



THE IHS PRIMARY CARE PROVIDER

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



December 2010

Volume 35 Number 12

Economic Costs of Motor Vehicle Crashes and Economic Benefits of Prevention for the San Carlos Apache Tribe

Neill F. Piland, DrPH, Research Professor and Director, Institute of Rural Health, Idaho State University, Pocatello, Idaho; Lawrence R. Berger, MD, MPH, Clinical Assistant Professor of Pediatrics, University of New Mexico, Albuquerque, New Mexico; and Rebecca M. Naumann, MSPH, Epidemiologist, Motor Vehicle Team, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, Georgia

Introduction

American Indians and Alaska Natives (AI/AN) have a motor vehicle-related death rate more than one-and-a-half times greater than the rate for all other Americans (23.48/100,000 vs. 14.46/100,000).¹ To help address this disparity, the Centers for Disease Control and Prevention (CDC) awarded funds in 2004 to four tribes to tailor and implement evidence-based injury prevention programs to reduce motor vehicle-related injuries and deaths among members of their communities. Over the course of the five-year period of the CDC-funded cooperative agreements, each program implemented interventions selected from The Guide to Community Preventive Services, a systematic review of community-based interventions.² More information about The Guide and recommended interventions can be found at www.thecommunityguide.org.

The San Carlos Apache (SCA) Tribe, one of the four funded tribes, is located in southeast Arizona on 1.8 million acres of land with a population of more than 10,000 residents. In late 2004, the SCA Tribe established their CDC-funded Tribal Motor Vehicle Injury Prevention Program (TMVIPP) within the SCA Police Department. The goal of the SCA TMVIPP was to reduce motor vehicle-related injury and death by decreasing alcohol-impaired driving and increasing restraint use. To reach this goal, a network of partners was established with organizations both internal and external to the tribe, including the Indian Health Service (IHS), the Arizona

Department of Public Safety, Mothers Against Drunk Driving (MADD), and several tribal groups. Partners assisted with planning and carrying out program activities, under the lead of the program coordinator. The SCA TMVIPP activities included a comprehensive media campaign, sobriety checkpoints, enhanced police enforcement, and local community events. Data were collected on numbers of DUI arrests, sobriety checkpoints, and motor vehicle crashes, as well as on restraint use. Over the intervention period, the SCA TMVIPP was able to document important successes. Highlights include total DUI arrests increased 52%, motor vehicle crashes decreased 29%, nighttime motor vehicle crashes decreased 27%, and motor vehicle crashes involving injuries and/or fatalities decreased by 31%.³

This study builds on the detailed TMVIPP intervention data and evaluation work to examine the economic effects of the SCA TMVIPP. While detailed evaluation data have shown the successes of the program in terms of reductions in crashes and injuries, economic estimates provide valuable information about how such preventive programs affect the economies of tribes. These estimates reflect the amount of resources that may be saved from the TMVIPP and redirected to other

In this Issue...

- 272 Economic Costs of Motor Vehicle Crashes and Economic Benefits of Prevention for the San Carlos Apache Tribe
- 279 Healthy Native Communities Fellowship: Advancing Leadership for Community Changes in Health
- 285 IHS Child Health Notes
- 287 Meetings of Interest
- 288 Position Vacancies
- 291 2010 Year-End Index

services.

Approval to conduct and publish this study was obtained from the San Carlos Apache Police Department.

Methods

The SCA TMVIPP collected data on motor vehicle intervention activities (such as number of sobriety checkpoints and DUI arrests); and police-reported crashes, injuries, and fatalities. The police-reported crash and injury data allowed for comparison of motor vehicle crash and injury rates over a period of eight years: four years before the TMVIPP (2001 - 2004) and four years following the implementation of the program (2005 - 2008). Injury data from the local hospital were not used in our analysis because many seriously-injured motor vehicle crash victims were transported elsewhere for care.⁴

The crash and injury data from the SCA police department were not aggregated by age group, gender of victims, or severity of injury. These variables can greatly influence estimates of economic costs. Therefore, estimates of the distribution of motor vehicle-related injuries were made by adopting rates derived from Arizona Crash Outcome Data Evaluation System (CODES) data.⁵ The availability of Arizona-wide cost data from the Arizona CODES Project, when coupled with the SCA-specific, police-reported injury data, provided the foundation for estimating motor vehicle injury costs for the SCA community.

In the Arizona CODES project, crash data were collected by police at the scene of the crash; emergency medical systems (EMS) data were collected by emergency personnel at the scene of the crash; and emergency department and hospital data were collected by medical personnel providing treatment at the emergency department (ED), inpatient hospital, or outpatient department or other ambulatory facility. These data were linked further with rehabilitation and long-term care data.

The CODES data were comprised of both direct and indirect costs and include the following cost categories: medical costs (professional, hospital, emergency departments, drugs, rehabilitation, and long-term care); and other costs (police, ambulance, fire, insurance administration, loss of wages, loss of household work, legal and court costs, and property damage.⁵ The distribution of fatalities and level of severity of injuries in the 2005 Arizona CODES data were used in the calculation of the overall economic burden of injuries. These data were adjusted (by CODES) to 2006 dollars. The data collection and code-linking methodologies adopted for the 29 CODES-participating states are detailed in several publications.⁶⁻⁸

This study used a Human Capital approach to estimate direct and indirect costs and productive life years foregone. This approach was an incidence-based model used to estimate the societal cost of motor vehicle-related injuries and derive lifetime costs. Total annual costs were estimated by motor

vehicle injury incidence multiplied by per capita injury costs derived from the CODES cost and injury severity distribution data.

A cost-benefit analysis approach was also used for the estimation and valuation of the effects of the SCA TMVIPP. This approach allowed the comparison of all program costs and ensuing benefits to be valued and reported in dollar terms. To calculate cost-benefit ratios for the CDC-funded TMVIPP, we used total grant expenditures as a proxy for total intervention costs. This is a very reasonable assumption because effective interventions require substantial infrastructure (overhead) and continued scientific evaluation and professional input (consulting, evaluation, program direction, and administration). All of these costs are critical to effective implementation and on-going application of the interventions. Generally, if a program's cost is less than the benefit it produces (in monetary terms) it produces a net social benefit and adoption or continuation should be considered. The marginal (incremental) cost against the marginal benefits a program produces was also estimated in the same monetary units. This provided critical information on the value of expanding, abandoning, or continuing a given program or intervention within a program.⁹ Since benefits, like costs, accrue over time, the net benefit in these calculations was estimated with the 3% discount rate used in the CODES project. A net benefit greater than zero indicates a positive economic benefit for the program.

Results

Table 1 displays the SCA alcohol-impaired driving activities and crash and injury statistics for the years 2000 - 2008. From 2000 to 2004, there was a generally increasing trend in motor vehicle crashes and crashes with injuries. This trend was interrupted in 2005, the first full year of interventions implemented through the TMVIPP. The trend from 2005 through 2008 was generally reversed except for 2007, which had an increase in crashes over years 2005 and 2006. However the number of crashes was below those for years 2002 through 2004 and declined again in 2008. These trends were also evident for crashes with injuries and/or fatalities.

Table 2 presents the estimates derived for fatalities per crash and persons injured per crash from the Arizona CODES project for 2005. These estimates were derived from data for the total Arizona population and were not specific for the American Indian population of the state. In the Arizona CODES Project data, fatalities and disabling injuries made up of 1.7% and 9.9%, respectively, of the total number of injuries and fatalities. Non-disabling injuries constituted 35.6% of the total injuries and fatalities, and possible injuries were 54.3% of the total.⁶

Table 3 displays the estimated SCA motor vehicle injuries and associated medical and "other" costs (based on CODES

Table 1. Motor Vehicle Crashes and DUI Data, San Carlos Apache Tribe, 2000 - 2008

Item	2000	2001	2002	2003	2004	2005	2006	2007	2008
Crashes									
Total # of police-report crashes	237	247	343	341	338	276	247	297	240
Total # of fatal crashes	7	4	4	9	6	6	5	4	7
Total # of crashes with injuries and/or fatalities	84	83	88	99	104	87	83	101	72
DUI									
# of DUI arrests	266	245	261	307	308	385	411	391	468
# of sobriety checkpoints on SCA land						9	12	11	7
# vehicles stopped at checkpoints						3,644	3,892	7,002	3,621
# of saturation patrols								6	15

data) from 2001 - 2008. This period represents four years before the TMVIPP began and four years during which interventions and activities of the TMVIPP were carried out. There were increasing numbers of crashes and injuries from 2001 through 2004 and generally declining numbers over the intervention period of 2005 through 2008. It is notable that the first full year of implementation of the TMVIPP was followed by a large reduction of both crashes and injuries. The year 2007 was an exception that saw an increase that nearly equaled 2004, the year prior to the implementation of the prevention program. However, the next year, 2008, showed a dramatic decline in both crashes and injuries to levels previously unattained.

Over the eight-year period, we estimate that more than \$7.4 million were spent on medical care for motor vehicle-related injuries. Lifetime costs flowing from motor vehicle-related injuries amounted to over \$57 million. Taking as an example 2008 (the year with the lowest number of both motor vehicle crashes and persons with an injury), motor vehicle-related injuries accounted for approximately \$7,674 per injury in medical costs and \$57,428 per injury in total lifetime costs.

Table 4 compares the number crashes and injuries reported in 2001 - 2004 with 2005 - 2008 and their associated economic costs. The number of crashes decreased by 16.5%, fatal crashes by 4.3%, total fatalities by 3.8%, total crashes with injuries by 8.5%, and total number of persons injured by 8.6%. The economic costs are reported in deflated real (2006) rather than nominal dollars. They show generated reductions of \$357,700 in direct medical costs and \$2,354,850 in other costs, for a total savings of \$2,709,550 for the intervention period.

From 2005 - 2008, total TMVIPP costs were estimated to be \$274,696, or about \$69,000 per year. The four-year TMVIPP intervention savings in Direct Medical Costs alone (over

\$357,000) more than financed the cost of the interventions. For every dollar spent on interventions, over \$1.30 was returned in avoided Direct Medical Costs from reduced numbers of motor vehicle crashes, fewer injuries per crash, and reduced injury severity. Total cost-benefit for the interventions shows a lifetime ratio of about 1:9.86. This means that every dollar spent on interventions yielded a lifetime savings of \$9.86.

Discussion

This study estimated the economic cost and burden of injuries resulting from motor vehicle crashes on the San Carlos Apache Reservation in Arizona. These estimates build on the detailed epidemiological and program evaluation work performed during a five year CDC-funded motor vehicle injury prevention program grant awarded to the SCA Tribe.³ These grants were in response to exceptionally high rates of motor vehicle-related injury and death among AI/AN. For example, for the state of Arizona in 2000 the mortality rate for all races was 19.9 per 100,000 population; 76.8 for American Indians (AI); and 117 per 100,000 for AI living on the SCA Reservation.^{1,3} These high rates of motor-vehicle injury substantially impair the ability of tribes to provide adequate health care for their population and to maintain a population structure that promotes productivity and economic development.¹⁰

The SCA TMVIPP is designed to reduce the number of motor vehicle crashes and the number and severity of injuries per accident. These factors drive the short and long-term medical cost and economic burden on the community. The initial costs of transportation and treatment are frequently compounded by recurring medical costs for continuing care, specialty care, rehabilitation, and long-term care. This is a

Table 2. Estimates of Motor Vehicle Injury and Fatality Incidence, State of Arizona, All Races (CODES Project, 2005)

Total Crashes	139,265
Fatal Crashes	1,038 (0.75%)
Fatalities	1,179
Fatalities per crash	1.136
Injury Crashes	45,361 (32.57%)
Number of Injuries	70,293
Number of Persons Injured per Crash	1.548

burden on the health care resources available to the community. The community is also affected by the loss of income and productivity that injured individuals, their families, and other caregivers would have generated if the injuries had been avoided.

Over the eight-year period of this study, economic costs due to lost productivity and income from injury victims and those who care for them totaled nearly \$50 million (\$49,829,149). Prior to the TMVIP Program institution, the previous four years had seen increasing numbers of motor vehicle crashes and injuries each year from 2001 through 2004. During the years of TMVIP Program implementation, reductions were not only seen in terms of crashes and injuries but also costs. There were some fluctuations in the numbers of crashes, injuries, and costs during the program period. However, during the TMVIP Program (from 2005 to 2008) crashes were reduced by 16.5%, total crash fatalities by 3.8%,

and the total number of crash-related injuries by 8.6%. These decreases suggest that the interventions had a positive effect. Moreover, the program period showed a total reduction of \$2,709,550 in direct medical and other costs. These results have a large impact on the ability of the community to develop and grow, as the impact of crash-related injuries is recurring and continues to affect the economic potential of the community over a very long period.

The value of the TMVIP was also estimated using a cost-benefit approach: for every dollar spent on interventions, there was a lifetime benefit of \$9.86 saved. This ratio represents a substantial return on investment. It compares favorably to cost-benefit analyses of other preventive approaches, such as worksite wellness programs (\$1 to \$4.75 saved per \$1 spent), screening newborns for PKU and hypothyroidism (\$6.60 to \$13.80), drug courts (\$2.80 to \$6.32), and preconception care of women with diabetes (\$1.24 to \$5.19).¹¹⁻¹⁴

Table 3. Estimated Economic Cost of Motor Vehicle Injuries (includes fatalities), San Carlos Apache Tribe, 2001-2008

	2001	2002	2003	2004	2005	2006	2007	2008	2001-2008
Individuals with motor vehicle injuries	130	136	153	161	135	128	156	111	1,110
Medical Cost	\$736,483	\$809,294	\$954,130	\$1,056,770	\$924,835	\$915,712	\$1,163,008	\$851,784	\$7,412,016
Other Cost	\$5,241,982	\$5,598,490	\$6,457,780	\$7,302,072	\$6,116,950	\$6,020,747	\$7,568,398	\$5,522,730	\$49,829,149
Total Cost	\$5,978,465	\$6,407,784	\$7,411,910	\$8,358,842	\$7,041,785	\$6,936,459	\$8,731,406	\$6,374,514	\$57,241,165

Limitations

These cost estimates are conservative for several important reasons. First, there is a high probability of incomplete reporting of serious motor vehicle injuries due to absence of information about victims transported to referral hospitals.⁴ Second, it is very difficult to obtain complete cost data. Even the CODES project has been only partially successful in generating cost data from all the myriad sources of payment, including Medicare, Medicaid (AHCCCS), IHS Direct and Contract care, FEHB, private health insurance from other payers, and other public sources (VA, TriCare, etc.). Furthermore, the injury and fatality incidence data are derived from CODES data for the total Arizona population and are not specific for American Indians. Therefore, these cost estimates are conservative because of the higher incidence of serious motor vehicle-related injuries in this population, the rural environment, shortage of specialized emergency facilities and personnel, and long distances and travel times required for transport of injured patients.

Motor vehicle crash and injury data are also incomplete. A recent study on crash reporting for the San Carlos Apache Reservation showed that for the year 2001, the actual number of motor vehicle crash injuries was 60% higher than the police reported injuries. Additionally, motor vehicle-related fatalities reflected deaths at the scene of the crash while many deaths occurred during transit to, or at, tertiary facilities. Total fatalities may be as much as 20% to 30% higher than reported.⁴ Finally, the cost estimates do not include the value of such intangibles as pain and suffering or stress and depression, which can be serious and long-term outcomes of these crashes.



Table 4. Changes in Motor Vehicle Crashes, Fatalities, Injuries, and Economic Costs, San Carlos Apache Tribe, 2001 - 2004 and 2005 - 2008

	2001-2004	2005-2008	Difference (% change)
Crashes and Injuries			
Total # of police-reported crashes	1,269	1,060	209 (-16.5%)
Total # of fatal crashes	23	22	1 (-4.3%)
Total # of fatalities	26	25	1 (-3.8%)
Total # of crashes with injuries (includes fatalities)	375	343	32 (-8.5%)
Total # of individuals with injuries (includes fatalities)	580	530	50 (-8.6%)
Estimated economic costs			
Medical Cost	\$4,149,320	\$3,791,620	- \$357,700
Other Cost	\$27,281,460	\$24,926,610	- \$2,354,850
Total Cost	\$31,430,780	\$28,721,230	- \$2,709,550 (-8.6%)

Conclusions

Motor vehicle-related injuries and deaths are preventable. Crashes place an economic and societal burden on tribal communities. Through the work of the SCA TMVIPP and the active participation of many members in the community in the design, implementation, and operation of motor vehicle injury prevention interventions, there were reductions in crashes and injuries.

Not only do crashes result in numerous injuries and deaths, but the economic estimates in this study quantify their economic burden. From 2001 through 2008, economic costs associated with medical care and productivity losses to the SCA Tribe totaled more than \$57 million. Cost reductions were seen during the period that TMVIPP was implemented. The cost-benefit for the TMVIPP showed a lifetime ratio of about 1:9.86. This means that for every dollar spent to implement the prevention program, there were almost \$10 in savings from reduced medical and other costs.

These estimates provide information for health service resource utilization and health policy decisions, as well as valuable information for the design of cost-effective interventions to prevent motor vehicle-related injuries. The large and continuing burden of motor vehicle injury and death demands that effective programs be implemented, sustained, continuously evaluated, and improved.

References

1. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. 2007. Accessed September 8, 2010 at www.cdc.gov/ncipc/wisqars.
2. Task Force on Community Preventive Services. Recommendations to reduce injuries to motor vehicle occupants; increasing child safety seat use; increasing safety belt use; and reducing alcohol-impaired driving. *American Journal of Preventive Medicine*. 2001; 21(4S): 16-22.
3. Reede C, Pionkowski S, Tsatoke G. Using evidence-based strategies to reduce motor vehicle injuries on the San Carlos Apache Reservation. *IHS Primary Care Provider*. 2007;32(7):209-212.
4. Tsatoke G, Berger L, Hicks K, Pionkowski S. Challenges to injury surveillance at the local level. *IHS Primary Care Provider*. 2010;35(2):24-29.
5. Arizona Crash Outcome Data Evaluation System (CODES) Project. *The Economic and Injury Burden of Motor Vehicle Crashes in Arizona for 2005*. Arizona State University, July 2007.
6. National Highway Traffic Safety Administration (NHTSA). *Data Linkages, Codes: The Crash Outcomes Data Evaluation System (CODES)*. NHTSA, March 2006.

7. National Highway Traffic Safety Administration (NHTSA). *The Crash Outcome Data Evaluation System (CODES) And Applications to Improve Traffic Safety Decision-Making*. NHTSA, August 2009.
8. National Highway Traffic Safety Administration (NHTSA). *Estimating Median Hospital Charge in the Crash Outcome Data Evaluation System (CODES)*. NHTSA, October 2009.
9. Drummond M, O'Brien B, Stoddart G, Torrance G. *Methods for the Economic Evaluation of Health Programmes*. Oxford University Press, 2nd edition, 1997.
10. Piland N, Berger L. The economic burden of injuries involving American Indians and Alaska Natives: A critical need for prevention. *IHS Primary Care Provider*. 2007;32(8):269-273.
11. Wellness Councils of America. *The Cost-Benefit of Worksite Wellness*. Accessed November 16, 2010 at: http://www.welcoa.org/worksite_cost_benefit.html
12. Dhondt JL, Farriaux JP, Saily JC, Lebrun T. Economic evaluation of cost-benefit ratio of neonatal screening procedure phenylketonuria and hypothyroidism. *Journal of Inherited Metabolic Disease*. 1991; 14(4):633-639.
13. *A Cost-Benefit Analysis of the St. Louis City Adult Felony Drug Court*. Executive Summary. Institute of Applied Research. St. Louis, Missouri. 2004.
14. Herman WH. The economics of diabetes care. In: Davidson JK. *Clinical Diabetes Mellitus: A Problem-Oriented Approach*. Thieme. New York. 2000. Pages 814-828.

Acknowledgements

The authors are grateful to Alejandro Benally, Kenny Hicks, Stephen Piontkowski, Christine Reede, Gordon Tsatoke, David Wallace, and many other individuals from the San Carlos Apache Nation for their contributions to the planning, implementation, and evaluation of the San Carlos Apache Motor Vehicle Injury Prevention Program.

SAVE THE DATE



- * **Challenges in Indian Health Care** *
- * **Health Care Budgets & Financing** *
- * **Data and Information Technology** *
- * **Law** *
- * **Integrity and Ethics** *
- * **Negotiation** *

Session One: March 7 - 11, 2011

Session Two: April 11 - 15, 2011

Session Three: May 16 - 20, 2011

**You can be a part of the 2011 Class
of the Executive Leadership Development Program (ELDP)!**

The purpose of the Executive Leadership Development Program is to provide a forum where participants learn new skills and encounter different approaches to reduce barriers, increase innovation, ensure a better flow of information and ideas, and lead change. The goal is to provide essential leadership training and support for Indian health care executives, whether they work in Federal, tribal, or urban settings.

**Look for the registration material in January on
<http://www.ihs.gov/nonmedicalprograms/eldp/>.**

**ELDP Coordinators:
gigi.holmes@ihs.gov and wesley.picciotti@ihs.gov**

Healthy Native Communities Fellowship: Advancing Leadership for Community Changes in Health

Marita Jones, MPH, Director, Healthy Native Communities Fellowship, HPDP, Shiprock, New Mexico; Rebecca Rae, MCRP, MWR Associate Scientist I, Master of Public Health Program, School of Medicine, University of New Mexico, Albuquerque, New Mexico; Shelley Frazier, MPH, Coordinator, National Just Move It, HPDP, Shiprock; Kristine Maltrud, MPH, Coordinator, HNCF Learning Team, Albuquerque; Frances Varela, MSN, MALAS, Curriculum Development Consultant, Albuquerque; Chris Percy, MD, MPH, Chair, Health Promotion/Disease Prevention Taskforce; and Nina Wallerstein, DrPH, Professor, Master of Public Health and Director, Center for Participatory Research, School of Medicine University of New Mexico, Albuquerque

Introduction

American Indian and Alaska Native (AI/AN) health disparities are ranked the highest among all minorities nationally. Many of these health challenges are related to lifestyle issues such as obesity, physical inactivity, poor diet, substance abuse, and injuries. In 2003, the Indian Health Service (IHS) developed a 10-year strategic plan to eliminate health disparities through lifestyle change and healthy behaviors, access to care, health care quality, and innovation. One goal of the strategic plan was building healthier communities. In support of the strategic plan, and to address the health issues of AI/AN people, the IHS launched a Health Promotion and Disease Prevention (HP/DP) Initiative to develop a coordinated and systematic approach to enhance preventive health approaches at the local, regional, and national levels.

The goal of the HP/DP Initiative is to create healthier AI/AN communities by “developing, coordinating, implementing, and disseminating effective health promotion and chronic disease prevention programs through collaboration with key stakeholders and by building on individual, family, and community strengths and assets.” Through this initiative the Healthy Native Communities Fellowship (HNCF) was created in 2005. The HNCF core principles are to 1) build community connectedness and care for each other in strong and healthy relationships; 2) regenerate and heal the community by cultivating cultural and spiritual resources; 3) nurture talents and leadership that enhance the quality of community life; 4) develop effective strategies to tackle

problems that threaten the community; and 5) cultivate and create opportunities to heal negative family and community conditions.

This article will share the learnings and results of the HNCF implementation over the past five years (2005 - 2009).

Structure of the HNCF and Learning Approach

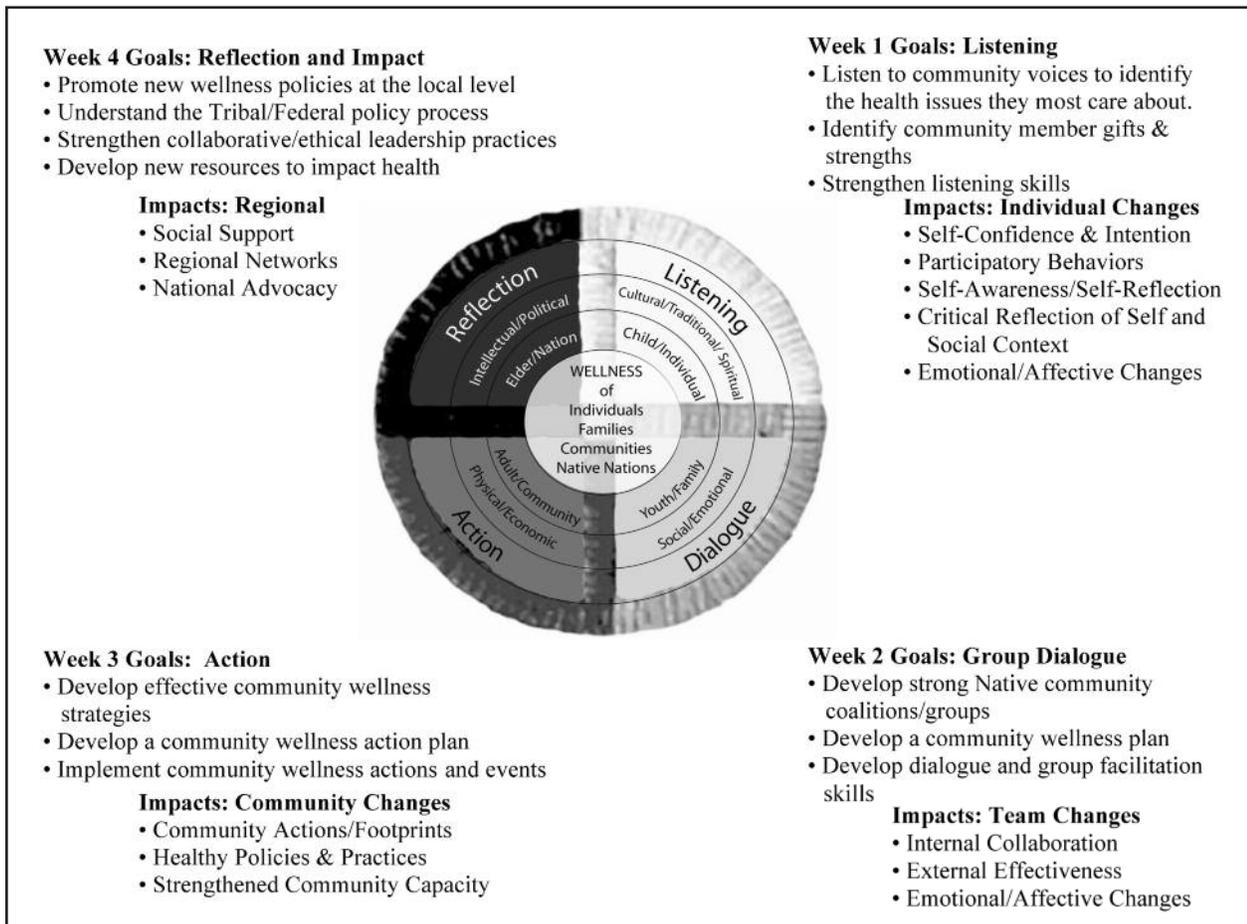
The National HP/DP Initiative took the lead to create the HNCF. The initiative also created a Policy Advisory Committee (PAC) representing tribal leaders and key national tribal organizations such as the National Indian Health Board and the National Congress of American Indians to help foster and oversee the initiatives generated from all the HP/DP programs and from the IHS Prevention Task Force.¹ The HNCF has worked closely with the PAC to promote findings and strategies across IHS tribal and urban programs aimed at reducing AI/AN health disparities.

In an intensive year-long planning period, the National HP/DP Initiative collaborated with consultants experienced in leadership development to collectively create a four-week curriculum for the HNCF. This curriculum is aimed at a diverse cross-section of emerging leaders and is grounded in collaborative learning and Native spiritual and cultural perspectives. The HNCF was launched in 2005 as a pilot with 16 teams representing multiple Indian communities nationally. Teams that participated in the pilot year advanced the structure and content of the curriculum. Because 2005 was a pilot/learning year, the impact data collected that year are not compared with the 2006 - 2009 data. Each year the HNCF has grown and learned from fellowship teams and recognized the need to expand. In 2008, the IHS partnered with Healthy Native Communities Partnership, Inc., (www.hncpartners.org) to strengthen HNCF and to unite collaboration with other healthier community initiatives: Just Move It (JMI), Creating Community Circles for Change (C4), and Native Health Communication Center (NHCC).

Since 2005, HNCF has brought together more than 200 fellows in 75 teams of 2 - 3 participants across the nation, representing all IHS service units and Areas. The fellowship is an annual four-week curriculum that develops skills in a cyclical way, structured around the medicine wheel and grounded in Native culture. The HNCF recognizes the diversity among all AI/AN, so the curriculum focuses on teaching and learning through shared Native values and

philosophy. The skills learned each week, which happen quarterly, are aimed at achieving the goals highlighted in the model below.

Figure 1. Healthy Native Communities Fellowship Curriculum Framework



Each retreat week has a learning and skill development focus, with skills building upon each other throughout each week. Week One begins in the east direction of the HCNCF Medicine Wheel and is grounded in listening. This direction represents the beginning of the fellowship cycle and its goals are for the fellows to get to know one another and to develop listening skills to strengthen their capacity. Some of the skills the fellows learn include deep listening, identifying personal and community strengths and gifts, community listening and assessment, and strategies for community participation and ownership.

Week two, the south direction, is focused around dialogue with themes around team learning; community dialogue and learning; and sharing an understanding of community strengths, needs, and priorities. The skills fellows take home include group facilitation; leading a group dialogue;

community wellness; and coalition building.

The third week, the west direction, is structured around action, community intervention, and solutions. The themes of this week are reconnection; strengthening community involvement; and developing community change strategies. Fellows learn the skills of leading a strategies workshop, facilitating group action planning, and strategies to manage conflict resolution and group dynamics.

The fourth week, the north direction, is about reflection, having an impact, renewal, closure, and expanding into national and political/policy issues. During the final week the fellows travel to Washington D.C. and are introduced to influencing policy to promote community wellness; and to nurturing leadership in one's self, teams, and communities. Skills learned include nourishing and sustaining team and community wellness efforts; developing policy to promote

community wellness; federal/tribal policy development process; participatory evaluation; and grant writing basics.

Between each of the face-to-face, week-long sessions, fellows are asked to try out their new skills back in their community, and to maintain connections with each other via a website called the HNCf workstation, a custom on-line tool and gathering place that is central to the HNCf.² This time between the face-to-face retreats is called “fellow space.” Coaching calls by HNCf staff are provided to support the fellows as they implement the skills and tools back in their home community according to a “community team action plan” that the fellows initially create at the beginning of their experience and then revise over the year. Fellowship teams are required to work with a home team with whom they can share the skills, tools, and knowledge they have gained.

“As you all have designed the retreats to build upon what we have learned in the prior sessions, I too have changed in that way, adding more skills, knowledge, and confidence in myself.”

Evaluation Design and Models

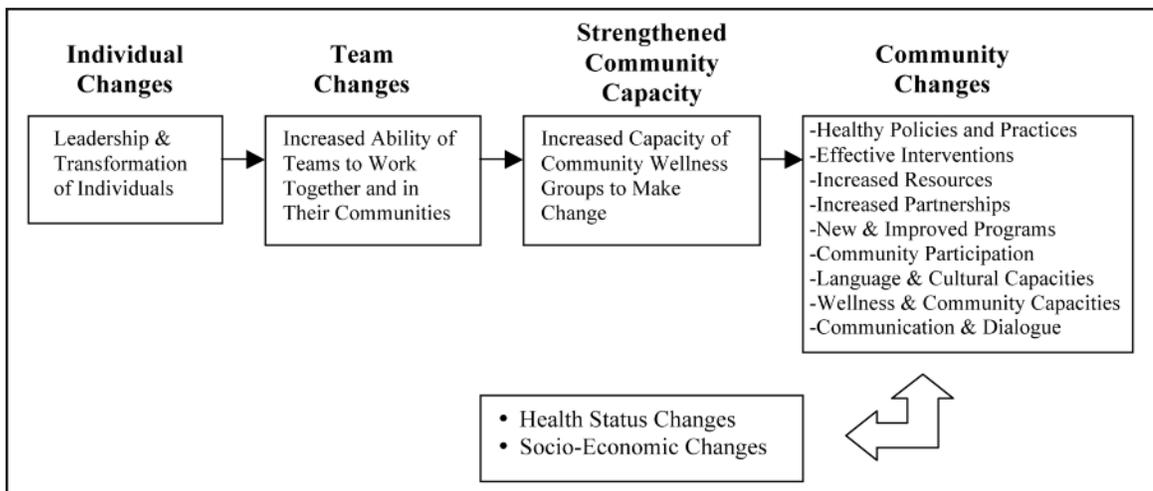
The HNCf uses a “participatory evaluation” framework to guide its evaluation model and methods.^{1,3} Participatory evaluation is a process of mutual reflection, where different stakeholders co-create the design and participate in thinking about what we’ve learned from the curriculum, from experiences in the fellowship retreats, from data collection with the fellows and fellowship teams, and from reports of community actions and changes. The participatory evaluation methods and data analyses have evolved as the “learning team” (the HNCf name for the evaluation team) has participated over time, both as observers and as members of the HNCf faculty, to collaboratively apply the findings to curriculum revisions

and development. Similar to the principles of community-based participatory research of capacity building, collaborative learning, and starting from community strengths, the learning team has supported internal evaluation capacity-building among the HNCf faculty so that new directions for evaluation and for the program are grounded in mutual decision-making.^{1,4,5} The fellowship has used several data collection methods during the fellowship’s tenure, including team interviews (conducted during weeks 2 and 4); end-of-week evaluations; instruments such as skills and personal medicine wheel self-assessments; daily reflections on what has worked well and what should be changed (plus/deltas); and web-based entries by fellows about their practice in their community. Workstation blogs became an important new method in the last two years for promoting sharing among the fellows as well as an excellent source for information on self-described individual, team, and community level changes. To analyze the data, the learning team used an iterative process in the first two years to collectively code and reach agreement on individual, team, and community constructs and themes. The findings are reported back as change themes with supporting quotes, and as quantitative assessments of change.

Models

Two models have been used to demonstrate the fellowship’s expectations of the change process: the theory of change logic model and the medicine wheel model. The theory of change model illustrates how changes in individual capacity can lead to increased ability of teams to work together, which can strengthen community capacity to enhance community wellness. Together, these capacities can lead to specific community changes, such as healthy policies, increased resources, language and cultural capacities, and new and more effective programs, which ultimately contribute to improved health and socio-economic status.

Figure 2. Fellowship Theory of Change Logic Model



The HNCF medicine wheel model posits the same “theory” of change using the cycle of the four cardinal directions to pose questions about individual, team, community, and regional/national changes (see Figure 1). The evaluation results in this article are organized around these four questions:

- *Individual*: What impact does the HNCF have on participating individuals?
- *Team/Home-Team*: What impact does the HNCF have on participating teams?
- *Community*: What changes have occurred in Native communities as a result of individual and team participation in the HNCF?
- *Regional/National*: What impact does the HNCF have across teams/communities and at the regional and national level, including Indian Nations?

Evaluation Results

In the first years, the curriculum and subsequent evaluation focused on individual healing and transformation of fellows as change agents, along with changes in team cohesiveness and capacities. As the fellowship has evolved over the years to seeking greater impacts on community wellness, the curriculum and the evaluation also began to increasingly focus on community actions and impacts. These trends are apparent in the results below.

Individual Changes. In pre-interviews with fellows about their expectations before the fellowship, most fellows expressed hope about how the fellowship would increase their capacity to work on themselves, within their teams, and in their community. They had high expectations of their personal growth, and these expectations were closely linked to their role of “change agent” in their community. Specifically, they hoped the fellowship would motivate them to be more physically active, to eat healthier, to be more balanced, to enhance their skill development, and to model those behaviors in the community. Many saw the fellowship motivating them to dedicate more time to cultural and spiritual practices, helping them to better prioritize the needs of their families and communities, and increasing their understanding of political issues and ability to be more politically active. They mentioned learning skills, such as facilitation, action planning, wellness building, coalition building, community organizing, and building social support. As one fellow described, I wish to “...learn how to accurately assess my community’s needs, learn effective methods of organizing and mobilizing community members to implement positive changes.”

Typically, in their reflections across their year-long experience, fellows state they experience transformative changes beyond their initial expectations, especially in enhanced self-efficacy, confidence, and overall self-development. As they grow, learn, and open up to themselves, and to their team, other fellows and their communities, the experience helps spark a renewed commitment to their own

spiritual and physical health, connections to their traditions and other tribes, and new reflections about social and cultural contexts of healthier communities. The trend in individual fellow changes progresses during the year from more internal self-reference (e.g., self awareness, reflection, and emotional changes) to greater external changes related to self-efficacy, confidence, and use of skills (e.g., confidence in leadership ability and skills such as deep listening, communication, collaboration, planning, and policy/politics). By the mid-point of the fellowship year, fellows begin to articulate issues of leadership more clearly (i.e., being recognized as leaders, and learning and using leadership skills). By the end, in addition to positive changes, the fellows articulate challenges they have experienced, such as finding the time and support to practice the HNCF skills back in their communities; and the difficulty of sustaining a commitment to their own personal changes.

Team Changes. In the pre-interviews, fellows often express initial expectations that the fellowship will help them “grow together as a team”; this team cohesiveness is often strengthened as fellows simultaneously gain confidence and leadership abilities, and build trust and communication among team members. During the fellowship, the fellows are asked to create a team learning plan that includes a common vision to guide their team toward shared goals. The team interviews in the second and fourth weeks reflect this orientation as team members state their learnings and interest in strengths-based processes to identify personal, team, and community assets to reach their goals.

In addition to their own team planning, teams see the fellowship as an opportunity to learn from other communities’ successes and failures in order to develop best practices, to be inspired by others, and to “increase collective knowledge.” By “developing lifelong relationships with other fellows,” they expect to increase their awareness of other Native cultures, and to continue the tradition of “Indians teaching Indians,” thus creating a network of AI/AN working to improve the health of their communities.

Almost all teams report profound changes in their teams, both internally (working together), and shifting towards more external orientation by the end of the year (e.g., greater visibility, collaboration, strength of the home team, participation in community actions, use of HNCF skills in the community, working better with others, and becoming more politically savvy). In the first half of the fellowship, most teams describe their internal focus, through using such tools as true colors to learn about and gain respect for each other’s work and communication styles. By the second half of the fellowship, teams report developing connections with staff and others in the community, and new abilities to implement HNCF community tools, such as strategic planning and action planning aimed at producing community outcomes. One of the biggest challenges teams experience is finding the time to meet due to conflicting schedules and work agendas. Challenges shift over the year, with initial team concerns of learning how

to work together better shifting to the challenges of becoming advocates for community change.

Community Changes. Through personal development and effective teamwork, the fellows have initiated many community initiatives for change. With community change a primary aim of the fellowship, community changes are carefully tracked through various assessments, coaching calls, team interviews, blogs, and the workstation.

The “Community Outcomes” bar graph (Figure 3) highlights areas where the fellows from years 2006 - 2009 have worked to create change in their communities by organizing wellness events, gaining new resources, implementing new policies, establishing new programs, and supporting culture and language renewal. The fellowship does not require fellows to implement a certain amount of community initiatives, nor does the fellowship mandate a particular agenda. Fellows and

“I signed up as a coordinator for the “Just Move It” program recently and plan to have a kick off this month. We will start out with morning walks, (like at HNCF retreats) which I really enjoy and hope to get more people active in the community where there is no facility to work out or stay in shape.”

teams are encouraged to create and strengthen their own agendas for the changes that are appropriate to their communities.

Building leadership capacity is about creating a space for purposeful learning through broad-based participation. The HNCF provides the fellows with skills to create these learning spaces within their communities. Because only a small number from each community can attend the fellowship retreats, the HNCF relies on fellows to practice their new skills in their communities and train others. The “capacity and skills changes” bar graph (Figure 4) shows the percentage of fellowship teams that are using skills from all four retreats. Through using the skills, fellows are intentionally engaging in new communication and dialogue, and developing partnerships with other community entities, colleges/schools, and other key players. Many fellows stated that the HNCF skills gave them confidence to work in a strengths-based manner.

Challenges

The HNCF focuses on leadership and team capacity building as the means for improving health outcomes. As is the case with other broad-based community health promotion initiatives, the HNCF faces the significant challenge of assessing its contribution to improved health outcomes, outcomes that typically require years of tracking. The current

Figure 3: Community Outcomes Graph by Team

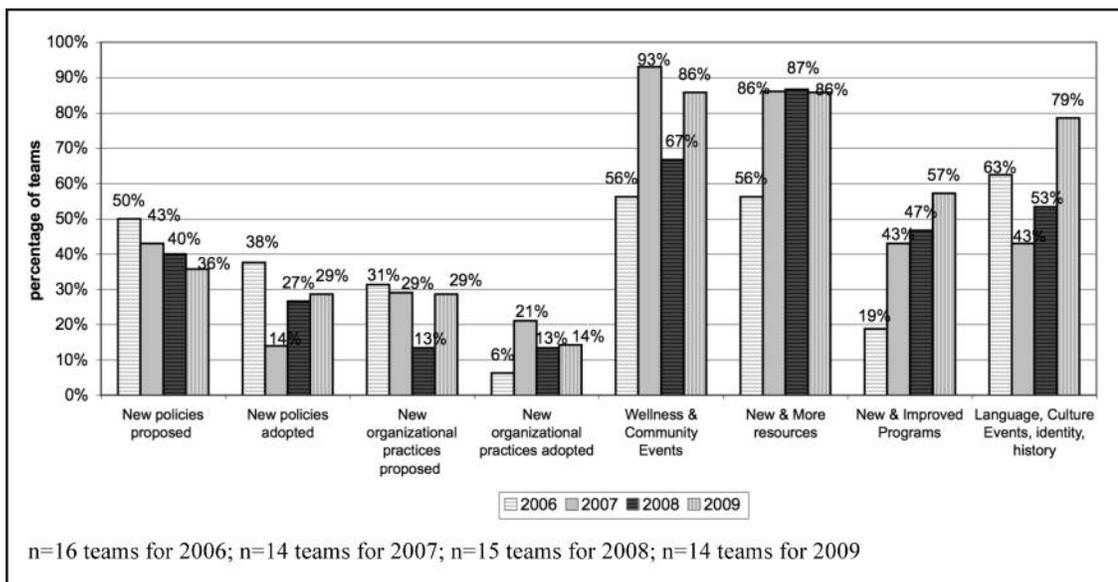
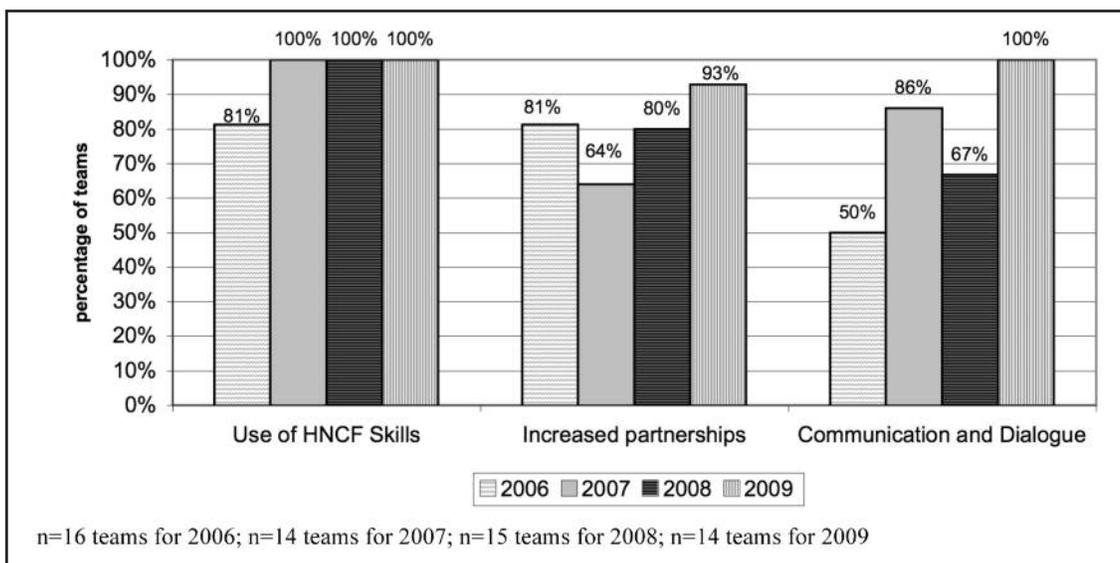


Figure 4: Capacity and Skills Changes Graph by Teams



evaluation only captures changes that may occur during the fellowship year, such as self-described changes in individual and team attitudes, cognitive-behavioral self-perceptions and skill development; and self-identified community-level changes. Our evaluation data show that the enhanced cognitive-behavioral changes and skills among the fellows are leading to significant community actions and changes, such as new policies, more community participation and partnerships, new resources, cultural renewal and other capacities, which are linked in the literature to health outcomes. Our next steps are to create a longitudinal design that can facilitate assessment of these linkages.

Conclusions/Recommendations

HNCF continues encouraging teams to work together to use their HCNF skills towards accomplishing community changes, which includes adapting the HCNF curriculum to new opportunities. Several strategies are in process. The fellowship is shifting its focus to developing a three-year commitment, with a one-year intensive retreat structure, followed by ongoing technical assistance, coaching, distance- and web-based learning, and cross-team sharing and learning. Further training opportunities are being developed for alumni, including training in program evaluation, social marketing, digital storytelling, policy implementation and monitoring, and grant writing. Other types of support include creating mechanisms for HCNF teams from repeat communities and regions to mentor and support one another in their efforts. The participatory evaluation will follow these efforts, such as creating a longitudinal design that can identify capacity and systems changes with potential to produce health outcomes; assessing these health outcomes based on targeted programs or

policies; and documenting stronger regional and national connections, including collective policy advocacy across communities. Ultimately, we recommend an evaluation strategy based on longitudinal tracking of alumni, teams, and communities that can make the associations between community and regional changes and health and socio-economic impacts.

References

1. Hoole E, Patterson T. Voices from the field: evaluation as part of a learning culture. In JG Carman & KA Fredericks (Eds.), *Nonprofits and Evaluation. New Directions for Evaluation*, 2008, 119, 93–113.
2. Jones M, Frazier S, Percy C, et al. Using web-based tools to build capacity for CBPR: Two case studies of American Indian leadership development. In M Minkler, N Wallerstein (Eds.). *Community Based Participatory Research For Health: From Process to Outcomes*, 2nd ed., San Francisco: Jossey Bass, 2008, 171-182.
3. Springett J, Wallerstein N, Issues in participatory evaluation. What predicts outcomes in CBPR? In M Minkler, N Wallerstein (Eds.). *Community Based Participatory Research For Health: From Process to Outcomes*, 2nd ed., San Francisco: Jossey Bass, 2008, 199-223.
4. Minkler M, Wallerstein, N. (Eds.), *Community Based Participatory Research For Health: From Process to Outcomes*, 2nd ed., San Francisco: Jossey Bass, 2008.
5. Israel B, Eng E, Shulz A, Parker E. (eds). *Methods in Community Based Participatory Research for Health*, San Francisco, Jossey-Bass Publishers, 2005.

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

“Science is wonderfully equipped to answer the question ‘how’ but it gets terribly confused when you ask the question ‘why?’”

Erwin Chargaff

Article of Interest

Multi-site randomized controlled trial of a child-centered physical activity program, a parent-centered dietary-modification program, or both in overweight children: the HIKCUPS study. *J Pediatr.* 2010 Sep;157(3):388-94, 394.e1. Epub 2010 May 6.

Objective: To evaluate whether a child-centered physical activity program, combined with a parent-centered dietary program, was more efficacious than each treatment alone, in preventing unhealthy weight gain in overweight children.

Study Design: An assessor-blinded randomized controlled trial involving 165 overweight/obese 5.5- to 9.9-year-old children. Participants were randomly assigned to 1 of 3 interventions: a parent-centered dietary program (Diet); a child-centered physical activity program (Activity); or a combination of both (Diet+Activity). All groups received ten weekly face-to-face sessions followed by three monthly relapse-prevention phone calls. Analysis was by intention-to-treat. The primary outcome was change in body mass index z-score at 6 and 12 months (n=114 and 106, respectively).

Results: Body mass index z-scores were reduced at 12 months in all groups, with the Diet (mean [95% confidence interval]) (-0.39 [-0.51 to 0.27]) and Diet + Activity (-0.32, [-0.36, -0.23]) groups showing a greater reduction than the Activity group (-0.17 [-0.28, -0.06]) (P=.02). Changes in other outcomes (waist circumference and metabolic profile) were not statistically significant among groups.

Conclusion: Relative body weight decreased at six months and was sustained at 12 months through treatment with a child-centered physical activity program, a parent-centered dietary program, or both. The greatest effect was achieved when a parent-centered dietary component was included.

Editorial Comment

Pediatric obesity is a pressing public health problem in the United States but especially among Native American children. Most prior studies of obesity treatment have shown little

sustained benefit. Recently, the US Preventive Services Task Force review of weight loss studies concluded that comprehensive, moderate intensity interventions (at least one hour of contact each week) addressing diet, activity, and behavioral modification resulted in modest and sustained weight loss.

This study showed sustained weight loss at 12 months, especially using a parent centered diet intervention and less with a physical activity component. This program was even more intense than most, requiring two hours of contact each week. Do we have the resources to implement similar programs in federal and tribal clinics? Can we afford not to?

Infectious Disease Update

Rosalyn Singelton, MD, MPH

Pertussis Deaths Spur Advisory Committee to Expand Tdap Recommendations

During 2010, several states have reported an increase in pertussis cases and/or localized outbreaks of pertussis. This included a state-wide epidemic in California leading to ten deaths in infants < 3 months and an estimated 6000 cases. Over the last five years, 8,000 - 25,000 cases of pertussis were reported per year in the United States. The cause of the current resurgence is multifactorial and may spring from the natural 3- to 5-year pertussis outbreak cycle, fueled by waning immunity in adolescents and adults who then infect young vulnerable infants.

To address ongoing pertussis transmission, on October 27, 2010 the Advisory Committee on Immunization Practices (ACIP), voted to expand the use of Tdap in adolescents and adults:

- Adolescents or adults who have not received a dose of Tdap should be immunized as soon as feasible, regardless of the interval since the most recent Td vaccine.
- People ages 11 through 18 who have completed the childhood DTP/DTaP vaccination series, and adults ages 19 through 64 years should receive a single dose of Tdap in place of one Td vaccine dose.
- Adults ages 65 years and older (who have not previously received Tdap) who anticipate having close contact with an infant < 12 months of age should receive a single dose of Tdap (off-label use of Tdap).

- Children ages 7 through 10 years who are not fully immunized against pertussis should receive a single dose of Tdap to provide protection against pertussis. If additional doses of Td vaccines are needed, they should be vaccinated according to catch-up guidance.

The ACIP recommendations still need to be approved by the CDC Director and published in the 2011 schedule; however, several states are already implementing these recommendations.

Update of American Indian/Alaska Native Literature **Jeff Powell, MD, MPH**

American Indian/Alaska Native Uninsurance Disparities: A Comparison of three Surveys. *American Journal of Public Health*. October 2010; 100(10): pp 1972-1979

This month's article examines a topic important to all Indian Health Service providers and advocates: uninsurance disparities. The purpose of this research article was to examine the consistency of three nationally representative data sources that estimate uninsurance rates among the American Indian and Alaska Native population. This is important because uninsurance disparities affect many levels of health policy and health advocacy nationwide. The analysis evaluated data from 2002, reflected in the 2003 Current Population Survey (CPS), the 2002 National Health Interview Survey (NHIS), and the 2002 Medical Expenditure Panel Survey (MEPS). While this article characterizes data for both adults and children, this review focuses on findings for children (findings for adults were similar).

There is a lot to learn from the detailed analysis of these three data sources. The primary take-home message, however, is simple: these sources reveal quite different findings. This means that conclusions drawn from nationally representative data sources on AI/AN uninsurance disparities need to be viewed with caution. For example, the percentage of AI/AN children who were uninsured for the entire year differed almost 6-fold. The NHIS reveals 3.3% of children to be uninsured, whereas the CPS shows the percentage as 22.8. The authors frame this disparity in light of the challenges in characterizing and representing the AI/AN population within these national surveys. As many who work with AI/AN populations know, national samples of "the" AI/AN population are difficult to define.

Digging deeper into the surveys allows some understanding of how conclusions drawn can be so different. The Current Population Survey is administered monthly by the Bureau of Labor. Information about insurance is collected in March of each year, and the 2003 CPS reflects an unweighted "AI/AN Alone" child sample of 1184. This represented a weighted population equivalent to 774,000 children whose parents identified as AI/AN alone. The NHIS and MEPS are both detailed surveys conducted by the National Center for Health Statistics that are pulled from the same sample – the

MEPS represents a subset or "panel" of NHIS respondents. The MEPS is a much more comprehensive survey that evaluates detailed information from households, health care providers, and employers. Of note, the NHIS and MEPS unweighted sample sizes are much smaller than the CPS samples. The NHIS unweighted AI/AN alone sample was 195, representing a weighted population of 590,000 children. The MEPS subset was a sample of 137, representing a weighted population of 767,000 children.

Table 2 in the article characterizes the widely different demographics and likely confounding variables in each of the survey samples. Notably, the surveys have very different geographical representations. Taking the "West" region in particular, the MEPS sample only has 23 percent of participants from the west, which accounts for half of the CPS survey participants. Obviously this could have very large impacts on health insurance status. Large differences are also present for Hispanic ethnic self-identification, parent's education levels, and socioeconomic levels.

The characterization of insurance "coverage type" is also listed in Table 2. Consistent with the wide differences described above, coverage type varies widely between surveys. Also of note are the estimates for IHS coverage. The article clearly describes how coverage by IHS does not constitute "health insurance coverage" according to these surveys. Since 1998, IHS coverage alone has been characterized as "uninsured." Nonetheless, it is revealing to note that only 17 to 34 percent of the weighted population samples acknowledged IHS coverage. It is interesting that the lower estimate of 17 percent is from the CPS, where half of the sample represents the Western region of the United States.

Getting back to a summary of the core issue of uninsurance disparities, comparisons to Non-Hispanic White populations are shown in Table 4. Again, the conclusions drawn vary widely between each of the three federal surveys. After adjustment for the demographic characteristics shown in Table 2, the three surveys reveal few statistically significant child uninsurance disparities. For All-year uninsured status, the CPS showed a significant six percentage point increase in all-year uninsurance. The NHIS and MEPS did not reveal differences after adjustment. Point-in-time uninsurance disparities (assessed only by the NHIS and MEPS) were demonstrated only by the NHIS survey (a significant 3.6 folk rate ratio), but not by the more comprehensive MEPS subset. In other words, while these three federal surveys reveal child uninsurance disparities, the findings vary widely and make broad generalizations difficult. The authors comment that different approaches are needed to more accurately and completely characterize uninsurance disparities among AI/AN children and adults.

MEETINGS OF INTEREST

Advancements in Diabetes Seminars

Monthly; WebEx

Join us monthly for a series of one-hour WebEx seminars for health care program professionals who work with patients who have diabetes or are at risk for diabetes. Presented by experts in the field, these seminars will discuss what's new, update your knowledge and skills, and describe practical tools you can use to improve the care for people with diabetes. No registration is necessary. The accredited sponsors are the IHS Clinical Support Center and IHS Nutrition and Dietetics Training Program.

For information on upcoming seminars and/or previous seminars, including the recordings and handouts, click on this link and see Diabetes Seminar Resources: <http://www.diabetes.ihs.gov/index.cfm?module=trainingSeminars>

Available EHR Courses

EHR is the Indian Health Service's Electronic Health Record software that is based on the Resource and Patient Management System (RPMS) clinical information system. For more information about any of these courses described below, please visit the EHR website at http://www.ihs.gov/CIO/EHR/index.cfm?module=rpms_ehr_training. To see registration information for any of these courses, go to <http://www.ihs.gov/Cio/RPMS/index.cfm?module=Training&option=index>.

Electronic Subscription Available

You can subscribe to *The Provider* electronically. Any reader can now request that he or she be notified by e-mail when the latest issue of *The Provider* is available on the Internet. To start your electronic subscription, simply go to *The Provider* website (<http://www.ihs.gov/Provider>). Click on the "subscribe" link; note that the e-mail address from which you are sending this is the e-mail address to which the electronic notifications will be sent. Do not type anything in the subject or message boxes; simply click on "send." You will receive an e-mail from LISTSERV.IHS.GOV; open this message and follow the instruction to click on the link

indicated. You will receive a second e-mail from LISTSERV.IHS.GOV confirming you are subscribed to *The Provider* listserv.

If you also want to discontinue your hard copy subscription of the newsletter, please contact us by e-mail at the.provider@ihs.gov. Your name will be flagged telling us not to send a hard copy to you. Since the same list is used to send other vital information to you, you will not be dropped from our mailing list. You may reactivate your hard copy subscription at any time.

POSITION VACANCIES

Editor's note: As a service to our readers, THE IHS PROVIDER will publish notices of clinical positions available. Indian health program employers should send brief announcements as attachments by e-mail to john.saari@ihs.gov. Please include an e-mail address in the item so that there is a contact for the announcement. If there is more than one position, please combine them into one announcement per location. Submissions will be run for four months and then will be dropped, without notification,, but may be renewed as many times as necessary. Tribal organizations that have taken their tribal "shares" of the CSC budget will need to reimburse CSC for the expense of this service (\$100 for four months). The Indian Health Service assumes no responsibility for the accuracy of the information in such announcements.

Mid-Level Practitioner Pediatrician

St. Regis Mohawk Health Service; Akwesasne, New York

The St. Regis Mohawk Tribal Health Service is looking for a mid-level practitioner and a pediatrician to work in our general practice clinic. We are located in Akwesasne, New York, and we are uniquely situated in northeastern upstate New York. Split right down the middle by the Canadian border, we are in the northern foothills of the Adirondack Mountains and along the beautiful and historic St. Lawrence River. We are 90 miles from both Montreal, Quebec, and Ottawa, Ontario (about 5½ hours north of New York City).

Our Medical Clinic operates Monday to Friday, 8:00 am to 5:00 pm, and is staffed by a board certified internist, a board certified family practitioner, and an experienced family nurse practitioner. We have an Outreach Program staffed by a family nurse practitioner and two registered nurses and two licensed practical nurses. There are also mental health, alcohol and chemical dependency, nutrition/WIC; dental, pharmacy, and certified laboratory services.

We are a congenial staff who work hard and like to laugh. We provide excellent medical care to our appreciative patients. If you are interested, please contact Debra Martin, Health Director, St. Regis Mohawk Health Service, 412 State Route 37, Akwesasne, New York 13655; telephone (518) 358-3141, Ext. 103. (12/10)

Family Practice Physician Family Nurse Practitioner Physician Assistant Psychiatrist

Bay Mills Health Center/Bay Mills Indian Community; Brimley Michigan

The Bay Mills Health Center is seeking a family practice

physician (MD or DO; board certified). Must have completed a residency program and have a Michigan license or be able to obtain one. New Graduates are welcome to apply!

We are seeking a full time psychiatrist who is board certified, able to obtain a Michigan license and has completed a residency program. The primary focus is on the adult population with some children in the patient case load.

We are in need of a certified mid-level practitioner, a FNP or a PA, with a background in Family Practice.

The health center is located in the beautiful eastern Upper Peninsula of Michigan on the Bay Mills Indian Reservation. We are located on the shores of Lake Superior, bordering Canada and we are rich in culture. The area is the outdoor enthusiast's dream.

We are an outpatient facility open 8 am to 4:30 pm, M-F. We have onsite lab, pharmacy, x-ray, behavioral health, dental, community health, and social service departments. Physicians carry a patient load averaging between 15 - 20 patients a day, with adequate time to be acclimated to the facility and procedures. There are no on call and weekend duties.

The Bay Mills Health Center was established in 1976 and is a Federally Qualified Health Center. The center is open to the general public and is Joint Commission accredited. Our patient focus is geared toward prevention. We are striving to become a patient-centered medical home, and plan to collaborate with Michigan State University to host residents during rotations.

We offer a competitive salary, student loan repayment options,, CME leave and allowance, and benefits. If you are interested, please contact Audrey Breakie at (906) 248-8327 (day) or (906) 437-5557 (evenings); or e-mail abreakie@baymills.org. (12/10)

Medical Director

Emergency Room Physicians

Emergency Medicine PA-Cs/Nurse Practitioners

Family Practice PA-Cs/Family Nurse Practitioners

OB/GYN Physician

Nurse Mid-Wives

Family Practice Physicians

Rosebud Comprehensive Health Care Facility; Rosebud, South Dakota

The Rosebud Comprehensive Health Care Facility in Rosebud, South Dakota is seeking board eligible/board certified physicians and mid-levels with at least 2 - 3 years post-residency experience. We are also in need of ER PA-Cs, family practice PA-Cs, and family nurse practitioners. Rosebud is located in rural south central South Dakota, west of the Missouri River on the Rosebud Indian Reservation and is approximately 30 miles from the Nebraska border. We are a 35-bed facility that has a 24-hour emergency department, and

a busy clinic that offers the following services: family practice, internal medicine, ob/gyn, pediatrics, general surgery, optometry, dentistry, physical therapy, dietary counseling, and behavioral health. Our staff is devoted to providing quality patient care, and we have several medical staff members who have been employed here ten or more years. The beautiful Black Hills, Badlands, Custer State Park, Mount Rushmore, and Crazy Horse Memorial are just 2 - 3 hours away. South Dakota is an outdoorsman's paradise with plenty of sites for skiing, hiking, hunting, fishing, boating, and horseback riding. Steeped in western folklore, Lakota cultural history, and the lands of such famous movies as "Dances with Wolves" and "Into the West," there is plenty for the history buff to explore. If you are interested in applying for a position, please contact Kevin Stiffarm, Chief Executive Officer, at (605) 747-3111, (605) 517-1283; or e-mail him at kevin.stiffarm@ihs.gov. (11/10)

Family Practice Physician
Warm Springs Health and Wellness Center; Warm Springs, Oregon

The Warm Springs Health and Wellness Center has an opening for a board certified/eligible family physician. Located in the high desert of central Oregon, we have a clinic that we are very proud of and a local community that has much to offer in recreational opportunities and livability. Our facility has been known for innovation and providing high quality care and has received numerous awards over the past ten years. We have positions for five family physicians, one created by a physician who recently retired after 27 years of service. Our remaining four doctors have a combined 62 years of experience in Warm Springs. This makes us one of the most stable physician staffs in IHS. Our clinic primarily serves the Confederate Tribes of Warm Springs. We have a moderately busy outpatient practice with our doctors seeing about 15 - 18 patients per day under an open access appointment system. We were a pilot site for the IHS Innovations in Planned Care (IPC) project and continue to make advances in how we provide care to our patients. We fully utilize the IHS-Electronic Health Record, having been an alpha test site for the program when it was created. We provide hospital care, including obstetrics and a small nursing home practice, at Mountain View Hospital, a community hospital in Madras, Oregon. Our call averages 1 in 5 when fully staffed. For more information, please call our Clinical Director, Miles Rudd, MD, at (541) 553-1196, ext 4626, or e-mail stephen.rudd@ihs.gov. (10/10)

Dentist
Family Practice Physician
Consolidated Tribal Health Project; Redwood Valley, California

The Consolidated Tribal Health Project in Redwood Valley, California is recruiting for a dentist and a family practice physician. These positions are full-time with benefits;

salary DOE. All applicants will be considered; Native American preference applies. Visit www.cthp.org for an application and job description. Send application and resume to HR Department by fax at (707) 485-7837. ADA/EEO. (10/10)

Family Practice Physician
Menominee Tribal Clinic; Keshena, Wisconsin

Join seven experienced primary care physicians in beautiful north central Wisconsin 45 miles from Green Bay. We provide comprehensive primary care for Wisconsin's longest residing residents at a large, established clinic on the banks of the Wolf River. Practice in an efficient setting with committed colleagues, your own nurse, and a robust electronic health record. Inpatient and obstetrical care are provided at a 25-bed community hospital nine miles away, where family doctors do C-sections, colonoscopies, and EGDs. Live in a safe town of 8000 with great schools and endless recreational opportunities. Competitive compensation available, along with loan repayment (NHSC and State of Wisconsin). Contact Kevin Culhane, MD at (715) 799-5786, or e-mail at kevinc@mtclinic.net. (10/10)

Community Dietitian
Southeast Alaska Regional Health Consortium (SEARHC); Juneau, Alaska

SEARHC invites registered dietitians to apply for a community dietitian opening on the SEARHC Health Promotion Team. The baseline qualifications are a BS in community nutrition/dietetics or a nutrition-related field. Two years clinical nutrition and/or community nutrition work experience are required, with specific experience in management and prevention of diabetes, heart disease, and other chronic diseases. Must be a registered dietitian and eligible for dietetic licensure in the State of Alaska.

The dietitian will assess, plan, implement, and evaluate community nutrition programming focused on diabetes prevention. Additionally, the community dietitian offers medical nutrition therapy to clients living with diabetes and pre-diabetes on an on-site, outpatient basis as well as using distance delivery via Polycom. These services are provided to individuals, small groups, and communities in Juneau and the northern SEARHC region. SEARHC is a non-profit tribal health consortium of 18 Native communities, which serves the health interests of the Tlingit, Haida, Tsimshian, and other Native people of southeast Alaska. Residents of southeast Alaska towns share a strong sense of community. Residents take full advantage of the excellent opportunities for fishing, boating, skiing, hiking, and other outdoor activities. Applications are available on-line at www.searhc.org, or please contact Human Resources at (907) 463-6693. (10/10)

Family Practice Physician

Western Oregon Service Unit (Chemawa); Salem, Oregon.

The Western Oregon Service Unit is a comprehensive ambulatory care facility located on the campus of the BIA's Chemawa Indian Boarding School. Chemawa serves not only the 420 high school teens who come to the boarding school every fall, but urban and regional beneficiaries as well.

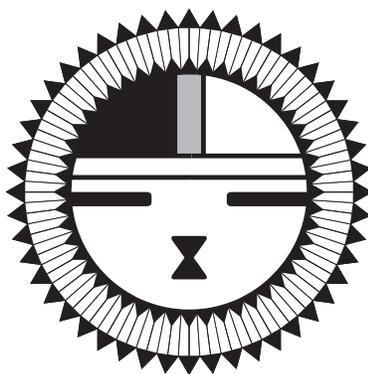
Staffed with two family practice physicians and one family nurse practitioner, Chemawa is currently recruiting for a board certified/board eligible family medicine physician. If selected for the position, you would have a federal position, competitive salary, the absence of call, and have week-ends, holidays, and nights free to enjoy the urban lifestyle of Oregon's state capitol, Salem. Salem has moderate weather and easy access to the Pacific Ocean, the Cascade Mountains, the high desert, Portland, and the renowned viticulture of the Willamette Valley.

For more information, contact CAPT Les Dye at leslie.dye@ihs.gov. (9/10)

The 16th Annual Elders Issue

The May 2011 issue of THE IHS PROVIDER, to be published on the occasion of National Older Americans Month, will be the sixteenth annual issue dedicated to our elders. Indian Health Service, tribal, and Urban Program professionals are encouraged to submit articles for this issue on elders and

their health and health care. We are also interested in articles written by Indian elders themselves giving their perspective on health and health care issues. Inquiries or submissions can be addressed to the attention of the editor at the address on the back page of this issue.



2010 YEAR-END INDEX

Major Subjects and Titles, Volume 35, January through December 2010

C

Cancer

- ACOG Revises Cervical Screening Guidelines: Start At age 21; Screen Less Frequently Jan
- National Colorectal Cancer Awareness Month: an Update from Indian Country Mar

Continuing Education

- Healthy Native Communities Fellowship: Advancing Leadership for Community Changes in Health Dec
- Long Term Training Opportunity for Nurse Anesthesia Nov
- Taking Care of Your Diabetes: A Patient-Focused Conference Report Jan

D

Dental

- Conducting an Oral Health Screening Survey: Nashville Area Experience Jun

Diabetes

- A Case Study in Effective Delivery of Health Care for People with Diabetes in Rural Setting Sep
- First Evidence Based Criteria for Diagnosis of Gestational Diabetes Sep
- Taking Care of Your Diabetes: A Patient-Focused Conference Report Jan

E

EHR (See Informatics)

G

Geriatrics

- Do We Need a Tribal LTC Association? May
- Faye's Story: Life's Circle May
- Four National HIV/STD Related Measures: How is your Service Unit Doing? May
- Identifying Polypharmacy among Older Adults Using IHS National Data Warehouse Data Oct
- The IHS Falls Prevention Initiative Jul
- Tai Chi for Elder Falls Prevention Jul
- Tohono O'odham Nursing Facility Fullfills Goals May

Gynecology

- ACOG Revises Cervical Screening Guidelines: Start At age 21; Screen Less Frequently Jan
- New Guidance on Birth Control: CDC Releases US version of WHO Medical Selection Criteria for Contraception Jul
- Rehabilitation Medicine and Urinary Incontinence Therapy Nov

H

Health Systems Issues

- Improving Continuity of Care through Care Team Integration, Empanelment, and Open Access Scheduling at Dena'ina Health Clinic Oct

HIV/AIDS

- Rural Native American Perception of HIV/AIDS Aug

I

Indian Health Service

- Helping A People To Understand Mar
- Pioneers in the Indian Health Service: Dr. Annie Dodge Wauneka Mar

Informatics

- EHR Well Child Module Jun
- Free Trial for IHS: FirstCONSULT May
- What You Need to Know About Meaningful Use Mar

Infectious Diseases

- Implementation and Evaluation of a Pharmacy Managed Influenza Clinic Sep
- Vaccinating Mom Protects Baby, Too! A Study Conducted at Seven Navajo and White Mountain Apache Hospitals Shows Maternal Vaccination Lowers Illness Rates in Newborns Nov

Injury Prevention

- Challenges to Injury Surveillance at the Local Level Feb
- Child Passenger Safety: A Comprehensive Program is a Sustainable Program Jul
- Economic Costs of Motor Vehicle Crashes and Economic Benefits of Prevention for the San Carlos Apache Tribe Dec
- The IHS Falls Prevention Initiative Jul
- Suicide Prevention: The Role of the IHS Environmental Health Officer Jul
- Tai Chi for Elder Falls Prevention Jul

O

Obesity

- Evidence-Based Public Health Responses to the Overweight Crisis in American Indian and Alaska Native Communities Jun

Obstetrics

- Breastfeeding as a SIDS Reduction Strategy Feb
- First Evidence Based Criteria for Diagnosis of Gestational Diabetes Sep
- VBAC: NIH Consensus Conference Supports Appropriateness of Trial of Labor for Low Risk Women and Calls for Removal of Barriers to Care May
- Vaccinating Mom Protects Baby, Too! A Study Conducted at Seven Navajo and White Mountain Apache Hospitals Shows Maternal Vaccination Lowers Illness Rates in Newborns Nov

P

Pediatrics

- Child Maltreatment Data: Does It Tell the Whole Story? Jun
- Child Passenger Safety: A Comprehensive Program is a Sustainable Program Jul
- Women's Health Notes: Breastfeeding as a SIDS Reduction Strategy Feb
- Vaccinating Mom Protects Baby, Too! A Study Conducted at Seven Navajo and White Mountain Apache Hospitals Shows Maternal Vaccination Lowers Illness Rates in Newborns Nov

Pharmacy

- Identifying Polypharmacy among Older Adults Using IHS National Data Warehouse Data Oct
- Implementation and Evaluation of a Pharmacy Managed Influenza Clinic Sep
- The Indian Health Service and FDA's Drug Safety Oversight Board Feb

Prevention (See Also "Injury Prevention")

- ACOG Revises Cervical Screening Guidelines: Start At age 21; Screen Less Frequently Jan
- Conducting an Oral Health Screening Survey: Nashville Area Experience Jun
- Evidence-Based Public Health Responses to the Overweight Crisis in American Indian and Alaska Native Communities Jun
- Implementation and Evaluation of a Pharmacy Managed Influenza Clinic Sep
- National Colorectal Cancer Awareness Month: an Update from Indian Country Mar
- Vaccinating Mom Protects Baby, Too! A Study Conducted at Seven Navajo and White Mountain Apache Hospitals Shows Maternal Vaccination Lowers Illness Rates in Newborns Nov
- Women's Health Notes: Breastfeeding as a SIDS Reduction Strategy Feb

S

Sexually Transmitted Diseases

- Developing an Intervention for Youth – From Research to Action Apr
- Four National HIV/STD Related Measures: How is your Service Unit Doing? Apr

-
- Harnessing Sexually Transmitted Disease (STD) Surveillance in Indian Country to Strengthen STD Clinical Services to At-Risk Populations Apr
 - Helping Native Teens Make Healthy Decisions Apr
 - Indian Country: Get Yourself Talking, Get Yourself Tested! Presenting the 2010 GYTNOW Campaign Apr
 - Sexual Risk Assessment and Risk Factors for Sexually Transmitted Diseases Apr
 - STD Screening Recommendations, 2010 Apr
 - Using Media Technologies to Reach Native Youth Apr

T

Traditional Medicine

- Faye's Story: Life's Circle May
- Understanding the Healing Hands of the Maniilaq Tribal Doctor: A Short History of The Program's Development May



Dept. of Health and Human Services
Indian Health Service
Clinical Support Center
Two Renaissance Square, Suite 780
40 North Central Avenue
Phoenix, Arizona 85004

PRESORTED STANDARD
POSTAGE AND FEES PAID
U.S. DEPT. OF HEALTH & HUMAN
SERVICES
PHOENIX, AZ
PERMIT NO. 5691

CHANGE SERVICE REQUESTED

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300



Change of Address or Request for New Subscription Form

Name _____ Job Title _____

Address _____

City/State/Zip _____

Worksite: IHS Tribal Urban Indian Other

Service Unit (if applicable) _____ Last Four Digits of SSN _____

Check one: New Subscription Change of address

If change of address, please include old address, below, or attach address label.

Old Address _____



THE IHS PRIMARY CARE PROVIDER

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



THE IHS PROVIDER is published monthly by the Indian Health Service Clinical Support Center (CSC). Telephone: (602) 364-7777; fax: (602) 364-7788; e-mail: the.provider@ihs.gov. Previous issues of THE PROVIDER (beginning with the December 1994 issue) can be found on the CSC Internet home page (<http://www.ihs.gov/Provider>).

- Wesley J. Picciotti, MPADirector, CSC
- John F. Saari, MDEditor
- Cheryl BegayProduction Assistant
- Theodora R. Bradley, RN, MPHDirector, OCE
- Linda Trujillo, RN, MSNNursing Consultant
- Erma J. Casuse, CDADental Assisting Training Coordinator
- Edward J. Stein, PharmDPharmacy Consultant

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.

Publication of articles: Manuscripts, comments, and letters to the editor are welcome. Items submitted for publication should be no longer than 3000 words in length, typed, double-spaced, and conform to manuscript standards. PC-compatible word processor files are preferred. Manuscripts may be received via e-mail.

Authors should submit at least one hard copy with each electronic copy. References should be included. All manuscripts are subject to editorial and peer review. Responsibility for obtaining permission from appropriate tribal authorities and Area Publications Committees to publish manuscripts rests with the author. For those who would like more information, a packet entitled "Information for Authors" is available by contacting the CSC at the address below or on our website at www.csc.ihs.gov.