Project Spotlight: Summer Research Institute (SRI)

Tyrene Hubbard, Undergraduate- Biochemistry, UA

Overview of Research
During the summer of 2014, I participated in an internship with both NACP and UROC working collaboratively with Principal Investigator (P.I.) Mary Koithan, Ph.D., RN. Our research focused on barriers and service gaps in health care for rural American Indian (AI) cancer survivors and their families in Arizona. During the 10 week program, we conducted interviews with 5 out of 12 tribes in Arizona by telephone and in-person focus groups. In our research, we used descriptive qualitative research methods to investigate the barriers and gaps in service. Our preliminary results were generated from a combination of individual interviews, open-ended questionnaires, and focus group interviews which were used to collect data. Our analyses also identified three other associated components with barriers which we termed facilitator, service gaps, and suggested actions. Barriers and service gaps that were persistent in our research included transportation, lack of services, lack of education, language gaps, geographical distance, cultural beliefs, and attitudes relative to cancer and other chronic illnesses. Our results indicated that significant changes are needed to reduce cancer disparities in the AI populations in Arizona. Research is ongoing and more data will be added by P.I. Mary Koithan as research continues.

How NACP has shaped your professional life?
My overall experience in working with the NACP program is positive. I thought the criteria for participation was rigorous but in the end what I gained was experience and inspiration from my cohorts and others involved in the program. Attending a conference presented by the Native Research Network (NRN) and also doing a public poster presentation in Window Rock, AZ was also very rewarding. My family had an opportunity to come by and watch as I presented my poster. The NRN conference was interesting as health care professionals that work with the tribes were in attendance and shared their research, experience, and wisdom.

How long you have been with the NACP?
I have been with NACP for 6 months.

Courtney Joe, Undergraduate– Public Health, UA

Overview of Research
My research focused on how the intakes of certain dietary micronutrients such as B-12, manganese, and phosphorous influence bone structure and strength in young girls. The intake of dietary micronutrients during childhood and adolescence has the potential to positively impact bone structure and strength and may decrease future risk of osteoporosis. It was hypothesized that vitamin B-12, manganese, and phosphorous intake positively influence bone structure and strength in pre-and early pubertal girls. Baseline data from 4th and 6th grade girls who participated in the “Jump-In” Building Better Bones Study included bone structure and strength measurements, diet assessment and body composition assessments. The Harvard Youth/Adolescent Food Frequency Questionnaire (YAQ) assessed micronutrient and energy intake.
Bone structure and strength variables were measured by peripheral quantitative computed tomography (pQCT). Bivariate Pearson correlations and linear regression were used to evaluate associations between bone measurement and selected micronutrient intake while adjusting for BMI, maturity offset, caloric intake, and physical activity. Results indicated that femur (p=0.015) and tibia length (p=0.016) had significant correlations with phosphorous intake. There were trends towards associations with femur (p=0.056) and tibia (p=0.063) length to manganese intake. Trends towards associations with femur diaphyseal cortical area (p=0.08) and diaphyseal tibia cortical area (p=0.06) to phosphorous intake also resulted. Linear regression revealed no significant associations between bone structure and strength measurements to selected micronutrient intakes after adjusting for covariates. The micronutrients selected for this analysis were not associated with bone structure and strength in 4th & 6th grade girls. However, these micronutrients may play an important role in other aspects of bone development.

How NACP has shaped your professional life?
NACP has given me the opportunity to network with a number of researchers and faculty members. It has also paved a way into what specific field I want to build my career in, which is Maternal and Child Health. Not only was NACP an experience for an academic purpose but I now mention it within my resumé because I know that it would be useful in sharing when applying for future jobs in health promotion.

How long you have been with the NACP?
I have been with NACP for the past two summers (2013 & 2014).

---

Dr. Diane Stearns, Toxicology, Northern Arizona University

Overview of Research
The Stearns Lab studies how uranium causes DNA damage in ways that may relate to cancer. Results from our lab have elucidated how uranium bonds to the phosphate backbone of DNA and weakens the backbone to produce strand breaks, and how it produces mutations that are different than those produced by alpha radiation and reactive oxygen species (free radicals). This explains how uranium can be harmful as a heavy metal in ways that are independent of its radioactivity. We are currently exploring a new mechanism for uranium toxicity, that of photoactivation. Uranium can be excited by solar radiation to produce an excited form that is more toxic and mutagenic than uranium or radiation alone. This raises the possibility that uranium may be harmful through dermal exposures and may contribute to skin cancers.

How NACP has shaped your life?
My research on uranium started with funding from the original partnership in 2002, as one of the original pilot projects. My lab turned to the question of how uranium may damage DNA when I learned how the issues surrounding environmental exposures to uranium were of such strong interest to communities here in the southwestern US. Many of my strongest and most productive student researchers have been supported by NACP. I have been grateful for the opportunities to work with people from so many different academic and cultural backgrounds because this has broadened my understanding of how scientific research can contribute to society and policy, and how the best answers to these questions come from team collaborations.

How long you have been with NACP?
I have been with NACP throughout its existence. I have transitioned from overseeing a funded research project to overseeing the Research Developmental Core with my co-PI at UACC, Dr. Jesse Martinez. I enjoy being able to help to build the research capacity at NAU that is tackling issues of cancer disparities, and to contribute to training the next generation of scientist and researchers.
Overview of Research
I look at how uranium oxides effect cells. Specifically cell toxicity rates and deposition of uranium oxides inside cells. This research is done in order to characterize the carcinogenic and toxic properties of uranium oxides.

How NACP has shaped your professional life?
I have been really fortunate to be involved with NACP. NACP has given me an opportunity to learn about new research ideas as well access to the researchers and their labs. I have also been able to do the research I am currently working on based in part from funding from NACP. This has allowed me to work on research that is interesting and exciting as well as important to indigenous communities. I am positive what I have learned while being involved in NACP will have a huge effect on my professional life going forward.

How long have you been with NACP?
This year will be my third year.

Janice Wilson, Bachelor’s in Nursing, Northern Arizona University

Overview of Research
The goal of the research that I conducted in Diane Stearns, Ph.D, lab was to characterize how uranium causes DNA damage.

How NACP shaped your professional life?
NACP has helped me in many different ways through the last 3 years. They have helped me develop as scientist as well as achieve my goal of graduating with a Bachelors of Science in Nursing Degree. The staff has been extremely supportive and encouraging in my educational endeavors. The program itself has helped fund my education, as well as provided opportunities through symposiums and conferences to build professional relationships that will aid in my future goals. Through this program I have developed more confidence in myself as a person, a nurse, scientist, and professional. They have given me a mindset that I can achieve more than I originally set out to achieve. I have since set new goals for my education and see my Bachelors Degree as a stepping stone to the next educational level.

How long you’ve been with NACP?
3 years.

Thank you for all the wonderful mentorship!
Future scientists in the making,
Northern Arizona University students visiting the University of Arizona Cancer Center.
The Community Action Committee was formed to help guide and implement activities for the next 5 year grant cycle which runs from September 2014 - August 2019. Our specific aims and key activities for the program include:

1) Conducting an assessment of community cancer prevention and control programs and activities and readiness to conduct cancer research;
2) Developing and implementing a Cancer Cultural Competency Curriculum for health researchers and healthcare providers;
3) Developing and implementing a community small grants program to encourage cancer prevention and control research

Michael Allison, ADHS Native American Liaison Michael joined the Arizona Department of Health Services (ADHS) in January of 2001. His main responsibility is to enhance effective working relationship between ADHS and the Arizona Native American health care community comprised of twenty-one tribal health office/departments, three urban Indian health programs, the Inter Tribal Council of Arizona, Inc., three Indian Health Service Area Offices, and other agencies providing public health services to the Arizona Native American community. Michael is a member of the Navajo Nation originally from Shiprock, New Mexico. His Navajo clans are Ta’chii’nii (red running into the water people) and Naakaaii Dine (the Mexican Navajo people). He earned his Master of Business Administration Degree from the University of New Mexico in 1974 and his Master of Public Health Degree from the University of Arizona in May 2003. He has 38 years of management work experience in small business development, tribal economic development, health care management, and public health. Former positions held by Michael include: Executive Director, Navajo Division of Economic Development; Executive Vice President, National Center for American Indian Enterprise Development; and Executive Director, Native American Community Health Center, Inc. Representing ADHS, Michael serves as a member of the Arizona Advisory Council on Indian Health Care and as an Ex-Officio Board member of the Arizona Commission of Indian Affairs.

Gina Costello has been in the field of Nursing for the last 38 years with the last 15 in Oncology. Her background includes working in the operating room, ICU, CCU, and mobile Apheresis. The last area of practice was in Oncology that included private practice, case management and Bone Marrow Transplants. Through years of work in main hospital medicine, it wasn’t until private practice and administering chemotherapy that oncology nursing became a primary main focus. Realizing that cancer affects all aspect of a person’s life, oncology nursing focuses on spiritual, physical, and emotional health. During her bone marrow transplant work, her mother and both sisters were diagnosed with breast cancer, leukemia, and lymphoma respectively. Following the passing of her mother, she realized there are many people who may not have support following a diagnosis of cancer and wanted to share information with any patients diagnosed with cancer. Working with the Tohono O’odham Nation provided just that opportunity. She educates the Nations’ members on cancer prevention as the Health Education Specialist for the Tohono O’odham Cancer Program, and a special interest in Patient Navigation.
**Community Outreach: NACP Community Outreach Committee**

**Patricia K. Hibbeler, ABD, MA** is the Chief Executive Officer of the Phoenix Indian Center, Inc. She is Salish and Kootenai from the Flathead Reservation in Northwestern Montana. She raises funds for the Center and provides direction in operations and evaluation of the non-profit organization, specializing in workforce development, educational programming, social services and language and culture revitalization. Ms. Hibbeler serves as a Steering Committee Member for the National Urban Indian Families Coalition, Trustee for the Heard Museum, ASU President Crowe’s Minority Advisory Committee, Maricopa County Community College District Chancellor’s Committee, Phoenix College President’s Advisory Committee, Still University Advisory Committee, ASU Southwest Interdisciplinary Research Center’s Community Advisory Committee, EFSP Maricopa County Board, and Arizona State School Superintendent’s Indian Education Advisory Board. She also received the President’s Award from Arizona State University during her tenure there for program evaluation, design and implementation. She has been successful in building relationships between tribal communities, urban communities, and state or local agencies focusing on creating collaborations to dialogue and create plans of action to address the health and education issues of American Indian people. Ms. Hibbeler’s interests include dropout prevention and school-based substance abuse prevention issues for the American Indian population.

**Susan Levy** is Communications Coordinator, Volunteers, and Community Involvement at Native Health. Native Health provides holistic, patient-centered, culturally sensitive health and wellness services for Native people in Phoenix. She holds a bachelor’s degree in Sociology from ASU and a certificate in gerontology.

**Cora Maxx-Phillips** works as a consultant and advisory board member with the National Resource Center for Tribes and with Southwest Research and Information Center. She also served as the Executive Division Director of Navajo Nation Division of Social Services. Prior to this, she served as an Executive Staff Assistant to the President working on issues ranging from health, government, education, uranium, environmental health, uranium, social services and international issues. For the past 25 years, she has worked in the field of Social and Human Services, Administration, Criminal and Juvenile Justice, Housing, Education, Environment, Sacred Sites Protection and Health issues. Ms. Maxx-Phillips was the first Native American to serve on the National Democratic Platform Committee in 2000, and attended the National Democratic Party Convention in 2000. Governor Jane Hull appointed her to the Arizona Juvenile Justice Commission and the Minority Youth Issues Committee. She was appointed twice by Governor Napolitano to serve on the Arizona Indian Affairs Commission. She also served on the Navajo Nation Government Development Commission. Some of her professional work has been presented and published by the National American Psychological Association, National Coalition of Juvenile Justice and the International Symposium for Substance Abuse Treatment, National Symposium on American Indian Families, American Public Health Association. She has also made several documentaries: Poison Winds – Uranium in Navajo Nation, Save the Peaks, etc. She holds membership in the National Congress of American Indians, American Civil Liberties Union, National Association of Female Executives, Dine Hatahlie Association and other organizations.
Bill Ward lives in Mesa, Arizona. He is President and Founder of "Community Health Advocate Men’s Cancer and Health Issues." Co-Founder of “Arizona American Indian Men’s Health Coalition”. Together both groups provide educational information to my Native American Brothers on the reservations and underserved communities in Indian Country. Bill is a nine year prostate cancer survivor. His life started on the White Mountain Apache Indian Reservation in McNary Arizona. His Father is African American and Mother is 1/2 Mississippi Choctaw Indian and 1/2 African American. Bill graduated from McNary high school in McNary, Arizona, a small town on the Fort Apache Indian Reservation and attended Eastern Arizona College on a basketball scholarship. He is an US Army veteran was a journeyman electrical substation operator. He worked in the Electrical field for 29 years and retired as the District Operations Manager for Transmission Field Services in 2001. He is the recipient of the Department of Energy Distinguished Career Service Award. Bill was diagnosed with Prostate Cancer in 2004 and had successful prostate cancer surgery using the Da’Vinci Robot at the University of Washington in Seattle, WA. Bill is a national advocate for Native American cancer survivors, particularly men’s cancer issues serving on many Boards and working with many tribes nation wide. He currently working with a men’s health group to establish a National Men’s Health web site for Alaska Natives and American Indians. He is co-founder of Arizona American Indian Men’s Health Coalition to reach and educate the men on health and cancer issues and concerns in Arizona.

Virginia Warren, MPH is Cancer Control Office Chief for the Arizona Department of Health Services. Warren was awarded the 2014 Carol Friedman Award for Extraordinary Leadership and Exemplary Mentorship in Comprehensive Cancer Control during the Centers for Disease Control and Prevention (CDC) Annual Meeting in Atlanta this month. The award is named for Dr. Carol Friedman, CDC’s first Comprehensive Cancer Control Branch Chief and a tireless advocate for the underserved. Virginia was selected as this year’s award winner for her exemplary work within the Arizona Comprehensive Cancer Control Program and the HealthCheck Programs. Additionally, her efforts in establishing and maintaining partnerships and collaborative opportunities in the community were key to her selection by the committee.

Shannon Yellowman Williams (Navajo) is the Program Coordinator for the Radiation Exposure Screening and Educational Program (RESEP) at North Country Health Care Center in Flagstaff, AZ. She has a bachelor’s degree in Community Health Education and has worked in non-profit community health centers for several years. She has extensive knowledge of grants at the county, state and federal level. She also has experience in health education program development, planning and implementation. She works with the local community centers in Flagstaff and has knowledge of developing educational programs and outreach. Ms. Williams Chairs the Partnership for Native American Cancer Prevention Committee in Flagstaff and has been instrumental in the development of cancer education programs and cancer survivor support groups.
Community Outreach: NACP Community Outreach Committee

**Abby Lohr, MPH** is Director of Community Resource and Grants Manager for the Susan G. Komen Foundation, Southern Arizona. Ms. Lohr is a graduate of the UA MPH program with a focus on family and child health and global health. She previously worked as a medical translator at a migrant health clinic in Southern Minnesota.

**Bessie Tsosie** is Dine’, her maternal clan is Kiya’nnani, and she was born for the Tl’ashchi’l clan. Her maternal grandfather clan is Tsi’naajinii clan and paternal grandfather clan is Ashihii. She retired from employment in 2009. She previously worked in education in the Executive Branch of Navajo Nation. She also was Executive Director of the Election Program in the Legislative Branch of the Navajo Nation and Drug Court Coordinator within the Judicial Branch. She was the Resident Service Manager of the Navajo Housing Authority. Along with her husband she started the first nonprofit program on Navajo Nation, Twilight Dawn Program. Currently, she is Secretary/Treasurer of the Mariano Lake Chapter on the Navajo Nation and serves as a Commissioner of the Navajo Nation Government Development Program. Mrs. Tsosie was raised by her grandparents who impressed upon her certain values to follow and guiding principles to live a harmonious life. One teaching is that Kei is the most important social virtuous principle that a person could ever learn and it will take you far in life. They also said always be in tune with nature.

**Jamie Ritchey, PhD, MPH** is Director of the Tribal Epidemiology Center at the Inter Tribal Council of Arizona and Adjunct Faculty at the University of Arizona. Dr. Ritchey has over ten years of practical public health experience leading analyses to develop public health reports and peer-reviewed publications. She is experienced in strategic planning, managing multiple budgets, program evaluation, and team building. Her professional expertise includes: Management, leadership and team building; Global health; psychiatric epidemiology particularly suicidal behavior; cancer etiology (genetic and environmental); infectious and parasitic disease etiology and prevention in humans and animals; commercial tobacco prevention and control; quality improvement of health care; and epidemiologic methods. Maureen Brophy, MPH is attending for Dr. Ritchey.

**Del Yazzie, MPH (Navajo)** is an epidemiologist at the Navajo Nation Tribal Epidemiology Center.

**Eva Seckayumptewa** is Director of Hopi Tribe Social Services.

**Angie Williams (Navajo)** is Director of the Navajo Nation Breast and Cervical Cancer Prevention.

Welcome to NACP!