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Report on American Indian and Alaska
Native Activities

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This report provides selected highlights of American Indian and Alaska Native (AI/AN) research accomplishments and activities at the National Institutes of Health (NIH) during fiscal year 2014.

A Primary Prevention Trial to Strengthen Child Attachment in a Native Community:

Research has shown that attachment security in infancy and early childhood promotes resilience in children who grow up under stressful circumstances. The University of Washington Partnerships for Native Health, in collaboration with the Fort Peck Tribes in northeastern Montana, is adapting the Promoting First Relationships (PFR) program to ensure cultural appropriateness. Researchers will then test the effectiveness of PFR in promoting sensitive caregiving and child attachment.

A Spectrum of Perspectives: Native Peoples and Genetic Research Symposium:

The *Spectrum of Perspectives: Native Peoples and Genetic Research* symposium was held on June 23, 2014 in Washington, DC at the National Museum of the American Indian. This meeting was co-hosted by the National Congress of American Indians (NCAI), NIH, and the National Museum of the American Indian as part of the education programming associated with the NIH and Smithsonian's National Museum of Natural History exhibition – "Genome: Unlocking Life's Code", which was on view at the Smithsonian's National Museum of Natural History from June 2013 – September 2014. The symposium explored the range of perspectives in Native communities on genomics, highlighted key topics for ongoing community conversation, and created a video recording of the conversations that can be shared with Native communities as they host similar conversations across Indian Country. The symposium featured four panel discussions with speakers who represented an array of tribal affiliations, scholarly disciplines, and viewpoints. These conversations ranged from whether, and how, genetics research impacts AI/AN health; genomics and ancestry; training and health career pathways for Native researchers; and a discussion of the ethics of blood, including viewpoints on specimen handling and identity. Symposium presentations are available for viewing online at A Spectrum of Perspectives

(<https://www.youtube.com/playlist?list=PLS6nSmuURFJC6iY2lWMFwfVjXDHfC6AwC>).

Action for Health in Diabetes

The Look for Action for Health in Diabetes (LookAHEAD) clinical trial assesses the long-term health impact of behavioral interventions designed to achieve and sustain weight loss. The trial included two AI/AN clinical centers. In September 2012, the intervention was discontinued when it was found that weight loss in overweight/obese adults with long-standing type 2 diabetes did not reduce cardiovascular events such as heart attack and stroke. Although the intervention did not reduce cardiovascular events, LookAHEAD has shown other important health benefits of the lifestyle intervention, including decreasing sleep apnea, reducing the need for diabetes medications, helping to maintain physical mobility, reducing the development of chronic kidney disease, reducing health care costs, and improving quality of life. While the intervention was discontinued, follow-up of all study participants is continuing to evaluate their long-term health and effects of the weight loss intervention. One of the study's principal investigators reviewed study progress with the Navajo Nation Human Research Review Board in Shiprock, NM, on July 15, 2014, reported results to the medical staff of the Northern Navajo Medical Center, Shiprock, NM, on September 17, 2014, and to the Special Diabetes Programs for Indians grantees meeting (Phoenix Area of the Indian Health Service) in Phoenix, AZ.

AI/AN Health Outreach Activities:

The NIH collaborates with AI/AN national organizations and IHS field offices in providing easy access to NIH materials related to AI/AN elders and aging. The NIH also continues to support the Native Elder Resource Center in Seattle, Washington. The Center promotes the health and well-being of aging AI/AN by pursuing research, training, continuing education, technical assistance, and information dissemination within a biopsychosocial framework that recognizes the unique cultural contexts of AI/AN populations.

Alaska Native Violence Prevention Community-Based Participatory Research Meeting Series:

AI/AN individuals are two and a half times as likely as U.S. Whites to be a victim of violence; however, research in Alaska related to violence is limited. Additionally, three out of every four AI/AN women who live in Alaska are sexually assaulted in their lifetime. This meeting series is supporting an academic-community partnership initiative between the Athabascan Tribal governments and an Alaska-based AIANSI to develop a sustainable partnership to conduct CBPR aimed at preventing violence and reducing health disparities related to violence.

Alcohol Abuse/Dependence and its Consequences for Indigenous Adolescents:

This project investigates the development of alcohol abuse and dependence disorders (AUDs) among Ojibwe adolescents. Analysis of a longitudinal, one-of-a-kind, eight-year panel study that surveyed indigenous young people at eight time periods through their teen years will advance understanding of developmental processes regarding AUDs in this population and inform innovative, empirically-driven, cultural interventions. The study focuses on the emergence of AUDs across time among Ojibwe young people; the influence of internalizing and externalizing behaviors; protective factors, including group membership; co morbidity; potential mediators between alcohol use and antisocial behaviors; and the effects of community characteristics on AUDs.

American Indian, Alaska Native, and Native Hawaiian 2014 Health Planners:

As part of an NIH National Multicultural Outreach Initiative (<http://www.niams.nih.gov/multicultural/>), a set of 2014 health planners has been developed and distributed, including a planner tailored for AI/AN and Native Hawaiians. NIH partnered with IHS, the Administration on Aging/Administration for Community Living, and other HHS agencies to distribute culturally tailored planners to Native communities nationwide. The planners will be distributed again in 2015.

American Indian Higher Education Consortium Behavioral Health Institute:

The American Indian Higher Education Consortium (AIHEC) Behavioral Health Institute wove together the theory and practice of historical trauma and CBPR through a number of activities such as presentations, discussions with community-academic partners, small group breakout sessions, and reflections on personal experiences and readings. The Institute was co-funded through a contribution to the AIHEC Native American Research Center for Health grant award. The institute's theme was "Historical Trauma & Community Based Participatory Research—Towards a Model of Participation for Tribal Colleges and Universities." Anticipated outcomes for participants included gaining an appreciation of the impact of historical trauma, becoming familiar with the CBPR methodology—its strengths and challenges, and becoming familiar with hands-on skills used in CBPR projects. The Institute will be supported annually throughout the project period of the AIHEC Native American Research Center for Health grant.

Annotated Measures Compendium for American Indian and Alaska Native Substance Abuse Research:

This project supports the development of a compendium of measures use in AI/AN substance abuse research. There are many cultural differences between AI/AN and other racial and ethnic groups and due to these differences measures developed for other groups may not work as expected with AI/AN. Furthermore, constructs that may not matter for substance abuse outcomes in other groups, or constructs that do not exist in other groups, must be accurately assessed within the AI/AN population. In many cases, measures to assess these constructs have not been developed or have been used in very few studies. These include the practice of traditional activities, the unique expression of cultural identity, historical trauma, and the unique experience of PTSD. The compendium will include information on validity, reliability, and qualitative information on how well the measures seem to capture the intended constructs in a culturally valid manner.

Assisting the Narragansett Tribe with Emergency Preparedness:

In 2014, the Superfund Research Program (SRP) developed a collaborative relationship with the Narragansett Tribe to address the Tribe's need for emergency planning and response. The SRP provided emergency preparedness information for distribution at the Elders' Annual Meeting. Emergency planning and drills were also conducted with local, state, and federal officials. The SRP distributed emergency preparedness information to Tribal members at their annual powwow, which draws thousands of Tribal members and community visitors. Information for each family was tailored to their community's evacuation plan and emergency shelters. The Community Engagement Core of the SRP continues to collaborate with the Tribal Government to address the Tribe's emergency planning and response needs.

Banner Alzheimer's Institute Center of Excellence:

The Banner Alzheimer's Institute Center of Excellence (BAI) is committed to improving people's lives through biomedical research. BAI engaged in raising awareness of Alzheimer's disease and related dementia with 16 of 22 federally recognized tribes; served community participants and family caregivers through distinct outreach and education programs, including an annual conference on Alzheimer's disease in AI; enrolled participants in the Alzheimer's Disease Clinical Core, a longitudinal study on cognitive aging. This study may determine if certain scores are predictive of Alzheimer's disease or dementia.

Bayesian Methods for Prevention and Intervention Science:

This workshop, held June 30 - July 2, 2014, focused on Bayesian methods for prevention and intervention science, with a specific focus on the promise of these methods for small sample research, a challenge that is often encountered in research involving AI/AN people. The workshop was planned as part of NIH's AI/AN research initiative, designed to respond to unique issues that often arise when working with small communities. Several research teams conducting AI/AN substance abuse research participated in the workshop.

Biology of Hibernation:

The University of Alaska has investigators established in various aspects of hibernation physiology. NIH funds some of this work through Academic Research Enhancement Awards (AREA) including research on three aspects of hibernation biology in Arctic ground squirrels - intrinsic neuroprotective properties during the hibernating state, mechanisms and cognitive

significance of synaptic remodeling during hibernation, and central nervous system regulation of metabolic suppression in hibernation. Several AI/AN students have worked on this research and have gone on to pursue graduate degrees in biomedical science or medicine.

Building a Sustainable Indian Tribal Infrastructure for Translational Research:

Faculty from the University of Washington, School of Nursing worked in collaboration with the Port Gamble S'Klallam Tribe and Suquamish Tribe to establish a trans-cultural research education partnership to build tribal capacity in research and to enhance nursing students' understanding and skills in building community partnerships. Undergraduate and graduate nursing students were immersed in tribal communities, under university faculty supervision, to develop skills in clinical and research practice, core public health competencies, program planning, and transcultural nursing practice. Over the course of the program, students and faculty worked with tribal communities to design research proposals and to implement health education programs. Faculty and students partnered with Tribes in the submission of research grant applications and students were then able to participate in research implementation. This program integrated teaching, research, and practice in a collaborative university-tribal teaching model.

Chickasaw Health Information Center:

The Chickasaw Health Information Center (CHIC) is a public-private project jointly supported by the NIH, the Chickasaw Nation, and Computercraft, a Chickasaw-owned science and technology company. The CHIC is a consumer health information center located in the Chickasaw Nation Medical Center in Ada, OK. Computercraft developed and hosts the CHIC website, and also developed a mobile kiosk. The website provides patients and citizens of the Chickasaw Nation with access to health information and a newly redesigned version of the website went live in the fall of FY 2014. In addition, the physical space of the CHIC, located in the Medical Center, will be upgraded with new technology and furniture. A program evaluation is planned for the summer of 2015. The NIH also trains staff and health care providers and provides guidance about effective information provision practices.

Clinical Trials Network American Indian and Alaska Native Interest Group:

NIH conducts ongoing monthly meetings with this interest group, comprised of substance abuse treatment researchers focused on AI/AN populations. Recent activities have included a focus on further development of the AI/AN research portfolios related to substance abuse and strategies to assist AI/AN investigators to develop competitive grant applications.

Collaborative Research Center for American Indian Health:

The goal of this Center is to bring together Tribal communities and health researchers to conduct transdisciplinary research on the social determinants of health that are significant to health disparities experienced by AI communities in South Dakota, North Dakota, and Minnesota. The Factors Influencing Pediatric Asthma (FIPA) project, in collaboration with the Cheyenne River Sioux Tribe, examines factors influencing pediatric asthma including genetics, immunity, environmental exposures, education, economic resources, and access and utilization of medical care. Tribal college students are active members of the research team. Recently, an intensive patient education intervention on self-directed care was pilot tested at Forth Berthold Community College. A clinical trial with the intervention has begun with the expectation of reduced morbidity and medical care utilization, while increasing quality of life.

Developing a Diabetes Numeracy Intervention for American Indians and Alaska Natives:

Patients with diabetes must engage in a variety of self-care behaviors, including appropriate dietary practices, blood glucose self-monitoring, and medication management. Important to each of these behaviors is the capacity to understand and use numbers (e.g., counting carbohydrates). This project is developing and pilot testing a culturally appropriate intervention to improve diabetes-related numerical skills among AI/ANs with diabetes. After the intervention, the project will assess change in numeracy skills and change in diabetes self-efficacy, self-care behavior, and clinical outcomes to assess whether change in numeracy predicts change in these secondary outcomes.

Developing Effective Proximal Care to Prevent Rural Alaska Native Youth Suicide:

The annual rate of death by suicide among AI/AN youth is significantly higher than that of other young Americans. This project is developing a community-based, capacity-building intervention to reduce suicidal behavior in AI/AN youth. Leveraging the experience and insight of the Northern Alaska Wellness Initiative (a collaborative effort that engages Tribal representatives to assess the development and evaluation of behavioral health services and programming), the study pairs mental health professionals with tribal leaders to reduce stigma associated with help-seeking and to promote earlier interactions between providers and community members. This project takes a public health approach, aiming to shift from crisis intervention to selective outreach and community-integrated care of youth at-risk for suicide. The intervention holds promise for decreasing suicide risk and bolstering protective factors in Tribal communities.

Diabetes Prevention Program:

The Diabetes Prevention Program (DPP) clinical trial and its follow-up study, the Diabetes Prevention Program Outcome Study (DPPOS), have shown that certain interventions could prevent or substantially delay the onset of type 2 diabetes in overweight or obese adults with impaired glucose tolerance (pre-diabetes). Forty-five percent of the participants in these studies belong to underrepresented racial or ethnic groups, including AI/AN individuals, that have increased risk of type 2 diabetes. At the June 2014 meeting of the American Diabetes association, the DPPOS study reported that at a 15 year follow-up, the difference in type 2 diabetes development decreased by 27 percent in the lifestyle group and 18 percent in the medication group when compared with placebo. It is noteworthy that the Indian Health Service, through a Special Diabetes Program for Indians demonstration project, has now delivered the DPP lifestyle intervention to over 6,000 AI/AN individuals nationwide.

Domoic Acid Neurotoxicity in Native Americans:

Over the past 30 years, there has been a dramatic increase in the number of harmful algal blooms in coastal waters resulting in more toxic algal species and toxins that can cause massive kills of fish and shellfish, wildlife mortality, human illness, and death. One of these marine organisms produces a neurotoxin, domoic acid (DA). Clam harvesting beaches on AI/AN reservations in the Pacific Northwest have had levels of DA which have been close to or exceeded safe levels. Data indicate that the AI/AN population is currently at risk for significant, but preventable, neurobehavioral impairment from clam consumption. This study of 735 AI/AN individuals from three Tribes is determining the health impacts of chronic, low level exposures to DA over time, as well as the exposure and host factors associated with DA neurotoxicity.

Emergency Department Screen for Teens at Risk for Suicide:

Intentional self-harm is one of the leading causes of youth emergency room visits. The Emergency Department Screen for Teens at Risk for Suicide (ED-STARS) study is developing and prospectively validating an instrument to screen for suicide risk. It will also refine algorithms capable of predicting which youth are most likely at risk for attempting suicide in the future. ED-STARS is being conducted in 13 hospital emergency departments affiliated with the Pediatric Emergency Care Applied Research Network and the White River Public Health Service Indian Hospital.

Enhancing the Diversity of the NIH Funded Workforce:

The National Institutes of Health awarded nearly \$31 million in FY 2014 to invest in innovative approaches to training and mentoring researchers, including those from backgrounds underrepresented in biomedical sciences. These awards are part of a projected five-year program to support more than 50 awardees and partnering institutions in establishing a national consortium to develop, implement, and evaluate approaches to encourage individuals to pursue and persist in biomedical research careers. Each of these initiatives has components addressing AI/AN populations and collectively, these awards aim to enhance representation of diverse groups, including AI/AN, in the NIH-funded workforce. This consortium is comprised of three integrated initiatives:

Building Infrastructure Leading to Diversity:

Building Infrastructure Leading to Diversity (BUILD) is a set of 10 experimental training awards designed to implement and study innovative and effective approaches to engaging students from diverse backgrounds in biomedical research and to prepare students to become future contributors to the NIH-funded research enterprise. The BUILD awardees will work with multiple partnering institutions to provide robust research training and mentorship experiences for students and faculty. Two BUILD awardee institutions and their partners aim to serve significant numbers of AI/AN students: University of Alaska, Fairbanks and Portland State University, and their partners which include University of Alaska-Southeast, Ilisagvik College, and University of Alaska-Anchorage.

The National Research Mentoring Network:

The National Research Mentoring Network (NRMN) will develop a nationwide network of mentors and mentees spanning all biomedical disciplines and will develop best practices for mentoring, mentor training, and professional development opportunities for mentees and mentors. The NRMN grantees' leadership team includes investigators with demonstrated commitment to serving AI/AN populations and partnerships with organizations, including: the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), American Indian Science and Engineering Society, Association of American Indian Physicians, Northern Arizona University Center for American Indian Resiliency, Washington State University Behavioral Health Collaborative in Rural American Indian Communities, and the University of Washington Regional Native American Community Networks Program. For more information about awardees and their partners, visit <http://commonfund.nih.gov/diversity/fundedresearch>.

The Coordination and Evaluation Center:

The Coordination and Evaluation Center (CEC) will coordinate consortium-wide activities and assess the efficacy of the training and mentoring approaches developed by

the BUILD and NRMN awardees. Given the wide range of geographical, racial, ethnic, linguistic, and cultural diversity represented by the BUILD and NRMN awardees and their partners, the CEC will allow for the rigorous analysis of which interventions are most effective within which context and for which populations. These findings will have implications for recruiting, training, and mentoring of diverse groups nationwide, including AI/AN.

Environmental Health Information Partnership:

The Environmental Health Information Partnership (EnHIP) strengthens institutional capacity to reduce health disparities through use of information technology and environmental health information. The program includes institutions with high AI/AN enrollment including Oglala Lakota College (South Dakota), Diné College (Arizona), Haskell Indian Nations University (Kansas) and the University of Alaska, Anchorage. EnHIP helps institutions incorporate NLM resources in their curricula and community outreach projects. Faculty, staff, and students receive training in information resources and participate in meetings about scientific issues and funding opportunities. The program also supports local information projects related to environment and disaster preparedness.

Family Investigations of Diabetes and Nephropathy:

The Family Investigations of Diabetes and Nephropathy (FIND) project is carrying out studies to elucidate the genetic susceptibility to kidney disease in patients, especially those with diabetes mellitus. African Americans, Hispanics, and American Indians appear to have an increased incidence and prevalence of diabetic, as well as non-diabetic, renal disease and the FIND study has specifically recruited people from these populations to assess the role that genetic variations may play in renal disease. A recent genome-wide association study has identified particular genetic variants that may be associated with diabetic nephropathy in American Indians.

Genetics of Obesity in Yup'ik Eskimos:

This research program is identifying genetic risk factors for obesity and seeks to understand how genetic risk is modified by environmental factors, including intake of polyunsaturated fatty acids, and by behavioral factors, such as physical activity in an AI/AN population.

Health Information Resources and Technologies That Address Health Disparities:

NIH develops and maintains culturally-appropriate websites that focus on information to address health disparities among AI/AN. The American Indian Health Web Portal is dedicated to issues affecting the health and well-being of all North American AI/AN and includes current research information and traditional healing resources. NIH will release a redesigned portal in the summer of 2015. The Arctic Health website, in collaboration with the Alaska Medical Library at the University of Alaska, Anchorage, brings together reliable information on diverse aspects of the Arctic environment and the health of northern peoples. A Native American Health page on MedlinePlus.gov, the National Library of Medicine's main consumer health website, facilitates access to information on specific health concerns that affect AI/AN.

Healthy Children, Strong Families: American Indian Communities Preventing Obesity:

The obesity rate among AI children is high and, once established, this early obesity often persists through adulthood, which increases the risk of cardiovascular disease and type 2 diabetes. This project is testing a community-based intervention in six diverse rural and urban AI communities nationally to address the problem of AI childhood obesity, primarily in families with pre-school

age children. The study will evaluate body mass index scores, adult and child waist circumferences, fruit and vegetable consumption, sugar intake, time spent watching television, physical activity level, amount of sleep, and, in adults, the psychosocial factors of stress and depression. The short term goal of this project is to develop successful obesity interventions that are practical and easily replicated, while the long-term goal is to incorporate successful interventions into AI health programs and to disseminate them nationally in order to assist communities in preventing and reducing obesity.

Healthy Native Babies:

The NIH collaborated with experts in Native communities to create the Healthy Native Babies Project, an outreach component of the Safe to Sleep® campaign focused on AI/AN communities. This project focuses on Sudden Infant Death Syndrome (SIDS) risk reduction in Northern Tier AI/AN communities. In FY 2014, the project conducted train-the-trainer sessions, disseminated materials, and provided resource stipends to tribes and organizations. Train-the-trainer sessions were held in nine locations to assist local health educators with skills needed to effectively train employees and colleagues on Sudden Unexpected Infant Death (SUID), SIDS, and other sleep-related causes of infant death. Outreach was conducted and materials disseminated at six events during the past year to reach tribes and organizations serving Native families. In addition, resource stipends were awarded to 11 tribes and organizations to have customized materials with safe infant sleep messages printed, utilizing the Healthy Native Babies Project Toolkit Disk.

Historical and Contemporary Factors Influencing the Lives of Reservation-Based Native American Youth: Non-Lethal Suicidal Behavior:

This research used a community-based participatory research approach and solely-American Indian research team led by a nurse researcher from NIH to collect data from 288 AI youth 15-24 years of age from a one-reservation, two-tribe sample in the Northern Plains. Data were collected on several sensitive topics including childhood abuse, exposure to violence, and suicide. The study was supported by a tribal resolution and all documents were reviewed and approved by tribal leadership or designee. One component of this agreement includes the confidentiality of the participating tribes and confidentiality was treated with of utmost importance when conducting this research. The study found 45 percent of the youth had thought about suicide and 35 percent had attempted suicide. It also found that many youth had multiple ongoing trauma exposures, including adverse childhood experiences (ACE), and a significant relationship between the number of adverse exposures and mental health and risk behavior outcomes. Seventy-eight percent of the sample reported at least one ACE and 40 percent reported at least two. These effects were cumulative and each additional ACE increased the odds of suicide attempt, poly-drug use, PTSD symptoms, and depression symptoms. In August 2013, the study team began an eight month process to disseminate findings to the community. Using video-conference (VTC) technology the team held biweekly meetings that allowed community-based research partners to learn about and engage in interactive discussions of the data. The purpose of this data-sharing phase was to return findings to the community as highlighted in a tribal resolution and agreed upon in preliminary planning discussions. Through this tribal engagement process the tribal advisory group concluded that early childhood interventions are a critical next step toward addressing the long-term impact and widespread exposure to trauma and violence reported by tribal youth. With this understanding, the board launched the next phase of the partnership – a study designed to evaluate an intervention to address trauma and abuse among parent-child dyads in the local Head Start program.

Historical Trauma Practice and Group Interpersonal Psychotherapy for American Indians:

Disparities in socioeconomic factors, including income, health insurance, and education, contribute to low mental health treatment engagement among American Indians. This project is addressing low treatment engagement among AI/AN individuals by developing and refining a culturally-tailored intervention, the Historical Trauma and Unresolved Grief Tribal Best Practice (HTUG), combined with Group Interpersonal Psychotherapy (IPT), for treatment of depression and other mental disorders. The project, conducted in partnership with several community partners, includes a pilot, randomized clinical trial comparing HTUG/IPT to standard IPT alone in both rural and urban clinical settings. This intervention holds promise for reducing disparities in mental health treatment engagement in AI/AN and other underserved populations.

Honoring the Gift of Heart Health:

NIH funded nine Strategic Champions Demonstration Projects as part of the Community Health Worker Health Disparities Initiative. Two of these projects were implemented in AI communities. The Partners in Health project worked with the Navajo Nation in Arizona and New Mexico and the Southeast Arizona Area Health Education project worked with AI communities in Arizona. The overall goal of both projects was to build on community health representatives' and community health workers' capacity to utilize a curriculum called 'Honoring the Gift of Heart Health' and expand education and support in the community to ultimately decrease health disparities in heart disease among underserved populations. Each project implemented multifaceted, innovative strategies within its respective community. A webinar highlighting the lessons learned can be found on the Community Health Worker Health Disparities website along with other materials about the projects

(<https://www.nhlbi.nih.gov/health/educational/healthdisp/start-a-program/resources.htm>). In addition, results are being disseminated through venues like conference presentations and scientific journals, to encourage other communities to consider implementing this curriculum.

Indigenous Wellness Research Institute National Center of Excellence:

The goal of this Center is to improve AI/AN health and eliminate health disparities through transdisciplinary research partnerships focused on behaviorally-rooted health conditions that disproportionately affect AI/AN populations, e.g., cardiovascular disease (CVD), obesity, diabetes, HIV/AIDS, substance abuse, and mental illness, while emphasizing the importance of historical context as well as co-occurring factors of violence, substance use, and psychological distress. The Healthy Hearts 2 project focuses on using CBPR principles to address risk factors for cardiovascular disease in AI populations, including depression and diabetes, which is a particularly strong determinant of CVD morbidity and premature mortality among adults in Northwest AI tribes. A motivational interviewing, cognitive-based treatment for CVD prevention intervention has been developed through a collaboration with tribal investigators, the Tulalip tribal community, and cultural leaders. The goal is to address underlying depressive symptomatology, activate CVD prevention behaviors, increase medication adherence, and decrease body mass index and CVD risk behaviors. Currently, recruitment is underway for the implementation of the intervention.

Innovative Multigenerational Household Intervention to Reduce Stroke and Cardiovascular Disease:

This project is determining the effectiveness of a household-based motivational counseling intervention to reduce stroke risk in 360 households where Strong Heart Family Study members reside. The Strong Heart Family Study is a population-based cohort of 4,549 AI from 12 tribes in Arizona, Oklahoma, North Dakota, and South Dakota. The intervention is working to demonstrate household-level improvements in stroke risk score for adults over 45 years old as well as a change in modifiable risk factors like smoking, physical activity, diet, and blood pressure for all participants.

Institutional Development Award:

The Institutional Development Award (IDeA) program broadens the geographic distribution of NIH funding for biomedical research. The program fosters health-related research and enhances the competitiveness of investigators at institutions located in states in which the aggregate success rate for applications to NIH has historically been low. The program also serves unique populations, such as rural and medically underserved communities in these states. The IDeA program consists of IDeA Networks of Biomedical Research Excellence (INBRE), IDeA Program Infrastructure for Clinical and Translational Research (IDeA-CTR), and Centers of Biomedical Research Excellence (COBRE). Grants supported by the IDeA program work with tribal nations and colleges on a variety of projects. For example, INBRE grants in Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, and South Dakota work with 16 different TCUs on building research capacity and infrastructure for projects ranging from building STEM education programs at the TCU to research on West Nile virus infection frequencies.

Intervention Research to Improve Native American Health:

The Intervention Research to Improve Native American Health (IRINAH) brings together a network of researchers who are funded through the trans-NIH Interventions for Health Promotion and Disease Prevention in Native American Populations program. The group's goal is to assist communities and scientists in their research endeavors and share best practices for conducting research in American Indian communities. This network holds a monthly conference call, as well as an annual, in-person meeting to promote and discuss research. Further information can be found at:

<http://cancercontrol.cancer.gov/nativeamericanintervention/funded.html>

Intramural NIAID Research Opportunities Activities:

The Intramural NIAID Research Opportunities (INRO) program, an annual outreach program for underrepresented populations in biomedical research, provides a platform for potential trainees and future employees to learn about research. The February 2014 INRO program included a presentation by an American Indian post baccalaureate researcher. INRO marketing efforts were directed to AI/AN, Hispanics, African Americans, and Native Hawaiians and Other Pacific Islanders through a nationwide strategy via e-mail, phone, and direct mail to AI/AN contacts affiliated with U.S. colleges and universities and targeted website and journal advertisements.

Mentoring Program for Career and Research Development of American Indian and Alaska Native Scholars:

This training program, which is led by an AI investigator, supports the career development of researchers investigating the intersection of substance abuse and behavioral aspects of HIV research within ethnic (emphasizing Native populations) and sexual minority populations. Scholars have participated in scientific meetings, intensive writing workshops, and grant writing workshops as well as received targeted career mentoring. Six trainees participated in the first year of the training programs. All trainees developed concepts papers for research projects to serve as the basis for future independent grant applications. Two participants have submitted applications and several have also developed manuscripts for publication.

Molecular Characteristics of the Apical Recycling System:

This research has recently identified mutations in a protein called Myo5B as the cause of the rare congenital diarrhea syndrome, microvillus inclusion disease (MVID). Study participants included Europeans of several racial and ethnic groups and individuals from a Navajo tribe. The study has found that each of the Navajo participants have a single point mutation that inactivates proper motor function of Myo5B. This study is investigating the underlying abnormalities that result from loss of function Myo5B mutations in MVID.

National Diabetes Education Program Multicultural Campaigns:

In partnership with the CDC, NIH launched the National Diabetes Education Program (NDEP) in 1997 to change the way diabetes is treated. Since its inception, NDEP has taken a multicultural approach to achieve the goals of improving diabetes management, developing community-based interventions, implementing health system changes, and forging an inclusive partnership network. With the help of AI/AN representatives, the program has developed a range of materials on type 2 diabetes prevention and control that are adapted specifically for the AI/AN population. The program provides ideas and encourages the creation of activities in AI/AN communities to provide education about diabetes prevention and treatment.

National Native American Youth Initiative Program:

The National Native American Youth Initiative (NNAYI) program met on June 26-27, 2014 to introduce AI/AN high school student scholars to the possibilities, realities, and benefits of pursuing a career in biomedical research, especially in health disparities and minority health research. This two-day program at the NIH was supported by more than 10 NIH Institutes and Centers, as well as the Office of the NIH Director. A broad cadre of NIH researchers, post-doctoral scientists, and extramural staff introduced NNAYI high school scholars to career opportunities and scholarship in biomedical research and the academic skills required for a biomedical/science-focused admission to colleges or health profession schools, as well as served as role models in biomedical science, research, and health careers. A total of 43 high school scholars, peer counselors and AAIP staff participated in the FY 2014 program.

Native American Engagement in HIV Clinical Research:

The Native American Engagement in HIV Clinical Research (NAEHCR) project funded by NIH, the Office of HIV/AIDS Network Coordination, and the National Native American AIDS Prevention Center, continued working to build relationships between Native communities and HIV clinical research staff. In FY 2014, NAEHCR conducted several focus groups and cultural humility trainings to increase site staff competency for working with American Indians in urban communities. NAEHCR sought collaborations throughout FY 2014 and collaborated on

activities with the AIDS Clinical Trials Unit and HIV Prevention Trials Unit at the Johns Hopkins Medical Center; the Richland College Pow Wow; and the Urban Inter-Tribal Center of Texas. These collaborations helped NAECHR to complete a number of activities including 1) completing the “NAEHCR: Project Guidance & Best Practices” and cultural humility training module, available online at: https://www.hanc.info/resources/Legacy_Project_Intiatives_Library/NAEHCR_Guidance_and_Best_Practices_v1.0.pdf; 2) giving presentations on an HIV Prevention research module at the Tulsa Two-Spirit Gathering in April 2014, at the NorthEast Two-Spirit Society in August 2014 (San Francisco), and the NorthEast Two-Spirit Gathering in October 2014. NAECHR also led a workshop session on the HIV prevention research module, with guest presenter from the NorthEast Two-Spirit Society at the U.S. Conference on AIDS in San Diego in October 2014.

Native American Research for Health:

The Native American Research for Health (NARCH) program is a trans-NIH collaboration with the IHS that supports collaborations between federally recognized AI/AN Tribes or Tribal organizations and research-intensive academic institutions that support health research projects prioritized by the Tribal communities. The NARCH initiative is encouraging competitive research linked to the health priorities of AI/AN organizations and health disparities; increasing the capacity of both AI/AN organizations and research-intensive institutions to reduce distrust by AI/AN communities and people toward research; and developing a cadre of AI/AN scientists and health professionals engaged in biomedical, clinical, behavioral, and health services research who will be competitive in securing NIH funding. In FY 2014, NIH and IHS supported 63 NARCH projects and cores totaling \$10.2 million dollars. NARCH projects range from STEM education to research on diabetes protocols, alcohol abstinence, childhood trauma, and effects of environmental exposures.

Native American Research for Health Principal Investigator Meeting:

NIH, in collaboration with the IHS, conducted the annual Native American Research for Health (NARCH) Program Principal Investigator (PI) meeting on October 17, 2014 in Los Angeles, California. The purpose of the meeting was to provide updates on the NARCH-funded research projects and student and faculty development projects with a secondary goal of creating collaborative efforts across NARCH programs. The NARCH PIs were also provided information on current NIH funding opportunities applicable to the AI/AN communities, the newly-forming NIH Tribal Consultation Advisory Committee, and NIH intramural research opportunities for students and young investigators. NIH and IHS provided information on the new progress report requirements and the NARCH program evaluation process.

Native Children’s Research Exchange Annual Meeting: Implementation Science: Applications for Tribal Settings:

This annual conference was held September 17-19, 2014 in Denver, CO. The mission of the Native Children’s Research Exchange (NCRE) is to network researchers studying child and adolescent development and substance abuse in AI/AN communities. The NCRE supported six junior scholars to attend the meeting and provides support for on-going mentoring for two scholars each year.

Native Navigation Across the Cancer Continuum in the Comanche Nation:

This project developed a set of cancer-related health education modules in collaboration with the Comanche Nation in Oklahoma. The materials integrate local cultural content with standardized

cancer education, screening, and prevention information for the Comanche people, and include information for individuals to help develop goals regarding healthy behaviors that can prevent cancer.

Native Voices: Native Peoples’ Concepts of Health and Illness Traveling Exhibition:

In FY 2014, the NIH completed pilot testing of a traveling version of the Native Voices: Native Concepts of Health & Illness Exhibition, currently on display in the National Library of Medicine (NLM) Rotunda. The traveling exhibition opened at the first pilot site on October 25, 2013 at the Cankdeska Cikana Community College at the Spirit Lake Tribe Nation in Fort Totten, ND. During the year, the exhibition then opened at the Queens Medical Center, Honolulu, HI, in conjunction with the Hawaiian Heritage Day, July 18, 2014; the Mid-Year Conference of the National Congress of AI/AN Heritage Center, Anchorage, AK, June 9, 2014; and the Chickasaw Nation ARTesian Gallery, Sulphur, OK, August 26, 2014. The exhibition was evaluated at each of the four pilot sites using on-site interviews and observations combined with a visitor evaluation form offered in online and paper formats. Over 300 exhibition visitors completed evaluation forms. The traveling exhibition used for pilot testing includes six banners and six iPads. The iPads allow full exploration of the video content of the exhibition, including hearing the voices of the American Indian individuals who were interviewed for the exhibition. The visitor evaluations were overwhelmingly positive, and onsite observations indicated no major implementation issues. The evaluation results and lessons learned are being incorporated into the next phase of the Native Voices traveling exhibition program.

Network for Cancer Control Research among American Indian and Alaska Native Populations:

NIH and the Mayo Clinic share the responsibility for supporting the Native Network for Cancer Control Research among American Indian and Alaska Native Populations, which meets twice yearly. This group of Native and non-Native researchers and educators exchange information on cancer control research and improve community links to researchers at federal agencies, including NIH, IHS, and CDC. The Network strives to increase the number of AI/AN researchers, scientists, and medical students involved in cancer control activities in AI/AN communities; develop curricula and mentor students in the Native Researchers’ Cancer Control Training Program; and convene national conferences on “Cancer in Indian Country.”

NIH Biomedical/Biobehavioral Research Administration Development Residency Workshop:

TCUs are not major recipients of NIH grant awards. This three-week workshop held on the NIH campus was intended to familiarize participants with NIH grants policies and procedures, grants management issues, and leadership in research administration. The residential workshop, a component of the Biomedical/Biobehavioral Research Administration program, promotes the development of a cadre of leaders in research administration who can develop and implement strategies for strengthening the research administration support infrastructures, as well as facilitate the development of Teacher Scholar core competencies related to research. The focus is enabling the development of externally supported research programs in which students can participate. Tribal College participation is sponsored throughout the project period by NIH through a contribution to the American Indian Higher Education Consortium (AIHEC) Native American Research Center for Health grant.

NIH Institute Review Board Internship Program:

The NIH Department of Bioethics and the NHGRI Education and Community Involvement Branch offer an Institute Review Board (IRB) internship for a cohort of up to four qualified candidates, subject to funding. The selected interns observe meetings of several intramural IRBs, shadow IRB staff, attend the NIH human subjects research ethics course, attend IRB training courses and staff meetings, and take part in various research seminars offered by the Department of Bioethics. Interns may also participate in elective activities, such as visiting the Office of Human Research Protections and serving as *ad hoc* reviewers of IRB protocols, depending on interest and expertise. Interns are given a workspace in the Department of Bioethics. In FY 2014, two American Indian women participated in the IRB internship program.

NIH Visit Week:

NIH developed “NIH Visit Week” in 2013 to expose AI/AN students to biomedical research and health career opportunities. The program takes place during the summer months when high school and undergraduate AI/AN students are invited to attend a week-long intensive enrichment program at the NIH. In FY 2014, fourteen students participated; seven students came from research-intensive universities and seven students came from tribal or community colleges. During the week, the students participated in science career workshops, networking opportunities, and hands-on laboratory experiences. The laboratory experiences ranged from basic science to clinical. The students also attended a lecture by the Deputy Director of NIH and met with students in the NIH chapter of the Society for Advancement of Chicanos and Native Americans in Science.

Omnicity: Joining Circles Academic-Community Partnership Conference Series:

The Joining Circles initiative is enhancing existing partnerships and expanding linkages among American Indian intertribal communities, academic institutions, and public health organizations in order to identify health concerns and strategies to reduce obesity disparities in the indigenous populations of Virginia. Project activities are designed and implemented with the oversight of a Community Advisory Board comprised of tribal leaders. By using a community-based participatory approach, Joining Circle seeks to heal distrust and create connections to improve health.

Oral Health Status in Native Head Start Children:

Baseline data from the clinical trial being conducted by the Center for Native Oral Health Research “Preventing Caries in Preschoolers: Testing a Unique Service Delivery Model in American Indian Head Start Programs” indicate that poor oral health remains a major problem for AI/AN children. Among the 981 children aged 3-5 who were examined as part of the clinical trial, nearly 70 percent had untreated tooth decay, which is 16 percent higher than non-Hispanic White 2-4 year olds examined during the 1999-2004 U.S. National Health and Nutrition Examination Survey. Investigators reported that many AI/AN children needed treatment in the operating room because of the severity of their oral disease. This clinical trial explores ways to disseminate and implement practical approaches to prevent early childhood caries (cavities) among young children from American Indian communities.

Outreach to AI/AN Students:

At the American Indian Science and Engineering Society (Denver, November 2013), NIH provided exhibit services and materials on research training and the NIAID scientific portfolio and met with students interested in applying for fellowship programs and the Intramural NIAID

Research Opportunities program. NIH had an exhibit booth at the “Resiliency” Annual Native Health Research Conference in Phoenix in June 2014. AI/AN/NH investigators and investigators who work within these communities participated in workshops geared toward understanding the nuances of working within AI/AN/NH communities and proposing research projects to NIH. NIH provided laboratory tours and lectures by principal investigators (PIs) at the Vaccine Research Center (VRC), to nearly 40 AI high school students participating in the trans-NIH National Native American Youth Initiative in June 2014. Students spoke with VRC PIs about research opportunities.

Partnerships to Prevent Childhood Obesity on the Flathead Indian Reservation:

This project aims to use a CBPR approach to develop partnerships that establish memoranda of understanding between AIANSIs and at least two community organizations for the purpose of developing research projects, negotiating Institute Review Board protocols, developing culture review protocols, and submitting research applications. Additional aims will determine a collaborative agenda that identifies community needs and priorities in preventing childhood obesity through an iterative process. Survey data, attendance, and review of timeline and procedures by an Advisory Board will be used to evaluate the project.

Prenatal Alcohol and SIDS and Stillbirth Network: The Safe Passage Study:

The Safe Passage Study, conducted by the PASS Network is a community-based study investigating the role of prenatal alcohol exposure in the risk for sudden infant death syndrome (SIDS) and adverse pregnancy outcomes, including stillbirth and fetal alcohol spectrum disorders. Information gained will help towards the reduction of fetal and infant mortality and improve child health in communities of the Northern Plains, including American Indians.

Prevention Trial in the Cherokee Nation: Interactive Effects of Environment & Screening and Brief Intervention:

This project is conducting and evaluating a community-level intervention to prevent underage drinking and negative consequences among AI and White youth in rural, high-risk communities in Northeastern Oklahoma. This prevention study utilizes community environmental change, brief intervention, and referral approaches, which will be evaluated alone and in combination.

Promoting Behavioral Change for Oral Health in American Indian Mothers and Children:

The Center for Native Oral Health Research is focusing on reducing early childhood caries (ECC) in young American Indian children living on reservations. One study uses a motivational interviewing technique and is designed to improve maternal oral health behaviors. Culturally relevant health education and promotion materials for use in ECC prevention were developed. In addition, an oral health motivational interviewing intervention was developed and is being implemented for pregnant women and mothers of newborns. Dissemination activities will be focused on increasing community awareness of behaviors that impact oral health. Considerable prior experience with the participating tribe has helped shape the study’s methods and approaches.

Qasgiq: Dissemination Using Yup’ik Indigenous Implementation Strategies:

The Qasgiq project has developed culturally-based activities to reduce suicide risk and co-morbid underage drinking prevention interventions. These interventions were developed by working with Yup’ik adolescents and showed that high intensity interventions increased a sense of “reasons for life” in comparison to other groups. The current dissemination phase of the

project is enhancing and extending these approaches within the Native community and tribal partners, providing an organizational leadership certificate curriculum for staff at community health centers and tribal leaders, and conducting a process evaluation of the Qasgiq intervention implementation strategy and dissemination approach. At the request of the community, the project was enhanced to provide for a youth-directed component in the dissemination and implementation activities. The youth-directed component is working to further enhance local control of project implementation, enrich the CBPR process and community capacity to direct it, increase the durability and sustainability of the intervention and locally directed intervention research efforts, and develop new local modes of dissemination of research results.

Research Clinic in Guadalupe, Arizona:

NIH supports an outpatient research clinic in Guadalupe, AZ, a small town whose residents are primarily AI/AN or Hispanic. This clinic provides a convenient place where research volunteers, primarily AI/AN individuals, are seen. It is also accessible to volunteers from an urban area who have previously been minimally represented in research studies. Currently, two NIH programs, Look for Action for Health in Diabetes (Look AHEAD) and the Family Investigation of Nephropathy and Diabetes (FIND) are conducted in this clinic, and other new programs may be offered there in the future.

Risk Factors for Alcoholism in Native Americans:

This research is identifying risk and protective factors related to alcohol use disorders in reservation-dwelling Mission Indians of Southern California. The purpose is to elucidate the genetic, clinical, and neurobehavioral factors related to alcohol use and associated health problems in this high-risk population. Findings suggest that the Mission Indians have a distinct cluster of biological and behavioral risk factors, and that early initiation of alcohol use is particularly malignant for this population. The study of factors associated with risk for alcohol-related problems in this unique population can guide the development of targeted prevention and intervention.

Science Education Partnership Award in New Mexico:

AI/AN have historically been underrepresented in the scientific workforce, and recently, there has been a steady decline in the number of AI/AN students graduating with science and engineering bachelor's degrees. This challenge is addressed through a multi-faceted science enrichment program aimed towards students enrolled in Tribal and non-tribal (predominantly Hispanic) middle schools, their science teachers, families, and the community at large in rural New Mexico. The program, the Science Education Partnership Award (SEPA) in New Mexico, is a school- and community-based health education and participatory research program that incorporates intergenerational and science inquiry-based learning experiences to explore research, health promoting nutrition, and physical activity for the prevention of chronic diseases.

Society for Advancing Chicanos and Native Americans in Science Meeting:

The Society for Advancing Chicanos and Native Americans in Science (SACNAS) meeting took place October 15-18th in Los Angeles, California. Native Hawaiian and AI/AN students and investigators, as well as students and investigators who work within these communities, participated in the meeting. NIH staff presented talks and ran several sessions regarding NIH training programs, as well as grant opportunities and collaborative research opportunities.

***Streptococcus mutans* and Dental Caries among Native American Children:**

This multilevel prospective study explores risk factors for early childhood caries development among children of a Northern Plains Tribe. The study seeks to determine if one of the caries-causing bacteria, *Streptococcus mutans*, increases the risk of early childhood caries, either on its own or in combination with social, behavioral, and environmental factors. Understanding these risk factors for early childhood caries could lead to early intervention strategies to prevent these conditions.

Strong Heart Family Study:

This study is the largest multi-center longitudinal study of cardiovascular disease (CVD) among AI. The goal of the study is to improve health in the areas of CVD and diabetes, with the use of genetics as one of the approaches. The partners in this study include 13 American Indian tribes and communities in three geographic areas: an area near Phoenix, Arizona, the southwestern area of Oklahoma, and western and central North and South Dakota. The initial data collection in this study has been completed and now the research will continue to monitor the morbidity and mortality of the original cohort and the family cohort over time. In addition, informal discussions continue on data sharing requirements for new genetics research using these data. NIH supported a workshop to introduce the Strong Heart Family data set to young investigators to encourage future collaborations with the Strong Heart Family Study. Collaboration is also underway with the iDASH program to address data sharing through the development of a data enclave model.

Study of Radiation Doses and Cancer Risks Resulting from the 1945 Trinity Test:

The NIH, in partnership with the Albuquerque Area Indian Health Board, Southwest Tribal Institute Review Board (IRB), the University of New Mexico, the New Mexico Tumor Registry, and Las Mujeres Hablan, is carrying out a study to quantitatively estimate the number of cancer cases in New Mexico (past and future) that may be related to the nuclear test of the first atomic weapon in south-central New Mexico, code-named *Trinity*. The Mescalero Apache and Picuris Pueblo Tribal leadership have issued tribal resolutions in support of the research. The Southwest Tribal IRB and University of New Mexico IRB have also approved the study. In September 2014, the pilot phase of this study was completed. For further information, please visit the following website: <http://dceg.cancer.gov/research/how-we-study/exposure-assessment/trinity>

Substance Use and Mental Health Collaborative for Rural American Indian Adolescents:

Suicide among AI/AN youth is four times higher than the national average for young men and eleven times higher for young women. This project is using CBPR principles to work with the Spokane Tribe to develop culturally-relevant intervention strategies for rural AI/AN adolescents in Washington State. These interventions aim to address substance use and mental health disparities, in an effort to decrease the risk of suicide. Input from the Tribal Council has been instrumental in formulating the intervention development process. A primary concern expressed by Tribal members is the high rate of suicide within the community, including an unusual number this past year (3 in a population of about 2,000). Collaboration building and strengthening trust has fostered an increased interest in the Tribal community about the role that research can play in addressing this issue.

Summer Program in the Neurological Sciences:

The annual Summer Program in the Neurological Sciences provides academically talented and diverse high school, undergraduate, graduate, and medical students with a stimulating and

rewarding research experience and to encourage their pursuit of advanced education and future careers in neurological science research. This program targets students from diverse backgrounds and has achieved substantial success recruiting AI/AN by developing relationships with schools and tribal councils and through extended outreach and visits to areas densely populated by Native students. The director of the program has established relationships with Red Cloud High School on the Pine Ridge Reservation in South Dakota, and St. Michael Indian High School, a school serving the Navajo population in Arizona and New Mexico. The institute hosted nine Native students during the 2014 Program, including seven Lakota, one student from the Lumbee Tribe of North Carolina, and one student from the Pauma Band of Luiseno in California. Students from the class of 2014 were also involved in activities with the NIH Native Scholars, who provided cultural support, research poster workshops, and weekly tutoring in college math and chemistry. Since 2007, NIH has supported 36 slots for AI/AN (some students have gone through the program twice), and 12 students have gone on to present their data at scientific meetings. Most of the AI/AN participants have been tracked; of those, all but five remain in scientific fields. NIH plans to continue this program and the associated outreach with AI/AN communities. In addition, NIH continues efforts to maintain relationships with the alumni in order to facilitate their potential future participation in NIH-funded neuroscience training and development programs.

Summer Scholars Research Science Meeting:

On September 22, 2014, eight students selected from the 2014 Summer Research Internship program presented their research projects on NIH campus and learned about research priorities and opportunities. The Summer Research Internship program is designed to increase interest of high school and undergraduate students from underrepresented racial and ethnic populations in careers in biomedical research. Students were from different racial and ethnic backgrounds, including AI/AN. Internships include an eight week paid, intensive, hands-on drug abuse and addiction research experience that provides students with the opportunity to gain an understanding of the research process. Internships are conducted with funded investigators across the country. Four AI/AN students participated in the 2014 internship program.

Surveillance, Epidemiology, and End Results Data Linkages to the IHS Medical Records System:

The Surveillance, Epidemiology, and End Results (SEER) program at NIH works to provide information on cancer statistics in an effort to reduce the burden of cancer among the U.S. population. Every year the SEER data are linked to the IHS medical records system in order to identify additional AI/AN individuals in the cancer registries. The linkage is used to improve the accuracy of cancer rates for AI/AN populations, and is performed at the IHS headquarters in Albuquerque, NM. The concept of linking the records originated in the New Mexico SEER registry and is now conducted for all of SEER and the CDC's registry system, the National Program of Cancer Registries.

Technology Innovations for Supporting Health in Alaska Native People:

This study is evaluating the efficacy of two culturally-tailored, technology-mediated disease prevention interventions for supporting change in multiple risk behaviors in rural AN men and women. These interventions are informed by the research team's fieldwork over the past 6 years in rural Alaska and built on continued community partnerships with Tribes. The interventions are tailored to AN health needs and values to target 5 of the American Heart Association's 7

Strategic Impact Goals for 2020. One intervention will target tobacco use and physical activity. The other intervention will target hypertension and hypercholesterolemia using medication adherence and nutritional changes. Both groups will use computerized interventions, delivered via telemedicine by Native-focused counselors located in Anchorage reaching AN people in their rural home villages.

The 25th Annual Native Health Research Conference:

NIH staff participated in the 25th Annual Native Health Research Conference held in Phoenix, AZ June 2-7, 2014. AI/AN investigators, as well as investigators who work within these communities, participated in the workshops, which were geared toward understanding the nuances of working within the AI/AN communities and proposing research projects to the NIH. NIH conducted pre-conference and conference workshops to increase knowledge of grant writing and the NIH funding opportunities available to support research pertinent to AI/AN communities. Some NIH Institutes sent exhibit booths and provided one-on-one communication with AI principal investigators, junior faculty, and pre/postdoctoral students about NIH's scientific research portfolio and research training and career development opportunities. Additionally, a staff member from the NIAAA Office of the Director presented an invited plenary address: *Alcohol among Native Americans: From Myths to Cultural Renewal*.

Training Rural/Underserved Youth to Understand and Pursue Scientific Careers:

The Clean Air and Healthy Homes Program (CAHHP) is developing culturally-competent scientific programs in underserved areas, including AI/AN communities in Montana, Idaho, and Alaska. Students living in rural and frontier areas can be at an educational disadvantage, particularly in pursuing scientific careers, since remote locations may limit access to hands-on educational programs that stimulate interest in the sciences. This inquiry-based Science Education Partnership Award program trains students and their families in the scientific process based on real-world air pollution issues, giving them the tools necessary to conduct hands-on research. This research will explore whether the CAHHP can be used in rural, underserved areas to effectively educate students in the scientific process, raise their interest in science and science careers, and increase their awareness of environmental impacts on human health. It is focused on recruiting teachers at sites that contain limited science resources, have high populations of students qualifying for free and reduced lunch, and/or include AI/AN populations. CAHHP uses environmental health as an integrative context for science learning as well as the incorporation of AI/AN cultural perspectives into the instructional materials.

Trans-NIH American Indian and Alaska Native Health Communications and Information Work Group:

On April 3, 2014, this work group partnered with the NIH Office of Equity, Diversity and Inclusion to sponsor a second seminar for the speaker series, "Healing Our Community through Narrative: The Power of Storytelling." The seminar topic was on diabetes education, and featured speakers from the CDC and NIH. In addition to the presentations, several exhibit tables featured AI/AN resources from various groups and agencies. With colleagues at IHS and the Administration on Aging/Administration for Community Living (AoA/ACL), this work group has finalized a Memorandum of Understanding (MOU) to develop an electronic newsletter to increase awareness of health information and resources from the NIH and other Federal agencies. The e-newsletter, which will replace the current quarterly hard-copy mailings, will feature a wide range of health topics and be distributed to IHS Community Health Representatives and

AoA/ACL grantees that provide services to Native elders. Meetings of the work group in 2014 included discussion of AI/AN programs at IHS and the Administration for Children and Families, as well as the services offered to AI/AN veterans by the Center for Minority Veterans in the Department of Veterans Affairs.

Trans-NIH American Indian/Alaska Native/Native Hawaiian Research Interest Group:

In FY 2014, the Trans-NIH American Indian/Alaska Native/Native Hawaiian Research Interest Group convened on a monthly basis to share current research priorities and innovative ideas for facilitating CBPR and to highlight and discuss challenges with advancing research in Native communities. IHS colleagues regularly participated in the group with NIH members, and discussed best practices and lessons learned about outreach activities for providing health care in several AI communities. In collaboration with the NIH Office of Equity, Diversity and Inclusion and the Trans-NIH AI/AN Health Communications and Information Work Group, the Trans-NIH AI/AN/NH Research Interest Group helped celebrate Native American Heritage Month by inviting a speaker from the National Museum of the American Indian to discuss “Healing Our Community Through Narrative: The Power of Storytelling.”

Tribal Collaborations in the Prevention of Alcohol-Exposed Pregnancies:

Alcohol-exposed pregnancies (AEP) and Fetal Alcohol Spectrum Disorders are prevalent in AI communities in the Northern Plains. This research uses a CBPR approach to support partnerships with Tribes to develop AEP prevention programs. A community needs assessment found that working with schools and including teenagers and school-aged children in a prevention program would be beneficial. Barriers to implementing an AEP prevention program included pressure from social networks to drink and a lack of support to stop drinking, as well as social determinants such as high rates of poverty and domestic violence, lack of transportation and funds to access birth control, and poor health literacy. Focus groups with community members and key informant interviews with health and social service professionals highlighted several subthemes regarding social support in the prevention of AEP including the role of family (especially elders), the impact community can have, and the important function of culture. Currently, recruitment is underway for the AEP prevention program, Changing High-risk alcohol use and Increasing Contraception Effectiveness Study (CHOICES) with non-pregnant women in the Oglala Sioux Tribe.

Tribal Colleges and Universities Behavior Wellness Study:

The TCU-BeWell project seeks to develop and implement a culturally contextualized version of an alcohol prevention intervention at TCUs. The hypothesis is that a culturally contextualized adaptation of the Screening and Brief Intervention, developed in conjunction with TCU partners, will surpass a control condition in reducing hazardous or harmful drinking and alcohol-related negative consequences and improve academic outcomes. It is anticipated that the intervention will have a significantly greater effect at TCUs that also receive a policy intervention to move them from a zero-tolerance to harm reduction stances and improve capacity to integrate services for improved referral and treatment for high-risk TCU students.

Tribal Health and Resilience in Vulnerable Environment Study:

The Tribal Health and Resilience in Vulnerable Environment (THRIVE) study is assessing correlates and outcomes of food insecurity in the Chickasaw and Choctaw nations in Oklahoma. A telephone survey is being administered to 500 American Indian adults randomly sampled from Tribal registries. Clinical measures will be validated for 200 of those surveyed using Tribal clinic

electronic health records. Perceptions of food environments will be compared to objective store measures using geographic information systems data. The project also is designing, implementing, and evaluating a convenience store intervention to increase the availability and intake of vegetables and fruits among Tribal members. It will use a cluster-randomized design with 20 matched Tribally-owned convenience stores. The project is creating a multimedia manual, co-developed with Tribal members, guiding Tribes in food environment changes, which will be disseminated through an open-source website.

Tribal Turning Point: Pilot Study for Prevention of Type 2 Diabetes in American Indian Youth:

The Tribal Turning Point Program (TTPP) is a pilot program developing a translational intervention and generating data to inform a future full-scale trial. The TTPP targets diet and physical activity behaviors through motivational interviewing with child/parent pairs to facilitate problem solving and behavioral goal attainment. TTPP also uses culturally-appropriate, active-learning modification of the Diabetes Prevention Program for AI/AN parents and youth delivered in a group setting. The culturally-appropriate Turning Point Toolbox is used to support the motivational interviewing and active-learning components. Partnerships have been established between the Cherokee and Navajo Nations, several academic institutions, and a diverse Advisory Board.

Tribes Partner with Superfund Research Program to Assess Clam Contamination on Tribal Lands:

In 2014, the Superfund Research Program (SRP) developed a collaborative partnership with the Swinomish Tribe and the Samish Indian Nation on a project to improve techniques for measuring clam contamination on tribal lands. The group is working on ways to measure contamination using samplers that can be placed in the sediment to soak up and measure chemicals instead of removing the clams in the event of an oil spill. More information can be found on this at: <http://nwifc.org/2014/12/tribes-partner-osu-study-clam-contamination/> .

University of Montana American Indian Students and Staff Visit Rocky Mountain Laboratories:

American Indian pre-pharmacy students and staff from the University of Montana (UM) visited Rocky Mountain Lab (RML) through the Skaggs School of Pharmacy Native American Center of Excellence (NACOE) summer program in July 2014. Students toured the RML electron microscopy facility and a biosafety training lab. Students and staff heard scientific presentations and a talk by an AI graduate student at UM who was pursuing a Ph.D. at RML. This visit followed from a February visit to UM by NIH staff, sponsored by the NACOE through the Native American & Minority Health & Cultural Competency Lecture Series. During the visit, NIH representatives gave presentations, discussed NIH job and training opportunities, toured the UM Payne Native American Center, and met with the director of the Native American Studies Program.

Urinary Biomarkers in Biopsy Defined Early Nephropathy in Types 1 & 2 Diabetes:

Diabetic nephropathy (DN) risk is high among AI/AN individuals with type 2 diabetes. This study, which has a cohort of AI/AN participants, is gathering samples and data on patients followed longitudinally for decades in order to collect data on the natural progression of the disease. A major advantage of this study design is the ability to study biomarkers of early DN

structural changes prior to detectability of functional abnormalities. The study is working to assess predictors of progression rates from pre- and early disease states to end-stage renal disease. The study has identified urinary markers of tubular injury and serum markers of inflammation that enhance the ability to identify those at risk of progression to end-stage renal disease beyond traditional risk factors.

Worker Training Program:

The Worker Training Program (WTP) funds a national network of over 100 non-profit safety and health training organizations to provide training to workers who handle hazardous materials, hazardous waste, or are involved in emergency response to hazardous materials incidents. Through its awardees, the WTP has trained over 1,200 AI/AN individuals, including tribal employees of natural resource, law enforcement, emergency medical, fire service, and public works agencies. The Alabama Fire College (AFC) trained nearly 700 American Indians from 14 tribes to protect themselves and their communities from hazardous materials encountered in workplaces and during emergency response operations through their partnership with the Native American Fish and Wildlife Society (NAFWS). Key training occurred at Confederated Tribes of the Umatilla Indian Reservation (Cayuse, Walla Walla, and Umatilla) and at three tribes in Albuquerque, NM (the Jicarilla Apache tribe, Eight Northern Indian Pueblo Council, and the Pueblo of Sandia Tribe). At the NAFWS National Conference and Pacific Northwest Regional Conference in Pendleton, Oregon, the AFC offered two eight-hour, hazardous awareness trainings for the Confederated Tribes of the Umatilla Indian Reservation and one class at the National Conference to the Yakima Tribe of Washington State.