

# PROGRAM BRIEF

## AHRQ Research and Other Activities Relevant to American Indians and Alaska Natives

### Agency for Healthcare Research and Quality

AHRQ's mission is to improve the quality, safety, efficiency, and effectiveness of health care by:

- Using evidence to improve health care.
- Improving health care outcomes through research.
- Transforming research into practice.

American Indian and Alaska Native (AI/AN) people continue to have disproportionately higher rates of illness and higher mortality rates when compared with other Americans. AI/ANs die at higher rates than other Americans from tuberculosis (500 percent higher), alcoholism (550 percent higher), diabetes (200 percent higher), unintentional injuries (150 percent higher), homicide (100 percent higher), and suicide (70 percent higher). This group is also burdened with high infant mortality rates and high rates of obesity and diabetes among children.

The Agency for Healthcare Research and Quality (AHRQ) is committed to improving the quality, safety, effectiveness, and efficiency of health care for all Americans. AHRQ provides grants to enhance the health services research knowledge base; develops tools and talent that foster the health services research infrastructure; and builds

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relationships with tribal and other AI/AN organizations, the Indian Health Service (IHS), and other Federal agencies to advance excellence in health care for AI/ANs.

This program brief provides a summary, arranged by topic, of ongoing and recently completed AHRQ activities that specifically address the health of the AI/AN people.





## Arthritis

Rheumatoid arthritis (RA), a major cause of disability among the general U.S. population, has a higher prevalence among some AI/AN subgroups.

- **Quality of arthritis care for Alaska Natives varies significantly by quality measure**

This study provides an initial evaluation of quality of care for RA in an Alaska Native population receiving care in an integrated health care system. The researchers assessed the providers' level of adherence to eight quality-of-care indicators among 106 Alaska Natives living in the Anchorage Service Unit. The highest performance scores were for folic acid prescription while on methotrexate (93.6 percent) and disease-modifying antirheumatic drug prescription (90.6 percent). The areas in need of greatest improvement were related to radiographs of both hands and feet and laboratory measures to monitor RA. Having at least one visit to a rheumatologist increased the likelihood of high performance on many, but not all, quality indicators. Ferucci ED, Donnithorne KJ, Koller KR, et al. Performance on rheumatoid arthritis quality indicators in an Alaska Native healthcare system. *Qual Saf Health Care*. 2010 Oct; 19(5):387-391. (Grant HS15625).

## Diabetes

AI/ANs have the highest rates of type 2 diabetes in the United States. Diabetes is traditionally a disease of older people, but diabetes is being diagnosed at young ages in American Indian communities. American Indian youths (15-19 years old) have the highest prevalence (4.5 per 1,000) of type 2 diabetes among all ethnic groups. Of AI/ANs aged 18 years and older, about 17.2 percent have

diabetes. Diabetes is least common among Alaska Natives (8.1 percent) and most common among American Indians in the southern United States and southern Arizona (26.7 percent and 27.6 percent respectively). The Pima Indians of Arizona have one of the highest diabetes rates in the world.

- **More comprehensive diabetes education programs are linked to better diabetes care.**

Researchers found that few diabetes education programs for AI/ANs met national standards in 2001. They also found that more comprehensive programs were associated with better quality diabetes care. All 88 IHS-funded diabetes care programs in 2001 completed a checklist of criteria from the IHS Integrated Diabetes Education Recognition Program (IDERP) on how well programs implemented each of the 10 national standards for diabetes self-management education. Programs were then categorized as Level 1 (developmental), Level 2 (educational), or Level 3 (integrated). Patients receiving care from Level 2 and Level 3 programs had higher completion rates of all 15 diabetes quality-of-care indicators compared with those in programs at or below Level 1. Yet, only 9 of the 86 programs had fulfilled enough criteria to qualify for at least Level 2 IDERP recognition. The remaining 77 programs qualified at Level 1 or less. Programs were often understaffed and unable to complete the extensive documentation process required by the IDERP, according to the authors. Roubideaux Y, Noonan C, Goldberg JH, et al. Relation between the level of American Indian and Alaska Native diabetes education program services and quality-of-care indicators. *Am J of Pub Health*. 2008 Nov; 98(11):2079-84. (Grant HS10854).

- **Robeson County Primary Care Research Network studies prevalence of diabetes in local American Indians**

This project brings together 54 providers, 21 of which are American Indian, with the goal of creating a research network of primary care providers who largely serve American Indian patients in Robeson County, North Carolina, a rural county that is home to most of the State's more than 50,000 members of the Lumbee Tribe. In addition to creating the network of primary care practices where disease- and tribe-specific data can be collected, researchers will estimate diabetes prevalence in adults and children as well as collect pilot data on the care processes for diabetes. The creation of the network, measurement of diabetes prevalence, and results of the pilot study will be used to direct further work for improving the identification and care for diabetes in the community. (Principal Investigator: Bonnie Yankaskas, University of North Carolina at Chapel Hill; Grant HS15989, 8/01/06-7/31/09).

## Disparities

Improvements in preventive services, care for chronic conditions, and access to care have led to a reduction and in some cases elimination of disparities in access to and receipt of care for AI/AN populations. However, disparities in care continue to be a problem for some conditions.

- **Higher education among American Indian elders increases their likelihood of engaging in physical activity**

AI/ANs report lower levels of leisure-time physical activity than the majority population. This lack of exercise puts them at risk for obesity, hypertension, type 2 diabetes, and cardiovascular

disease, which are becoming more prevalent in many AI/AN communities. However, as with many other groups, more educated AI/AN elders have higher levels of physical activity than their less educated counterparts. Researchers correlated education with physical activity level among 107 AI/AN elders (age 50 to 74 years) who self-identified as not having been physically active in the 6 months preceding the study. After receiving information about the benefits of exercise and the types of exercise they might engage in, they participated in a 6-week trial comparing two approaches to physical activity monitoring. Both approaches required participants to fill out weekly activity monitoring sheets but the second approach also required the use of a pedometer. After controlling for relevant demographic and health factors, they found that groups at different educational levels (less than high school, completed high school, General Education Degree or some vocational education, and college education) did differ significantly in caloric expenditure due to moderate to vigorous exercise, with the differences increasing significantly with higher levels of educational attainment. Sawchuk C, Bogart A, Charles S, et al. Education is associated with physical activity among American Indian elders. *American Indian Alaska Native Mental Health Research*. 2008; 15(1):1-17. (Grant HS10854).

- **Distance to cancer care facilities hinders access for American Indians**

For specialized services such as cancer care that are not widely distributed geographically, access may be fundamentally limited by distance, which can be measured in travel time. Using census data, researchers estimated travel times to National Cancer Institute

(NCI)-designated Cancer Centers, academic medical centers, and oncologists by various demographic characteristics, including race/ethnicity and region. AI/ANs, non-urban dwellers, and residents in the South had the longest travel times to a NCI Cancer Center. Travel burdens also persisted for AI/ANs and non-urban populations for cancer treatment by academic medical centers and oncologists. These disparities in access merit further examination if corrective policies are to be designed and implemented. Onega T, Duell EJ, Shi X, et al. Geographic access to cancer care in the U.S. *Cancer*. 2008; 112:909-918. (Grant T32 HS00070).

## Perceptions of Care

To gauge AI/ANs satisfaction with the quality of their health care, researchers use surveys, focus groups, and other assessment tools.

- **Collaboration between Choctaw Nation, AHRQ, and IHS yields the American Indian Survey, an adaptation of CAHPS®**

The Consumer Assessment of Healthcare Providers and Systems (CAHPS®) surveys measure patients' experiences with ambulatory and facility-level care. Since these surveys are not adapted for ethnic and linguistic minority populations, the Choctaw Nation Health Service (CNHS) Program and AHRQ agreed to explore developing a survey to collect patient experience-of-care data to evaluate care received by patients at different CNHS clinics. AHRQ and the CAHPS consortium, together with the IHS, worked with CNHS to develop a CAHPS American Indian Survey. They conducted a mail survey of the Choctaw population that yielded 696 surveys (a 58 percent response rate). This collaboration and community-based

participatory research helped to produce a useful survey tool that can be used by other American Indian tribes and by the IHS. Weidmer-Ocampo B, Johansson P, Dalpoas, D, et al. Adapting CAHPS for an American Indian population. *J Health Care for the Poor Underserved*. 2009; 20:695-712. (Grant HS16980).

- **Survey of patients' experiences completed**

Researchers completed standardized surveys of patients' experiences with the Billings Area Office of the IHS in 2003 to develop new performance initiatives and learn why eligible patients with other insurance coverage choose non-IHS providers. Gaining this information is particularly important because the IHS can receive reimbursement from public and private insurers when services are provided to covered patients. The research team used AHRQ's CAHPS program, a multiyear initiative of AHRQ that assesses the patient-centeredness of care and compares and reports on performance in an effort to improve the quality of care. Researchers, through a cooperative agreement, used survey results to develop a performance improvement plan in spring 2007 that identified cost-effective, feasible strategies for improving care. Follow-on work will include deploying interventions at one hospital and three ambulatory clinics to give researchers an opportunity to refine tools and interventions for use in culturally diverse populations served by underfunded health care providers. (Principal Investigator: Gordon Belcourt, Montana/Wyoming Tribal Leaders Council; Grant HS14034, 9/30/03-3/31/12).

## Preventive Care

The main health challenges currently faced by AI/AN people are the health conditions and chronic diseases related to lifestyle issues such as obesity,

physical inactivity, poor diet, substance abuse, and injuries. Preventive health initiatives for AI/AN populations have been undertaken to create healthier communities, improve quality of life, decrease health care use, control disability, and improve productivity. Initiatives include developing, coordinating, implementing, and disseminating effective health promotion and chronic disease prevention programs through collaboration with key stakeholders and by building on individual, family, and community strengths and assets.

- **Project focuses on healthy weight and cancer outcomes for women**

This continuation grant builds upon its earlier capacity-building success during which the Montana-Wyoming Tribal Leaders Council developed a shared data resource and research infrastructure for participatory research among a majority of the 10 tribes it serves. The continuation project will further build capacity for health care research on the priority health issues identified by the tribes and continue to support culturally appropriate health programs. Three new research studies are planned: evaluation of interventions to promote healthy weight among women, examination of factors that contribute to breast and cervical cancer outcomes, and design and implementation of a "healthy reservations" model program for systemwide health improvement on reservations. (Principal Investigator: Gordon Belcourt, Montana-Wyoming Tribal Leaders Council; Grant HS14034, 9/30/03-3/31/12).

- **Study delineates low rates of breast and cervical cancer screenings among American Indian women**

The researchers investigated factors associated with primary and secondary breast and cervical cancer screening among American Indian women

receiving care from the IHS in Montana and Wyoming. Primary screening is screening for those women who have had no previous abnormal mammogram or Pap screening results while secondary screening is followup screening for women with prior abnormal screening results. They found that 3-year mammography prevalence rates among American Indian women age 45 and older were 37.7 percent for primary and 58.7 percent for secondary screening. Among women age 18 and older, 3-year Pap test prevalence rates were 37.8 percent for primary and 53.2 percent for secondary screening. Primary mammography screening was positively associated with number of visits and receiving care at an IHS hospital. Primary Pap test screening was inversely associated with age and positively associated with the number of patient visits. Secondary mammography screening was inversely associated with driving distance to an IHS facility. These results are consistent with other surveys among American Indian women, which report that Healthy People 2010 goals for breast (90 percent) and cervical (70 percent) cancer screening have not been met. Wilson RT, Giroux J, Kasicky KR, et al. Breast and cervical cancer screening patterns among American Indian women at IHS clinics in Montana and Wyoming. *Public Health Rep*. 2011 Nov-Dec; 126(6):806-15. (Grant HS14034).

- **Use of a tribal language not a barrier to colorectal cancer screening among American Indians**

American Indians have one of the lowest colorectal cancer (CRC) screening rates for any racial/ethnic group in the U.S., yet reasons for their low screening participation are poorly understood. The researchers examined whether tribal language use is associated

with knowledge and use of CRC screening in a community-based sample of American Indians. They found that participants speaking primarily English were no more aware of CRC screening tests than those speaking primarily a tribal language. Participants who spoke only a tribal language at home and those who spoke both a tribal language and English also showed a comparable likelihood of receipt of CRC screening. Study findings failed to support the concept that use of a tribal language is a barrier to CRC screening among American Indians. Gonzales AA, Garroutte E, Ton TG, et al. Effect of tribal language use on colorectal cancer screening among American Indians. *J Immigr Minor Health*. 2012 Dec; 14(6):975-982. (Grant HS10854).

- **Improving preventive services recommendations and reminders**

To improve the quality of preventive services recommendations and reminders, in 2009 AHRQ commissioned a gap analysis to compare its recommendations in the electronic Preventive Services Selector (ePSS) tool, to the preventive health reminders currently in use in the IHS's Resource and Patient Management System (RPMS). The analysis found that the majority of the recommendations in the ePSS tool are not currently contained in the RPMS, and the ones that are have slightly different logic definitions. However, the RPMS does contain sufficient data elements so that the AHRQ recommendations can easily be built into the Best Practice and Health Maintenance sections of the existing RPMS Health Summary. (AHRQ Contract No. 4290-2009-00014C).

## Quality of Care

A primary interest of AHRQ is improving the quality of health care in the United States. Improving quality of care for AI/ANs poses various

challenges. Overall, AI/ANs receive worse care than whites for about 30 percent of quality measures and worse access to care than whites for 62 percent of access measures, according to AHRQ's 2011 National Healthcare Quality Report. The Agency has funded several studies aimed at improving care quality for AI/ANs.

- **Results of Baseline American Indian CAHPS® survey lead to implementation of customer service quality improvement initiatives**

The purpose of this project was to demonstrate the potential usefulness of the CAHPS® as a tool for identifying opportunities for the IHS quality improvement (QI) and monitoring improvements (see <https://cahps.ahrq.gov/about.htm> for information on AHRQ's CAHPS program). The Baseline American Indian CAHPS survey was administered to 400 IHS patients in mid-2010 and the results were used by the joint IHS-Tribal Working Group to develop specific quality improvement initiatives that will be implemented in these IHS facilities in 2011. The Wind River IHS/Tribal Working Group selected customer service as the targeted area for improvement. A QI strategy was developed to improve customer service that included presentations from three experts in customer service, monthly incentives tied to specific customer service indicators, and competition between the two Wind River IHS clinics. The implementation of the QI strategy began in March 2011 and continued through March 2012. In April 2012, the followup CAHPS survey was conducted. Analysis of the followup survey data focused on assessing the impact of the QI strategy on the ratings of office staff courtesy and respect, office staff helpfulness, and on overall rating of the IHS. Results



were positive and significant for all three measures. Results were disseminated to the Wind River IHS Leadership Team, the Eastern Shoshone and Northern Arapaho Tribal Health Directors, and at an all-staff IHS meeting. The IHS Leadership Team plans to develop additional QI initiatives making use of the CAHPS approach. (Principal Investigator: Paul D. Cleary, Yale University; Grant HS16978, 09/01/07-09/29/17)

- **Medical home model for Alaska Natives to be assessed for impact on patient care delivery**

The Southcentral Foundation (SCF), a tribally owned organization, implemented a patient-centered medical home (PCMH) in 1999 and 2000 in Anchorage, Alaska. In this project, the University of Alaska and the SCF partnered to determine the impact of the PCMH transformation on the characteristics and quality of patient care delivery, and to assess changes in health care delivery, such as quality and safety efforts, efforts to bring evidence to the point of care, use of information systems, and costs. The study focused on process and outcomes related to three components of the PCMH model: patient-provider match (empanelment); integrated primary care teams (team-based care); and increased access (often same day). It also included a cost assessment and a time series analyses of primary care sensitive patient outcomes and patient service utilization from medical record data. The researchers found that emergent care utilization rates among all patients for any diagnosis were increasing before the PCMH implementation, dropped during the implementation, continued to decrease steadily immediately following the implementation, and subsequently leveled off. Hospitalization rates for any diagnosis were flat before and during the PCMH

implementation, decreased immediately after the implementation, and then flattened out again in the later post implementation stage. Interview participants observed improved access to primary care services following the transition to the PCMH tempered by increased staff burnout. Additional themes of PCMH transformation included the building of patient-provider relationships and the role of leadership in PCMH implementation. This PCMH model could have national implications for improving the health of the AI/AN population and may also be relevant to other practices serving diverse populations with multiple health disparities. (Principal Investigator: David L. Driscoll, University of Alaska at Anchorage; Grant HS19154, 7/01/10-6/30/12).

- **Study links funding levels of tribal health programs to outcomes**

Tribally Operated Health Programs (TOHPs) provide care nationally to more than one-third of the 2 million AI/ANs who obtain services from the IHS. Many unnecessary hospitalizations can be prevented with access to comprehensive, effective ambulatory care. This study found that higher IHS funding levels for TOHPs in California were associated with lower rates of hospitalization for ambulatory care-sensitive conditions (HASCs) by the AI/ANs who used them. On average, IHS funding pays for less than 49 percent of the medical care provided by TOHPs in California. For TOHPs with funding less than 60 percent of what the Federal Government pays for Federal employee medical care (benchmark), the HASC rate dropped 12 percent for every 10 percent increase in funding. Even when adjusted for confounding characteristics, the funding effect was between 9 and 11 percent. The authors concluded that additional funding of tribal program health care is likely to

improve outcomes of care for the AI/AN population. Korenbrot C, Kao C, Crouch JA. Funding of tribal health programs linked to lower rates of hospitalization for conditions sensitive to ambulatory care. *Medical Care*. 2009 Jan; 47(1):88-96.

- **Collaboration creates community health information exchange network**

This project includes a collaborative partnership among 12 agencies, including a rural acute care hospital, a large American Indian tribal entity, an IHS hospital, a community health center, a health department, and a community consortium. The total patient population is 250,000 in 14 counties in rural northeastern Oklahoma. The project includes three components for improving quality of care. The first, Healthfinder, is an electronic and telephone resource to assist consumers in locating health providers and social services. It also assists providers in meeting community needs. Healthfinder ([www.okhealthfinder.com](http://www.okhealthfinder.com)) includes a special section to assist AI/ANs in finding tribal and IHS resources. The second component implements an integrated community health information exchange network to facilitate provider coordination and transfer of critical patient information. The network is using Hastings Indian Medical Center, an IHS facility, and the Cherokee tribe, the second largest tribe in the country, as initial connections with the goal of allowing all IHS and Native American tribes to connect quickly and inexpensively through the network. The last component explores areas for the most cost-effective prevention strategies and adopts common objectives for prevention interventions and outcome measurement. This project builds on an earlier 1-year planning grant (HS15364)

by the same investigator. (Principal Investigator: Mark Jones, Tahlequah City Hospital; Grant HS16131, 9/30/05-9/29/08).

- **Study seeks strategies to improve performance based on priority issues**

In addition to supporting the development of a sustainable research infrastructure for the Montana/Wyoming Tribal Leaders Council, Black Hill State University, and the Black Hills Center for American Indian Health, this project funded a study aimed at designing, implementing, and evaluating the effectiveness of a structured process in which tribal members and IHS providers jointly developed strategies to improve performance based on priority issues identified through a consumer survey. Investigators developed a targeted research agenda that addressed tribally identified priority issues, such as hepatitis C, West Nile virus, and methamphetamine use. (Principal Investigator: Gordon Belcourt, Montana/Wyoming Tribal Leaders Council; Grant HS14034, 9/30/03-3/31/12).

- **Database developed to assist in health care planning**

This grant enabled the development of a shared resource database for tribes to use in health care program planning and application development. It includes area- and tribal-specific data, "best practices" papers, and links to resources on health topics of interest to the tribes. It is currently being maintained by the Rocky Mountain Tribal Epi-Center. (Principal Investigator: Gordon Belcourt, Montana/Wyoming Tribal Leaders Council; Grant HS14034, 9/30/03-3/31/12).

## Research Infrastructure Development

A major AHRQ goal is to build research infrastructure and enhance opportunities for AI/AN investigators in health services research.

- **Project to improve race and health status data for Pacific Northwest States**

The Improving Data and Enhancing Access-Northwest Project uses the most complete roster of Northwest AI/ANs to conduct record linkages with an array of health-related data systems in a three-state region (Oregon, Washington State, and Idaho). It seeks to more accurately characterize health status and clinical outcomes data for Northwest tribal people, while working to minimize and eventually eliminate racial misclassification errors in State surveillance data systems. Ultimately, it will disseminate results and develop concrete methods by which other States and Tribal Epidemiology Centers may implement similar programs. Thus far, the grantee has disseminated AI/AN mortality data and information about linkage methods at two recent conferences. AHRQ is providing support for this project through funding received from the American Recovery and Reinvestment Act of 2009. (Principal Investigator: Victoria Warren-Mears, Northwest Portland Area Indian Health Board; Grant HS19972, 9/30/10-9/29/13).

- **Project to improve the reporting of race, ethnicity, and language in California**

In order to identify, understand, and eliminate health care disparities, it is critically important to make headway in the way that hospitals and other providers and payers successfully collect consistent and accurate data regarding race, ethnicity, and language from their

patients. This project integrates and improves upon methods for collection, auditing, and post-collection data imputing of race, ethnicity, and language data. The size of California, its diverse population, and large number of hospitals make California an important test bed for the development and dissemination of approaches that can work across a large spectrum of States. The grantee is working with AHRQ to develop a Web site that will disseminate products to enhance race/ethnicity data reporting. In addition, the grantee is writing a section on data auditing for a joint manuscript with the other AHRQ-funded grantees in this program. AHRQ is providing support for this project through funding received from the American Recovery and Reinvestment Act of 2009. (Principal Investigator: David S. Zingmond, University of California, Los Angeles; Grant HS19963, 9/30/10-9/29/13).

- **Project to improve the quality of race and ethnicity data in hospital discharge and emergency department databases in New Mexico**

New Mexico's Improving the Quality of Race and Ethnicity Data Project will contribute to reducing racial and ethnic health and health care disparities by improving the reliability of race, ethnicity, and tribal affiliation hospital data in the State. Guided by a State advisory committee, between 5 and 10 pilot hospitals will field test training materials that will be developed for the project. These will include hospital procedure, data collection, patient education, and train-the-trainer materials. Hospital discharge records will be linked with birth certificate records and IHS records to track improvements. New Mexico expects to establish a model for the collection, reporting, and appropriate dissemination of tribal identifier data



that will be informally disseminated to other States and through a published manuscript. To date, the grantee has completed work on data linkages with other large datasets (Bureau of Vital Statistics) and incorporation of emergency department data is ongoing. Moreover, the grantee continues to work with the New Mexico Hospital Association and Health Insight New Mexico to coordinate trainings and education for all levels of hospital staff. A Community Advisory Committee meeting was held on July 20, 2012 at the New Mexico Hospital Association offices in Albuquerque. This Committee has representatives from hospitals, academic institutions, community groups and the New Mexico Department of Health. AHRQ is providing support for this project through funding received from the American Recovery and Reinvestment Act of 2009. (Principal Investigator: Michael Landen, New Mexico State Department of Health; Grant HS20033, 9/30/10-9/29/13).

- **Coding problems inhibit ability to study American Indian acute inpatient hospital data**

Reliable coding of race and ethnicity by hospitals represents a critical step toward assessing and addressing racial and ethnic disparities in acute inpatient care. The authors examined the reliability of race and ethnicity classifications by different hospitals who admitted the same patients in a large, diverse State. The rates of coding agreement for American Indians were very low (19 percent), compared with whites (91 percent), and blacks (88 percent). There was a similar pattern for hospital data and death certificates with agreement of only 27 percent for American Indians. The authors concluded that coding agreement is too low for American Indians (as well as persons born in

American Indian and selected Hispanic subgroups) for these groups to be studied using this data. Fiscella K and Meldrum S. Race and ethnicity coding agreement between hospitals and between hospital and death data. *Med Sci Monit.* 2008; 14(3):SR9-SR13. (Grant HS10910).

- **Comparative effectiveness research (CER) to enhance the delivery of services within the Indian Health Service**

The purpose of this project was to enhance CER research methodology within the IHS and develop a large dataset to allow IHS to conduct CER on IHS delivery models. In the fall of 2010, AHRQ, in collaboration with IHS, awarded a competitive task order contract to develop the infrastructure to link service data, pharmacy cost data, and health status measures to allow for CER to assist IHS in better serving its populations. The team successfully linked data from four IHS data sources and built a CER dataset covering 4 fiscal years (2007-2010) and including data on approximately 440,000 AI/ANs. The dataset was used to develop new methods for IHS to calculate health status scores for its clients and to identify ambulatory-sensitive inpatient admissions. Additional work created algorithms for estimating comprehensive treatment costs using data from across practice settings. After completing a pilot CER study examining the association between the use of education and case management services provided by a variety of health care providers and the use of hospital emergency department and inpatient services, the team provided training to IHS and tribal researchers in the use of datasets for CER. The project successfully wrapped-up in the summer of 2012 with all project materials, including the integrated CER dataset, research



method and dataset documentation, and study findings delivered to IHS. (AHRQ Contract No. 290-2006-00020, 9/27/10–9/26/12).

- **Comparative effectiveness of quality improvement efforts focuses on chronically ill adults among American Indian/Alaska Native communities**

The overall purpose of this project was to support the development of a longitudinal data infrastructure (LDI) for the IHS capable of building the capacity for CER, a type of patient-centered outcomes research. After conducting a thorough evaluation of the technical functionality of IHS database systems and their data dictionaries (RPMS, C32 repository, NDW, and iCare), the project team successfully developed and tested an LDI that integrates clinical and administrative data for IHS clients across multiple settings of care. The LDI resolves several previous gaps in data sources available to IHS for research and quality improvement activities, providing IHS with coordination across data sources, well-documented data infrastructure, and significantly enhanced capacity for CER and patient-centered outcomes research. The initial LDI contains data derived from four IHS sites and is inclusive of events for over 300,000 patients across multiple years. It was used for two small feasibility studies that demonstrated the potential of the LDI for CER. The LDI is capable of being expanded and continuously updated to allow IHS greater research power. The project successfully concluded in November 2012 with the delivery of the LDI and detailed technical manuals to staff in IHS's Office of Information Technology. An important aspect of the development of the LDI was close work

with tribal entities including the United South and Eastern Tribes Epidemiology Center to provide them with skills development in utilizing the LDI and their own data sources to conduct CER responsive to local needs. AHRQ provided staff support to IHS in this project with funding received from the American Recovery and Reinvestment Act of 2009. (AHRQ Contract No. 290-2009-000231, 9/01/10–11/30/12).

- **Research infrastructure development leads to research studies and dissemination activities**

AHRQ awarded a Minority Research Infrastructure Support Program (M-RISP) grant to the Montana-Wyoming Tribal Leaders Council (TLC). At the time of the initial award, TLC had very limited research infrastructure and capacity, with four staff and two research partners. Tribes in the region had little experience with research and were skeptical. A structured approach to infrastructure development was implemented, focusing on engaging Tribes, expanding financial and administrative capacity, and building staff and partnerships. Several research studies were designed and implemented to increase both TLC and Tribal research experience. Over the duration of the M-RISP, the TLC engaged Tribes in research activities and created both the Rocky Mountain Tribal Epidemiology Center and the Rocky Mountain Tribal Institutional Review Board to serve the Tribes in its region; increased its professional research staff to sustain and expand capacity; developed partnerships with academic institutions to augment substantive and technical research capacity; obtained numerous grants from a diverse set of Federal agencies and foundations, many of

which are multiyear and provide a solid foundation for sustainability of TLC research; and engaged in dissemination activities to contribute to knowledge of AI/AN health research and methods for engaging Tribes in research. (Principal investigator: Gordon Belcourt, Montana-Wyoming Tribal Leaders Council; Grant HS14034, 9/30/03-3/31/12).

- **Conceptual model of academic persistence aids in training of young AI/AN professionals**

Various programs have emerged to recruit junior investigators to the social, behavioral, and health sciences. Drawing on Tinto's general theory of academic persistence focusing on the undergraduate education and IHS experience with the Native Investigator Development Program, the author presents a conceptual model that applies to individuals early in the postdoctoral or postresidency experience. This model is exemplified in the Native Investigator Development Program at the University of Colorado, Denver. All trainees in this program are either American Indian or Alaska Native. The author describes program and institutional characteristics as well as trainee processes. He concludes by describing the various benefits of the model, such as providing a common language for discussing elements of the training process and serving as a guide for assessing trainee needs. Manson SM. Professional journeys, professional paths: Persistence in navigating the crossroads of a research career. *Am J of Pub Health*. 2009 Apr; 99 suppl 1:S20-S25. (Grant HS10854).

## **Tobacco Use**

Traditional tobacco has a spiritual role in Indian culture and varies from tribe to tribe. By some estimates, American

Indians have used the tobacco plant for more than 18,000 years. Traditional tobacco is still used by many tribes for prayer, ceremonies, offerings, gift-giving, or as a healing medicine. Commercial tobacco use, however, is also significant among AI/ANs. Approximately 32 percent of AI/ANs are smokers. This is the highest rate of tobacco use among every age, ethnic, and gender category in the United States. Between 1983 and 2002, adult smoking rates fell in all racial and ethnic groups except for AI/ANs.

- **Study delineates effects of smokeless tobacco on anxiety and depression among two American Indian tribes**

Rates of nicotine use are high in American Indians. Anxiety and depression tend to be associated with cigarette use, but the association of anxiety and depression with smokeless tobacco (ST) is less clear. This study is the first to examine psychiatric conditions and lifetime ST use in a large, geographically diverse American Indian community sample. The researchers asked if panic disorder, major depression, and

posttraumatic stress disorder (PTSD) are related to lifetime ST use in two American Indian tribes. The odds of lifetime ST use were 1.6 times higher in Northern Plains tribal members with a lifetime history of PTSD after controlling for sociodemographic variables and smoking. In the Southwest, lifetime psychiatric disorders were not associated with lifetime ST use status. Increasing psychiatric comorbidity was significantly linked to increased odds of ST use in both tribes. Although approximately 30 percent of tribal members were lifetime users of ST, the association with lifetime psychiatric disorders was not as strong as those observed with cigarette smoking. Understanding shared mechanisms between all forms of tobacco use with anxiety and depressive disorders remains an important area for investigation. Sawchuk, CN, Roy-Byrne P, Noonan C, et al. Smokeless tobacco use and its relation to panic disorder, major depression, and post-traumatic stress disorder in American Indians. *Nicotine Tob Res.* 2012 Sep; 14(9):1048-1056. (Grant HS10854).

## For More Information

For further details about AI/AN projects and other activities at AHRQ, contact:

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 Photos courtesy of IHS

### Key Acronyms

AHRQ	Agency for Healthcare Research and Quality
AI/AN	American Indian/Alaska Native
CAHPS®	Consumer Assessment of Healthcare Providers and Systems
HHS	Department of Health and Human Services
IHS	Indian Health Service

