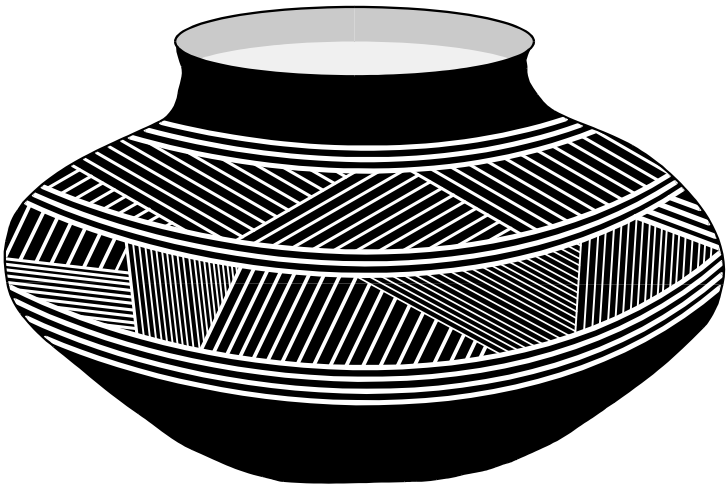
This is a meeting for those who care for Native American women and children combined with a chance to ski in Telluride. For more information, contact Alan Waxman at *awaxman@salud.unm.edu* or go to *http://www.ihs.gov/MedicalPrograms/MCH/M/ConfDnlds/TelluridеagendaI0-2004.doc*.

Virtual Geriatric Institute Available

The New Mexico Geriatric Education Center's Virtual Geriatric Institute is now available on their website. The virtual institute is comprised of the taped general sessions and downloadable handouts from the 2004 Summer Geriatric Institute on "The Elder in Crisis: Managing Geriatric Emergencies," with sessions on The Elder with Fever; The Elder with Abdominal Pain, Vomiting, and Bleeding; The Elder with Shortness of Breath; The Elder with Acute Behavioral Disturbances; and The Elder in Crisis: Building a Support Network.

If you missed the institute, now is your opportunity to gain the geriatrics knowledge and skills offered in this conference, which builds on the last three years and includes CMEs/CEUs.

There are fee waivers available for tribal and IHS providers. Check it out on our website at *http://hsc.unm.edu/som/fcm/gec* or contact Darlene Franklin for the full agenda or to register, at *dfranklin@salud.unm.edu* or (505) 272-4934.



Fundamentals of HIV/AIDS Preceptorships for AI/AN Health Care Providers

The Phoenix Indian Medical Center's "Fundamentals of HIV/AIDS Preceptorship" is designed to teach IHS, tribal, or urban program health care providers — including physicians, nurses, physician assistants and case managers — how to identify new cases of HIV, provide basic medical care, and use information technology to assist in patient care after the participants return to their communities. The training is designed specifically to be peer-based, utilizing as teachers clinicians with more experience in the treatment of HIV/AIDS. This activity will be held March 29 - 31, 2005 in Phoenix, Arizona.

PIMC's preceptorship consists of three half-days of lectures on the epidemiology and fundamentals of HIV disease, the components of counseling and testing, and maternal-child health. A second component of the program teaches participants how and where to access expert consultation on HIV care and treatment using the Internet and/or telephone consultation. Use of a state-of-the-art computer lab gives participants an opportunity to test new skills by conducting online research. Every afternoon, as the third component of the preceptorship, participants choose from a variety of opportunities to observe their peer-clinicians provide pre- and post-test counseling, and to observe methods of providing HIV care at PIMC, Maricopa County Public Health Department, Phoenix Children's Hospital Bill Holt Clinic, the Carl T. Hayden Veteran's Administration Hospital, or the McDowell Comprehensive Health Care Center, a CARE Act funded clinic specializing in the care of people living with HIV/AIDS.

Application

There is no cost for this activity. Support for travel and lodging is available through the HIV Center of Excellence (travel support is only by a reimbursement process). Each individual participant is responsible for making their own travel arrangements. Lodging arrangements will be made upon travel arrangement confirmation. Please call Adrian Bizardi, Grant Administrator, Centers of Excellence for details by telephone at (602) 263-1587.

Training Objectives

Upon completion of the HIV Preceptorship Clinical Training Program, participants will be able to:

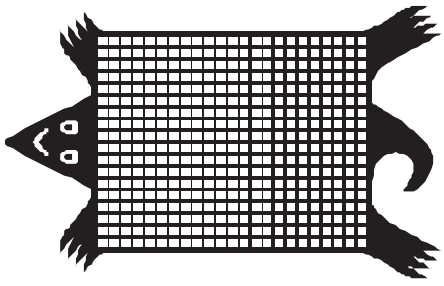
- Perform HIV risk assessments and provide information on risk reduction and recommendations regarding HIV testing;
- Conduct initial evaluation and follow-up of patients in early stages of HIV infection;
- Recognize and treat early symptoms and common manifestations of HIV infection;
- Refer patients to appropriate medical and non-medical HIV resources; and
- Understand the importance of interdisciplinary treatment plans for AIDS patients.

Continuing Education Credits

The Indian Health Service (IHS) Clinical Support Center is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians. The IHS Clinical Support Center designates this continuing education for up to 19.5 hours of Category 1 credit toward the Physician's Recognition Award of the American Medical Association. Each physician should claim only those hours of credit he or she actually spent in the educational activity. This Category 1 credit is accepted by the American Academy of Physician Assistants and the American College of Nurse Midwives. The Indian Health Service Clinical Support Center is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center Commission on Accreditation, and designates this activity for 23.4 contact hours (including 3.6 hours of pharmacology) for nurses.

Contact

For more information, contact Adrian Bizardi, Grant Administrator, Centers of Excellence, Phoenix Indian Medical Center; telephone (602) 263-1587; e-mail *adrian.bizardi@ihs.gov*; or Charlton Wilson, MD, FACP, Associate Director, Phoenix Indian Medical Center, telephone (602) 263-1587; e-mail *charlton.wilson@ihs.gov*.



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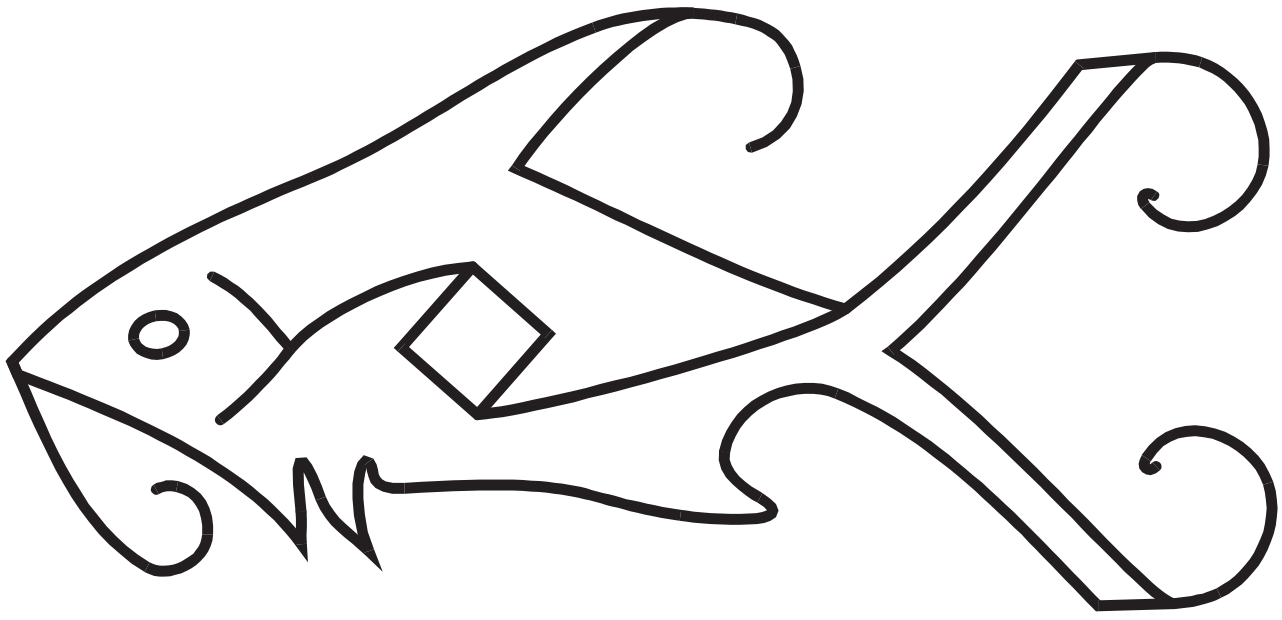

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Opinions expressed in articles are those of the authors and do not necessarily reflect those of the Indian Health Service or the Editors.

Circulation: The PROVIDER (ISSN 1063-4398) is distributed to more than 6,000 health care providers working for the IHS and tribal health programs, to medical schools throughout the country, and to health professionals working with or interested in American Indian and Alaska Native health care. If you would like to receive a copy, send your name, address, professional title, and place of employment to the address listed below.

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