THE IHS PRIMARY CARE PROVIDER

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

June 2010 **Volume 35 Number 6**

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

Karen Strauss, MS, Nutrition Consultant, Frederick, Maryland; and Jean Charles-Azure, RD, MPH, Principal Nutrition Consultant, Indian Health Service, Rockville, Maryland

Introduction

The increasing prevalence of childhood obesity throughout the US has led policy makers to rank it as a critical public health threat.[1] Overweight rates for American Indians and Alaska Natives (AI/AN) have increased dramatically over the past 30 years, with approximately 80 percent of adults and about 50 percent of AI/AN children overweight. Existing infrastructure that collects and aggregates height, weight, and body mass index (BMI) data includes the Indian Health Service (IHS) and tribally-operated health facilities' automated medical records Resource and Patient Management System (RPMS) Clinical Reporting System (CRS) software that aggregates individual patient health records and the Centers for Disease Control and Prevention (CDC) Pediatric Nutrition Surveillance System (PedNSS). Overweight data are essential to inform IHS administrators and providers, community leaders, and community members for public health policymaking, designing overweight interventions, and evaluating intervention outcomes and effectiveness.

The *Future of Public Health Report* asserted that public health is "what we as a society do collectively to assure the conditions in which people can be healthy."[2] In their report on *The Future of the Public's Health in the 21st Century*, the Institute of Medicine described the public health system as including governmental and public health agencies; the health care delivery system; public health and medical academia that are clearly identified with health activities; communities and their entities (schools, organizations, and religious congregations); businesses; employers; and media.[3] Each of these entities has a role and responsibility in shaping community opinions and outcomes. A public health approach is designed to affect large populations by changing the environment, systems, and policies; the approach begins in the community with what to do and who would be involved to influence and shape the strategies.

The determinants of overweight in the US are complex and numerous and operate at the social, economic, environmental, and individual levels. The increasing overweight trend is characterized by environments that promote increased food intake, especially food high in added fat and sugar, and decreased physical activity.[1] Society has changed dramatically over the past three decades over which time obesity has developed, with both parents working outside the home; longer parental work hours; changes in the school food environment; more meals eaten outside the home; and changes in what children eat, where they eat, and how much they eat. Changes in physical activity have contributed to obesity, with physical education classes eliminated or decreased in activity intensity, decreased safe places for outside play, and increased "screen time." Public health approaches that affect large numbers of different populations in multiple community settings such as schools, worksites, and health care, over the long term are thought to be effective.[4] Former Surgeon General of the US, David Satcher, stated, "Individual behavior change can only occur in a supportive

In this Issue...

139 Evidence-Based Public Health Responses to the Overweight Crisis in American Indian and Alaska Native Communities
146 EHR Well Child Module
151 Conducting an Oral Health Screening Survey: Nashville Area Experience
157 Child Maltreatment Data: Does It Tell the Whole Story?
159 Women's Health Notes
161 Meetings of Interest
163 Position Vacancies

environment with accessible and affordable healthy food choices and opportunities for regular physical activity."[5] Public policy for environmental change initiatives that make healthier choices in nutrition and physical activity available, affordable, and easy will be most effective in helping to combat obesity. Such public health policies are likely to complement individual-level programs by effecting change over the long term to benefit many people rather than just one person at a time. The purposes of this paper are to present and discuss the most recent CRS and PedNSS overweight and obesity data for children and adults and to describe some examples of long-term, evidence-based public health responses.

Methods

The IHS and tribally-operated health facilities in the 12 IHS Areas record height and weight data in individual patient health records that are aggregated using the CRS software. The CRS report gives body mass index (BMI) data for ages 2 to 74 years. RPMS data are collected continuously, but CRS aggregates the data by GPRA (Government Performance and Results Act) year, which runs from July 1 - June 30. Fiscal year (FY) 2008 data are those which are collected from July 1 2007 - June 30, 2008. The CSR definitions for "current" BMI in adults do not require the measurement to have occurred within the current GPRA reporting year.[6] For adults up to age 50, the measurement must be within the last 5 years; for adults over 50 it must be within the last 2; and height and weight do not need to be taken on the same day. Children must have height/weight taken on the same day and within the reporting period to be included. In summary, BMI statistics from CRS are not a "snapshot" of a population in a given year, except for children.

Heights and weights are taken using standardized technique specified in "American Indian and Alaska Native Pediatric Height and Weight Study 2001 - 2002 Anthropometric Protocols.[7] The protocols include equipment and technique for infants and children through adolescence. The adolescent protocols are also used for adults.

The CRS data represent "active users" of the IHS and tribal health system. An active user must have two face-to-face visits to medical clinics in the past three years. At least one visit must be to a core medical clinic, that is, an ambulatory clinic (including day surgery or observation) or a hospitalization; the rest of the service categories are excluded. An "active user" must be alive on the last day of the reporting period, must be AI/AN, and must reside in a community specified in the site's GPRA community taxonomy, defined as all communities of residence in the defined Contract Health Service (CHS) catchment area. There is no exact way to determine "inactive" users in CRS other than to deduct the number of active users from the user population. The user population includes anyone who has been in a clinic in the past three years. However, the user population does not match the official eligible population statistics that are generated by IHS based on other criteria.[6]

The Pediatric Nutrition Surveillance System (PedNSS) is a child-based public health surveillance system that describes the nutritional status of low-income US children who attend federally-funded maternal and child health and nutrition programs.[8] PedNSS provides data on the prevalence and trends of nutrition-related indicators. PedNSS uses existing data from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program, and Title V Maternal and Child Health Program. The majority of the data is from the WIC program that serves children up to age 5.

Data on birth weight, underweight, and overweight from the PedNSS are reported in this paper. The PedNSS provides data for each participating contributor, which may be a state, US territory, or tribal government. The data in this report include AI/AN WIC participants from state and tribal government programs. The goal of PedNSS is to collect, analyze, and disseminate data to guide public health policy and action.

Results

Data in this paper from the IHS CRS or PedNSS are based on standardized tables for children, and the usual BMI cutoffs for adults: a BMI of 25 for overweight and 30 for obese. For both children and adults, 85th percentile and up is overweight; 95th percentile and up is obese. Thus, the "overweight and obese" category is everyone at or above the 85th percentile.(Table 1)

The trends for overweight and obesity increased for children 0 - 5 years over the PedNSS period 1999 - 2008 as measured primarily in WIC clinics. The CSR data as measured in IHS and tribal clinics are 5 percentage points higher than PedNSS data for the 2007 and 2008 comparison years. In preadolescent (6 - 11 years) and adolescent (12 - 19 years) ages, the prevalence of overweight among the active users increased at each age, with 49 percent of preadolescents and 51 percent of adolescents overweight. Overweight among IHS/tribal active users continues to increase with increasing age, with 81 percent of adults 20 - 74 years overweight. In 2007 and 2008, 85 percent of adults aged 35 - 44 and 45 - 54 are overweight (data not shown on table), and these age groups have the highest percentage of overweight adults.

Discussion

Overweight among AI/AN children has increased substantially since the 1990 - 1991 school-aged children survey conducted by the IHS Nutrition and Dietetics Section.[9] This 1990 - 1991 survey included children ages 6 to 19 attending Bureau of Indian Affairs schools and found that 39% of children ages 6 - 11 were overweight or obese, and 42% of children 12 - 19 were overweight or obese. Trends for increasing rates of overweight are seen, with CSR data

Table 1. Overweight and Obesity Trends

Year	Age									
	0-5 years*		2-5 years**		6-11 years**		12-19 years**		20-74 years**	
	Overweight or Obese	Obese	Overweight or Obese	Obese	Overweight or Obese	Obese	Overweight or Obese	Obese	Overweight or Obese	Obese
1999	36.4	17.2								
2000	36.3	17.4								
2001	36.0	17.1								
2002	36.3	17.5								
2003	36.6	17.7								
2004	38.9	19.0								
2005	39.0	19.0								
2006	39.5	19.4								
2007	39.8	19.4	45	24	49	31	51	30	81	53
2008	40.6	20.2	45	25	49	31	51	31	81	54

Source *PedNSS, ** IHS CRS reporting data only for 2007, 2008

showing 10 percent increase in overweight for preadolescent children and 9 percent increase for adolescents since the 1990 - 1991 survey.

The 2007 and 2008 CRS data for adults ages 20 - 74 years find 81 percent overweight or obese, with 85 percent of those ages 35 - 54 overweight. Overweight and obesity are risk factors for diabetes. The prevalence of diabetes is higher among the AI/AN population (16.5%) than any other major racial or ethnic group in the US; the prevalence of diabetes has been rising.[10] The increase in diabetes prevalence among AI/AN ages 20 - 29 from 1990 to 1998 is 58%, as compared with 9.1% in the US general population, and there is a 68 percent increase in diabetes in AI/AN native youth aged 14 - 19 years from 1994 – 2004.[11] This increasing overweight trend and diabetes prevalence present a crisis for AI/AN communities.

Increasing trends in overweight have developed over several decades and necessitate a long-term approach to halt and reverse the trend. Behaviors related to diet and physical activity play an important role in the development and extent of overweight. In many communities physical activity classes in schools have been eliminated or decreased in activity intensity. Safe areas for community physical activity such as walking and biking are often not available. Diets historically high in complex carbohydrate foods have been replaced by foods that are high in refined carbohydrates (especially sugar), fat, and sodium, and low in fruits and vegetables. The increase in fast-food restaurants and convenience food stores and the limited access to grocery stores in some areas encourage use of foods high in fat and sugar.

A comprehensive public health approach that includes environmental changes over a long-term is needed to combat overweight in AI/AN communities. The Social-Ecological Model, a behavioral theory model, is a comprehensive public health approach. The model shown below illustrates the interrelationships of the individual and their environment.[12] Each circle can be seen as a level of influence on individual health behavior. To improve lifestyle behaviors (increasing physical activity and healthier eating), health promotion intervention efforts need to focus not only on the individual but also on the factors or levels that influence the individual's choices. The factors or levels operate from several spheres of influence including public policy (national, state, and local laws), community (relationships among organizations), organizational, interpersonal, and individual.[13]

Coalition building is characteristic of successful public health interventions, because it allows both representation of and interventions at all spheres of influence. A coalition is the joining of people and organizations to work together to influence outcomes on a specific issue that is beyond the influence of any individual person or organization. The Prevention Institute describes eight steps for developing an effective coalition.[14] Steps include the following: 1) analyze the program's objectives and determine whether to form a coalition, 2) recruit the right people, 3) devise a set of preliminary objectives and activities, 4) convene the coalition, 5) anticipate the necessary resources, 6) define elements of a successful coalition structure, 7) maintain coalition vitality, and 8) make improvements through evaluation. Forming a coalition may be considered when a community organization or a community leader asks for its formation to deal with an issue such as the community prevalence of overweight; a funding mandate may require forming a coalition, or a pressing concern or crisis may cause a coalition to form spontaneously.

All economic sectors such as businesses, federal, state, and tribal programs in the AI/AN community must cooperate to combat overweight. AI/AN business, federal, and state funds can be used to address community infrastructure and livability. For example, state funds from the Federal Highway Administration and National Park Service can be used to develop and refurbish lands to promote transportation and leisure activity. Economic development funds from the Department of Commerce, US Department of Agriculture, and US Department of Housing and Urban Development, can be used to improve community infrastructure and physical environments. Many states have tribal liaisons that can assist AI/AN communities in creating state/tribal partnerships to access federal funds. Federal programs that work directly with states like CDCs Division of Nutrition, Physical Activity, and Obesity (DNPAO) may also assist AI/AN in forming state/community partnerships. Too often state funds are difficult for tribes to access; with tribal/state or tribal/state/CDC partnership, successful grants can be developed.

CDC DNPAO obesity funded state programs are encouraged to develop strategies that focus primarily on policy and environmental changes that support individual behavior changes for healthful eating and physical activity in various settings. The CDC DNPAO has identified six principle target areas for prevention and control of obesity. Their focus on the target areas is based on their understanding of the available evidence-based interventions as they relate to population based changes for making a positive impact. These target behaviors are: 1) decrease consumption of sugar sweetened beverages, 2) increase the consumption of fruits and vegetables, 3) increase breastfeeding initiation, duration, and exclusivity, 4) increase physical activity, 5) reduce the consumption of energy dense foods, and 6) decrease television viewing. The CDC document, *Recommended Community Strategies and Measurements to Prevent Obesity in the United States*, makes recommendations that include strategies, measurements, and effectiveness evidence.[15,16]

Community physical activity strategies for obesity prevention include requiring physical education in schools and increasing the amount of physical activity in physical education programs, improving access to outdoor reaction facilities, enhancing infrastructure supporting bicycling and walking, and enhancing personal safety in areas where persons are or could be physically active. Community strategies for healthier nutrition include improving geographic availability of supermarkets in underserved areas, providing incentives to food retailers to locate in and/or offer healthier food and beverage choices in underserved areas, discouraging consumption of sugar-sweetened beverages, limiting advertisements of less healthy foods and beverages, and increasing support for breastfeeding.[15]

Social Ecological Model Approaches

Some best practices using a public health approach -- that is, a social-ecological model -- have shown success in promoting healthier practices. Some examples of interventions at the organizational level include the Zuni, New Mexico School Health Policy[16]; White Mountain Apache Healthy Store Program[17,18], and Siletz Indian Family Wellness Center Project[19]; breastfeeding interventions at PIMC[20]; and NNBC Healthy Start Act[21]

A high school prevention program in Zuni that targeted student education to decrease consumption of sugared beverages, enhance knowledge of diabetes risk factors, and establish a youth-oriented fitness center resulted in decreased fasting plasma insulin levels.[16] This study followed plasma insulin and plasma glucose levels at 0, 1.5, and 3 years. The plasma glucose levels were normal at the beginning and throughout the study; there were steady declines in plasma insulin levels throughout the study. Elevated plasma insulin levels are associated with insulin resistance, obesity, and type 2 diabetes. At baseline the fasting and 30-minute plasma levels were significantly elevated for Zuni youth. By year 3, the male's plasma insulin were equal to their anglo counterparts; female levels showed steady decline, but at 3 years the levels for females were still higher than their anglo counterparts.

Formative research was used to develop a White Mountain Apache community-based dietary intervention to increase purchases of healthier foods at local convenience stores and markets.[17] This included interviews, assessment of food purchasing and preparation, and dietary recalls of community members. Stakeholders contributed to intervention development through a program planning workshop, group feedback, and implementation training. The intervention assessment identified foods high in fat and sugar as commonly consumed. Barriers to healthy eating identified were low availability and perceived high cost and poor flavor of healthy foods. Intervention targets included store owners/manager,

shoppers/cookers, mothers, students, and diabetics. The top ten target foods were soda, chips, whole milk, spam, lard, bologna/lunch meats, fried foods, gravy, hamburger, and deli foods. Targeted behaviors included preparing foods with less fat, reading food labels, downsizing portions, and shopping wisely. Community members assisted in selecting messages and message channels.

Impact and process program evaluation criteria were established that evaluated in-store stocking and sales outcomes and self-reported consumer outcomes.[18] Process evaluation found a moderate to high degree of success with the program. At the individual level, the intervention program reached a large number of members. At the community level the implementation was moderately consistent with the intervention program elements. Stocking of promoted foods and presence of in-store communication materials were implemented at a high quantity and consistent with the program. However, the availability of the promoted food decreased after the 6 - 8 week promotion, emphasizing the importance of longer term interventions.

A family wellness project was the vehicle for evaluating the tribal participatory research (TPR) model that involved the community in pre-funding collaboration, tribal council approval and oversight, building research staff, and in intervention and evaluation.[19] During a three-year pre-implementation collaboration, researchers worked with community leaders, the Head Start director, and a tribal planner in planning the project which would become a grant proposal. The project emphasized the family's role in determining child outcomes. The intervention introduced families to traditional American Indian child-rearing practices and fostered the use of those practices in order to promote healthy development of AI preschool children. Intervention components included a Native American parenting curriculum using videos of traditional tribal stories of traditional core values of parenting, a classroom curriculum linked in content to the parenting materials, and the use of paraprofessional home visitors and wraparound funding to increase service utilization and coordination. The stories were narrated by tribal elders and told with historical photographs, tribal artwork, and scenes of tribal events. The intervention was well received, with 80% of enrolled Head Start families participating during the first two years.

Increasing support for breastfeeding is one of the six targets recommended by CDC to reduce overweight/obesity trends. Breastfeeding has been shown to lower the risk of overweight/obesity and diabetes.[22-29] Several CDC documents are key resources in developing and implementing breastfeeding interventions, such as the US Breastfeeding Report Card,[30] the Maternity Practices in Infant Nutrition and Care (mPINC) Survey,[31] and CDC Guide to Breastfeeding Interventions.[32]

PIMC[20] and the NNBC[21] are examples of organizational level breastfeeding interventions. After reviewing medical records and focus group data, PIMC designed an intervention to affect breastfeeding at the individual and community levels. Special diabetes funding was used to hire a full-time lactation consultant and a full-time lactation technician. The program included support and education through presentations and phone support and hospital policy changes to support breastfeeding in the hospital setting for patients and employees. PIMC efforts were successful in increasing breastfeeding duration.

The Navajo Nation Healthy Start Act is one of several interventions planned by the Navajo Nation Breastfeeding Coalition (NNBC) to increase the duration and exclusivity of breastfeeding. The NNBC used PedNNS data as evidence to better understand Navajo Nation breastfeeding rates and found that 74.1% initiated breastfeeding; at six-months participation decreased from 40.2% in 1997 to 34.8% in 2007; and at 12-months participation decreased from 31.8% in 1997 to 24.7% in 2006. There were no data for exclusivity.

NNBC used a Navajo Nation WIC internal survey about reasons mothers decide to quit breastfeeding and found that most mothers stopped breastfeeding when they planned to returned to work. This finding indicated that returning to work is a barrier to breastfeeding because mothers believe there is no support in the workplace. Therefore, NNBC targeted Navajo Nation legislation that would require accommodation of working mothers who are breastfeeding. In its 2008 Fall Session the Navajo Nation unanimously passed the Healthy Start Act.[33] The legislation required employers operating businesses on the Navajo Nation to offer flexible breaks for breastfeeding mothers as well as a clean and enclosed private area (not a bathroom) for working mothers for breastfeeding and pumping breast milk, among other things.

Partnerships are key in developing interventions that target multiple influence levels. The NNBC Healthy Start Act demonstrates the use of partnerships in coalition participation, community assessment, legislation development, grant writing, social marketing, and intervention implementation and evaluation.

Collaborative work of the CDC-DNPAO Breastfeeding Work Group, the US Breastfeeding Committee, and State Breastfeeding Coalitions provided opportunities for training and networking. These partnerships provided technical assistance and guidance on the Navajo Nation worksite breastfeeding support legislation such as developing the Healthy Start Act language. The WIC program and IHS provided education for and support to breastfeeding mothers. IHS community health representatives (CHR), specially-trained paraprofessionals who are professional staff liaisons in the community, were trained in the health and economic benefits of breastfeeding, provided testimony at Navajo Nation Chapter meetings concerning the proposed law, and rallied the vote in support of the law. Breastfeeding education was provided in clinics, hospitals, churches, schools, worksites, and community centers. The Arizona Breastfeeding Coalition

collaborated with Navajo Nation Breastfeeding Coalition to write for the US Department of Health and Human Services, Health Resources and Services Administration's Maternal and Child Health Bureau (HRSA, MCHB) mini grant. The two coalitions were awarded the small grant that supported a two-day train-the-trainer workshop and implementation of the coalition's strategic plans to create breastfeeding friendly worksites. The PIMC Breastfeeding Support Program partnership was helpful in providing technical support; a rally for the Healthy Start Act; and development of advertising materials to promote community support for breastfeeding.

Summary and Recommendations

Overweight/obesity and associated chronic diseases, especially type 2 diabetes, present a crisis for AI/AN communities. Environmental conditions over several decades have led to increasing overweight trends and diabetes prevalence. A public health approach over the long term is needed to combat overweight/obesity by complementing individual interventions at community clinics and hospitals. All components of the public health system, that is, the health care delivery systems, businesses, employers, schools, and churches in a community have critical roles and responsibilities for overweight/obesity opinions and outcomes.

Evidence-based interventions that use the Social Ecological Model, which includes individual, interpersonal, organizational, community, and tribal policy level interventions, are more effective than individual approaches alone. Social marketing tailors the interventions to the local community and usually involves community coalitions and campaigns that help individuals understand the benefits of healthier food choices and physical activities, and recognize and overcome competing choices. Resources from local tribal businesses as well as resources from the tribal, state, and federal governments are needed to make the necessary environmental changes to support healthier eating and physical activity.

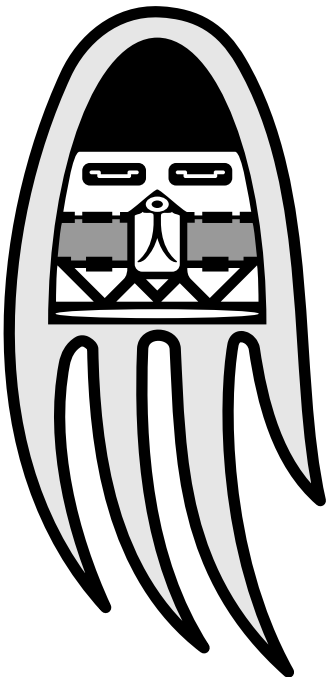
Acknowledgment: Special thanks and appreciation go to Lorraine Whitehair, RN, RD, MPH, Public Health Nutritionist, CDC Division of Nutrition, Physical Activity and Obesity (CDC-DNPAO), National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia. Ms. Whitehair provided information about the Navajo Nation Breastfeeding Coalition and relevant resources of the DNPAO/CDC.

References

1. Institute of Medicine, 2005. Preventing Childhood Obesity: Health in the Balance, Washington DC: The National Academies Press.
2. Institute of Medicine, 1988. The Future of Public Health. Washington DC: The National Academies Press.
3. Institute of Medicine, 2002. The Future of the Public's Health in the 21st Century. Washington DC: National Academies Press.
4. Booth SL, Sallis JF, Ritenbaugh C, et al. Environmental and societal factors affect food choice and physical activity: rationale, influences, and leverage points. *Nutrition Reviews*. 2001 Mar;59(3 Pt 2):S21-39; discussion S57-65.
5. DHHS. The Surgeon General's call to action to prevent and decrease overweight and obesity. Washington, DC: US Government Printing Office, 2001:16. *http://surgeongeneral.gov/topics/obesity*
6. Resource and Patient Management System, IHS, Clinical Reporting System, National GPRA & PART Report, Performance Measure List and Definitions, Version 9.0, August 2009, Office of Information Technology (OIT), Division of Information Resource Management , Albuquerque, New Mexico
7. *http://www.ihs.gov/cio/crs/documents/CRS2009NationalGPRAReportPerformanceMeasureListandDefinitions.pdf*
8. Indian Health Service. American Indian and Alaska Native pediatric height and weight study 2001-2002 anthropometric protocols. Rockville, Md. *http://www.ihs.gov/MedicalPrograms/Anthropometrics/Study_Anthropometric_Protocols.pdf*
9. What is PedNSS, Pediatric and Pregnancy Nutrition Surveillance System, Centers for Disease Prevention and Control, Atlanta, GA.
10. *http://www.cdc.gov/pednss/index.htm*
11. Strauss K. American Indian School Children Height and Weight Survey, *The IHS Provider*. 1993 18:8, 137-142.
12. Barnes P, Adams, P, Powell-Griner E. Health Characteristics of the American Indian or Alaska Native Adult population: United States 2004-2008. National Center for Health Statistics, Centers for Disease Control and Prevention, US Deparment of Health and Human Services, Washington, DC.
13. Diabetes in American Indians and Alaska Natives Facts At-a-Glance, 2010, Indian Health Service, Division of Diabetes Treatment and Prevention, Department of Health and Human Services, Rockville, MD.
14. A Healthy Active Oregon: Statewide Physical Activity and Nutrition Plan 2007-2012.
15. *http://oregon.gov/DHS/ph/pan/docs/PAN_rpt_07.pdf*
16. Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity, State Nutrition and Physical Activity and Obesity Program Technical Assistance Manual, Atlanta, GA, 2008.
17. Cohen L, Baer N. Satterwhite P. Developing effective coalitions: an eight step guide. In: Wurzbach ME, ed. Community Health Education & Promotion: A Guide

to Program Design and Evaluation. 2nd ed. Gaithersburg, Md: Aspen Publishers Inc; 2002:144-161. (*www.preventioninstitute.org*)

18. Centers for Disease Prevention and Control, Recommended Community Strategies and Measurements to Prevent Obesity in the United States, Morbidity and Mortality Weekly. 56:7, July 24, 2009. *http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm*.
19. Brooks B, Dietz W. Obesity Prevention and Control: From Clinical Tools to Public Health Strategies. *Academic Pediatrics*. Sept-Oct 2009, 9(5): 291-292
20. Ritenbaught C. et al. A lifestyle intervention improves plasma insulin levels among Native American high school youth. *Prev Med*. 2003. 36(3): 309-19.
21. Vastine A et al. Formative research and stakeholder participation in intervention development. *Am J Health Behav*. 2005:29(1):57-69.
22. Curran S et al. Process evaluation of a store-based environmental obesity intervention on two American Indian reservations. *Health Ed Res*. 2005: 20(6)719-729.
23. Fisher A and Ball T. The Indian family wellness project: an application of the Tribal participatory research model. *Prev Sci*. 2002: 3:(3)235-240.
24. Murphy S and Wilson C, Breastfeeding promotion: a rational and achievable target for a type 2 diabetes prevention in Native American communities. *J Human Lact*. 2008:24193-198.
25. Personal communication from Lorraine Whitehair, RN, RD, MPH, Public Health Nutritionist, Program Development and Evaluation Branch, Division of Physical Activity and Obesity, NCCCDPHP/CCHP/CDC 4770 Buford Hwy NE, MS-K 03, Atlanta, GA 30341, Phone 770-488-5704.
26. Burrows NR et al. Prevalence of diabetes among Native Americans and Alaska Natives 1990-1997. *Diabetes Care*. 2000: 23:1786-1790.
27. Chung IS et al. Breastfeeding and maternal and infant health outcomes in developed countries. Evidence Report/Technology Assessment No. 153. AHRQ Publication No. 07-E007. Apr 2007. Agency for Health Care Research and Quality, Rockville, MD.
28. Arenz S. et al. Breastfeeding and childhood obesity: a systematic review. Int. J Obes. Relat Metab. Disord. *J. of Int. Assoc. of Study of Obesity*. 2004: 28:10, 1247-1256.
29. Jarder T. et al. Duration of breastfeeding and risk of overweight: a meta analysis. *Am. J. Epidemiol*. 2005: 162:(5)397-403.
30. Owen C.G. et al. Effect of infant feeding on the risk of obesity across the life course: a quantitative review of published evidence. *Pediatrics*. 2005: 115:(5)1367-1377.
31. Taylor J.S. et al. A systematic review of the literature associating breastfeeding with type 2 and gestatioinal diabetes. *J Am Coll Nutr*. 2005: 24:(5)320-326.
32. Owen, C.G. et al. Does breastfeeding influence risk of type 2 diabetes in later life? A quantitative analysis of published evidence. *Am J Clin Nutr*. 2006: 84:(5)1043-1054.
33. Thomas S and Cook D. Breastfeeding duration and prevalence of overweight among 4- 5-year olds. *The IHS Provider*. 2005. Apr 100-103.
34. Breastfeeding Report Card, 2009. *http://www.cdc.gov/breastfeeding/data/report_card.htm*
35. Maternity Practices in Infant Nutrition and Care (mPINC) Survey, CPHRE Battelle, 1100 Dexter Ave N., Suite 4000, Seattle, WA 98109 and Centers for Disease Control and Prevention, Department of Health and Human Services, 2007, Atlanta, GA. *http://www.cdc.gov/breastfeeding/pdf/Sample_Benchmark_Report.pdf*
36. Shealy R et al. The CDC Guide to Breastfeeding Interventions, Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, US Department of Health and Human Services, 2005, Atlanta, GA. *www.cdc.gov/breastfeeding*.
37. Navajo Nation Council, Office of the Speaker, October 22, 2008. Navajo Nation Council concludes its 2008 Fall Session, Navajo Nation Healthy Start Act of 2008 passes unanimously. *http://www.navajo.org/News%20Releases/Joshua%20Lavar%20Butler/Oct08/Day3_NNC_Fall_Session.pdf*



EHR Well Child Module

Clarence Smiley, MPH, MT (ASCP), Office of Information Technology, Albuquerque, New Mexico; and Susan Pierce-Richards, MSN, ARNP, FNP-BC, ANP-BC, Office of Information Technology, Albuquerque

This article was prepared for distribution in this month's Office of Information Technology Newsletter; permission to publish it in this month's IHS Provider *was granted by the editor, Lynette Waters, and by the authors. All agreed that it deserved the widest attention.*

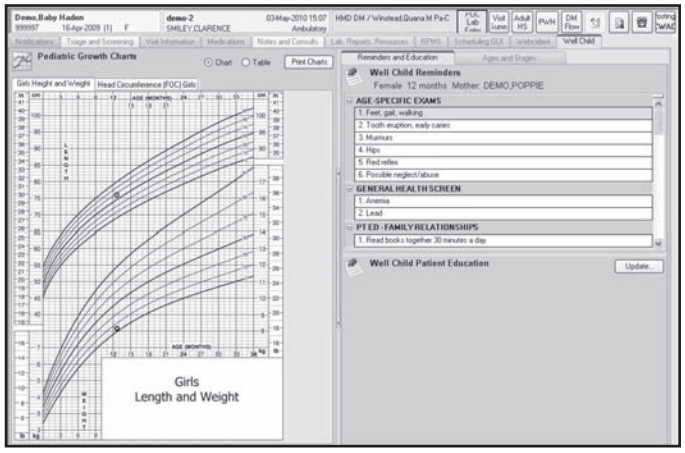
Introduction and Background

Well Child care is one of the most common yet clinically complex services. Typically, the well child "record" is captured on a series of special encounter forms, with each form corresponding to a specific age group from birth through adolescence. Each form contains age-specific guidelines for developmental screening, anticipatory guidance, examinations, immunizations, nutritional counseling, and patient education. The ideal situation is that children are scheduled for well child appointments and the forms correspond to the age of the child being seen at the time of encounter, however; experience tells us that this type of precision is rarely, if ever achieved.

The Indian Health Service (IHS) has developed an electronic solution by developing and releasing the Electronic Health Record Well Child Module (EHR WCM). The EHR WCM was officially release March 2010. The objective of the Well Child Module is to use information technology to standardize well child care throughout the IHS and to lay the groundwork for the inclusion of age-specific guidelines and reminders for well child care into the Electronic Health Record (EHR). The EHR WCM is designed to work within the context of the EHR and can be set up as a tab within the EHR application. EHR WCM is also designed to be in compliance with a set of national guidelines and standards that were provided by a group of senior pediatricians in the IHS. As a rule guidelines and standards are taken from nationally recognized sources such as Bright Futures, the American Academy of Pediatricians, the Ages and Stages Child Monitoring Program, and the IHS Patient Education advisory group. The WCM contains four basic EHR components: 1) Pediatric Growth Grids, 2) Ages and Stages questionnaires, 3) Guidelines for anticipatory guidance, screening exams, lab tests, etc, and 4) Well Child patient education components.

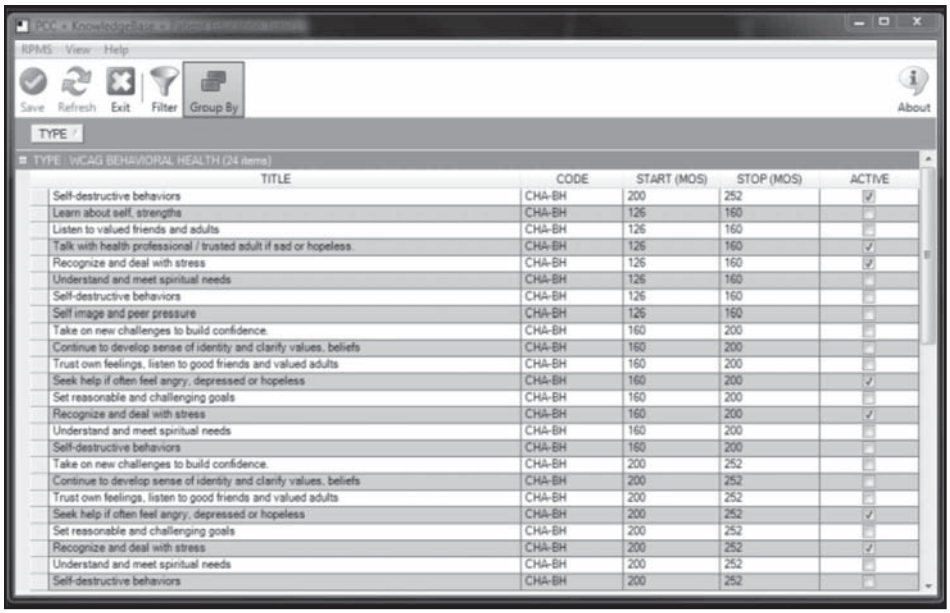
The objectives of the EHR Well Child Module are to:

1. Standardize and improve well child care throughout the IHS
2. Present correct age-specific guidelines to the provider at the time of encounter using current nationally recognized guidelines
3. Enable the components of the Well Child Module to be incorporated into the EHR



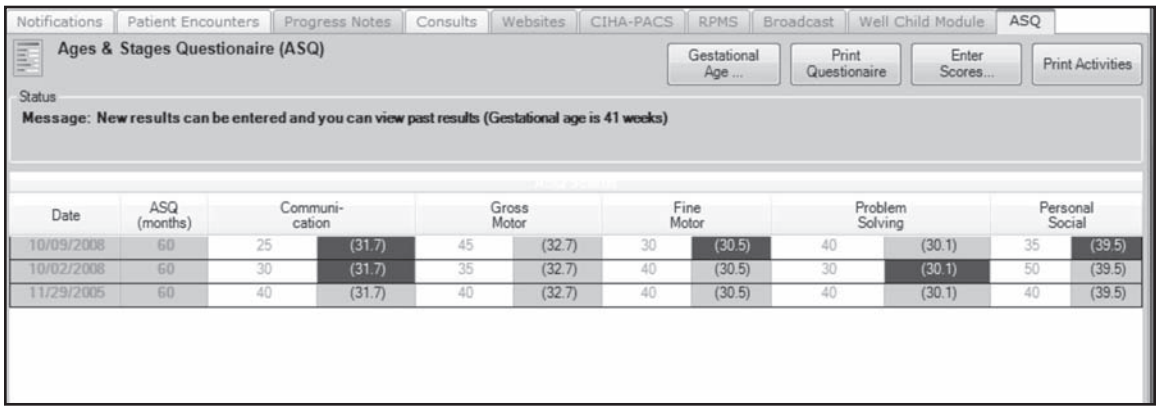
Features of the New Well Child Module (WCM)

Knowledgebase and Knowledgebase Manipulator. From the moment a child is born until age 21, there are thousands of age-specific guidelines and reminders that apply to well child care. The EHR WCM contains a knowledgebase in RPMS that serves as a repository for age-specific guidelines and reminders. The Knowledgebase Manipulator is a tool used by WCM that will enable providers to edit the knowledgebase and to determine exactly which age-specific guidelines and reminders will be displayed when utilizing the module. See example below.



TITLE	CODE	START (MOS)	STOP (MOS)	ACTIVE
Self-destructive behaviors	CHA-BH	200	252	✓
Learn about self, strengths	CHA-BH	126	160	
Listen to valued friends and adults	CHA-BH	126	160	
Talk with health professional / trusted adult if sad or hopeless.	CHA-BH	126	160	✓
Recognize and deal with stress	CHA-BH	126	160	✓
Understand and meet spiritual needs	CHA-BH	126	160	
Self-destructive behaviors	CHA-BH	126	160	
Self image and peer pressure	CHA-BH	126	160	
Take on new challenges to build confidence.	CHA-BH	160	200	
Continue to develop sense of identity and clarify values, beliefs	CHA-BH	160	200	
Trust own feelings, listen to good friends and valued adults	CHA-BH	160	200	
Seek help if often feel angry, depressed or hopeless	CHA-BH	160	200	✓
Set reasonable and challenging goals	CHA-BH	160	200	
Recognize and deal with stress	CHA-BH	160	200	✓
Understand and meet spiritual needs	CHA-BH	160	200	
Self-destructive behaviors	CHA-BH	160	200	
Take on new challenges to build confidence.	CHA-BH	200	252	
Continue to develop sense of identity and clarify values, beliefs	CHA-BH	200	252	
Trust own feelings, listen to good friends and valued adults	CHA-BH	200	252	
Seek help if often feel angry, depressed or hopeless	CHA-BH	200	252	✓
Set reasonable and challenging goals	CHA-BH	200	252	
Recognize and deal with stress	CHA-BH	200	252	✓
Understand and meet spiritual needs	CHA-BH	200	252	
Self-destructive behaviors	CHA-BH	200	252	

ASQ Screening. The Ages and Stages (ASQ) questionnaire is a commercial instrument for monitoring childhood development. The ASQ contains a set of 19 age-specific questionnaires for the child's parent to answer. The questionnaire is then scored by well child care personnel and results are entered into the EHR application at the point of care. ASQ results are stored as "measurements" in RPMS and are displayed on the new Well Child Health Summary. See below for examples on ASQ scores that have been entered via the EHR.



Notifications | Patient Encounters | Progress Notes | Consults | Websites | CIHA-PACS | RPMS | Broadcast | Well Child Module | ASQ

Ages & Stages Questionaire (ASQ)

Gestational Age ... | Print Questionaire | Enter Scores... | Print Activities

Status

Message: New results can be entered and you can view past results (Gestational age is 41 weeks)

Date	ASQ (months)	Communi-cation		Gross Motor		Fine Motor		Problem Solving		Personal Social	
10/09/2008	60	25	(31.7)	45	(32.7)	30	(30.5)	40	(30.1)	35	(39.5)
10/02/2008	60	30	(31.7)	35	(32.7)	40	(30.5)	30	(30.1)	50	(39.5)
11/29/2005	60	40	(31.7)	40	(32.7)	40	(30.5)	40	(30.1)	40	(39.5)

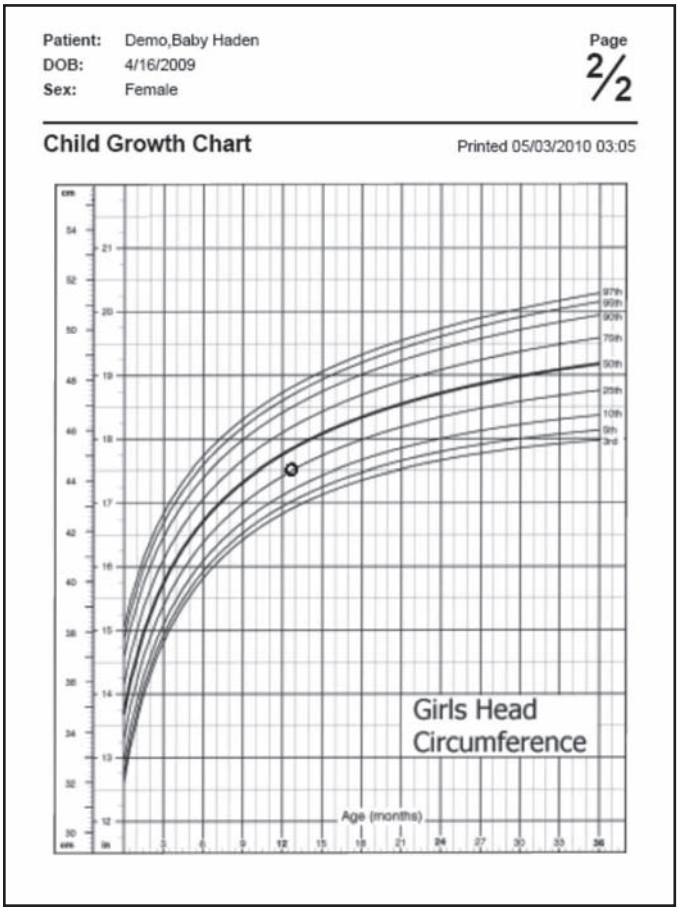
Informal Development Screening. For sites that are not able to conduct ASQ screening on every visit, the WCM can be configured to display representative milestones from the Denver Developmental Screening Test (DDST), and these milestones will display on the EHR WCM. The child's age determines exactly which milestones will display as well as the percentage of children at that age who are expected to pass a particular milestone.

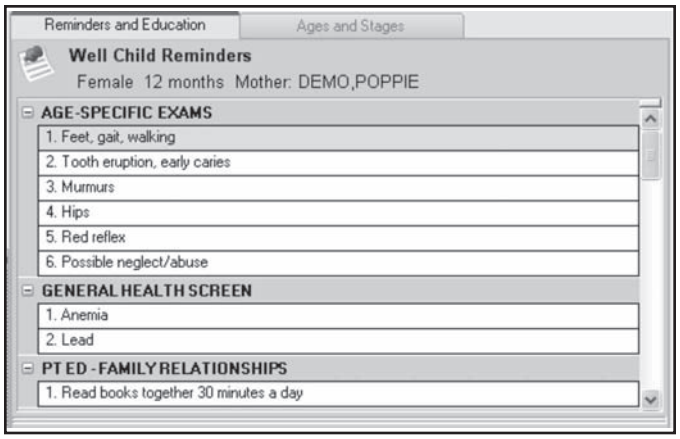
Intervention Reminders. Special exams and interventions are due throughout childhood. The WCM will provide the following age-specific exams and reminders:

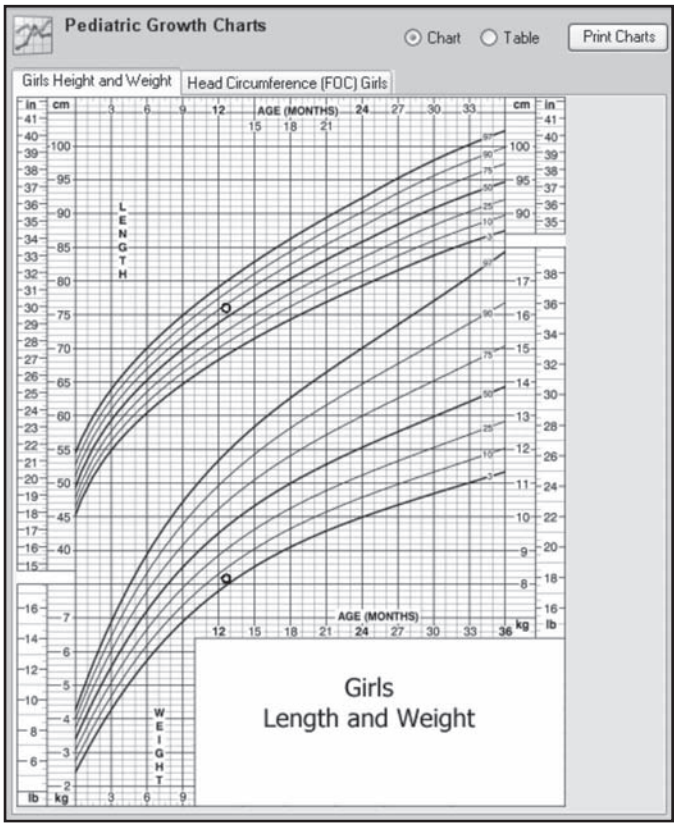
- Special risk exams
- Age-specific exams
- General screening exams
- Autism screening questions
- Immunization reminders

Anticipatory guidance. Anticipatory guidance is a cornerstone of well child care. There are literally thousands of age-specific topics, general patient education topics, and nutrition counseling topics available for display. Using the Knowledgebase Manipulator the WCM will enable providers to display only topics and standards they choose to display during an encounter. Topics include substance abuse, behavioral health, community interaction, oral health, etc.

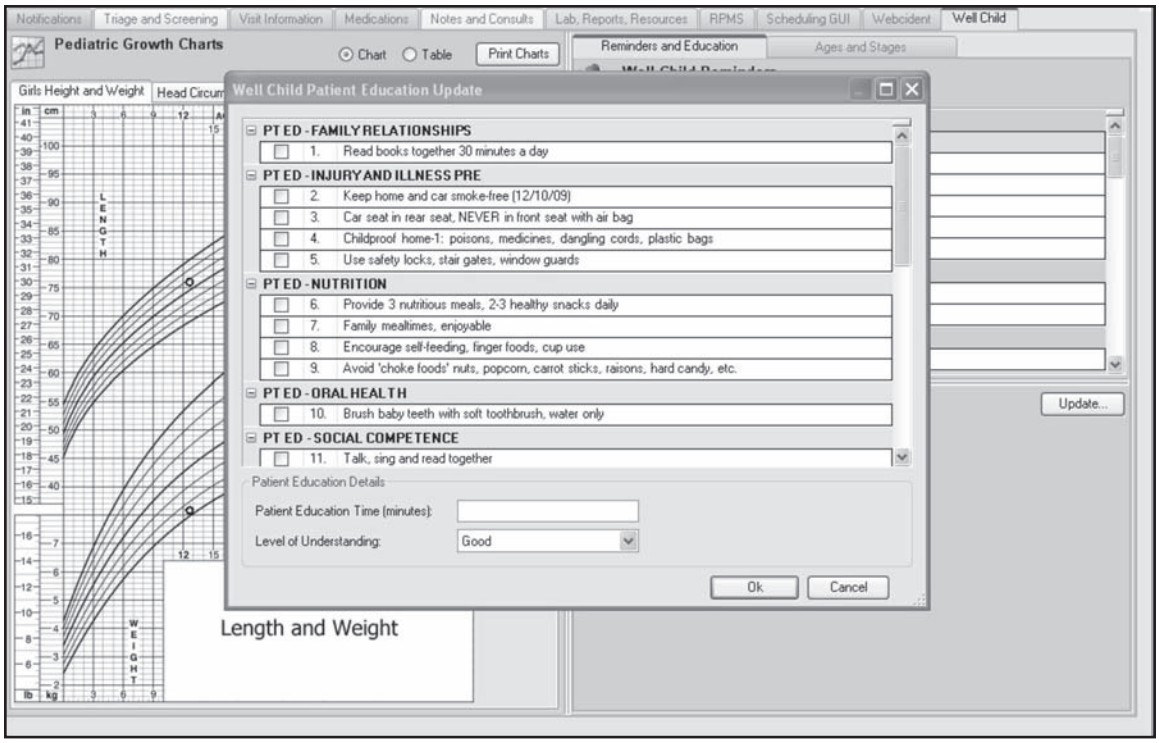
EHR Growth Grids. Users will be able to generate and print height/weight charts, BMI grids, and Head Circumference charts when applicable. Information can also be displayed as a table versus chart. See example below for growth charts.







Well Child patient education component. The new EHR Well Child patient education component will allow users to document and record any patient education provided to the patient at the time of encounter. Age-specific patient education topics are presented to the provider at the time of encounter. Selected patient education topics are immediately updated in EHR/RPMS. See example below for an example of the EHR Well Child Patient Education Update component.



Summary of the New Well Child Module

The EHR WCM is designed to utilize information technology to standardize and improve the delivery of well child care offered to patients of the IHS. The WCM leverages the power of information technology and automated decision support in two specific ways to:

- Capture and encapsulate data gathered during well child care encounters that previously was only collected piecemeal over an extended amount of time
- Customize and present age-specific guidelines and reminders to the pediatrician at the time of encounter

One important note is that, technically, the EHR WCM is in the PCC+ namespace but sites that do not run PCC+ need only to install the software; they do not have to setup and configure PCC+ for this module to run. If you are NOT running PCC+ at your site, installation is a very simple process. All you need to do is install the KIDS build on the RPMS server, run the setup executable on the EHR server (usually they are same server), and then incorporate WCM into your EHR template using EHR Design mode. *No previous releases or patches of pcc+ are needed*. By taking this path you are installing a pure EHR application totally independent of PCC+.

Several other validated screening tools exist such as the Arizona PEDS® instruments used by pediatricians in Arizona. New autism screening tools (e.g., mCHAT®) are also becoming available. We intend to add these screening options to future versions of the WCM.

ASQ Ordering information

To use the ASQ feature of the WCM, *each site must purchase an ASQ CD for each location* (building) where the ASQ is to be used. You will not be able to install the ASQ component without this CD ROM due to copyright and licensing restrictions. The CD must be purchased separately and is not included in the distribution. Each license includes one CD-ROM that contains all ASQ materials and the right to make unlimited, printed copies of those materials within that building. A copy of the CD-ROM must be inserted on your local RPMS server during WCM installation to enable this feature.

Order the CD-ROM on line at: *http://www.brookespublishing.com*. Once you navigate to the main page of the website, look for links displaying ASQ. At the ASQ webpage, look for the ASQ-3 link. Once you click on ASQ-3, look for the "Ordering Information" heading at the bottom of the page. Make sure that the package you order includes a CD ROM with PDF files containing all the ASQ data collection forms.

Ordering Information

ASQ-3 Starter Kits

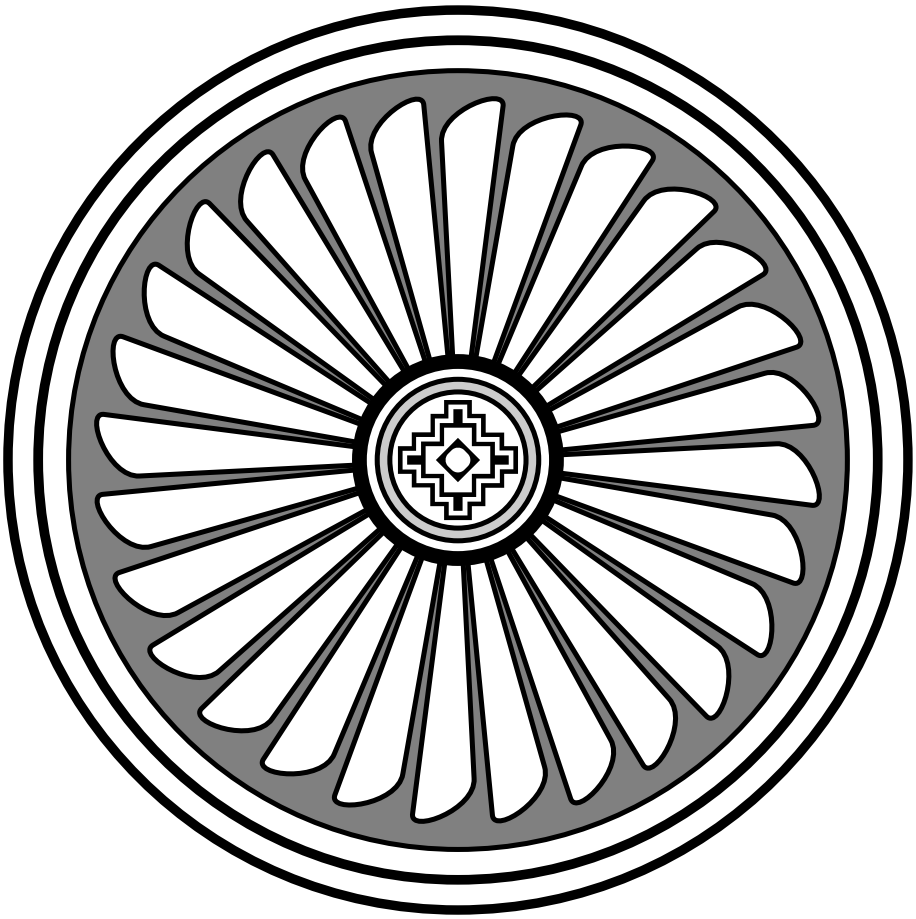
Everything you need to start screening children with ASQ-3: 21 photocopiable print masters of the questionnaires and scoring sheets, a CD-ROM with printable PDF questionnaires, the ASQ-3 User's Guide, and a FREE ASQ-3 Quick Start Guide.

Starter Kit with English Questionnaires

ISBN 978-1-59857-041-0 / 2009 /
Stock# 70410 / **$249.95**

add to my cart

For more information about the WCM, please contact Susan Richards at *susan.richards@ihs.gov* or Clarence Smiley at *clarence.smiley@ihs.gov*.



Conducting an Oral Health Screening Survey: Nashville Area Experience

M. Catherine Hollister, RDH, MSPH, PhD, CDR, USPHS, Dental Support Center Director, Nashville Area, United South and Eastern Tribes, Inc., Nashville, Tennessee

Abstract

Purpose: The last Indian Health Service Oral Health Survey was completed in 1999. The lack of current data hinders the ability of local programs to assess oral health needs. The Nashville Area tribes requested tribal-specific data that were comparable to national surveys, could be used to determine health disparities, and could be easily replicated. The purpose of the project was to develop methods that could be used to quickly and efficiently gather oral health status information for local sites. Survey data are then available to inform community members, apply for funding, and for local program planning and evaluation.

Methods: The Dental Support Center designed and conducted the survey by adapting existing protocols commonly used for state surveys. Data comparable to those obtained in national and state surveys were gathered using mixed methods including chart reviews and screenings.

Results: A total of 1,047 children ages 2 – 5 years and 742 children ages 8 - 10 were included in the survey, representing approximately 27% of the eligible children in both age groups. Of the Nashville Area tribes, 84% participated, including tribes that provide dental services through Contract Health Services only. Most of the data (62%) were gathered in community settings.

Conclusions: Using mixed methods of community screening and clinical chart reviews, tribes can easily and efficiently monitor the oral health status of community members. Surveillance can be customized by site and repeated as frequently as desired.

Introduction

The 2009 Nashville Area Oral Health Screening Survey was prompted by requests from the United South and Eastern Tribes, Inc. (USET) Health Committee for current information that could determine health disparities and be used for program evaluation. In response to this request, the Nashville Area Dental Support Center used current oral health surveillance methods, adapted to the unique needs of the Indian Health Service (IHS), to conduct a Basic Oral Health Screening Survey. The goals of the project were to:

- Provide current, basic oral health status information to tribes
- Create a process that can be easily replicated at regular intervals
- Enable tribes to assess oral health disparities
- Provide data that can be used to evaluate the effectiveness of local prevention programs

The Nashville Area Oral Health Screening Survey collected data throughout the Nashville Area on the presence of dental decay, decay experience, and dental treatment needs for children 2 - 5 and 8 - 10 years of age. For older children (8 - 10), presence of molar sealants was also assessed. Of the 25 USET member tribes, 21 (84%) and one urban center participated in this survey. Tribes with direct dental care and tribes that provide dental care only through Contract Health Services (CHS) participated. The survey was conducted using the indicators outlined in the Association of State and Territorial Dental Directors' Basic Screening Survey.[1] The protocols were adapted slightly for this survey that included both community-based dental screenings and dental record reviews. Area aggregate and tribal-specific reports provided data comparable to previous IHS Oral Health Surveys and most state surveys.

The core indicators for this survey were: untreated dental decay, decay experience (decay, fillings, crowns, or extractions due to decay), presence of dental sealants (older children only), and treatment needs (no need, early care, urgent needs). Prior to beginning the survey, the project coordinator met with local dental and/or administrative staff to discuss the survey, procedures, and possible applications of the data. Many sites added additional indicators based on data availability and community values. Each site developed a unique screening form that included the core indicators and any additional indicators. The Nashville Area tribes found great value in this survey, and many have used the information gathered to improve programs and services. Individualized consultations and rapid reports made the survey relevant and useful. Lessons learned and summarized in the "Keys to Success" will be invaluable in subsequent surveys.

Keys to Success

- Local consultations and customized data collection forms
- Site specific reports in addition to Area aggregate report
- Maintaining comparability with state and national surveys
- Including local dental and/or medical staff in data collection and reporting

- Reports informing parents of dental needs and local resources
- Inclusion of prevention services such as fluoride varnish or oral health instructions

Methods

The target groups for the survey were children ages 2 - 5 and 8 - 10 years. Some tribes chose to add additional groups, such as adolescents or adults. Data were collected using one of two methods: face-to-face screenings or chart reviews. Both methods used the same definitions of disease and treatment needs. Regardless of data collection method, the core indicators included untreated decay, decay experience (current decay, restorations, or extractions due to decay), presence of molar sealants (older children and adults only), and treatment needs (no obvious need, early care or urgent needs). Other indicators were added by individual Indian Health Service/Tribal/Urban (I/T/U) programs, according to local needs. This screening survey included a convenience sample of patients with a dental exam between 10/1/2008 and 12/31/2009 plus individuals screened in community settings. If a person had an examination and was screened in the community, only data from the chart review were included in the analysis.

Tribes with and without on-site dental services participated in the survey. Those tribes with dental clinics were more likely to perform chart reviews, although some did screenings at schools or Head Start centers. Tribes that provided dental care only through CHS screened members at community or school sites such as Head Start, elementary schools, health fairs, holiday celebrations, and sporting events. Individuals with urgent needs were referred to appropriate tribal staff for referral or follow up.

Screeners and chart reviewers were trained and calibrated prior to screening. In the case of screening, all examiners received instructions printed by ASTDD regarding classification of each indicator. In the case of multiple reviewers for a single site, all reviewers completed 5 - 10 screenings or chart reviews. Screening results were written on paper forms and then entered into an Excel spreadsheet.

Individual Consultations

Prior to beginning the survey, the project coordinator met with dental and/or administrative staff at each site. Local staff discussed the type of survey to be conducted (chart review or screenings), location and time of the survey, and data to be gathered. Many sites added indicators deemed to have value for the tribe. Additional indicators included tobacco use, smoker in the home, orthodontic status, oral hygiene, dental visit in the past year, dental cleaning in the past year, and dentate status (adults only). As soon as decisions were made regarding the type and location of the survey and any additional indicators, the project coordinator designed a customized form. All forms included the core indicators; most included 1 - 3 additional fields. Sites that conducted the survey at community events and offered services such as oral hygiene instructions and fluoride varnish added additional information to the form. Risk/benefit information, a signature line for informed consent, and coding information were some common fields that were added. This form was then used to enter services into the patient's computerized record and to collect the screening data.

Consent

Planners weighed the merits of passive or active consent. According to ASTDD protocols, passive consent is acceptable if children are screened only and no other services are done. However, most tribes saw this as an opportunity to apply fluoride in conjunction with the survey, so in most cases active consent was used. Parents/guardians were informed of the risks and benefits of screening and fluoride varnish and were given the opportunity to consent to each service separately. Fluoride varnish was applied to children with a signed consent form. Children screened using passive consent were not given a fluoride treatment. All tribal members who attended a community event were offered a dental screening; parents were informed of obvious dental needs. Fluoride varnish was applied to children accompanied by parent or guardian who signed consent for the treatment. In the case of chart reviews, no additional consent was obtained.

To gather additional information, many tribes chose to add additional questions to the consent form. Topics of these questions included access to professional dental services in the past 12 months (CHS only sites), toothache in the last six months, and prophylaxis in the last 12 months.

Screening Procedures

Most tribes that selected screening as a data collection method did so because there was ample access to large numbers of children in the target age groups. Typically these tribes had a Tribal Head Start or elementary school or conducted a community event such as a Health Fair or Children's Day. All tribes without on-site dental clinics used screening, as no dental records were available. A limitation of screening was that community events often included very small numbers of children in the target age groups.

Screenings were visual only using a mouth mirror and light source; no x-rays were taken. All screenings were done by dentists or hygienists. Patients either stood or were seated in a straight back chair. Flashlights or lighted mouth mirrors were used for illumination. Excess food particles or heavy plaque were removed using a toothbrush or tooth pick. Results of the screening were recorded on the form along with applicable consent and/or coding information. If parents were present at the screening (health fairs or community events) they were informed of the child's oral health needs. If parents were not present (Head Start or school screenings) notes were sent home to inform parents of the screening results. Children

who refused the screening or for whom oral status could not be determined were excluded from the analysis.

Chart Reviews

Tribes that selected chart reviews as the primary data collection tool did so because there was little or no opportunity to screen individuals at a community setting. Most of these sites did not have a tribal elementary school or a scheduled community event. Many did not have tribal Head Start or preschool. Because of these limitations, chart reviews of existing comprehensive exams offered the best access to the largest number of children in the target age groups.

Chart reviews were done by reviewing comprehensive examination forms in either a hard copy dental chart or electronic dental record. To identify records, computer searches were done to identify patients in the target age groups who had an examination with full mouth charting (codes 0150 or 0120) between October 1, 2008 and December 31, 2009. All charts that met the search criteria were included in the survey. Head Start charts were a rich source of data for the survey. Many of the charts included in this survey were from Head Start examinations. In most cases, charts were reviewed rather than children screened because the exams had already been completed for the school year. Because a dental examination is required for Head Start, and not the result of individuals seeking dental care, Head Start chart reviews were considered "screenings" (community surveys) rather than "chart reviews" (clinical surveys).

Indicators

Dental Decay. Teeth were considered to have untreated decay if there was an obvious lesion more than .5mm in diameter. White spots or teeth treatment planned for sealants or preventive resin restorations were considered sound.

Caries Experience. Caries experience was evaluated on the presenting teeth or charted teeth only. Caries experience included untreated decay, restored teeth, and teeth extracted because of decay.

Sealants. In the screening situation, teeth were evaluated visually only. Sealants were judged present if any permanent molar had a partially or fully intact sealant. When chart reviews were performed, sealants were judged present if an intact sealant was charted on a permanent molar on the exam form.

Treatment Urgency. Treatment urgency was scored in three categories: no obvious need, early care needed, or urgent treatment needs. "No obvious need" included individuals with no untreated decay and no dental pain reported. "Early care" included individuals with 1 - 5 decayed teeth with no report of pain or signs of infection. Dental needs were scored "urgent" if there was documentation of pulpal involvement, the individual reported pain, signs of infection were observed, or if the individual had six or more decayed teeth. This definition of "Urgent Treatment Needs" varies slightly from the ASDTT protocols,[1] where urgent need is based on pain or infection. Because this survey included chart reviews where pain was not always documented, six or more decayed teeth was included in the definition of "urgent treatment needs."

Survey Limitations

The use of a convenience sample limits the ability to generalize the results to the population. However, the large sample size improves generalizability; approximately 27% of the 2 - 5 and 8 - 10 year olds with at least one medical visit in FY08 were included.

There are limitations to each form of data collection, both screenings and chart reviews. Chart reviews represent a selection bias by only including those individuals who choose to seek dental services. This may result in underestimation of dental disease because individuals who value dental health may seek regular care. In the case of very young children, however, it may overestimate the disease burden because parents who see obvious disease or have children in pain may be more likely to come to the dental clinics than parents of young children with healthy teeth and no dental complaints. Community screenings and school screenings are more likely to reveal a true representation of the community's oral health. However, screenings may not detect cavities between teeth that would be detected in a comprehensive examination. Because of the differences in data collection, this report includes results of all participants, and separate reports of clinic based (chart reviews) and community based (screenings) findings. Untreated decay may be underreported in community screenings. However, urgent needs, the primary measure of severity, are readily evident in visual screenings and are much more likely to be accurately reported in both community screenings and chart reviews.

One further limitation is the small sample size in some individual tribes. The total sample for the Nashville Area represented 27% of children in the primary target groups. But within smaller tribes, the sample was frequently much smaller. Therefore conclusions for individual I/T/Us may be limited due to small samples.

Data

Service data (screening, fluoride varnish, OHI) was entered into the patient's computerized record. Screening data were transferred from the screening forms to an Excel spreadsheet. All individual identifiers were removed prior to analysis. Individuals for whom indicators could not be determined were removed prior to analysis. Analysis for the aggregate report was done in SAS 9.1. Analysis for the individual tribal reports was done in EpiInfo.

Findings

Most of the data (62%) were collected in community settings. By age group, 68% and 55% of 2 - 5 year olds and 8 - 10 year olds, respectively, were evaluated in community

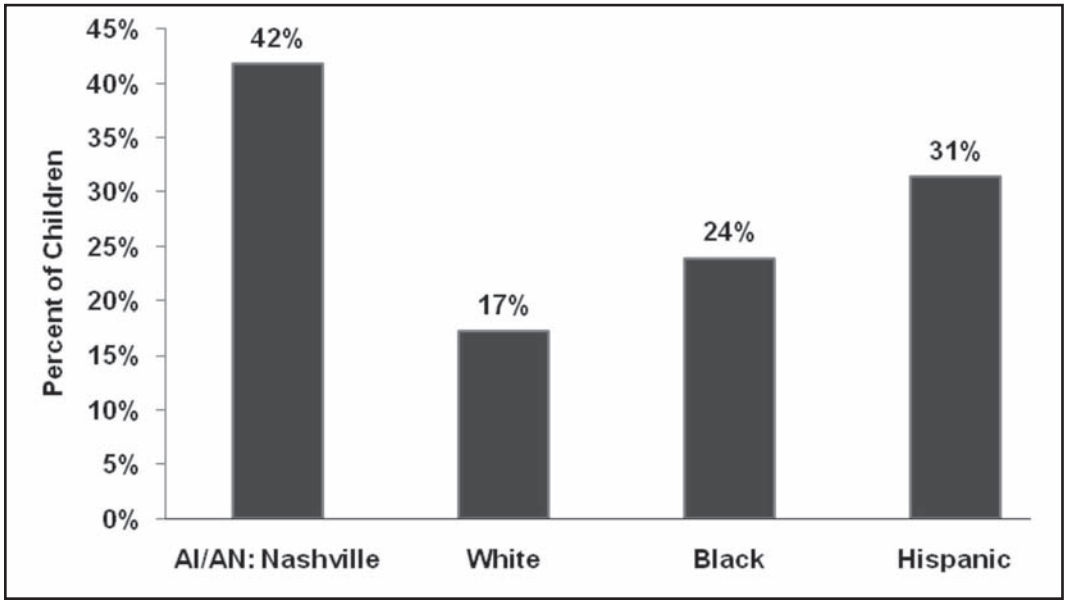
screenings. The survey demonstrated that oral health is a major concern for American Indians/Alaska Natives (AI/AN) residing in the Nashville Area.[2] Area wide, 55% of the children age 2 - 5 already had experienced dental decay. In the younger age group 17% had urgent dental needs as evidenced by pain, infection, or rampant decay. Among children age 8 - 10, 75% have had at least one cavity and 12% had urgent dental needs. (See Figure 1)

Figure 1. Outcomes of screenings by age group

Age Group	Indicator	Percent
Age 2 - 5	Decay Experience	55.2%
	Untreated Decay	41.8%
	Urgent Needs	17.9%
Age 8 - 10	Decay Experience	75.2%
	Untreated Decay	45.4%
	Urgent Needs	12.2%
	Molar Sealants	49.8%

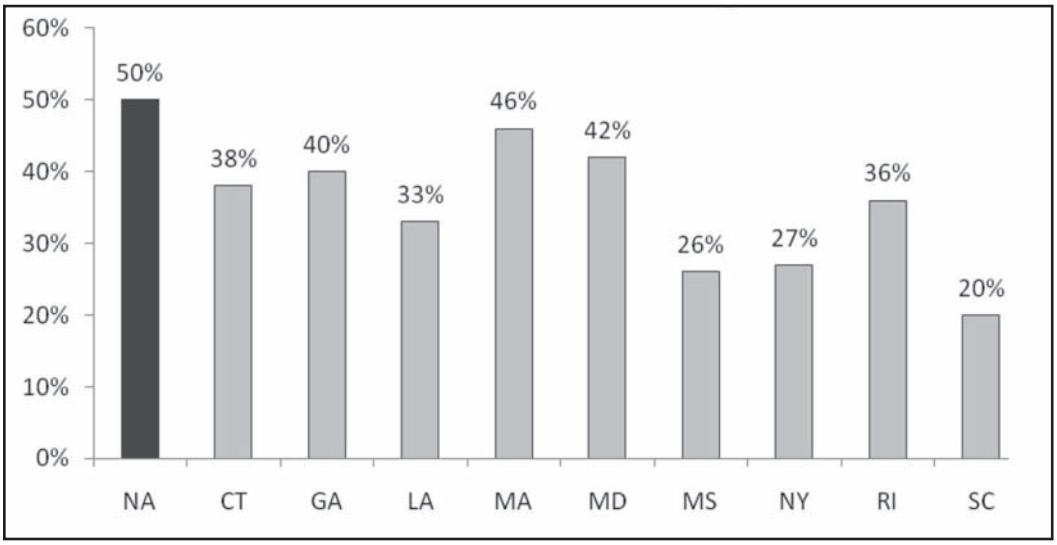
Because the survey was designed for comparability to other state and national surveys, findings demonstrated disparities between AI/AN children and other racial and ethnic groups.2 (See Figure 2)

Figure 2. Percent of 2-5 Year Old Children with Untreated Decay; American Indian Children in the Nashville Area Compared to Children Examined in NHANES 1999-2002



This survey clearly demonstrated the success of the IHS focus on prevention, particularly dental sealants. Among children age 8 - 10, 50% had at least one molar sealant. This exceeded the findings of all state surveys in the region.[2] (See Figure 3) State surveys typically include children in grade 3, most of whom are ages 8-10.

Figure 3. Dental Sealants Children Age 8-10



Discussion

Surveillance is a critical tool for public health. Data gathered through surveillance are used to inform the community, plan and evaluate programs, and project future needs. However, time and funding are significant challenges to conducting regular surveillance. Questions of what should be monitored, how often, data sources, appropriate target groups, and sampling must be addressed. Equally important are local values, how the data will be used, and community support.

A basic tenet of surveillance is that only essential information should be gathered to allow for necessary decision making. True surveillance must be conducted regularly and information disbursed in a timely manner. As survey tools become more complex, frequency may decrease, costs rise, and time required for analysis and distribution increases. This survey did not measure many oral health indicators included in some oral surveys. As such, a basic survey of this type may not detect minor changes in oral health status. However, the basic nature of the survey offers many advantages. This type of basic surveillance is very cost-effective and can be repeated as often as desired by local programs. In this survey, dentists and hygienists conducted all of the screenings, but because a diagnosis is not required and the findings are not being used for treatment, non-dental personnel may be trained to do oral health screening. Indeed, many states have successfully used nurses and other non-dental staff to provide basic dental screenings and refer children with dental needs to dental providers.

Lessons learned from this survey will be applied to future surveys, and some changes will be made based on these experiences. The most important lesson was the value of meaningful consultation with each tribe before the survey was done. Each site carefully considered target groups to be included, how the data would be collected, the best location for the survey, how consent would be obtained, and which, if any, additional indicators would be included. In most cases, local staff participated in actual screening, chart reviews, event organization, or data collection. Calibration of local dental staff will facilitate the next repetition of the survey.

Another important lesson was the value of maintaining comparability with state and national surveys. The ability to determine health disparities was a primary concern for most sites. Designing the survey with comparability in mind allowed these comparisons.

Severity of oral health status was measured using "Urgent Needs." This was a useful indicator because the other core indicators measured the presence but not the severity of dental decay. One change that will be proposed for upcoming surveys will be the addition of the core indicator "rampant decay." This will offer two advantages: an additional indicator of severity, and better comparability to state surveys. Because the survey included chart reviews and frequently pain or infection was not recorded, determining urgent needs using the ASTDD definition of "pain or infection" was not possible. To accommodate the use of chart reviews, the definition was altered to include "pain, infection or six or more cavities." Unfortunately the use of this altered definition compromised the ability to compare results to state surveys. Because many of the tribes want the ability to use chart reviews, separating "Urgent Needs" and "Rampant Decay" will allow these comparisons. For community-based surveys, both indicators can be used, thus allowing comparisons to similar surveys. In the case of chart reviews, "Urgent Needs" may not be applicable, but "Rampant Decay" may be used to measure severity and compare to state surveys that use the same indicator.

Results of the 2009 survey were distributed to all Nashville Area tribes in February 2010. All tribes received an aggregate Area report. This report included the core indicators only with comparisons to state and national data. All tribes that participated received a tribe-specific report including all of the

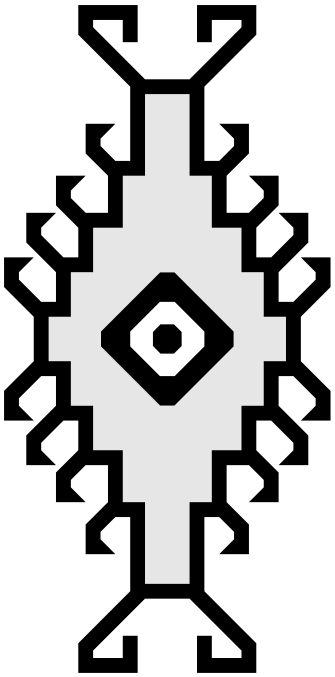
information collected and comparisons to similar surveys.

Many tribes have already used the reports. Most of the comments indicate the tribe-specific reports have the most value. Uses have included: securing follow up dental appointments for "Urgent Needs" individuals, articles in the community newsletter, grant application, planning services at upcoming children's events, and evaluating local prevention programs. Several tribes have made arrangements to repeat the survey using local dental staff or resources.

To view the entire Nashville Area Screening Survey 2009 Report, see *http://www.usetinc.org/Programs/USET-THPS/DentalSupportCenter.aspx*

References

1. Association of State and Territorial Dental Directors. Basic Screening Surveys (2008). Accessed June 2009 from *www.astdd.org/index.php?template=surveybss.html.*
2. Dental Support Center, United South and Eastern Tribes, Inc. (2010) 2009 Nashville Area Oral Health Screening Survey Report, Nashville, TN.



Sources of Needs Assessment Data That Can Be Used to Plan CE Activities

The new focus in planning continuing education activities is the identification of gaps in provider knowledge, competence, or performance that can be addressed with your activity. Ideally, these gaps should apply specifically to the American Indian and Alaska Native population and the providers who serve them. Where can you obtain data that help you identify these gaps? From time to time, we will publish items that either give you such data or show you where you can find them. When you are asked about the sources of your needs assessment data in your CE planning process, it will be easy enough to refer to these specific resources.

In this issue, the article "Evidence-Based Public Health Responses to the Overweight Crisis in American Indian and Alaska Native Communities" by Karen Strauss and Jean Charles-Azure suggests not only sources of data that show us the gravity of the health disparities when it comes to overweight and obesity, but also a number of evidence-based interventions that might be replicated in your community. Continuing education sessions might also be organized to help in your facility's implementation of the new EHR Well Child Module. Because this is a totally new package, it is certain that all of the clinicians who might use it will need training to tailor the package to your needs and to achieve competency in its use.

Child Maltreatment Data: Does It Tell the Whole Story?

John Ratmeyer, MD, FAAP, Deputy Chief of Pediatrics, Medical Consultant to the Child Protection Team, Gallup Indian Medical Center, Gallup New Mexico

The most recent child maltreatment (CM) data were just released from the National Child Abuse and Neglect Data System (NCANDS) through the Children's Bureau of the US Department of Health and Human Services (DHHS). Starting with amending the Child Abuse Prevention and Treatment Act (CAPTA) in 1988, DHHS eventually developed a national data collection and analysis program to make state child abuse and neglect reporting information available; at first, it was voluntary, but the program has been required since 1996. *Child Maltreatment 2008* is the 19th such data set.

We can only begin to address CM if we understand both the scope and severity of the problem. NCANDS allows programs to assess their performance on a variety of key measures including the rate of first-time victims (measures prevention); the average response time from report to investigation (measures state child protective service [CPS] efficiency); and percentage of repeated reports for the same families within six months (measures effectiveness of child safety interventions after first reports). *Child Maltreatment 2008* contains information about reports, children affected, perpetrators, types of abuse (including fatalities), services offered to children and families, and CM research activities.

In addition to the annual NCANDS data described above, the *Fourth National Incidence Study (NIS-4)* was also just released, based upon data collected in 2005 and 2006. Unlike the *NCANDS* data, *NIS-4* is designed to estimate more broadly the incidence of child maltreatment in the US by including children reported to community professionals and agencies other than CPS.

The release of these two reports was greeted by headlines proclaiming "New Federal Report Shows Drop in Child Abuse Rate" (ABC News) and "US Winning War on Child Abuse" (CBS News). What do the data really show? Well, it's complicated. Wading through this sea of data (more than 500 pages) is a bit daunting, but one can glean highlights from particularly visionary organizations (e.g., Prevent Child Abuse America) and well-placed people (e.g., child protection professionals) for whom this information fuels evidence-based efforts to respond to and prevent CM.

First, any data set represents just a snapshot in time. While the recent data are important to review, the first set was collected during the one-year period ending in September 2008, and the second set was collected more than two years before that. None of those data reflect the economic downturn since then, and evidence suggests that CM rises in bad economic times. Second, the complete accuracy of any data set is reliant upon mining every source of information. To see the complete picture, one has to count everything. Child protection professionals note that the *Child Maltreatment 2008* data come only from reports lodged with CPS agencies. While NIS-4 data come from CPS and other agencies (e.g., law enforcement, juvenile probation, schools, public health, hospitals, day care centers, mental health centers, and non-CPS social service agencies), it only counts CM by parents and caregivers, excluding strangers and other non-caregiving persons. Neither data set gives a complete picture. It has been suggested that only by pooling health, social service, and criminal justice data can we construct a competent and comprehensive system of measuring CM. There is some hope that the CDC may take the lead in this measurement effort in the coming years, but, for now, we have to remain circumspect about the numbers we have.

Do the numbers we have suggest that CM is decreasing? Yes; that's continuing a trend noted since the early 90s when CM rates across the spectrum began to decline. During that same period, there were dramatic drops in the rates of violent crime. Most importantly, our nation enjoyed relative economic prosperity all through the 90s, with substantial investments in child welfare: more social workers, prevention programs, and police and prosecutors specifically detailed to investigate and prosecute both intimate partner violence and CM.

In regard to recent data, cautious optimism is advised. Many child protection professionals have a sense that much of the "decrease" is artifact related to how cases are counted by official agencies (i.e., social services and law enforcement). Many agencies are pursuing more aggressive "screen-out" policies in the first tier of the reporting process. If strict criteria are not met, reported cases of suspected CM are "screened-out" and not investigated -- a kind of CPS triage. *NIS-4* data say that only 1 in 3 case reports of children who were either harmed or endangered were ever investigated by CPS. In addition, many agencies are pursuing "alternative" approaches in responding to alleged CM in an effort to keep children and their families out of the child welfare system entirely. Both of these approaches may lower the level of "substantiated" cases without actually changing the true rate of CM; many "unsubstantiated" cases may never be adequately investigated, especially if CPS uses the triage concept to prioritize resources.

The total number of child fatalities rose from 1586 in 2007 to 1630 in 2008; that doesn't agree with the total rate of CM declining, which suggests we are undercounting all CM. None of the recent data reflect the recent economic downturn. Many state budgets have suffered greatly in the past few months. Social welfare positions have been cut in some states. That means less robust responses to CM and erosion of CM prevention activities. Unpublished data from a collaboration of children's hospitals show a dramatic rise in the number of hospitalized children with abusive head trauma since the beginning of the recession, consistent with the rise in child fatalities cited above.

Even before the downturn in the economy, American Indian and Alaska Native (AI/AN) children were abused and neglected far more than whites (13.9 compared to 8.6 per 1000 children); only blacks are abused more. *NIS-4* says children of unemployed parents had two times the rate of maltreatment overall (two times the abuse and three times the neglect of employed parents); children with household incomes below $15,000 were neglected seven times more than other children.

The lasting effects of historical trauma, unemployment and underemployment, poverty, substance abuse, and intimate partner violence in many AI/AN communities contribute to the epidemic of CM in Indian Country. The bottom line is that our children need us to remain vigilant and to invest in resources to both prevent and respond to CM. Only by understanding what supports families and protects children can we effectively respond to CM; only by understanding risks can we effectively prevent CM. Hopefully, over time, better counting will help us to better understand the problems and challenges that lie before us, arming us with information to better protect our children and the families that nurture them.

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.

Successful Interventions Halve FAS Rates in Alaska Native Birth Cohort, 1996 - 2002

Guest Author: Judy Thierry, MCH Program, IHS Headquarters, Rockville, Maryland

The cause of Fetal Alcohol Syndrome (FAS), a disorder the effects of which occur along a spectrum, Fetal Alcohol Spectrum Disorder (FASD), of severity, is due to alcohol exposure during pregnancy. There are no known safe amounts. Total abstinence during pregnancy is recommended. As a preventable cause of mental retardation, the necessary public health and clinical approaches to FASD prevention, as expected, are complex and multi-factorial. The State of Alaska Epidemiology Bulletin published on February 18, 2010, notes falling Alaska Native (AN) FAS rates in Alaska. AN-specific interventions leading up to and during the 1996 to 2002 FAS registry data collection period, while not linked, appear to have impacted the rates.

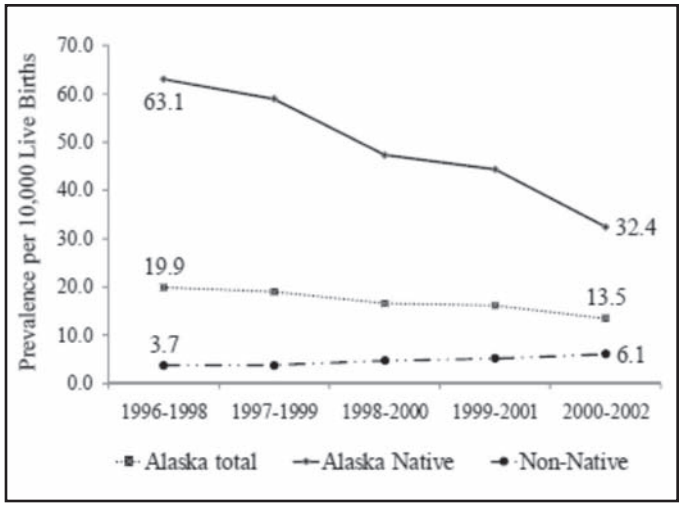
James E. Berner, MD, Senior Director for Science, Division of Community Health, with the Alaska Native Tribal Health Consortium notes that substantial interventions were required to shift these rates. No less than a massive system change at many levels with intense political will on the part of tribes and IHS; a highly developed and staged women-centric model of care with services directly devoted to substance abuse treatment, case finding and assessment; and FASD services for children, *and* prevention efforts were developed and maintained during this period and into the present.

Dr. Berner states, "Regarding the FAS rate reduction, it is worth noting that the efforts to document and improve the FAS rates among AN were initiated by the IHS Area Office in Alaska in the mid-80s. We organized the first state-wide effort to find every AN FAS child, and then hired John Aase, and later Sterling Clarren, as consulting dysmorphologists to staff our FAS clinics. The state was willing to agree that this was a problem -- but our problem -- after we showed them our data. The IHS data helped get Congressional funding later so that each Area had an FAS coordinator. In Alaska, the state was a willing partner and helped as their limited funding allowed. The Alaska Area got funding that provided the first residential treatment program for pregnant women, and their children, through the first three months of the infant's life after delivery, and we made sure that the state had 2 - 3 beds they could use for non-Native women. After compacting, Southcentral Foundation now manages the contract for that treatment unit. Each Tribal Health Corporation maintains some level of a prenatal substance abuse prevention program, and several are quite complete. Now almost all the prevention directed at AN women is part of a tribal program. The state manages and supports the diagnostic clinics we used to do, and of course, there are federally-funded independent living programs (ILP) and, from age three years and older, school-system managed programs for affected children.

Our prenatal alcohol program is a partnership between tribal and state efforts, and almost all the prenatal prevention, and prevention aimed at the AN youth are tribal, not state. One could plausibly argue that prevention efforts are the key to lowering the incidence of FAS, and, for the AN population, this is mostly a tribal activity.

It is also important to remember that only the AN rate has dropped; there has not been a significant drop in the non-Native rate.

Figure 1. FAS prevalence by three-year moving averages, Alaska Birth Defects Registry, birth years 1996-1998 to 2000-2002



References

Schoellhorn J. Decline in birth prevalence of fetal alcohol syndrome in Alaska. *State of Alaska Epidemiology Bulletin*. No.3. Feb 17, 2010. *http://www.epi.alaska.gov/bulletins/docs/b2010_03.pdf*

Resources

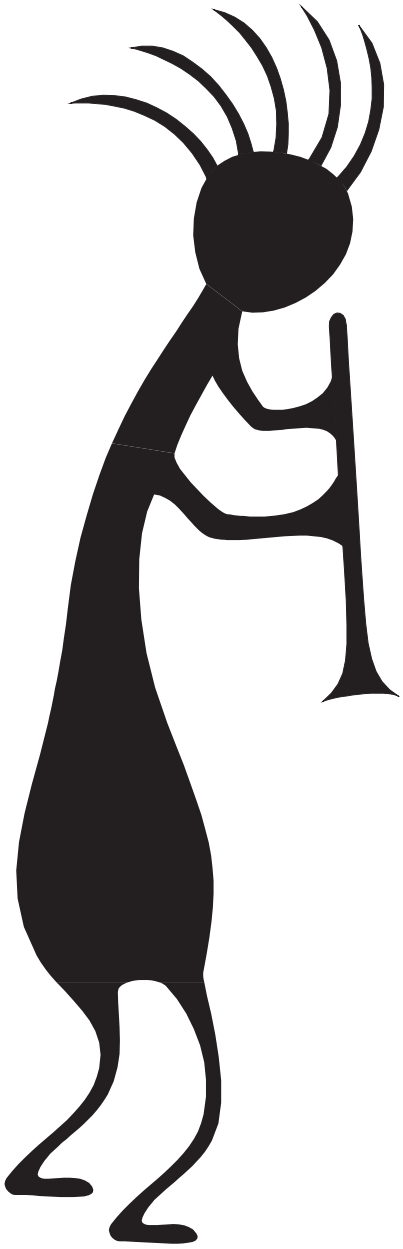
Alaska MCH Chart books

1. Alaska Native Maternal and Child Health Trends and Data. Alaska Native Epidemiology Center Division of Community Health Services Alaska Native Tribal Health Consortium, September 2008. *www.anthc.org/cs/chs/epi/*
2. Schoellhorn, KJ, Perham-Hester, KA, Goldsmith, YW. Alaska Maternal and Child Health Data Book 2008: Health Status Edition. Anchorage, AK. Maternal and Child Health Epidemiology Unit, Section of Women's, Children's and Family Health Alaska Division of Public Health, Alaska Department of Health and Social Services. December 2006. *http://www.epi.alaska.gov/mchepi/*

CDC FASD homepage and resources at *http://www.cdc.gov/ncbddd/fasd/index.html*

The above article, and several others, are also available in the Women's Health Notes. The WHN is an electronic publication for those providing care for American Indian and Alaska Native women and their families. The Chief Clinical Consultant for Obstetrics and Gynecology serves as the editor of the newsletter. If you have suggestions or would like to contribute, please contact jean.howe@ihs.gov.

Current and past issues, and many other resources, are available at the IHS MCH Website at http://www.ihs.gov/MedicalPrograms/MCH/index.cfm?module=whn_home. *The Women's Health Notes is available by subscription through the IHS listserv at* http://www.ihs.gov/cio/listserver/index.cfm?module=list&option=list&num=87&startrow=76.



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.

Upcoming seminars include:

- **July 13, 2010**
  Preventing CVD in Diabetes by Terry Raymer, MD
- **August 19, 2010**
  Advanced diabetes management Case Studies by Jo Ellen Habas, MD
- **September 8, 2010**
  Exercise and Cardiometabolic Risk Reduction in Diabetes and Prediabetes by Ralph La Forge

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

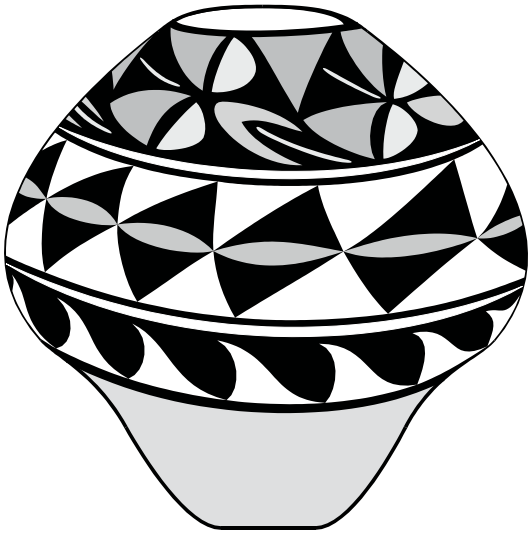
EHR is the Indian Health Service's Electronic Health Record software that is based on the Resource and Patient Management System (RPMS) clinical information system. For more information about any of these courses described below, please visit the EHR website at *http://www.ihs.gov/CIO/EHR/index.cfm?module=rpms_ehr_training*.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

Introduction to Social Marketing
June 25 - 29, 2010; Santa Fe, New Mexico

The American Indian Institute will be offering the "Introduction to Social Marketing" training in Santa Fe, New Mexico, June 25 - 29, 2010. This training is designed for tribal health administrators and directors who are interested in the field of social marketing. The course will include an overview of social marketing, focus group research, program design, and implementation. This is the first course in a series of four that will include 1) Introduction to Social Marketing; 2) Advanced Social Marketing, for those who are in the process of implementing a project; 3) Program Evaluation; and 4) Focus Group Research. Continuing education units will be offered by the University of Oklahoma. For more information, please contact *Chelsea-Southerland@ou.edu* or visit *www.aii.ou.edu*.

The Pharmacy Practice Training Program: a program in patient-oriented practice (PPTP)
August 2 – 5 or August 23 - 26, 2010; Scottsdale, Arizona

The goal of this four-day training program for pharmacists employed by the Indian Health Service or Indian health programs is to improve the participant's ability to deliver direct patient care. This program encompasses the management of patient care functions in the areas of consultation, communication, interviewing techniques, laboratory test interpretation, conflict resolution, physical assessment, and disease state management. The course is made up of case studies that include role playing and discussion and provides 27 hours of pharmacy continuing education. It will be held at the Chaparral Suites Hotel, 5001 North Scottsdale Road, Scottsdale, Arizona 85258. For more information, look for "Event Calendar" at *http://www.csc.ihs.gov/* or contact CDR Ed Stein at the IHS Clinical Support Center by e-mail at *ed.stein@ihs.gov*.



Spirit of EAGLES

American Indian/Alaska Native Leadership Initiative on Cancer

Artwork Designed by: Chholing Taha

Eighth National Conference

"Changing Patterns of Cancer in Native Communities: Strength Through Tradition and Science"

September 11-14, 2010
Westin Hotel
Seattle, WA

Watch for details coming soon @ http://www.nativeamericanprograms.org/

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.

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 of whom 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 the 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. (4/10)

Family Physician
SouthEast Alaska Regional Health Consortium; Juneau, Alaska

The SEARHC Ethel Lund Medical Center in Juneau, Alaska is searching for a full-time family physician with obstetrics to join a great medical staff of 14 providers (ten physicians and four midlevels) at a unique clinic and hospital setting. Have the best of both worlds by joining our practice where we share hospitalist duties one week every 6 - 8 weeks, and spend our remaining time in an outpatient clinic with great staff and excellent quality of life. We have the opportunity to practice full spectrum family medicine.

Work in Southeast Alaska with access to amazing winter and summer recreational activities. Live in the state capital with access to theater, concerts, annual musical festivals and quick travel to other communities by ferry or plane. Consider joining a well rounded, collegial medical staff at a beautiful clinic with generous benefits. For more information, contact Dr. Cate Buley, Assistant Medical Director, Ethel Lund Medical Center, Juneau, Alaska; telephone (907) 364-4485; e-mail *cbuley@searhc.org*; or go to *www.searhc.org* to learn more. (4/10)

Family Practice Physician
Yakama Indian Health Center; Toppenish, Washington

The Yakama Indian Health Center is recruiting for two positions in family practice, pediatrics, or internal medicine to join our staff of four physicians, three ARNP, and two PA-C. We are a modern facility with on-site pharmacy services, an open access appointment system, electronic health records, a moderately busy outpatient practice, and a user population of 18,000 members of the Confederated Tribes and Bands of the Yakama Nation.

Located 150 miles southeast of Seattle in the Yakima Valley, Toppenish has a lot to offer both the outdoor enthusiast and the urban sophisticate. Hunt, fish, or golf during the day, then attend a Broadway musical at the Capitol Theatre in Yakima. Skiing at White Pass or Crystal Mountain is only an hour away, and the Yakama Nation Museum and Cultural Heritage Center in downtown Toppenish stays open seven days a week.

Base salaries depend upon experience, and range from $155,000 to $177,000. Other benefits may include loan payback, retention or recruitment bonuses, and moving expenses. For more information, please call our CEO, Andrew Delgado, or our Clinical Director, Rex Quaempts, at (509) 865-2102. (4/10)

Family Physician
SouthEast Alaska Regional Health Consortium

The SEARHC Clinic in Juneau, Alaska has an excellent opportunity for a family physician with obstetrics skills to join a medical staff at a unique clinic and hospital setting. Have the best of both worlds in a practice where we share hospitalist duties and staff an outpatient clinic, all with an excellent quality of life. We have the opportunity to practice full

spectrum family medicine. Southeast Alaska has amazing winter and summer recreational activities. Enjoy Alaska's capital with access to theater, concerts, and annual musical festivals. Now a NHSC Loan Repayment Site. For information contact Dr. Cate Buley at (907) 364-4485; e-mail *cbuley@searhc.org*; or visit the website at *www.searhc.org*. (2/10)

Family Physician
Kodiak Area Native Association; Kodiak, Alaska

Come practice on Alaska's Emerald Isle. Looking for a board certified or board eligible family physician to join Kodiak Area Native Association in providing comprehensive family medicine. Coastal temperatures and endless outdoor recreation. Contact Robert Onders, MD with further questions or, to send a CV, at *Robert.Onders@kanaweb.org*. KANA is an EOE employer exercising Native preference in accordance with PL 93-638. For a complete list of job qualifications, description, and application, please contact Kodiak Area Native Association Human Resources Department by e-mail at *Samuel.towarak@kanaweb.org*; mailing address 3449 E. Rezanof Drive, Kodiak, Alaska 99615; telephone (907) 486-9805; or fax (907) 486-9896. (2/10)

Physician
Puyallup Tribal Health Authority; Tacoma, Washington

The Puyallup Tribal Health Authority is currently recruiting a full time physician to join a team of nine other physicians. PTHA is a tribally operated ambulatory clinic located in Tacoma, Washington, and is accredited by AAAHC, CARF and COLA. This position will evaluate, diagnose, and treat medical, obstetric, psychiatric, and surgical diseases and emergencies as credentialed and privileged; oversee the medical evaluation, diagnosis, and treatment of patients by other medical professionals, including precepting midlevel providers as needed; perform histories and physicals, and direct the evaluation, diagnosis, and treatment of PTHA patients in local hospitals, including participation in scheduled rounding; make referrals to specialists as per PTHA protocol and follow-up to assure quality care; provide on-site health education and counseling to patients and staff; participate in after-hours on-call duty as scheduled; provide back-up consultation to other on-call PTHA providers as scheduled; and participate in utilization review studies and quality improvement committee work as assigned.

Minimum requirements include a Doctorate of Medicine or Osteopathy from an accredited institution; board certified (or eligible to sit for exam) in family practice or appropriate field; licensed to practice medicine in the State of Washington; and current certification in ACLS.

PTHA offers a competitive salary, benefits, and a generous time off schedule. To apply, a completed PTHA employment application is required (resume optional). Please submit applications to the Human Resource Department prior to the closing date. Indian hiring preference by law. Telephone (253) 593-0232 ext 516; fax (253) 593-3479; e-mail *hr@eptha.com*; website, *www.eptha.com*. The mailing address is PTHA Human Resource Department, KCC bldg #4, 1st Floor, 2209 E. 32nd St.. Tacoma, Washington 98404. (2/10)

Family Medicine, Internal Medicine, Emergency Medicine Physicians
Sells Service Unit; Sells, Arizona

The Sells Service Unit (SSU) in southern Arizona is recruiting for board certified/board eligible family medicine or internal medicine physician to join our experienced medical staff. The SSU is the primary source of health care for approximately 24,000 people of the Tohono O'odham Nation. The service unit consists of a Joint Commission accredited 34-bed hospital in Sells, Arizona and three health centers: San Xavier Health Center, located in Tucson, Arizona, the Santa Rosa Health Center, located in Santa Rosa, Arizona, and the San Simon Health Center located in San Simon, Arizona, with a combined caseload of approximately 100,000 outpatient visits annually. Clinical services include family medicine, pediatrics, internal medicine, prenatal and women's health care, dental, optometry, ophthalmology, podiatry, physical therapy, nutrition and dietetics, social work services, and diabetes self-management education.

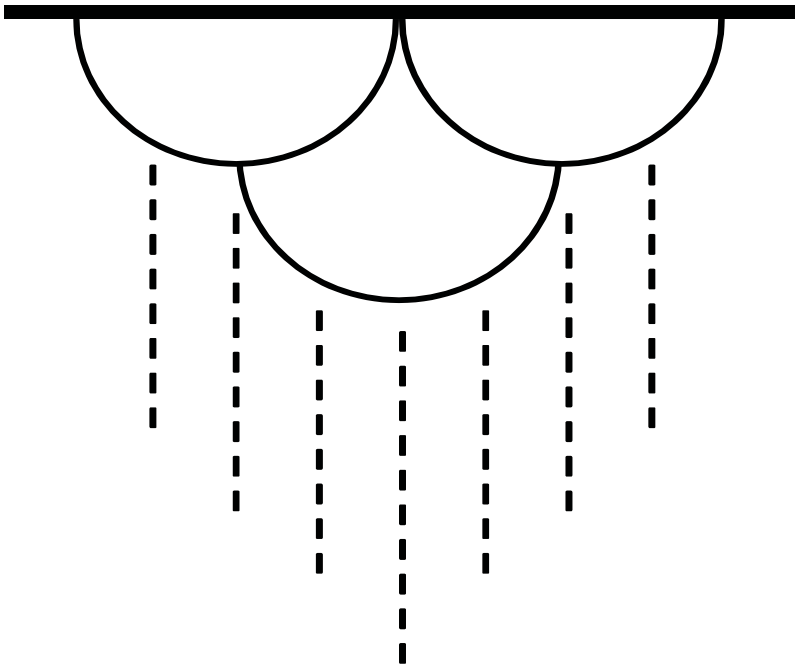
Sixty miles east of the Sells Hospital by paved highway lies Tucson, Arizona's second largest metropolitan area, and home to nearly 750,000. Tucson, or "The Old Pueblo," is one of the oldest continuously inhabited sites in North America, steeped in a rich heritage of Indian and Spanish influence. It affords all of southern Arizona's limitless entertainment, recreation, shopping, and cultural opportunities. The area is a favored tourist and retirement center, boasting sunbelt attributes and low humidity, with effortless access to Old Mexico, pine forests, snow sports, and endless sightseeing opportunities . . . all within a setting of natural splendor.

We offer competitive salary, relocation/recruitment/retention allowance, federal employment benefits package, CME leave and allowance, and loan repayment. Commuter van pool from Tucson is available for a monthly fee. For more information, please contact Peter Ziegler, MD, SSU Clinical Director at (520) 383-7211 or by e-mail at *Peter.Ziegler@ihs.gov*. (2/10)

Family Practice Physician
Jicarilla Service Unit; Dulce, New Mexico

The Jicarilla Service Unit (JSU) is a new, beautiful 65,000 square foot facility nestled in the mesas of northern New Mexico with views of the edge of the Colorado Rockies. We provide care to the Jicarilla ("Basket-maker") Apache community with a population of 3,500. Our clinic has an opening for a board certified/eligible family practice physician for purely outpatient care with a 40 hour work-week. Our site qualifies for IHS and state loan repayment programs. JSU has

a fully functional electronic health record system. Our pharmacy has a robust formulary including TNF-alpha inhibitors and exenatide. The clinic also has an urgent care clinic for acute walk-in cases. Our staff currently consists of a family practice physician, an internist, a pediatrician, a part-time FP physician (who focuses on prenatal care), three family practice mid-levels, an optometrist, and two dentists. We also have a team of dedicated public health nurses who specialize in home visits for elders and prenatal follow-up. The Jicarilla Apache Nation is self-sufficient with profits from oil and natural gas. Much has been invested in the infrastructure of the reservation, including a large fitness facility with free personal training, a modern supermarket, a Best Western Hotel and Casino, and more. We are also located 45 minutes from the resort town of Pagosa Springs, which has year-round natural hot springs and winter skiing at renowned Wolf Creek Pass. We welcome you to visit our facility in person. To take a video tour of the Nzh'o Na'ch'idle'ee Health Center online, go to *http://www.usphs.gov/Multimedia/VideoTours/Dulce/default.aspx*. Please call Dr. Cecilia Chao at (575) 759-3291 or 759-7230; or e-mail *cecilia.chao@ihs.gov* if you have any questions. (01/10)



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, MPA .....Director, CSC
John F. Saari, MD .....Editor
Cheryl Begay .....Production Assistant
Theodora R. Bradley, RN, MPH .....Director, OCE
Lisa Palucci, MSN, RN .....Nursing Consultant
Erma J. Casuse, CDA .....Dental Assisting Training Coordinator
Edward J. Stein, PharmD .....Pharmacy 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*.