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## Medical Charges for Car Crash Victims With and Without Seat Belts: Implications for Tribal Health Programs

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### Introduction

For American Indians and Alaska Natives (AI/AN) nationally, injuries are the number one reason for hospitalization in contract care facilities and second only to heart disease as a cause of death. Motor vehicle crashes account for 56% of the injury deaths in the AI/AN population.<sup>1</sup> In 1994 in the State of Oklahoma where there is a large Native American presence, there were over 48,000 motor vehicle injuries and 695 fatalities. Only 22% of fatality victims were wearing seat belts.<sup>2</sup>

As tribes increasingly assume operation of their own health care programs, epidemiologic and economic data are vitally important for decision-making. Given the enormous burden of motor vehicle injuries on any medical system, does investment in seat belt and child restraint programs make sense, or would prevention dollars be better spent on improving hospital services or emergency care? Are changes needed in Oklahoma's secondary\* seat belt law or is the law functioning well to protect the state's residents, including Native Americans? Our study examined the charges for medical care for American Indian patients injured in motor vehicle crashes at one IHS hospital in northeastern Oklahoma, to obtain data that might be useful in addressing these questions.

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\* Secondary enforcement means that a citation can be issued for non-use of a seat belt only if the driver is stopped for some other reason (such as a speeding violation). Primary enforcement means that the driver of a motor vehicle in which restraints are not being used can be stopped and cited for that reason only.

### Methods

Located in Tahlequah, Oklahoma, the W.W. Hastings Hospital is an Indian Health Service (IHS) facility serving members of federally-recognized tribes. The hospital has 60 beds and is a Level III Trauma Center. It is adjacent to the Tahlequah City Hospital and is about 25 miles from the next closest hospital in Oklahoma. Medical records were abstracted for all car occupant crash victims who were treated in the emergency room at the W.W. Hastings Hospital from January 1 through September 30, 1994. Information was obtained on the restraint status of the patient, whether the person was admitted, length of hospital stay if admitted, position in the vehicle, age, sex, method of payment, and details concerning circumstances of injury. Only data concerning initial treatments were recorded; follow-up visits and deaths were not included. Also not included were victims injured as pedestrians, motorcyclists, bicyclists, occupants of truck beds, or riders in recreational

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vehicles. Data were analyzed using Epi-Info Version 6.<sup>3</sup>

To estimate the charges for emergency room treatment and hospitalization, we contacted the Blue Cross and Blue Shield Insurance Company of Tulsa. In 1994, the average daily charge for hospitalization in Oklahoma was \$800, and the average charge for an emergency room visit was \$350 (personal communication, Rick Kelly, Senior Consultant). These charge data were used to estimate costs, or resource expenditures, potentially generated by these auto crashes. We calculated estimated charges as follows:

*For patients treated in the emergency room (ER) and released:*

Number of ER patients x \$350.

*For patients who were hospitalized:*

(Number of hospitalized patients x \$800 x ALOS) + ER charges.

ALOS is the average length of stay calculated for those hospitalized, where length of stay was known. In four instances, where the length of hospital stay was not available (all of whom did not wear seat belts, and were transferred to outside hospitals), the average length of stay was assumed to be the same as for unrestrained patients admitted to the W.W. Hastings Hospital. We believe this is a conservative estimate because transferred patients likely suffered more serious injuries.

## Results

A total of 262 patients were treated for motor vehicle-related injuries in this nine-month period. Table 1 shows the restraint status and medical treatment received by motor vehicle crash patients. Of the 262 victims, restraint status at the time of injury was recorded for 216 (82%). Among these 216 victims with known restraint status, 80 (37%) were restrained at the time of their crash and 136 (63%) were not restrained. The demographic characteristics of the restrained and unrestrained groups (total N=216) were remarkably similar: 58% and 59% were female, 64% and 60% were drivers of the vehicles, 81% and 83% had no medical insurance (private, Medicaid, or Medicare), respectively. The mean age of the unrestrained group (24.4 years), however, was somewhat lower than that for the group wearing seat belts (27.4 years) at the time of injury. Nevertheless, there is no reason to believe that this age difference would have any impact on the analysis of charges.

Of the 80 patients who were restrained, two (3%) were admitted to the hospital: one patient for 2 days, and the other for 10 days. This resulted in a calculated average length of stay (ALOS) of 6 days for the two restrained

patients who were hospitalized (Table 1). All other restrained victims were treated and released from the emergency room. Of the 136 victims who had not been wearing seat belts, 19 (14%) were hospitalized. The length of stay was not reported for four of these patients, all of whom had been transferred to a contract care hospital. Length of stay was reported for the other 15 patients, and ranged from one to 64 days. The total number of documented patient days in the hospital was 275, resulting in an ALOS of 18.3 days for these 15 patients for whom data were available. Of the 46 patients whose restraint status was unknown, none were admitted to the hospital.

The distribution of restraint status by age group is shown in Table 2. Occupants over the age of 15 years accounted for 225 (86%) of the 262 victims. Among victims with known restraint status, 41% (13/32) of occupants under 16 years of age were restrained and 36% (67/184) of occupants 16 years and older were restrained.

**Table 1. Disposition of car crash victims by occupant restraint status, W.W. Hastings Hospital, Oklahoma, January 1 through September 30, 1994.**

	Total	Treated In ER Only	Admitted	Average Length of Stay
Restrained	80	78 (97.5%)	2 (2.5%)	6.0 days
Not restrained	136	117 (86.0%)	19(14.0%)	18.3 days*
Unknown	46	46(100.0%)	0	0
Total	262	241	21	

\* Average length of stay (ALOS) for the 15 patients whose length of stay was recorded.

**Table 2. Number of victims by age group and occupant restraint status, W.W. Hastings Hospital, Oklahoma, January 1 through September 30, 1994.**

Age Group (Years)	Restrained	Not Restrained	Restraint Status Unknown	Total
0-5	7	9	2	18
6-15	6	10	3	19
16-44	56	109	35	200
45+	11	8	6	25
TOTAL	80	136	46	262

For the nine-month period of the study, the total estimated charges (inpatient and emergency services) calculated for restrained patients were \$37,600, compared to \$325,760 for unrestrained patients, making the total charges for unrestrained patients almost 9 times higher than those for restrained patients. The average charge for each restrained patient (\$37,600/80) was \$470 compared to \$2,395 per unrestrained patient (\$325,760/136); the average cost for each unrestrained patient was, therefore, five times greater than for those restrained.

The charges for patients whose restraint status was unknown were \$16,100, with the average charge per patient of \$350 (the estimated charge for the emergency room visit).

The total hospitalization charges for restrained patients who were hospitalized were \$9,600, with an average charge per patient (n=2) of \$4,800. For unrestrained patients who were hospitalized, the total hospitalization charges were \$278,160, with an average charge per patient (n=19) of \$14,640. Thus, for those hospitalized, the average hospitalization charge per patient for an unrestrained victim was three times greater than for a patient who had been wearing a seat belt prior to injury, while the total hospital charges were 29 times greater for unrestrained victims than for restrained victims.

When the data for all 262 patients are annualized (that is, calculated for a 12-month period of time), the total estimated annual charges for treatment of injuries as a result of car crashes would be \$505,946. This amount represents the calculated charges for the 262 emergency room visits and 348 days of patient hospitalization extrapolated to a 12-month period. Figure 1 shows the dramatic differences in medical care charges.

## Discussion and Conclusions

A conservative estimate of the annual charges for emergency room care and hospitalization for injured motor vehicle occupants at this one IHS hospital amounts to \$506,000. This is clearly a substantial underestimate, since only emergency room and initial hospitalization costs were included. Not obtained were subsequent ambulatory and inpatient charges, actual charges for the four unrestrained patients treated in contract care facilities, and estimates of indirect costs. Table 3 lists many of the variables that would need to be calculated for a thorough accounting of direct and indirect costs of injury.<sup>4,6</sup> Nationally, direct medical costs account for only 25% of the lifetime costs for people injured by motor vehicles.<sup>7</sup> Indirect costs include the loss of earnings due to disability and premature death, and economic losses associated with family members who have to care for injury victims.

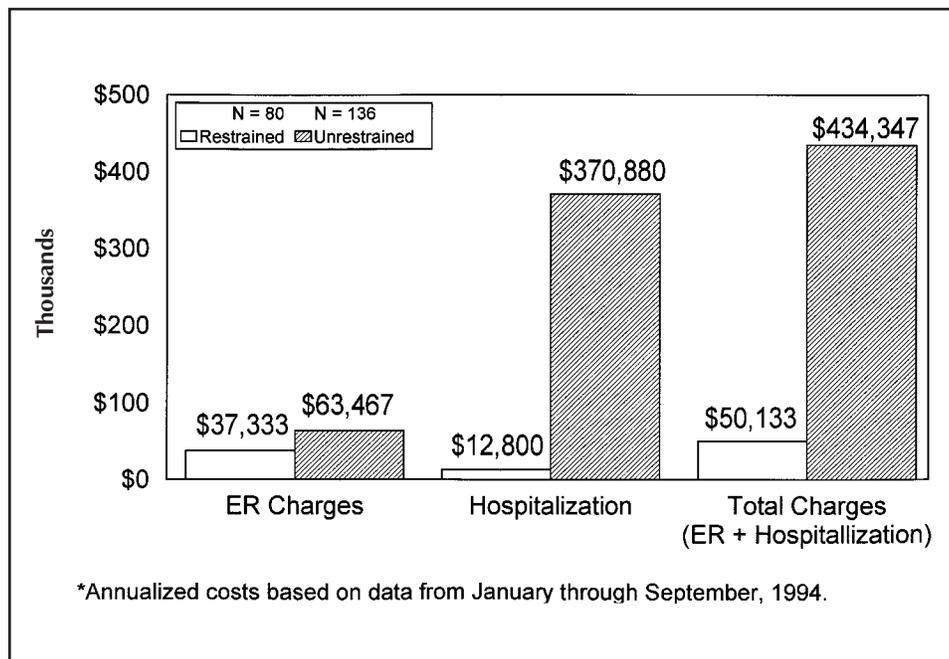
Among the 216 patients with known restraint status, patients

who were unrestrained by seat belts at the time of injury accounted for 63% of the victims treated at the Hastings Hospital but 90% of the total medical charges. Most of this difference was accounted for by higher rates of admission (14% vs. 3%) and longer hospital stays (18.3 days vs. 6 days) for unrestrained compared to restrained victims. In fact, if all 117 unrestrained patients had been wearing seat belts at the time of their injury, the total number of days of hospitalization would have been reduced by 94%. These figures presumably reflect the much greater severity of injuries among unrestrained crash victims.

Although the reliability of restraint status as documented in medical records is uncertain, we would expect any bias to be in the direction of overreporting restraint use at the time of injury. For both legal and psychological reasons, victims would be more likely to state that they were using a seat belt when they actually had been unrestrained than the other way around. Overreporting restraint use would have the effect of reducing the overall charges attributed to unrestrained victims and increasing those in the restrained category, making our estimates even more conservative. Similarly, attributing the same average length of stay to the four victims transferred to other hospitals whose length of stay was unknown is a conservative approach, since these patients are likely to have been among the most severely injured. The estimate we used for emergency room charges is similar to a recently published report from Michigan.<sup>8</sup> Also, the figure of \$800 per hospital day is very close to recently released IHS reimbursement rates (\$736 per day nationally, except \$930 for Alaska).<sup>9</sup>

There are several direct implications of these data for American Indian and Alaska Native communities. As seen in Table 2, rates of occupant restraint use were woefully inadequate.

**Figure 1. Annualized costs and ratios of motor vehicle-related injuries by restraint status, W.W. Hastings Hospital, Oklahoma, 1994.\***



**Table 3. Direct and indirect costs of injury.**

Pre-hospital care: ambulance and helicopter services
Emergency room visits
Hospital treatment: initial care, rehospitalizations, inpatient rehabilitation
Nursing home care
Outpatient physician visits
Outpatient prescription drugs
Physical therapy
Wheelchairs and appliances
Attendant care
Home modifications
Vocational rehabilitation
Value of earnings lost
Value of goods and services not produced because of injury-related illness, disability, and death

quate among victims of all ages. Therefore, increasing the rates of seat belt and child restraint usage has the potential for dramatically reducing serious injuries and resultant medical costs. This can be facilitated through enhanced car seat loaner programs; educational interventions in schools, worksites, and through the media; and passage and rigorous enforcement of primary restraint laws.<sup>10-13</sup> Oklahoma's child seat law is subject to primary enforcement; however, the state's seat belt law is currently "secondary."

Because 86% of the victims seen at the W.W. Hastings Hospital were over the age of 15 years, child restraint programs alone will not dramatically decrease the overall number of motor vehicle-related injuries. Reducing the incidence of motor vehicle crashes through efforts to reduce drunk driving, enforce speed limits, and promote safer driving among juveniles (for example, through restricted licensing) will decrease injuries among the most vulnerable groups of motor vehicle occupants. The latter includes teenagers, young adults, and individuals who are intoxicated.<sup>14-17</sup>

The effectiveness of a comprehensive prevention program has been demonstrated by the Navajo Nation. The Navajo Nation enacted a primary enforcement safety-belt use law, implemented an intensive public information program, and initiated rigorous, widespread enforcement of the law. Motor vehicle-related injury hospitalization rates for Navajo Indians fell nearly 30% as seat belt use increased from 14% to 60% over three years.<sup>18</sup> In spite of the success demonstrated by the Navajo Nation, most tribes do not have a primary enforcement occupant restraint law. Tribes, as sovereign nations, can adopt strict motor vehicle codes affecting occupant restraints, speed limits, and drunk driving. Injury prevention programs become more urgent as health care dollars become more scarce.

### Acknowledgements

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### References

1. *Trends in Indian Health-1995*. Rockville, MD: Indian Health Service, Division of Program Statistics; 1996.
2. *1994 Oklahoma Traffic Accident Facts*. Oklahoma City, OK: Oklahoma Department of Public Safety, Accident Records Division; 1995.
3. Dean AG, et al. *Epi Info, Version 6, A Word Processing, Database, and Statistics System for Epidemiology on Microcomputers*. Atlanta, GA: Centers for Disease Control and Prevention; April, 1994.
4. MacKenzie EJ, Shapiro S, Siegle JH. The economic impact of traumatic injuries: one-year treatment-related expenditures. *JAMA*. 1988;260:3290-3296.
5. Rutledge R, Lalor A, Oller D, et al. The cost of not wearing seat belts: a comparison of outcome in 3396 patients. *Annals of Surgery*. 1993;217:122-127.
6. Harlan LC, Harlan WR, Parsons PE. The economic impact of injuries: a major source of medical costs. *Am J Public Health*. 1990;80:453-459.
7. Rice DP, MacKenzie EJ, and Associates. *Cost of Injury in the United States: A Report to Congress*, 1989. San Francisco: Institute for Health and Aging, University of California and Injury Prevention Center, The Johns Hopkins University; 1989:46.
8. Williams RM. The costs of visits to emergency departments. *N Engl J Med*. 1996;334:642-646.
9. Kendrick T. Health Care Financing Administration updates Medicare, Medicaid reimbursement rates for IHS facilities. Bethesda, MD: Press release, Indian Health Service, Office of Communications, June 10, 1996.
10. Reath DB, Kirby J, Lynch M, Maull KI. Injury and cost comparison of restrained and unrestrained motor vehicle crash victims. *J Trauma*. 1989;29:1173-1177.
11. Hooker EA, Danzl DF, Thomas DM, Miller F, Zupances W. Economic impact of motor vehicle restraints in Kentucky: a trauma center's experience. *Kentucky Med J*. 1990; 88:59-61.
12. Orsay EM, Turnbull TL, Dunne M, et al. Prospective study of the effect of safety belts on morbidity and health care costs in motor vehicle accidents. *JAMA*. 1988;260:3598-3603.
13. Sokolosky MC, Prescott JE, Collins SL, Timberlake GA. Safety belt use and hospital charge differences among motor vehicle crash victims. *W Virginia Med J*. 1993; 89:328-330.
14. *Surgeon General's Workshop on Drunk Driving: Proceedings*. Washington, DC: U.S. Public Health Service, Office of the Surgeon General, 1988.
15. The National Committee for Injury Prevention and Control. *Injury Prevention: Meeting the Challenge*. New York: Oxford University Press; 1989.
16. Graitcer PL. Evaluating community interventions to reduce drunken driving. *Am J Public Health*. 1989;79:271.
17. Marine WM, Kerwin EM, Moore EE, et al. Mandatory seatbelts: epidemiologic, financial, and medical rationale from the Colorado matched pair study. *Journal of Trauma*. 1994;36:96-100.
18. Bill N, Buonvir G, Bohan P, et al. Safety-belt use and motor vehicle-related injuries: Navajo Nation, 1988-1991. *MMWR*. September 25, 1992; 41(38):705-708. □

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# Preventing Baby Bottle Tooth Decay and Early Childhood Caries Among AI/AN Infants and Children

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## Introduction

Initial dental decay in infants and young children is the result of a specific bacterium, *Streptococcus mutans*, which is transmitted from mothers to their infants.<sup>1,2</sup> This organism is "fueled" by the frequent intake of sucrose and other refined carbohydrates. Baby bottle tooth decay (BBTD) is characterized by a unique pattern of dental decay that affects the upper primary incisors followed by the primary molars, in order of eruption.<sup>3,4</sup> This pattern of dental decay is seen in children 1 to 3 years of age. BBTD can result from one or both of the following behaviors: giving a child a bottle containing carbohydrates at nap or bedtime, and bottle-feeding past the age of 12 months. Breastfed children who sleep with their mother and nurse at will throughout the night have also been reported to have this same pattern of decay.<sup>2,5</sup>

Some young children develop dental decay unrelated to bottle-feeding or breast-feeding. This dental decay affects the primary molar teeth and is generally caused by frequent snacking on refined sugars or other factors. The broader term early childhood caries (ECC) is used to describe dental decay in preschool age children from any source, and includes BBTD. The terminology "BBTD/ECC" has been adopted to alleviate confusion for professional and lay people alike as caries in this population are multifactorial and cannot be attributed to a single risk factor. Unfortunately, the children with BBTD/ECC are at risk of developing further dental decay because they have increased colonization with *Streptococcus mutans*.

Dental decay in young children can cause pain and infection, and may result in tooth extractions and costly dental treatment. According to a 1991 IHS survey of dental patients, over 75% of American Indian and Alaska Native (AI/AN) children experienced dental decay in their primary teeth.<sup>6</sup> Other surveys have documented that approximately 50% of AI/AN

children participating in Head Start programs, ages 3 to 5 years, have the specific pattern of BBTD.<sup>7,8</sup> IHS estimates the cost to treat BBTD, based on children treated under contract by pediatric dentists, to be \$1000-\$2000 per child. If hospitalization is necessary, the cost may be doubled. The IHS estimates that if all children were to receive the dental care they needed by the time they reach age seven, over \$61.7 million would be needed to pay for treatment (an amount that is many times larger than the budget for the entire IHS dental program). In order to treat only the new cases occurring each year, some \$4.9 million would need to be added to the current annual budget.

Due to the high prevalence of dental caries among AI/AN children and the associated costs of treatment, the authors believe that our efforts need to focus on prevention. This paper describes both community-based and clinic-based interventions to prevent BBTD/ECC.

## Community-Based Interventions

During the period 1986-1990, a BBTD prevention program was implemented in 12 AI/AN communities.<sup>9</sup> This program was a cooperative effort of three Department of Health and Human Service agencies: the Administration for Children, Youth, and Families, Head Start Bureau; the Indian Health Service, Dental Program; and the Centers for Disease Control and Prevention, Division of Oral Health. Preliminary data from the 12 combined sites has demonstrated that the prevalence of BBTD in children attending Head Start programs fell from 57% in 1986 to 43% in 1990, a 25% reduction ( $p < .001$ ). Funding for the BBTD intervention ended in 1990. The individual sites were encouraged to continue their efforts, but the provision of centralized training and technical assistance ceased.

In 1995, the IHS Dental Program, in conjunction with Head Start, funded an evaluation to assess the current prevalence of BBTD and the level of program activity at these 12 original sites.<sup>10</sup> The prevalence of BBTD at the 12 sites combined remained at 43%. The variation between sites, however, was considerable. After eight years, the program

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effect at the five sites that continued the full intervention was a reduction in prevalence to 38% ( $p < .001$ ). At the seven sites that discontinued the community-based prevention activities, the net effect after 8 years was a 13% reduction in prevalence (not statistically significant,  $p > .05$ ). The primary reason given for discontinuation of the community-based prevention activities at these sites was staff turnover. The evaluation concluded that the BBTD program is effective, but it must be institutionalized for long-term success.

The BBTD prevention program is multidisciplinary and incorporates a variety of strategies. The two major components are one-to-one counseling of the caretakers of infants and a community-wide intervention. The one-to-one intervention continued in some fashion at each of the 12 sites. The Women, Infants, and Children Program (WIC) staff reported that they offered BBTD counseling at the intervals recommended by national WIC guidelines. This includes the use of a tippee cup for juice at six months of age, and weaning from the bottle at 12 months. Breastfeeding is encouraged as the preferred method of feeding. At the sites where BBTD prevalence continued to decrease, the dental staff continued its prevention efforts and worked closely with the medical staff to encourage routine BBTD counseling during well-baby and immunization clinic visits.

At the successful sites, staff reported involvement in a wide variety of community-based prevention activities. These activities included computerized mailings to caretakers of infants, smile contests, health fair booths, public service announcements, use of posters, news articles, and parenting workshops. One dental assistant coordinator reported, "I like seeing the difference. It's really fun. I talk to people (about BBTD) at the supermarket and everywhere else in the community."

The BBTD prevention program demonstrated reduction in the prevalence of BBTD at both three-year and eight-year evaluations. A dentist from a successful site put it succinctly, "It works, but it takes a long-term commitment to the community."

The BBTD program has recently been expanded to include messages that address frequent snacking, the use of fluorides, early identification of dental decay by caregivers, and dental screenings at one year of age.

### **Clinic-Based Interventions**

As our understanding of the process of dental decay increases, there is speculation that we will soon be able to screen for and diagnose a child's risk for dental decay and then apply pharmacotherapeutic interventions selectively to those infants and children at greatest risk for the disease. Various pharmacotherapeutics are already available.

Clinic-based interventions to prevent BBTD/ECC have

been field-tested in a few IHS dental clinics. One of these interventions involved the monthly application of iodine on the teeth of infants and young children. The primary obstacle to this intervention was a high dropout rate. A pharmacotherapeutic regimen that requires monthly treatments may not be practical in an IHS setting (or many other settings). Since there are no data currently available to assess long-term effectiveness, the application of topical iodine is not recommended in an IHS setting.

Topical fluoride varnishes may be a more viable pharmacotherapeutic intervention at IHS sites. Fluoride varnishes have been used extensively in many European countries since the 1960s.<sup>11</sup> These varnishes are both safe and effective for use in young children and they require less frequent applications than the iodine treatment. Applied two to four times yearly, fluoride varnishes have a beneficial effect in the prevention of cavities in infants and preschool children. Fluoride varnishes are currently marketed as a cavity liner, but no FDA regulations prevent its use as a topical fluoride, the original intent of its development. Use of this product in this manner is up to the clinician's judgment.

Another strategy is to encourage parents and caretakers to bring the child to the dental clinic for an oral examination by the age of 12-18 months. Appropriate education can be provided and, if there are small lesions, preventive regimens may be applied that will arrest the lesion and potentially avoid an unpleasant dental experience for the child and caretaker.

As a secondary preventive measure, small lesions in young children can be provisionally restored with the new class of glass ionomer restorative products. Atraumatic Restorative Treatment (ART) involves removing decalcified tooth tissue using only hand instruments and restoring the cavity with an adhesive glass ionomer filling material.<sup>12</sup> The glass ionomer restoration provides a fluoride release that slows the advancement of the carious lesion. Larger lesions, especially on the maxillary incisors, can be treated without using a stainless steel crown. This restoration serves as an interim filling. In many cases, it is possible to delay the need for definitive care until the child is older when he or she may not require restraint, sedation, or general anesthesia.

The IHS ABCD (Access for Baby and Children's Dentistry) Program has been designed to combine community- and clinic-based programs into a comprehensive effort to include wider professional involvement. This program uses many components of the original BBTD community-based intervention project. In addition, clinical components of the ABCD Program include risk assessment, early intervention and referral, pharmacologic and restorative protocols, education of parents, and preventive recall. This intervention is patterned after a similar program at the University of

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Washington, but has been modified to better address AI/AN needs.

The ABCD program was introduced to IHS personnel in July 1996 in collaboration with the Department of Pediatric Dentistry at the University of Washington in July, 1996. The combination of both clinical and community preventive efforts is advocated to provide secondary prevention and help prevent advancing caries requiring sedation and general anesthesia.

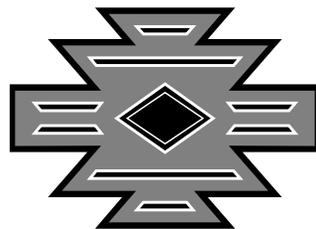
### Conclusions

The success of the community-based BBTD prevention program was demonstrated by both 3- and 8-year evaluations. Clinical interventions that address early identification of dental caries and the application of pharmacotherapeutic agents should continue to be evaluated in selected IHS communities. The combination of community-based and clinical interventions has been provided to 11 demonstration sites and will be evaluated in the future.

Since there is a new cohort of parents and infants each year, long-term success will be dependent on the institutionalization of these interventions.<sup>13</sup> Centralized training of dental and medical staff; Women, Infant and Children workers; and other community members, along with on-going technical assistance, will be critical to the long-term success of these interventions. Prevention and early intervention are considered by the authors to be the only viable and affordable options to effectively address the massive problem of early childhood caries in AI/AN children.

### References

1. Berkowitz RJ. Etiology of nursing bottle caries: a microbiological perspective. *J Public Health Dent.* 1996;56:51-54.
2. Caulfield PW, Cutter GR, Dasanayake AP. Initial acquisition of *mutans streptococci* by infants: evidence for a discrete window of infectivity. *J Dent Res.* 1993;72:37-45.
3. Ripa LW. Nursing caries: a comprehensive review. *Pediatr Dent.* 1988;10:268-282.
4. Johnsen DC. Characteristics and backgrounds of children with "nursing caries." *Pediatr Dent.* 1982;4:218-224.
5. Kotlow LA. Breastfeeding: a cause of dental caries in children. *J Dent Child.* 1987;44:192-193.
6. Niendorf W. *The Oral Health of Native Americans: A Chart Book of Recent Findings, Trends, and Regional Differences.* Albuquerque, NM: Indian Health Service, Dental Field Support and Program Development; August 1994.
7. Broderick E, Mabry J, Robertson D, Thompson J. Baby bottle tooth decay in Native American children in Head Start centers. *Public Health Rep.* 1989;104:50-54.
8. Kelly M, Bruerd B. The prevalence of baby bottle tooth decay among two Native American populations. *J Public Health Dent.* 1987;47:94-97.
9. Bruerd B, Kinney MB, Bothwell E. Preventing baby bottle tooth decay in American Indian and Alaska Native communities: a model for planning. *Public Health Rep.* 1989;104:631-640.
10. Bruerd B, Jones C. Preventing baby bottle tooth decay: eight-year results. *Public Health Rep.* 1996;111:63-65.
11. Mandel ID. Fluoride varnishes: a welcome addition. *J Public Health Dent.* 1994;54:67.
12. Frenken JE, Pilot T, Songpaisan Y, Phantumvanit P. Atraumatic restorative treatment: rationale, technique, and development. *J Public Health Dent.* 1996;56:135-140.
13. Goodman RM, Steckler A. A model for the institutionalization of health promotion programs. *Fam Community Health.* 1989;11(4):63-78. □



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## LETTER TO THE EDITOR □

The article, "Crow Agency Anticoagulation Service Initiated by Pharmacists," by Daniel Struckman, RPh, published in the August 1995 issue of *The IHS Primary Care Provider* was a great service to the pharmacy staff here in Warm Springs, Oregon. This has long been an area of patient care that appeals to me. After offering to provide this service at other service units and being repeatedly turned down for one reason or another, I had given up and did not even think to offer the service to the providers at the Warm Springs Health and Wellness Center.

One of our providers read the article and brought it to a Pharmacy and Therapeutics Committee meeting to ask why the pharmacists here didn't provide this service. That is all it took to get the ball rolling! We contacted Mr. Struckman in Lame Deer, Montana. He sent us a copy of their protocol and pointed us in the right direction to obtain training materials for the pharmacy staff.

After reading the recommended literature and reviewing

his program, we were able to set up a similar program that fit the needs of our clinic and devise a training program to standardize the care our patients would receive. Although our anticoagulation clinic program is very small, it adds a tremendous amount of professional satisfaction to our jobs and has lead to talk of other pharmacy-run clinics. We would all like to thank Mr. Struckman for taking the time to publish the success he has had with his anticoagulation program.

Linda M. Schrand, PharmD     Darcy Brownlee, RPh  
Clinical Pharmacist             Chief Pharmacist

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## MEETINGS OF INTEREST □

### **Advanced Operative Laparoscopy for Obstetricians and Gynecologists**

**June 2-3, 1997 (and repeated) Bethesda, MD**

This two-day course in advanced gynecologic laparoscopy is designed to enhance the specialist's experience and skills in the laparoscopic management of gynecologic problems. Included are seven hours of didactic instruction, The remainder of the time is devoted to two hands-on laboratory sessions in small groups to provide individualized experience and practice in performing laparoscopic surgery with the latest available equipment on the market and under development. Procedures to be performed include salpingostomy, salpingectomy, oophorectomy, and hysterectomy, as well as management of potential inoperative problems. USUHS designates this activity for 13 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

The course will be presented June 2-3, 1997; September 22-23, 1997; and December 8-9, 1997 at the Uniformed Services University of the Health Sciences in Bethesda, MD. For additional information, contact HMI Michael D. Lozeau, USN, Department of Obstetrics and Gynecology, USUHS at 301-295-3777.

### **Obstetrical Ultrasound**

**June 11-13, 1997 Bethesda, MD**

This Three-day OB/GYN imaging diagnostic ultrasound course is specifically aimed at physicians in practice, first- and

second-year OB/GYN residents, certified nurse midwives, and nurse practitioners who wish to learn and improve their "basic" skills of performing and interpreting basic anatomic ultrasound examinations. Anyone who has been performing real-time ultrasound procedures for less than 24 months should benefit from participation. The course includes three half-days of didactic presentation and discussion sessions and three half-days of supervised hands-on practical sessions in small groups. This permits the participants to perfect their skills and put into practice the measurements and calculations discussed in the didactic portion of the course. USUHS designates this course for 23 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association and for 27.6 contact hours of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation.

For additional information, contact LT Tim Osbon, Continuing Health professional Education, USUHS at 301-295-3106.

### **Recruitment Conference for IHS and Tribal Recruiters July 8-10, 1997 Phoenix, AZ**

Recruitment and retention of health care professionals are major concerns for Indian health programs across the country, whether they are operated directly by the Indian Health Service, by tribes, or by urban Indian programs. It is essential that we work together to maximize our exposure to prospective

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employees and enhance the probability of having them join us in our efforts.

As a means of beginning a dialogue that will result in the development of a comprehensive and cooperative recruitment effort, we are convening a meeting of as many of the people

involved in the effort to recruit health professionals for Indian health programs as possible.

More information and an agenda will be available by the end of April. Please mark your calendars now, and plan to attend this important activity.

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## NATIVE AMERICAN MEDICAL LITERATURE □

*The following is an updated MEDLINE search on Native American medical literature. This computer search is published regularly as a service to our readers, so that you can be aware of what is being published about the health and health care of American Indians and Alaska Natives.*

*The Clinical Support Center cannot furnish the articles listed in this section of The Provider. For those of you who may wish to obtain a copy of a specific article, this can be facilitated by giving the librarian nearest you the unique identifying number (UI number, found at the end of each cited article).*

*If your facility lacks a library or librarian, try calling your nearest university library, the nearest state medical association, or the National Library of Medicine (1-800-272-4787) to obtain information on how to access journal literature within your region. Bear in mind that most local library networks function on the basis of reciprocity and, if you do not have a library at your facility, you may be charged for services provided.*

Herrera-Geopfert R, Magana M. Follicular cheilitis. A distinctive histopathologic finding in actinic prurigo. *Am J Dermatopathol.* 1995 Aug;17(4):357-61. 96166821

Parham P, Ohta T. Population biology of antigen presentation by MHC class I molecules. REVIEW ARTICLE: 71 REFS. *Science.* 1996 Apr 5;272(5258):67-74. 96178670.

Nguyen VT, Larson DE, Johnson RK, Goran MI. Fat intake and adiposity in children of lean and obese parents. *Am J Clin Nutr.* 1996 Apr;63(4):507-13. 96181041

Albers LL, Schiff M, Gorwoda JG. The length of active labor in normal pregnancies. *Obstet Gynecol.* 1996 Mar;87(3):355-9. 96176491

Ensor BE, Irish JD. Hypoplastic area method for analyzing dental enamel hypoplasia. *Am J Phys Anthropol.* 1995 Dec;98(4):507-17. 96170571

Merriwether DA, Rothhammer F, Ferrell RE. Distribution of the four founding lineage haplotypes in Native Americans suggests a single wave of migration for the New World. *Am J Phys Anthropol.* 1995 Dec;98(4):411-30. 96170565

Wainwright RB. The US Arctic Investigations Program: infectious disease prevention and control research in Alaska.

REVIEW ARTICLE: 52 REFS. *Lancet.* 1996 Feb 24;347(9000):517-20. 96174712

McCordle BW, Wood MM, Collins GF, Wheatley B, Rowe RD. An increased incidence of total anomalous pulmonary venous drainage among aboriginal Canadians. *Can J Cardiol.* 1996 Jan;12(1):81-5. 96166666

Dempsey P, Gesse T. Beliefs, values, and practices of Navajo childbearing women. *West J Nurs Res.* 1995 Dec;17(6):591-604. 96166624

Lee ET, Howard BV, Savage PJ, et al. Diabetes and impaired glucose tolerance in three American Indian populations aged 45-74 years. The Strong Heart Study. *Diabetes Care.* 1995 May;18(5):599-610. 96166624

Thompson DB, Ossowski V, Janssen RC, Knowler WC, Bogardus C. Linkage between stature and a region on chromosome 20 and analysis of a candidate gene, bone morphogenetic protein 2. *Am J Med Genet.* 1995 Dec 4;59(4):495-500. 96161365

Deka R, Shriver MD, Yu LM, Ferrell RE, Chakraborty R. Intra- and inter-population diversity at short tandem repeat loci in diverse populations of the world. *Electrophoresis.* 1995 Sep;16(9):1659-64. 96126922

Broussard BA, Sugarman JR, Bachman-Carter K, et al. Toward comprehensive obesity prevention programs in Native American communities. REVIEW ARTICLE: 50 REFS. *Obes Res.* 1995 Sep;3 Suppl 2:289s-297s. 96117298

Shanker MS. Using neural networks to predict the onset of diabetes mellitus. *J Chem Inf Comput Sci.* 1996 Jan-Feb;36(1):35-41. 96156821

Nelson RG, Pettitt DJ, Knowler WC, Bennett PH. Prediabetic blood pressure and familial predisposition to renal disease in Pima Indians with non-insulin-dependent diabetes mellitus. *J Diabetes Complications.* 1995 Oct-Dec;9(4):212-4. 96129364

Gruber E, Anderson MM, Ponton L, DiClemente R. Overweight and obesity in native-American adolescents: comparing non-reservation youths with African-American and Caucasian peers. *Am J Prev Med.* 1995 Sep-Oct;11(5):306-10. 96105065

- Campos-Outcalt D, Ellis J, Aickin M, Valencia J, Wunsch M, Steele L. Prevalence of cardiovascular disease risk factors in a southwestern Native American tribe. *Public Health Rep.* 1995 Nov-Dec;110(6):742-8. 96158906
- Novins DK, Harman CP, Mitchell CM, Manson SM. Factors associated with the receipt of alcohol treatment services among American Indian adolescents. *J Am Acad Child Adolesc Psychiatry.* 1996 Jan;35(1):110-7. 96148233
- Novoradovsky A, Tsai SJ, Goldfarb L, Peterson R, Long JC, Goldman D. Mitochondrial aldehyde dehydrogenase polymorphism in Asian and American Indian populations: detection of new ALDH2 alleles. *Alcohol Clin Exp Res.* 1995 Oct;19(5):1105-10. 96119362
- Lester D. American Indian suicide rates and the economy. *Psychol Rep.* 1995 Dec;77(3 Pt 1):994. 96130953
- Bhatara VS, Fuller WC, Fogas BS. Mental Health Service Deficit: the South Dakota experience. *Am Indian Alsk Native Ment Health Res.* 1995;6(3):56-70. 96127667
- Lester D. Social correlates of American Indian suicide and homicide rates. *Am Indian Alsk Native Ment Health Res.* 1995;6(3):46-55. 96127666
- Burns TR. How does IHS relate administratively to the high alcoholism mortality rate? *Am Indian Alsk Native Ment Health Res.* 1995;6(3):31-45. 96127665
- Husted J, Johnson T, Redwing L. Multi-dimensional adolescent treatment with American Indians. *Am Indian Alsk Native Ment Health Res.* 1995;6(3):23-30. 96127664
- Scurfield RM. Healing the warrior: admission of two American Indian war-veteran cohort groups to a specialized inpatient PTSD unit. *Am Indian Alsk Native Ment Health Res.* 1995;6(3):1-22. 96127663
- Gonzalez CD, Frazier PJ, LeMay W, Stenger JP, Pruhs RJ. Sealant status and factors associated with sealant presence among children in Milwaukee, WI. *ASDC J Dent Child.* 1995 Sep-Oct;62(5):335-41. 96139572
- Wing DM, Thompson T. Causes of alcoholism: a qualitative study of traditional Muscogee (Creek) Indians. *Public Health Nurs.* 1995 Dec;12(6):417-23. 96137683
- Davis SM, Lambert LC, Cunningham-Sabo L, Skipper BJ. Tobacco use: baseline results from pathways to health, a school-based project for southwestern American Indian youth. *Prev Med.* 1995 Sep;24(5):454-60. 96089872
- Hodge FS, Cummings S, Fredericks L, Kipnis P, Williams M, Teehee K. Prevalence of smoking among adult American Indian clinic users in northern California. *Prev Med.* 1995 Sep;24(5):441-6. 96089870
- Glasgow RE, Lichtenstein E, Wilder D, Hall R, McRae SG, Liberty B. The tribal tobacco policy project: working with Northwest Indian tribes on smoking policies. *Prev Med.* 1995 Sep;24(5):434-40. 96089869
- Watkins DI. The evolution of major histocompatibility class I genes in primates. REVIEW ARTICLE: 135 REFS. *Crit Rev Immunol.* 1995;15(1):1-29. 96058541
- Jolly AM, Orr PH, Hammond G, Young TK. Risk factors for infection in women undergoing testing for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* in Manitoba, Canada. *Sex Transm Dis.* 1995 Sep-Oct;22(5):289-95. 96100866
- Lester D. Suicide and homicide among Native Americans: a comment. *Psychol Rep.* 1995 Aug;77(1):10. 96076906
- Kavanagh K, Pope D, Weiss K, et al. Students experience the Pine Ridge South Dakota Reservation. *Imprint.* 1995 Nov-Dec;42(5):48-51. 96099188
- Dafoe GH. Training and recruitment of aboriginal public health workers--Phase II. *Can J Public Health.* 1995 Jul-Aug;86(4):220. 96048099
- Borins M. Native healing traditions must be protected and preserved for future generations. *Can Med Assoc J.* 1995 Nov 1;153(9):1356-7. 96067025
- Oreiro DW. A community-based public health initiative integrating a traditional war canoe culture within today's contemporary lifestyles: the 'C.E.D.A.R.' project. *Patient Educ Couns.* 1995 Sep;26(1-3):177-81. 96037480
- Gunn SW. Totemic medicine among the American Indians of the northwest coast. REVIEW ARTICLE: 19 REFS. *Patient Educ Couns.* 1995 Sep;26(1-3):159-67. 96037478
- Jones J, Reid ME, Oyen R, et al. A novel common Kell antigen, TOU, and its spatial relationship to other Kell antigens. *Vox Sang.* 1995;69(1):53-60. 96078302
- Pardi D, Hjelle B, Folks TM, Lal RB. Genotypic characteristics of HTLV-II isolates from Amerindian and non-Indian populations. *Virus Genes.* 1995;10(1):27-35. 96082760
- VanLandingham MJ, Hogue CJ. Birthweight-specific infant mortality risks for Native Americans and whites, United States, 1960 and 1984. *Soc Biol.* 1995 Spring-Summer;42(1-2):83-94. 96068376
- Buck GM, Shelton JA, Mahoney MC, Michalek AM, Powell EJ. Racial variation in spontaneous fetal deaths at 20 weeks or older in upstate New York, 1980-86. *Public Health Rep.* 1995 Sep-Oct;110(5):587-92. 96073582
- Picard FJ, Coulthart MB, Oger J, et al. Human T-lymphotropic virus type 1 in coastal natives of British Columbia: phylogenetic affinities and possible origins. *J Virol.* 1995 Nov;69(11):7248-56. 96013830
- Gill GW. Challenge on the frontier: discerning American Indians from whites osteologically. *J Forensic Sci.* 1995 Sep;40(5):783-8. 96080954

- Bell RA, Shaw HA, Dignan MB. Dietary intake of Lumbee Indian women in Robeson County, North Carolina. *J Am Diet Assoc.* 1995 Dec;95(12):1426-8. 96086904
- Tsubouchi J, Tsubouchi M, Maynard RJ, Domoto PK, Weinstein P. A study of dental caries and risk factors among Native American infants. *ASDC J Dent Child.* 1995 Jul-Aug;62(4):283-7. 96063835
- Mail PD. Early modeling of drinking behavior by Native American elementary school children playing drunk. *Int J Addict.* 1995 Jul;30(9):1187-97. 96075955
- Nelson-Conley CL. Necrotizing fasciitis. *AORN J.* 1996 Jun;63(6):1119-22. 96367206
- Gilliland FD, Becker TM, Samet JM, Key CR. Trends in alcohol-related mortality among New Mexico's American Indians, Hispanics, and non-Hispanic whites. *Alcohol Clin Exp Res.* 1995 Dec;19(6):1572-7. 96356243
- Handt O, Krings M, Ward RH, Paabo S. The retrieval of ancient human DNA sequences. *Am J Hum Genet.* 1996 Aug;59(2):368-76. 96335706
- Foy CA, McCormack LJ, Knowler WC, Barrett JH, Catto A, Grant PJ. The angiotensin-I converting enzyme (ACE) gene I/D polymorphism and ACE levels in Pima Indians. *J Med Genet.* 1996 Apr;33(4):336-7. 96282909
- Guerrero-Romero F, Rodriguez-Moran M, Sandoval-Herrera F. Prevalence of NIDDM in indigenous communities of Durango, Mexico. [letter] *Diabetes Care.* 1996 May;19(5):547-8. 96311109
- Lutumba Ntetu A, Fortin JD. [Reconsidering the approach to native peoples.] *Can Nurse.* 1996 Mar;92(3):42-6. 96337582
- Herbert CP. Community-based research as a tool for empowerment: the Haida Gwaii Diabetes Project example. *Can J Public Health.* 1996 Mar-Apr;87(2):109-12. 96321415
- Wolfson P, Hood V, Secker-Walker R, Macauley AC. Mohawk English in the medical interview. *Med Anthropol Q.* 1995 Dec;9(4):503-9. 96353237
- Gilliland FD, Hunt WC, Key CR. Ethnic variation in prostate cancer survival in New Mexico. *Cancer Epidemiol Biomarkers Prev.* 1996 Apr;5(4):247-51. 96288594
- Abbott S, Trinkaus E, Burr DB. Dynamic bone remodeling in later Pleistocene fossil hominids. *Am J Phys Anthropol.* 1996 Apr;99(4):585-601. 96253265
- Parr RL, Carlyle SW, O'Rourke DH. Ancient DNA analysis of Fremont Amerindians of the Great Salt Lake Wetlands. *Am J Phys Anthropol.* 1996 Apr;99(4):507-18. 96253260
- Lowe M, Kerridge IH, Mitchell KR. 'These sorts of people don't do very well': race and allocation of health care resources. *J Med Ethics.* 1995 Dec;21(6):356-60. 96235755
- Irwin MH, Roll S. The psychological impact of sexual abuse of Native American boarding-school children. *J Am Acad Psychoanal.* 1995 Fall;23(3):461-73. 96267745
- Nelson RG, Pettitt DJ, de Couten MP, Hanson RL, Knowler WC, Bennett PH. Parental hypertension and proteinuria in Pima Indians with NIDDM. *Diabetologia.* 1996 Apr;39(4):433-8. 96265742
- Howard MO, Walker RD, Suchinsky RT, Anderson B. Substance-use and psychiatric disorders among American Indian veterans. *Subst Use Misuse.* 1996 Apr;31(5):581-98. 96271236
- Making a difference. Aboriginal nurses and health professionals in high demand. *Concern.* 1990 Feb;25(2):19. 96345305
- Walker RD, Lambert MD, Walker PS, Kivlahan DR, Donovan DM, Howard MO. Alcohol abuse in urban Indian adolescents and women: a longitudinal study for assessment and risk evaluation. *Am Indian Alsk Native Ment Health Res.* 1996;7(1):1-47; discussion 48-97. 96357819
- Lodico MA, Gruber E, DiClemente RJ. Childhood sexual abuse and coercive sex among school-based adolescents in a midwestern state. [see comments in: *J Adolesc Health.* 1996 Mar;18(3):165] *J Adolesc Health.* 1996 Mar;18(3):211-7. 96253621
- Sugarman JR, Grossman DC. Trauma among American Indians in an urban county. [see comments in: *Public Health Rep.* 1996 Jul-Aug;11(4):320] *Public Health Rep.* 1996 Jul-Aug;11(4):321-7. 96319580
- Narva AS. ESRD in the American Indian population. *Nephrol News Issues.* 1996 Feb;10(2):28-30. 96345431
- Valdini AF. Home. *J Fam Pract.* 1996 Aug;43(2):192-4. 96354939
- Howard BV, Lee ET, Yeh JL, et al. Hypertension in adult American Indians. The Strong Heart Study. *Hypertension.* 1996 Aug;28(2):256-64. 96322914
- Crago M, Shisslak CM, Estes LS. Eating disturbances among American minority groups: a review. REVIEW ARTICLE: 59 REFS. *Int J Eat Disord.* 1996 Apr;19(3):239-48. 96290055
- Arnett FC, Howard RF, Tan F, et al. Increased prevalence of systemic sclerosis in a Native American tribe in Oklahoma. Association with an Amerindian HLA haplotype. *Arthritis Rheum.* 1996 Aug;39(8):1362-70. 96320239
- Leon-S FE, Ariza-Deleon A, Leon-S ME, Ariza-C A. Peopling the Americas. [letter] *Science.* 1996 Aug 9;273(5276):723-5. 96349294
- Wiebe J, Huebert KM. Community mobile treatment. What it is and how it works. *J Subst Abuse Treat.* 1996 Jan-Feb;13(1):23-31. 96265294

- Browne AJ. The meaning of respect: a First Nations perspective. *Can J Nurs Res*. 1995 Winter;27(4):95-109. 96335284
- Kataoka S, Robbins DC, Cowan LD, et al. Apolipoprotein E polymorphism in American Indians and its relation to plasma lipoproteins and diabetes. The Strong Heart Study. *Arterioscler Thromb Vasc Biol*. 1996 Aug;16(8):918-25. 96320202
- Hanson RL, Jacobsson LT, McCance DR, et al. Weight fluctuation, mortality and vascular disease in Pima Indians. *Int J Obes Relat Metab Disord*. 1996 May;20(5):463-71. 96323703
- Wells CG, Bradford RH, Fish GE, Straatsma BR, Hawkins BS. Choroidal melanomas in American Indians. COMS Group. Collaborative Ocular Melanoma Study. *Arch Ophthalmol*. 1996 Aug;114(8):1017-8. 96326208
- Gibbs WW. Gaining on fat. *Sci Am*. 1996 Aug;275(2):88-94. 96291734
- Paolisso G, Tataranni PA, Foley JE, Bogardus C, Howard BV, Ravussin E. A high concentration of fasting plasma non-esterified fatty acids is a risk factor for the development of NIDDM. *Diabetologia*. 1995 Oct;38(10):1213-7. 96114568
- Harris SB, Perkins BA, Whalen-Brough E. Non-insulin-dependent diabetes mellitus among First Nations children. New entity among First Nations people of north western Ontario. *Can Fam Physician*. 1996 May;42:869-76. 96252687
- Nickens HW. A compelling research agenda [editorial] [Comment on: *Ann Intern Med*. 1996 Aug 1;125(3):173-82; Comment on: *Ann Intern Med*. 1996 Aug 1;125(3):221-32] *Ann Intern Med*. 1996 Aug 1;125(3):237-9. 96281219
- Carter JS, Pugh JA, Monterrosa A. Non-insulin-dependent diabetes mellitus in minorities in the United States. [See comments in: *Ann Intern Med*. 1996 Aug 1;125(3):237-9] *Ann Intern Med*. 1996 Aug 1;125(3):221-32. 96281217
- Rith-Najarian SJ, Ness FK, Faulhaber T, Gohdes DM. Screening and diagnosis for gestational diabetes mellitus among Chippewa women in northern Minnesota. *Minn Med*. 1996 May;79(5):21-5. 96251620
- Barker JC, Kramer BJ. Alcohol consumption among older urban American Indians [See comments in: *J Stud Alcohol*. 1996 Mar;57(2):117-8] *J Stud Alcohol*. 1996 Mar;57(2):119-24. 96234796
- Westermeyer J. Alcohol and older American Indians [editorial] [Comment on: *J Stud Alcohol*. 1996 Mar;57(2):119-24] *J Stud Alcohol*. 1996 Mar;57(2):117-8. 96234795
- Smith CJ, Nelson RG, Hardy SA, Manahan EM, Bennett PH, Knowler WC. Survey of the diet of Pima Indians using quantitative food frequency assessment and 24-hour recall. Diabetic Renal Disease Study. *J Am Diet Assoc*. 1996 Aug;96(8):778-84. 96314356
- Dalrymple AJ, O'Doherty JJ, Nietzschei KM. Comparative analysis of Native admissions and registrations to northwestern Ontario treatment facilities: hospital and community sectors. *Can J Psychiatry*. 1995 Oct;40(8):467-73. 96120630
- Pan DA, Lillioja S, Milner MR, et al. Skeletal muscle membrane lipid composition is related to adiposity and insulin action. *J Clin Invest*. 1995 Dec;96(6):2802-8. 96292308
- Howard BV, Lee ET, Fabsitz RR, et al. Diabetes and coronary heart disease in American Indians: The Strong Heart Study. *Diabetes*. 1996 Jul;45 Suppl 3:S6-13. 96289825
- Merriwether DA, Ferrell RE. The four founding lineage hypothesis for the New World: a critical reevaluation. *Mol Phylogenet Evol*. 1996 Feb;5(1):241-6. 96264822
- McMahon BJ, Beller M, Williams J, Schloss M, Tanttala H, Bulkow L. A program to control an outbreak of hepatitis A in Alaska by using an inactivated hepatitis A vaccine. *Arch Pediatr Adolesc Med*. 1996 Jul;150(7):733-9. 96290462
- Gilliland FD, Welsh DJ, Hoffman RM, Key CR. Rapid rise and subsequent decline in prostate cancer incidence rates for New Mexico, 1989-1993. *Cancer Epidemiol Biomarkers Prev*. 1995 Oct-Nov;4(7):797-800. 96114059
- Godel JC, Basu TK, Pabst HF, Hodges RS, Hodges PE, Ng ML. Perinatal vitamin A (retinol) status of northern Canadian mothers and their infants. *Biol Neonate*. 1996;69(3):133-9. 96258114
- Millar J, Etches DJ, Diaz S. Prevention in practice. Ethnic groups. REVIEW ARTICLE: 27 REFS. *Prim Care*. 1995 Dec;22(4):713-30. 96245669
- Weinstein P. Research recommendations: pleas for enhanced research efforts to impact the epidemic of dental disease in infants. REVIEW ARTICLE: 35 REFS. *J Public Health Dent*. 1996 Winter;56(1):55-9. 96242190
- Glass MH, Bieber SL, Tkachuk MJ. Personality styles and dynamics of Alaska Native and non-Native incarcerated men. *J Pers Assess*. 1996 Jun;66(3):583-603. 96224724
- Bonatto SL, Redd AJ, Salzano FM, Stoneking M. Lack of ancient Polynesian-Amerindian contact. [letter] [Comment on: *Am J Hum Genet*. 1993 Sep;53(3):549-62 ; Comment on: *Am J Hum Genet*. 1994 Jul;55(1):7-11] *Am J Hum Genet*. 1996 Jul;59(1):253-8. 96256871
- Merriwether DA, Hall WW, Vahlne A, Ferrell RE. mtDNA variation indicates Mongolia may have been the source for the founding population for the New World. *Am J Hum Genet*. 1996 Jul;59(1):204-12. 96256866
- Marcus P. Disney's great escape. *Psychoanal Rev*. 1995 Dec;82(6):940-3. 96212101
- Walkinshaw M, Strickland L, Hamilton H, Denning K, Gayley T. DNA profiling in two Alaskan Native populations

- using HLA-DQA1, PM, and D1S80 loci. *J Forensic Sci.* 1996 May;41(3):478-84. 96236234
- Valdini AF. Marilyn. *J Fam Pract.* 1996 Jun;42(6):555. 96251899
- Penn NE, Kar S, Kramer J, Skinner J, Zambrana RE. Ethnic minorities, health care systems, and behavior. REVIEW ARTICLE: 40 REFS. *Health Psychol.* 1995 Dec;14(7):641-6. 96218220
- Johnson KW, Anderson NB, Bastida E, Kramer BJ, Williams D, Wong M. Macrosocial and environmental influences on minority health. REVIEW ARTICLE: 115 REFS. *Health Psychol.* 1995 Dec;14(7):601-12. 96218216
- Northwest Area American Indian Health Status and Policy Assessment Project.* St. Paul, MN: American Indian Health Care Association; 1993. 9515998
- Mancall PC. *Deadly Medicine: Indians and Alcohol in Early America.* Ithaca, NY: Cornell University Press; 1995. ISBN 0-8014-2762-2 (cloth: alk. paper).
- Stockel HH. *The Lightning Stick: Arrows, Wounds, and Indian Legends.* Reno, NV: University of Nevada Press; 1995. ISBN 0-87417-266-7 (alk. paper).
- Cowan E. *Plant Spirit Medicine.* Newberg, OR: Swan-Raven & Co.; 1995.
- Herrick JW, ed. *Iroquois Medical Botany.* 1st ed. Syracuse, NY: Syracuse University Press; 1995. ISBN 0-8156-0295-2 (cloth: alk. paper).
- Mayfield JA, Reiber G, Nelson RG, Greene T. Compliance with medical care and amputation risk in diabetic Pima Indians [abstract]. *AHSR FHSR Annu Meet Abstr Book.* 1995;12:117-118. HTX/96648626
- Zhou Z, Libby D, Kindig DA. The number and distribution of minority physicians: 1980, 1990, 2000 and beyond [abstract]. *AHSR FHSR Annu Meet Abstr Book.* 1995;12:113-114. HTX/96648618
- Gardner J. For Indians, a winning gamble. *Mod Healthc.* 1996 May 13;26(20):40-42,44-5. AHA/96207670
- Eggers PW. Racial differences in access to kidney transplantation. *Health Care Financ Rev.* 1995 Winter;17(2):89-103. AHA/96196901
- Dawson SE, Madsen GE. American Indian uranium millworkers: a study of the perceived effects of occupational exposure. *J Health Soc Policy.* 1995;7(2):19-31. AHA/96176078
- Indian Self-Determination and Education Assistance Act amendments — BIA, IHS. Notice of proposed rulemaking. *Federal Register.* 1996 Jan 24;61(16):2038-2077. AHA/96175461
- Woodruff L. Growing diversity in the aging population. *Caring.* 1995 Dec;14(12):4,7-8,10. AHA/96142888
- Hisnanick JJ, Steele L. Home health care for cancer patients. Insights from the American Indian community. *J Long Term Home Health Care.* 1995 Summer;14(3):4-10. AHA/96002044
- McCabe M. Long-term care and the Navajo elder. *J Long Term Home Health Care.* 1995 Summer;14(3):11-18. AHA/96002045
- Chapleski EE, Dwyer JW. The effects of on- and off-reservation residence on in-home service use among Great Lakes American Indians. *J Rural Health.* 1995 Summer;11(3):204-16. AHA/96038140
- May PA, Moran JR. Prevention of alcohol misuse: a review of health promotion efforts among American Indians. REVIEW - 133 REFERENCES. *Am J Health Promot.* 1995 Mar-Apr;9(4):288-299. HTA/95374777
- Flack IM, Amaro H, Jenlins W, et al. Epidemiology of minority health. REVIEW ARTICLE: 50 REFS. *Health Psychol.* 1995 Dec; 14(7):592-600.96218215
- Pratley RE, Wilson C, Bogardus C. Relation of the white blood cell count to obesity and insulin resistance: effect of race and gender. *Obes Res.* 1995 Nov; 3 (6) :563-71. 96263725
- Hauck FR, White L, Cao G, Woolf N, Strauss K. Inaccuracy of self-reported weights and heights among American Indian adolescents. *Ann Epidemiol.* 1995 Sep;5(5):386-92. 96113148
- Santos FR, Rodriguez-Delfin L, Pena SD, Moore J, Weiss KM. North and South Amerindians may have the same major founder Y chromosome haplotype. [letter] *Am J Hum Genet.* 1996Jun;58(6):1369-70. 96213772
- Wilson AL. State of South Dakota's child: 1995. *SD J. Med.* 1996 Jan;49(1):9-16. 96226849
- Kohn LA, Leigh SR, Cheverud JM. Asymmetric vault modification in Hopi crania. *Am J Phys Anthropol.* 1995 Oct;98(2): 173-95. 96109350
- O'Neil TD, Mitchell CM Alcohol use among American Indian adolescents: the role of culture in pathological drinking. *Soc SciMed.* 1996 Feb;42(4):565-78. 96212115
- Kimball EH, Goldberg HI, Oberle MW. The prevalence of selected risk factors for chronic disease among American Indians in Washington State. *Public Health Rep.* 1996 May-Jun: 111 (3):264-71. 96219061
- Gascoyne RD, Kim SM, Oger JJ, Melosky B., Dekaban GA. HTLV-I associated adult T cell leukemia/lymphoma: report of two cases from an Amerindian population in coastal northwest British Columbia. *Leukemia.* 1996 March; 10(3):552-7.96234356
- Goldsmith MF. First Americans face their latest challenge: Indian health care meets state medicaid reform. [news] *JAMA.* 1996 Jun 19;275(23): 1786-8. 96251142
- Stephenson J. For some American Indians, casino profits are a

---

good bet for improving health care. [news] *JAMA*. 1996 Jun 19;275(23):1783-5. 96251141

Voelker R. Physicians find their place in Zuniland. [news] *JAMA*. 1996 Jun 19;275(23) :1781-2.96251140

National Institute of Diabetes and Digestive and Kidney Diseases. *The Pima Indians: Pathfinders for Health*. Bethesda, MD: Department of Health and Human Services, Public Health Service, National Institute of Health, 1995. NIH publication NIH 95-3821. 9611081

Burhansstipanov L, Dresser C. *Documentation of the Cancer Research Needs of American Indians and Alaska Natives*. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National

Cancer Institute; 1994. 9609157

O'Neil TD. *Disciplined Hearts: History, Identity, and Depression in an American Indian Community*. Berkeley, CA: University of California Press; 1996. ISBN 0-520-20229-5

Waldram JB, Herring DA, Young TK. *Aboriginal Health in Canada; Historical, Cultural, and Epidemiological Perspectives*. Toronto: University of Toronto Press; 1995. ISBN 0-8020-5956-2(cloth: elk. paper); ISBN 0-8020-6887-1(paper: elk. paper).

*Successful Strategies for Increasing Direct Health Care Quality, Accessibility, and Economy for American Indians and Alaska Natives*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Indian Health Service; 1995. IHS publication 95-85016.

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## NCME VIDEOTAPES AVAILABLE

*Health care professionals employed by Indian health programs may borrow videotapes produced by the Network for Continuing Medical Education (NCME) by contacting the IHS Clinical Support Center, 1616 East Indian School Road, Suite 375, Phoenix, Arizona 85016.*

*These tapes offer Category 1 or Category 2 credit towards the AMA Physician's Recognition Award. These CME credits can be earned by viewing the tape(s) and submitting the appropriate documentation directly to the NCME.*

*To increase awareness of this service, new tapes are listed in The IHS Provider on a regular basis.*

### NCME #703

**Psychiatric Challenges for the Primary Care Physician: Obsessive Compulsive Disorder** (60 minutes) Although one of the hallmarks of obsessive compulsive disorder is secrecy, a noted authority in the management of this disorder, Dr. John H. Greist, shows how asking three key questions can help you detect the vast majority of patients with this anxiety disorder. Using a case review approach, Dr. Greist illustrates the principles of diagnosis and optimal treatment, incorporating data from recent studies of current therapeutic modalities. As he demonstrates, many patients can be appropriately managed in the primary care setting by specific medications and behavioral interventions. Dr. Greist also provides guidelines for psychiatric referral.

### NCME #704

**Psychiatric Challenges for the Primary Care Physician: Depression** (60 minutes) Patients with major depressive disorder initially seek help from their primary care physicians. In this era of managed care, those in primary care must treat these patients efficiently and aggressively. Effective screening and recognition are key to early diagnosis, while first-line therapeutic agents may provide successful treatment outcomes. Using a clinical case review approach, Dr. Robert M.A. Hirschfeld offers a practical approach to managing depression in today's primary care practice.

### NCME #705

**Clinical Strategies for Successful Aging: Health Promotion in Older Patients** (60 minutes) As baby-boomers approach the golden years, their expectations regarding robust health and increased longevity are high. What steps should middle-aged and older patients be taking now to promote continued good health in the next decade of their lives? In this first segment of a two-part series on aging, a distinguished panel of geriatricians and internists addresses general lifestyle measures and specific preventive interventions that can help your patients age successfully.

### NCME #706

**Clinical Strategies for Successful Aging: Management of Geriatric Syndromes** (60 minutes) Despite the best efforts at health promotion, aging takes an inevitable toll, leaving older patients vulnerable to increasing illness and progressive disability. Nevertheless, much can be done to ameliorate the consequences of the most common geriatric syndromes. In this second segment of a two-part series on aging, a distinguished panel of geriatricians and internists discuss specific strategies to decrease morbidity and mortality in elderly patients.

### NCME #707

**Legal and Ethical Dilemmas of Current Clinical Practice Part 1: The Impact of Economic Pressures** (60 minutes) In an era of dwindling health care resources, practicing physicians must grapple with a spate of new legal and ethical issues. How can physicians work most effectively in the current practice environment? Is it possible to fulfill ethical duties to patients while meeting the demands of payers to contain costs? And how can the risk of legal liability be minimized? In this first of a two-part series, a distinguished panel representing the fields of law, ethics, and clinical practice examines these timely issues and provides guidelines for resolving important ethical and legal dilemmas in day-to-day practice.

## CONTINUING EDUCATION MATERIALS AVAILABLE

The IHS Clinical Support Center has continuing education materials available, at no charge, for health care professionals employed by Indian health programs. To make it easier for you to request these materials, we will describe what is available and provide an order form several times a year in *The Provider*.

### Individual Format

Most of our "Home Study Modules" are designed for use by physicians, nurses, nurse practitioners, and physician assistants (two are for nurses only). To obtain continuing education credits, an individual must read the materials in the module, take and pass the post-test, and complete the evaluation form. It is expected that each of these learning activities will take participants approximately 2-5 hours to complete. Current topics are listed on the order form (below).

### Group Format

Eleven risk management modules, a nurse leadership development course, and modules about clinical evaluation of child physical and sexual abuse (described in more detail below) are designed to be used in a group format. These group format activities, requiring someone on the staff to identify him/herself as the coordinator and discussion leader, include background material for the coordinator, goals and objectives, and ideas to promote active participation of the group. To obtain continuing education credits, the coordinator/discussion leader, after following the format provided, must submit the attendance list and completed evaluations to the Clinical Support Center.

Each of the Risk Management modules includes four unique case histories involving tort claims against the Indian Health Service, as well as background information for the designated discussion leader, and suggested questions to encourage active dialogue about the issues presented. Each module stands on its own; use of all modules is not required to

obtain credit. IHS- and tribal-employed physicians, physician assistants, nurse practitioners, and nurses can earn continuing education (CE) credit using these modules.

The Nurse Leadership Development course is designed to be offered over several months' time. Each of the 16 modules in this continuing education activity includes a lesson plan, objectives, background information for the discussion leader, a suggested bibliography that participants may read to enable them to be actively involved in the learning process, evaluation forms, and more. The purpose of this course is to enhance the leadership and management skills of registered nurses. To ensure the success of this activity, it is important to have the Director of Nurses' and nursing supervisors' commitment. In addition, the nursing staff needs to be involved in the needs assessment and initial planning so that they feel this is something they want to be actively involved with. CE credit for this activity is available for nurses only.

The modules on child physical and sexual abuse include slides and an audiotape. Continuing education credit is available for physicians, physician assistants, and nurses

### CE Accreditation

These activities have been planned and produced in accordance with the criteria established by the Accreditation Council for Continuing Medical Education (ACCME) and the American Nurses Credentialing Center Commission on Accreditation (ANCCCA). The Indian Health Service Clinical Support Center is the accredited sponsor.

### How to Obtain Materials

Health care professionals employed by Indian health programs may request these continuing education materials by completing the coupon below and sending it to the IHS Clinical Support Center, 1616 East Indian School Road, Suite 375, Phoenix, Arizona 85016 (fax: 602-640-2138).

### Request for Continuing Education Materials

*When ordering materials, please check no more than three items per order.*

#### Individual Format (home study modules)

- Tuberculosis    Sexually Transmitted Diseases    Hypertension    Headaches    Asthma    Early HIV Infection    Urinary Incontinence    Otitis Media  
 Management of Cancer Pain    Incorporating Critical Thinking Into Nursing Practice    Improving Case Management Using Critical Care Pathways

#### Group Discussion Format (Risk Management modules)

- Negligence    Informed Consent    Golden Rules of Risk Management    Tort Claims    Documentation: The Defensible Medical Record  
 Reducing the Incidence of Medication Errors    Medical Malpractice    Credentials and Clinical Privileging  
 Federal Government Liability for Contract Providers    Issues Involving Contract Health Services    Informed Consent Revisited

#### Group Discussion Format (other)

- Nurse Leadership Development    Evaluation of Child Physical Abuse    Evaluation of Child Sexual Abuse

Please *PRINT* legibly.

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### THE IHS PRIMARY CARE PROVIDER



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