

Department of Health and Human Services
National Institutes of Health

American Indian and Alaska Native Health Research Advisory Council

FY 2017
Annual Health Research Report

*Prepared by the National Institute on Minority Health and Health Disparities
in collaboration with the NIH Institutes and Centers and the NIH Tribal Health Research Office*

Table of Contents

National Institutes of Health.....	4
RESEARCH PROJECTS & FINDINGS	4
BEHAVIORAL AND MENTAL HEALTH.....	4
Collaborative Research Hubs to Reduce Suicide among AI/AN Youth:	4
Indigenous Pathways of Substance Use and Mental Health through Early Adulthood:	4
Integrating Intergenerational Cultural Knowledge Exchange with Zero Suicide:	4
Research on Personality and Cognitive Resilience Association:	4
Transdisciplinary Research, Equity and Engagement Center for Advancing Behavioral Health:	5
Using Culture to Prevent Suicide and Alcohol Use Among Alaska Native Youth:	5
CANCER.....	5
Cancer Centers Plan Research Training and Education Programs for Native American Students:	5
An Integrative Omics Approach to Identify Biomarkers Related to Preeclampsia and Breast Cancer Risks:	5
CARDIOVASCULAR DISEASE.....	6
Center for Native and Pacific Health Disparities Research:.....	6
Strong Heart Study:	6
COLLABORATIVE RESEARCH.....	6
Collaborative Minority Health and Health Disparities Research with Tribal Epidemiology Centers:.....	6
Intervention Research to Improve Native American Health:	6
Native American Research Centers for Health:	7
Research to Improve Native American Health Initiative:	7
DIABETES.....	7
Centers for Diabetes Translation Research:	7
Coming-of-Age Rituals and Preventing Gestational Diabetes:	8
Exploring the Adaptation of Mindfulness in Native American Communities to Address Diabetes:	8
ELDER HEALTH	8
Health System Navigation to Improve Native American Elder Health Care Access:	8
Native Elder Research Center:	8
ENVIRONMENTAL HEALTH	8
Center for Indigenous Environmental Health Research:	8
Effects of Low-level Inorganic Arsenic Exposure on American Indian Elders:	9
The Environmental influences on Child Health Outcomes Program:	9
GENOME.....	9

Center for the Ethics of Indigenous Genomic Research:.....	9
Community-Engaged Research Toward Precision Medicine with AI/AN People:.....	10
INFANT/CHILD HEALTH	10
An Intervention to Address Childhood Obesity by Promoting Alaska Natives’ Traditional Foods:	10
A Primary Prevention Trial to Strengthen Child Attachment in a Native Community:.....	10
Asthma Collaboration to Reduce Childhood Asthma Disparities on the Navajo Nation:.....	10
Community-Based Partnership Research Initiative in Reducing Infant Mortality in American Indian Communities:	11
Intergenerational Persistence of Treatment Effects:.....	11
INFECTIOUS DISEASE	11
Diet and the CPT1A Arctic Variant: Impact on the Health of Alaska Native Children:.....	11
Treating Posttraumatic Stress Disorder and Substance Use to Prevent HIV among Native Americans:.....	11
OBESITY	12
Reducing Obstetric Weight Gain and Gestational Diabetes in American Samoa:	12
RENAL DISEASE	12
NIH and Zuni Pueblo Community Provide Telemedicine for Chronic Kidney Disease:.....	12
National Institutes of Health and Centers for Disease Control and Prevention Report Highlight Improvement in Diabetes-Related Kidney Failure among AI/AN Populations:.....	12
SUBSTANCE RELATED DISEASE (Alcohol, Drug, Tobacco).....	12
Alcohol Detoxification and Substance Abuse Treatment among Alaska Natives:	12
Culturally Grounded Early Substance Use Prevention for American Indian Families:	13
Effective Interventions to Prevent Alcohol Use Among American Indian And Rural Youth:	13
Randomized Controlled Trial of CRAFT with American Indians:	13
Randomized Controlled Trial of a Family-Centered Ojibwe Substance Abuse Prevention Program:.....	14
Strategies for Preventing Underage Drinking and Other Substance Use in Native American Tribal Communities:	14
Substance Use Prevention Campaign for American Indian Youth:	14
Web-Based Addiction Treatment: Cultural Adaptation with American Indians:.....	14
Research on Prevention of Alcohol-Exposed Pregnancy among American Indian Women:.....	14

National Institutes of Health

The mission of NIH is to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, to lengthen life, and to reduce illness and disability. The prevention, diagnosis, and treatment of diseases and conditions that disproportionately affect AI/AN communities remain an NIH priority. NIH continues to support activities aimed at conducting research relevant to health concerns within AI/AN populations, increasing representation of AI/AN individuals in the biomedical and behavioral research workforce, building capacity for biomedical research within AI/AN communities, developing tools to disseminate health information, and strengthening community-based participatory research approaches to develop culturally relevant and community-based interventions. This report provides selected highlights of AI/AN research accomplishments and activities at NIH during fiscal year (FY) 2017.

RESEARCH PROJECTS & FINDINGS

BEHAVIORAL AND MENTAL HEALTH

Collaborative Research Hubs to Reduce Suicide among AI/AN Youth:

NIH funds cooperative agreements to establish and support regional collaborative hubs to reduce suicide in AI/AN youth. Specifically, the hubs conduct (1) preventive interventions research, including strength-based and resilience-focused approaches, and (2) outreach and dissemination activities to promote community engagement in research activities, that enable community decision-makers to use science-based information to develop and assess mental health policies and programs. More information on the program is available at:

<https://www.nimh.nih.gov/about/organization/gmh/ai-an/index.shtml>

Indigenous Pathways of Substance Use and Mental Health through Early Adulthood:

This community-based participatory research project aims to: 1) determine the pathways of Indigenous substance use and mental health problems from late childhood to early adulthood; 2) identify early life-course predictors of substance use and mental health among Indigenous young adults; and 3) describe culturally appropriate definitions of wellbeing in early adulthood and document the prevalence and predictors of these positive outcomes. Results of this research will increase awareness of the nature, cause, and consequences of alcohol, substance use, mental health problems and related chronic conditions in Indigenous reservation/reserve communities.

Integrating Intergenerational Cultural Knowledge Exchange with Zero Suicide:

This community based participatory research study seeks to incorporate Zero Suicide (ZS) into primary care settings of the Indian Health Service. The randomized controlled trial will compare the effectiveness of the Zero Suicide model with a cultural component (ZS+), to the ZS model alone, as it relates to reducing suicide ideation and behaviors, and increasing resiliency among AI youth.

Research on Personality and Cognitive Resilience Association:

An NIH-funded research project is studying the association between personality and cognitive resilience using lifespan personality, health, and health behavior data in the Hawaii Personality and Health Cohort. The study began over 50 years ago with personality assessments of the participants when they were elementary school children. This project will generate evidence to guide personality-based interventions, by suggesting which traits and trait mechanisms are most relevant in childhood and at midlife (e.g., trait conscientiousness in elementary school, health-behavior mechanisms at midlife). In addition, this project addresses the underrepresentation of Native Hawaiian or Other Pacific Islander, and individuals of Asian American ancestry in health-related scientific research.

Transdisciplinary Research, Equity and Engagement Center for Advancing Behavioral Health:

This Center will focus on improving behavioral health disparities among socioeconomically disadvantaged and underserved rural populations with emphasis on AI/AN, and Hispanic or Latino populations in New Mexico. The research will address social determinants of behavioral health such as adverse childhood experiences, historical trauma, and the intersectional effects of poverty and discrimination. It is intended to improve conditions and outcomes related to youth suicide, alcohol and drug misuse, depression, and access to behavioral health services. More information on the Center is accessible at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9768053&icde=41957906&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Using Culture to Prevent Suicide and Alcohol Use Among Alaska Native Youth:

An article published in *Prevention Science* magazine, featured a NIH-funded study that examined the potential of culture, as an effective strategy to address suicide and alcohol use disorders among Alaska Native youth. The study examined the effectiveness of a high-intensity intervention that promotes reasons for life and sobriety in young people using local expertise, high levels of community direction, and community-based staff. The *Qungasvik* intervention implemented modules that constitute episodes of Yup'ik cultural engagement focused on the individual, family, or community. The modules promoted 13 protective factors grounded in Yup'ik culture. The findings showed that a higher dose of exposure to the *Qungasvik* intervention produced significantly greater intervention impact on outcomes protective from suicide risk among rural Yup'ik Alaska Native youth, than a lower dose. The finding suggests *Qungasvik* may be a promising approach to prevention of suicide risk in rural Yup'ik Alaska Native communities. The results of the study were submitted for publication in 2017.

Publication: Blue Bird Jernigan, V., D'Amico, E.J. & Keawe'aimoku Kaholokula, J. [Prevention Research with Indigenous Communities to Expedite Dissemination and Implementation Efforts](#), *Prev Sci* (2018).

CANCER

Cancer Centers Plan Research Training and Education Programs for Native American Students:

NIH awarded administrative supplements to four Cancer Centers to plan cancer research training and education programs to increase the pool of AI/AN investigators in cancer research. The Cancer Centers will support NIH's efforts to increase the number of AI/AN researchers in the biomedical, clinical, and biobehavioral workforce by planning programs for high school and undergraduate students, with special emphasis on cancer disparities affecting AI/AN populations.

An Integrative Omics Approach to Identify Biomarkers Related to Preeclampsia and Breast Cancer Risks:

Preeclampsia is a common medical condition in pregnant women characterized by hypertension and protein in the urine, which occurs in five to eight percent of all pregnancies. Epidemiological studies have shown strong evidence that women associated with preeclamptic pregnancies have an almost 50 percent reduced rate of breast cancer decades later. This project will integrate different scientific approaches in biology (with an omics ending), to investigate the molecular links between preeclampsia and breast cancer risks later in life. Samples will be collected through the Hawaii Biorepository and will reflect the unique multi-ethnic population of Hawaii. In FY 2017, the project identified samples for a pilot study. More information is available at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9542867&icde=41957926&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

CARDIOVASCULAR DISEASE

Center for Native and Pacific Health Disparities Research:

The purpose of this Center is to use community engagement and empowerment to address cardiometabolic health disparities among Alaska Native, Native Hawaiians, and Pacific Peoples through clinical, interventional, translational, and health services research. One project will examine racial and ethnic differences in the prevalence and cost of preventable hospitalizations due to heart disease and diabetes, and subsequently use the data to pilot test a hospital-based intervention to prevent re-hospitalization. The Center will also focus on training a diverse scientific workforce to conduct health disparities research and advancing community engagement research to attract and empower diverse communities to participate in research and community health promotion activities. Information on the Center can be found at: <http://www2.jabsom.hawaii.edu/native/index.htm>

Strong Heart Study:

This longitudinal observational study on cardiovascular disease among American Indians, involves 12 tribes and communities in Oklahoma, Arizona, and North and South Dakota. The study's main objective is to examine the causes and natural history of cardiovascular disease among AIs. It has found high cardiovascular disease prevalence, morbidity and mortality, and identified type 2 diabetes as the leading risk factor for cardiovascular disease among AIs. The study also examines genetic and environmental risk factors for cardiovascular disease. The current phase (Phase VI) supports infrastructure, surveillance activities, and data analysis. Additional information about the Strong Heart Study can be found at: <http://www.strongheartstudy.org/>.

COLLABORATIVE RESEARCH

Collaborative Minority Health and Health Disparities Research with Tribal Epidemiology Centers:

This NIH initiative supports collaborative research between Tribal Epidemiology Centers (TEC), and extramural investigators on topics related to minority health and health disparities as it relates to AI/AN populations. Five NIH Institutes are partnering on the Collaborative Minority Health and Health Disparities Research with Tribal Epidemiology Centers initiative, which funds research to address significant gaps in data and knowledge pertaining to AI/AN health. Some of the broad areas of interest include environmental health, cancer, alcohol use disorder, substance use disorder including opioid use disorder, and social and structural determinants of health. Examples of collaborators that Tribal Epidemiology Centers may partner with include academic researchers, tribal governments or organizations, clinicians, faith-based organizations, public health or healthcare organizations, school systems, or other relevant organizations. Additional information on this initiative is available at: <https://www.nimhd.nih.gov/programs/extramural/research-centers/tec/index.html>

Intervention Research to Improve Native American Health:

American Indian/Alaska Native populations are exposed to risk factors that significantly increase their likelihood of chronic disease, substance abuse, mental illness, oral disease, and HIV infection. The Intervention Research to Improve Native American Health (IRINAH) program develops, adapts, and tests the effectiveness of health promotion and disease prevention interventions in AI/AN populations. The initiative will support various types of projects including culturally appropriate interventions designed to: be sustainable; promote healthy lifestyles; improve behaviors and social conditions; improve environmental conditions related to chronic disease; prevent or reduce the consumption of tobacco, alcohol, and other drugs; improve mental health outcomes; reduce risk of HIV infection; develop, test, and disseminate treatment interventions; and improve treatment adherence and/or health-care systems adopting standards of care to improve overall quality of life. The long-term goal is to reduce mortality and morbidity in AI/AN communities. IRINAH also provides a forum for discussions on the challenges and opportunities to improve health in AI/AN populations across the United States. The program currently funds more than 20 projects through several NIH Institutes and Centers. More information on the program is available at: <https://cancercontrol.cancer.gov/nativeamericanintervention/>

Native American Research Centers for Health:

The Native American Research Centers for Health (NARCH) is a collaborative research initiative involving multiple NIH Institutes and Centers, covering a range of research areas such as environmental health, infectious diseases, substance abuse, asthma, health disparities, faculty and student development, diabetes, and cancer. The NARCH initiative supports partnerships between American Indian/Alaska Native (AI/AN) tribes or tribally-based organizations and institutions that conduct intensive academic-level biomedical research. NARCH provides opportunities for conducting research, research training and faculty development to meet the needs of AI/AN communities. The NARCH program also provides opportunities for tribes and tribal organizations to build research infrastructure, and capacity building to address the health disparities prevalent in AI/AN communities and increase trust of research within the AI/AN communities. More information on NARCH is available at: <https://www.nigms.nih.gov/Research/DRCB/NARCH/Pages/default.aspx>

Research to Improve Native American Health Initiative:

This new initiative will support research aimed at improving the health of AI/AN communities such as secondary data analyses from sources like the Tribal Epidemiology Centers; data merged from various sources to answer critical research questions; pilot and feasibility studies; and/or assessment and validation of measures that are being developed and/or adapted for use in AI/AN and NHOPI communities. More information on the Research to Improve Native American Health Initiative is available at this link: <https://grants.nih.gov/grants/guide/pa-files/PAR-17-464.html>

DIABETES

Centers for Diabetes Translation Research:

NIH supports translational research to improve diabetes outcomes among AI/AN populations. The Centers for Diabetes Translation Research address diabetes, and foster collaboration across disciplines to enhance the efficiency, productivity and effectiveness of translating diabetes research findings into practice, and for the community.

The goals of the Center for American Indian and Alaska Native Diabetes Translational Research at the University of Colorado at Denver, are to: 1) provide an administrative structure that promotes diabetes-related translational research capacity; 2) sustain and expand the research base of funded faculty conducting research on diabetes prevention and treatment, 3) support translational research that offers resources in community engagement, cultural adaptation of intervention, health literacy, health technologies, dissemination and implementation science, and sustainability to advance a multidisciplinary, culturally grounded, problem-oriented translational research program of major scientific and programmatic importance; 4) serve as a national resource for other investigators pursuing diabetes translational research with AI/AN communities. More information on this Center is available at this link:

<http://www.ucdenver.edu/academics/colleges/PublicHealth/research/centers/CAIANH/cdtr/Pages/CAIANDTR.aspx>

At the Center for Diabetes Translation Research at Washington State University in St. Louis, investigators seek to eliminate disparities in type 2 diabetes by translating evidence-based interventions to diverse communities. The Center is organized around two interacting scientific themes that address the root causes of diabetes disparities; and obesity as a major contributing factor to type 2 diabetes. The Center is instrumental in the study of health communication and literacy as critical factors in disparities, as well as advancing the role of policy research as an instrument to address disparities in obesity and type 2 diabetes. Partnership with the National Congress of American Indians and AI/AN investigators, expands the reach of diabetes translational research to AI/AN communities. Link: <https://cdtr.wustl.edu/our-cores/research-partnerships-with-american-indianalaska-native-core/>

Coming-of-Age Rituals and Preventing Gestational Diabetes:

An innovative, community-based, and participatory program is focusing on prevention of risk factors leading to diabetes during pregnancy among AI/AN populations. The program integrates counseling before becoming pregnant with traditional coming-of-age rituals at the onset of puberty. These rituals traditionally involve the sharing of knowledge by female elders; and can present an excellent opportunity to discuss women's health between mothers and daughters. Scientists will test the effectiveness of this program in improving behavioral outcomes and knowledge of risks for diabetes during pregnancy, among American Indian/Alaska Native adolescent females and their mothers. More information is available at:
https://projectreporter.nih.gov/project_info_description.cfm?aid=9453016&icde=41950934&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Exploring the Adaptation of Mindfulness in Native American Communities to Address Diabetes:

American Indian/Alaska Natives have higher rates of developing diabetes and are more likely to experience complications and death due to the disease. Several factors may influence disparities in diabetes, including Native cultural beliefs and distrust of Western medicine. Stress can also worsen the physical effects of diabetes and may lead to continuation of adverse health behaviors. Mindfulness meditation is widely recognized as an effective means to reduce stress particularly around diabetes management. The goals of this study are to develop collaborations with AI/AN community leaders and spiritual advisors to develop mindfulness programs for AI/AN communities and compare the AI/AN programs to generic mindfulness-based stress reduction programs in Native communities.

ELDER HEALTH

Health System Navigation to Improve Native American Elder Health Care Access:

This community-driven study uses a participatory research design to examine insurance-related outreach activities focused on help-seeking behavior and the healthcare experiences of American Indian elders in New Mexico, to generate knowledge grounded in the perspectives of AI elders. The goal is to use the information to improve healthcare practices and policies and healthcare reform for this population and produce a replicable model for enhancing the effects of the Affordable Care Act that could potentially be applicable to other underserved groups.

Native Elder Research Center:

An initiative funded through the Native Elder Research Center will carry out several activities aimed at improving the health of AI/AN elders such as: expand active partnerships with AI/AN communities to ensure continuous access to and involvement of Native elders, their families, and local systems of care in the aging research process; extend its network of collaborative links to identify, recruit, and promote a cadre of AI/AN researchers in aging research; improve mechanisms to support the training and career development of AI/AN investigators in aging, health, and culture to lead successful research careers; and promote a research program aimed at improving health status and care of AI/AN elders. More information on the Center is available at:
https://projectreporter.nih.gov/project_info_description.cfm?aid=9532519&icde=41951003&ddparam=&ddvalue=&ddsub=&cr=4&csb=default&cs=ASC&pball=

ENVIRONMENTAL HEALTH

Center for Indigenous Environmental Health Research:

This Center will partner with rural and urban AI/AN communities to build community capacity for research and environmental health literacy, to evaluate the link between chemical and other environmental exposures to health inequities, and to encourage the translation of research findings into public health policy. Key components include: identifying and implementing mechanisms to effectively partner with tribes on using exposure

assessment to address environmental health concerns; strategies to promote tribal resilience to mitigate adverse environmental exposures; and guidance in using research to support sustainable tribal environmental approaches to improve community health. Additional information on the Center can be accessed at: https://projectreporter.nih.gov/project_info_description.cfm?aid=9540012&icde=41951061&ddparam=&ddvalue=&ddsub=&cr=4&csb=default&cs=ASC&pball=

Effects of Low-level Inorganic Arsenic Exposure on American Indian Elders:

Inorganic arsenic is a natural element found in groundwater and is toxic to humans in high and prolonged doses. A study funded in part by NIH, examined the association between long-term, low-level inorganic arsenic exposure on fine motor functioning among American Indians ages 64-95. The findings suggest arsenic exposure at low levels over a long period is associated with decreased fine motor functioning and processing speed in elderly American Indians.

Publication: Carroll, CR et al., Low-level inorganic arsenic exposure and neuropsychological functioning in American Indian elders. *Environmental Research*, Jul 2017, 156:74-79
<https://www.ncbi.nlm.nih.gov/pubmed/28334644>

The Environmental influences on Child Health Outcomes Program:

This research program combines multiple longitudinal cohort studies to investigate how a broad range of early environmental factors such as physical, chemical, biological, social, behavioral, natural and built environmental factors affect child health and development. Below is a synopsis of the two cohort studies aimed at addressing the health of AI/AN and NHOPI communities.

- **Environmental influences on Child Health Outcomes in the Northern Plains Safe Passage Study Cohort**, uses prenatal and infant data to assess the effects of early alcohol and other environmental exposures on AI youth. Specifically, this study focuses on the health outcomes of neurodevelopment and asthma. The results of this study have the potential to inform preventative prenatal approaches and innovative postnatal interventions.
- **Understanding Risk Gradients from Environment on Native Americans Child Health Trajectories: Toxicants, Immunomodulation, Metabolic Syndromes, and Metal Exposure**, assesses how environmental exposures to uranium and other metals may affect pregnancies, child health and early child development. Specifically, the study will focus on neurodevelopment and obesity health outcomes in children until age five. An estimated 1,000 mothers and their children living in the Navajo Nation will take part in this study.

More information on the ECHO program is available at: <https://www.nih.gov/research-training/environmental-influences-child-health-outcomes-echo-program>

GENOME

Center for the Ethics of Indigenous Genomic Research:

NIH funds the Centers of Excellence in Ethical, Legal and Social Implications Research program to support research on the ethical, legal and social questions raised by advances in genomics research and the increasing availability of genomic information. The Center for the Ethics of Indigenous Genomic Research will examine how the use of genomic information in medical care could potentially impact AI/AN communities and health care systems. This Center will partner with the Chickasaw and Lakota Sioux tribes and communities, and the Southcentral Foundation in Anchorage, Alaska, to study awareness, knowledge and attitudes about genomics in these communities. The tribal partnership will help create culturally appropriate research and education collaborations between academic researchers and tribal members, as well as tools to develop similar programs in

other communities.

Community-Engaged Research Toward Precision Medicine with AI/AN People:

This research project aims to advance policy approaches to support Precision Medicine Research (PMR) with AI/AN people through culturally respectful dialogue, empiric data collection, and deliberation with rural and urban AI/AN community members and tribal representatives in Alaska and Montana. Researchers work to identify cultural, logistical, and environmental factors that influence the relevance and acceptability of PMR within AI/AN communities, community members' willingness to participate, and ultimately, the uptake and usefulness of results and interventions that emerge from PMR. AI/AN community members are involved in developing flexible, community-responsive approaches to the return of results from PMR and defining best practices for returning research results that maximize benefit and minimize risk for AI/AN people. Tribes will assist in developing tools and methods, and a national AI/AN panel will evaluate the study to inform broader use and adaptation by groups across the country.

INFANT/CHILD HEALTH

An Intervention to Address Childhood Obesity by Promoting Alaska Natives' Traditional Foods:

Childhood obesity is a growing problem in the Alaska Native population due to a switch from a nomadic lifestyle to a sedentary lifestyle, and the associated consumption of store-bought manufactured food and sugar-sweetened beverages (SSBs). In this intervention, focused on Alaska Native children between zero to five years old, researchers will collaborate with the Rural Action Community Program, Head Start, and Parents as Teachers programs in 12 Alaska Native villages to test a nutritional intervention to improve outcomes in the children. The Back to Basics intervention consists of a home-based nutrition curriculum, and Head Start Center-based program to improve the nutritional quality of Alaska Native children's diets through reintroducing nutrient-dense traditional and non-traditional foods and reducing the consumption of SSBs. More information is available at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9571253&icde=41951205&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

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. One study is collaborating with the Fort Peck Tribes in northeastern Montana to adapt and test an intervention called the Promoting First Relationships (PFR) program, which is designed to promote the child-caregiver relationship in at-risk populations. Once adapted for use in this AI population, researchers will test the effectiveness of PFR in promoting sensitive caregiving and child attachment. More information is available at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9297102&icde=41951259&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Asthma Collaboration to Reduce Childhood Asthma Disparities on the Navajo Nation:

The study will combine two previously tested programs, one focused on training health care providers and one on school-based asthma education and monitoring, to build a comprehensive, integrated, team-based Asthma Care Implementation Program to address medical care, family, home, and community issues to improve the health of Navajo children with asthma. A previously funded one-year assessment was conducted based on community recommendations which included using existing resources such as the Navajo Epidemiology Center, Navajo Health Department, local media, and lay health workers. The study was well-received in the community and stakeholders will continue to provide recommendations. More information is available at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9545586&icde=41951606&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Community-Based Partnership Research Initiative in Reducing Infant Mortality in American Indian Communities:

This project is engaging AI communities in the design and implementation of an intervention to reduce the risk for Sudden Infant Death Syndrome (SIDS) and other related infant deaths due to unsafe sleep environments. According to the Centers for Disease Control and Prevention, AI/AN babies have 1.6 times the infant mortality rate as non-Hispanic Whites and are 1.7 times as likely as non-Hispanic White babies to die from SIDS. An even greater disparity exists among Northern Plains tribes, where the SIDS rate is 6.4 times the overall U.S. SIDS rate. This research is investigating the influence of post-natal factors on infant mortality, including parental knowledge, cultural beliefs, and access to resources that inform decision-making on infant sleep environments. In FY 2017, the project developed a culturally tailored safe sleep curriculum with input from focus groups and a community advisory board, as well as worked on the research design for a randomized clinical trial to assess the efficacy of the curriculum.

Intergenerational Persistence of Treatment Effects:

To enhance understanding of the benefits and impact of childhood interventions across generations, this study asks whether children who benefit from early interventions grow up to become better parents and, subsequently, have children who experience fewer health problems, educational challenges, and emotional problems. The study brings together two longstanding, ongoing, prospective intervention studies that follow panels of children into adulthood, with participants now in their mid-30s. One includes families participating in the Great Smoky Mountains Study, in which a positive income shock due to a casino opening resulted in an influx of resources to American Indian children's families. Analyses will draw on new data collected from parent surveys, low-cost daily virtual assessments of parents and children, and high-quality education and birth records of the offspring. The project aims to inform prevention science by testing whether, for whom, and how the effects of interventions are transmitted across generations. More information is accessible at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9568363&icde=41951650&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

INFECTIOUS DISEASE

Diet and the CPT1A Arctic Variant: Impact on the Health of Alaska Native Children:

Alaska Native infants from Western and Northern Alaska historically have had among the highest documented incidence of severe illness due to infectious disease, as well as an infant mortality rate more than twice the rate in other parts of Alaska. Previous data indicates that one potential contributor to these health disparities is a single nucleotide variant in the carnitine palmitoyl transferase 1A (*CPT1A*) gene, called the arctic variant. This project aims to investigate associations between diet and *CPT1A* and to develop a risk prediction model for infectious disease-related outcomes in Alaska Native infants. More information is available at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9565419&icde=41951668&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Treating Posttraumatic Stress Disorder and Substance Use to Prevent HIV among Native Americans:

Untreated posttraumatic stress disorder (PTSD), substance use disorder (SUD), and HIV or sexually transmitted infections (STI) risks are major concerns in American Indian communities. PTSD is sometimes self-treated through substance use which may result in substance use disorder and increase the risk of HIV sexual-risk behavior (HSB). This randomized comparative effectiveness trial addresses PTSD and substance use to prevent HSB, by evaluating Narrative Exposure Therapy (NET) and Motivational Interviewing with Skills Training (MIST) in HIV/STI prevention. Both approaches ultimately aim to prevent SUD and HSB, with the emphasis of NET on PTSD, while MIST focuses on substance misuse.

OBESITY

Reducing Obstetric Weight Gain and Gestational Diabetes in American Samoa:

Obstetric weight gain can lead to health problems for both mothers and their infants. One novel intervention aims to reduce obstetric weight gain, improve screening for diabetes during pregnancy, and promote exclusive breastfeeding. Researchers are testing the intervention's feasibility, acceptability, and efficacy, by comparing the intervention to standard of care among American Samoan women. American Samoan women are more likely than the general population to be overweight or obese when they become pregnant and are at greater risk of poor birth outcomes due to low health literacy and low income. Focusing on American Samoan women can address health disparities and help to reduce maternal and infant health problems related to obstetric weight gain and gestational diabetes.

RENAL DISEASE

NIH and Zuni Pueblo Community Provide Telemedicine for Chronic Kidney Disease:

An article in the January 2017 issue of *Advances in Chronic Kidney Disease*, highlighted a nine-year telemedicine collaboration between NIH and the Zuni Comprehensive Health Center in western New Mexico, to provide care to patients with advanced kidney disease at the clinic. This telenephrology clinic delivered ongoing consultations with a nephrologist at NIH for more than 1,870 patient visits using a collaborative, integrated chronic kidney disease management model. The team includes a nurse case manager, nephrologist, primary clinicians, pharmacists, and community health nurses. The nurse case manager played an essential role in the success of this collaboration, which demonstrates that rural high-risk communities can be served by telemedicine. In addition, the availability of electronic health records and excellent communication between the off-site consultant and the on-site clinicians contributed to the success of this collaboration.

Publication: AS Narva, G Romancito, T Faber, ME Steele, *Adv Chronic Kidney Dis.* 2017 Jan;24(1):6-11
<https://www.ncbi.nlm.nih.gov/pubmed/?term=Managing+CKD+by+Telemedicine%3A+The+Zuni+Telenephrology+Clinic>

National Institutes of Health and Centers for Disease Control and Prevention Report Highlight Improvement in Diabetes-Related Kidney Failure among AI/AN Populations:

The January 10, 2017 issue of *Morbidity and Mortality Weekly Report*, featured the findings of a report by NIH and CDC on health disparities among AI/AN populations. The report found that over a twenty-year period (1996-2013), the number of AI/AN individuals with diabetes-related end-stage renal disease (ESRD) decreased substantially. ESRD is kidney failure that requires treatment with dialysis or transplantation. Diabetes accounts for 69 percent of new cases of ESRD in AI/AN. This decline suggests that Indian Health Service public health and population management approaches to diabetes, which were improved beginning in the mid-1980s, are effective in preventing kidney failure among many AI/AN individuals.

Publication: Bullock A, Burrows NR, Narva AS, et al. *Vital Signs: Decrease in Incidence of Diabetes-Related End Stage Renal Disease among American Indians/Alaska Natives – United States, 1996-2013.* *MMWR Morb Mortal Wkly Rep* 2017;66:26-32 <https://www.cdc.gov/mmwr/volumes/66/wr/mm6601e1.htm>

SUBSTANCE RELATED DISEASE (Alcohol, Drug, Tobacco)

Alcohol Detoxification and Substance Abuse Treatment among Alaska Natives:

The Center for American Indian and Alaska Native Health, funded by NIH, examined key aspects of the substance abuse continuum of care to gain insights into the association between alcohol detoxification and transition to substance abuse treatment among Alaska Natives. The recently published results showed that

approximately 75 percent of participants that entered a tribally-owned and managed inpatient detoxification unit completed treatment. Participants with the following characteristics were more likely to complete detoxification: at an older age at first time of alcohol use; higher global assessment scores; or longer length of stay in detoxification. Having legal problems or a longer length of stay were associated with referral to substance abuse treatment, and participants with a longer length of stay in detoxification were more likely to enter substance abuse treatment. The study highlights the importance of alcohol detoxification as a potential pathway to substance abuse treatment.

Publication: UR Bear, J Beals, DK Novins, SM Manson, Alcohol detoxification completion, acceptance of referral to substance abuse treatment, and entry into substance abuse treatment among Alaska Native people. Addictive behaviors, 2017 <https://doi.org/10.1016/j.addbeh.2016.09.009>

Culturally Grounded Early Substance Use Prevention for American Indian Families:

This project seeks to develop a culturally grounded, family-based early substance use prevention intervention tailored to a Northern Plains American Indian Reservation. Investigators are implementing an evidence-based prevention program in a new context, working with community partners to translate the intervention for the local context. They are also integrating a cultural curriculum entitled Seven Directions, into the program. The curriculum was developed within the community, drawing on local knowledge of effective practices to further ground substance use prevention efforts within the cultural context. Researchers will assess the adapted program to determine its feasibility, refine details, and maximize fit within the community. To learn more visit:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9251801&icde=41951750&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Effective Interventions to Prevent Alcohol Use Among American Indian And Rural Youth:

A NIH-funded study demonstrated that community-based and individual-level prevention strategies are effective ways to reduce alcohol use among American Indian and other youth living in rural communities. One of the largest alcohol prevention trials ever conducted with an American Indian population, the study is the first to demonstrate the effectiveness of a screening and brief counseling intervention in significantly reducing youth alcohol use at a community level. Communities Mobilizing for Change on Alcohol is a community-organizing intervention designed to reduce alcohol access and use, as well as highlight health and social consequences among underage youth. The second strategy, called CONNECT, is a screening and brief counseling intervention delivered on an individual basis in schools. Students reported a reduction in any use of alcohol over the past 30 days after receiving one or both interventions. Both interventions worked alone and in combination, suggesting that the individual and the community intervention could be used effectively alone.

Publication: Kelli A. Komro et al. “[Multilevel Prevention Trial of Alcohol Use Among American Indian and White High School Students in the Cherokee Nation](#)”, *American Journal of Public Health* 107, no. 3 (March 1, 2017): pp. 453-459.

Randomized Controlled Trial of CRAFT with American Indians:

This study assesses the Community Reinforcement and Family Training (CRAFT) intervention. The CRAFT teaches and reinforces effective strategies for Concerned Significant Others (CSO) of those with a substance use disorder to take better care of themselves, identify and address behaviors that are not working to address the Identified Patient's (IP) substance use, and consistently reward the IP for any sober and treatment engagement behavior. This intervention is a cultural adaptation of CRAFT for American Indians and will compare the AI intervention with Nar/AI-Anon facilitation for those affected by someone else's addiction or addicted to alcohol. The objective is to examine acceptability of a culturally tailored evidence-based tool and estimate effect sizes for IP treatment entry and for CSO functioning pre-to-post intervention. Additional information is available at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9538683&icde=41951766&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Randomized Controlled Trial of a Family-Centered Ojibwe Substance Abuse Prevention Program:

This multi-reservation randomized controlled trial (RCT) on substance abuse prevention, involves Anishinaabe (Ojibwe) preadolescents aged 8-10 years, their parents or caretakers, and extended family adults who have daily influence on the participating child's behavior. The Bii-Zin-Da-De-Dah (BZDDD) (Listening to One Another) program is an American Indian adaptation of the Iowa Strengthening Families Program. The study aims to: 1) complete adaptation of the 14-week BZDDD prevention program for U.S. reservations; 2) implement a RCT of BZDDD to assess its efficacy for delaying and/or preventing adolescent onset of alcohol and drug use; 3) address cultural challenges for RCTs involving Indigenous cultures by evaluating contamination and informal diffusion in communities and extended families; and 4) work with our Anishinaabe research partners to develop a plan to sustain the prevention program. More information can be accessed at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9471373&icde=41951784&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Strategies for Preventing Underage Drinking and Other Substance Use in Native American Tribal Communities:

This project is evaluating a community mobilization and awareness intervention aimed at reducing the social availability of alcohol, marijuana, tobacco, and other drugs for Native American youth, from adults including family members. These community-based programs will be complemented with individual level interventions. For example, investigators will implement and evaluate a culturally tailored motivational intervention to reduce demand for alcohol and other drugs for AI youth 13-20 years of age who are substance users. More information is available at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9463744&icde=41951799&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Substance Use Prevention Campaign for American Indian Youth:

This study assesses a culturally adapted anti-inhalant communications campaign for AI youth called Be Under Your Own Influence. The campaign uses multiple channels of communication including print (e.g., posters and fliers), video and audio spots, presentations, and social media to deliver messages that are designed to alter outcome expectancies, intentions, and ultimately inhalant use among targeted youth. This study will test for effects of campaign exposure on autonomy, aspirations, perceived harm, and intentions to use. More information can be accessed at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9437774&icde=41951826&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Web-Based Addiction Treatment: Cultural Adaptation with American Indians:

To address the lack of access to drug addiction treatment in AI/AN communities, this study is exploring a web-based approach. This randomized controlled trial among urban AI/AN attending outpatient addiction treatment services of a culturally adapted treatment called Therapeutic Education System (TES-NAV), seeks to: 1) estimate preliminary effect size of 12 weeks of TES-NAV; 2) explore relevant moderators of TES-NAV outcomes and potential mechanisms of action; and 3) assess cultural factors that may correspond to variation in outcome. A three-month post-treatment follow-up will facilitate identification and interpretation of outcomes. Additional information is available at:

https://projectreporter.nih.gov/project_info_description.cfm?aid=9553709&icde=41951859&ddparam=&ddvalue=&ddsub=&cr=1&csb=default&cs=ASC&pball=

Research on Prevention of Alcohol-Exposed Pregnancy among American Indian Women:

The NIH-funded Collaborative Research Center for American Indian Health (CRCAIH), worked with the Oglala Sioux Tribes (OST) to conduct a study based on the CHOICES program, which focuses on preventing alcohol-exposed pregnancy (AEP) among women, before a woman conceives, by reducing unsafe drinking in women at

risk for pregnancy, and preventing unintended pregnancy. OST CHOICE was culturally adapted for American Indian women who were recruited from two reservations and one urban community. The study showed a significant decrease in alcohol-exposed pregnancy, particularly among women using contraception. Reduction in binge drinking did not have a major impact on AEP. Findings suggest that more research is necessary to explore additional strategies to support American Indian women in preventing AEP.

Publication: JD Hanson et al. Impact of the CHOICES Intervention in Preventing Alcohol-Exposed Pregnancies in American Indian Women. *Alcoholism: Clinical and Experimental Research*, February 7, 2017.
<https://onlinelibrary.wiley.com/doi/epdf/10.1111/acer.13348>