Fred Hutch Receives Funding to Advance Indigenous Cancer Health Equity

Cooperative agreement will support work on smoking cessation, lung cancer screening, patient navigation and more.

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Fred Hutch Cancer Center's Lonnie A. Nelson, PhD; Jason Mendoza, MD, MPH; and Myra Parker, JD, MPH, PhD, were awarded a U19 cooperative agreement from the National Institute of Minority Health and Health Disparities (NIMHD) that will provide more than $16.7 million over five years to improve cancer health equity for American Indian and Alaska Native (AI/AN) people and help prepare the next generation of researchers in Indigenous cancer health equity.

Fred Hutch is one of the first two institutions, along with University of Oklahoma, to be awarded a U19 cooperative agreement through the NIMHD Initiative for Improving American Indian and Alaska Native Cancer Outcomes.

"We want to express how honored we are to be among the first," said Nelson, who leads the CANOE Partnership, the program supported by the agreement. He is a professor in Fred Hutch's Public Health Sciences Division and a faculty leader of the Indigenous Cancer Health Equity Initiative (ICHE-i).

The agreement will fund a suite of projects under the name CANOE Partnership: Cancer Awareness, Navigation, Outreach and Equitable Indigenous Health Outcomes. CANOE will include two clinical trials focused on addressing disparities in Native communities — one testing a chatbot that provides smoking-cessation counseling and another testing a patient navigation program to improve lung cancer screening rates.

Speaking the right smoking-cessation language

The chatbot trial is called the Navigation and Artificial Intelligence Technology for Indigenous Virtual Education on Smoking Cessation (NAITIVE) Project. It's being done in collaboration with Jonathon B. Bricker, PhD, who developed and studied a smoking-cessation smartphone app, iCanQuit. Bricker has since developed a chatbot powered by artificial intelligence (AI) to provide

free, accessible smoking cessation counseling based on the iCanQuit materials. Nelson and Bricker are working to refine the AI chatbot specifically for an Indigenous population.

“We’re going to teach it to understand and respond in American Indian English, which is a specific dialect of vernacular English. In other words, we’re going to teach the AI to talk like a ‘rez kid,’” said Nelson, who is a descendent of the Eastern Band of Cherokee Indians.

The chatbot guides users through the process of setting goals, planning their quit attempts and celebrating successes. It’s been trained to answer thousands of questions about smoking cessation. The experience is crafted to help users focus on their values — values that shape their decision to quit smoking, their willingness to experience the discomfort of withdrawal and their commitment to stick with quitting — an approach based in acceptance and commitment therapy.

The trial that’s part of CANOE will test how effective the chatbot is compared to an existing chatbot from the National Cancer Institute that was also tailored for AI/AN users. The goal is to improve rates of cessation of commercial tobacco smoking among a nationally recruited sample of AI/AN adults. Fred Hutch researchers will partner with the Black Hills Center for American Indian Health on the project.

Patient navigation that respects patients’ cultures

American Indian and Alaska Native communities have the highest rates of commercial cigarette smoking of any racial or ethnic group in the U.S., putting them at risk for lung cancer and other smoking-related diseases. Lung cancer screenings offer a way for at-risk people to get diagnosed early, when treatment may be more effective, even lifesaving. However, many AI/AN people don’t get screened.

The same is true for getting screened for other cancers, like colorectal, cervical and breast cancers, said Nelson. He underscored that limited access to preventive care and inconsistent promotion of screenings in primary care settings are critical cancer screening barriers. The Indian Health Service, meant to provide federal health services to AI/AN communities, has historically been underfunded, he noted.

“The really troubling story we hear over and over in Indian Country is that by the time a person’s cancer was discovered, it was already stage 4,” Nelson said. This, compounded by limited access to high-quality cancer treatment, drives down survivorship rates in AI/AN communities.

As part of CANOE, Matthew Triplette, MD, MPH, in partnership with the South Puget Intertribal Planning Agency (SPIPA) and the five consortium tribes it serves, will lead one of the first studies of its kind to adapt, implement and evaluate a navigation intervention to improve lung cancer screening care completion among AI/AN people. The study is known as the SACRED LUNGS Project, which stands for Strengthening Awareness and Community Resources for Early Detection of Lung Cancer Through Navigation Guided Screening.

“Tribal and Indigenous communities have long recognized the importance of patient navigation in delivering culturally tailored and culturally safe care,” said Jamie Nikander, health and wellness programs manager at SPIPA. “Our navigators and communities have a deep-rooted understanding of how to adapt navigation to reflect AI/AN cultural values, which influence health care decisions and support patients in overcoming the impacts of historical trauma from the health care system.”

SACRED LUNGS is grounded in community-based participatory research and incorporates a comprehensive health behavior framework adapted for AI/AN populations: the NIMHD Minority Health and Health Disparities Research Framework. Findings from this study can inform further adaptations and scaling of the intervention across diverse AI/AN communities and health care settings.

This partnership and research study strengthen existing and unique academic-community partnerships between a National Cancer Institute Comprehensive Cancer Center, tribes and tribal representatives, fostering continued collaboration to advance equitable cancer care.

Supporting communities, preparing the next generation

Along with the two clinical trials, the cooperative agreement will fund a number of other efforts to improve Indigenous cancer health equity, including:

- An early-investigator pilot project that will provide resources and mentorship to those who are interested in advancing cancer health equity for Indigenous communities

- Tribal community grants to support anti-cancer work happening at the community level, such as:

  o Developing tracking systems for cancer screening to support annual screening across key patient groups and to review performance measures on a regular basis

  o Exploring behavioral incentives for cancer screening that align with cultural and contextual factors

- A community nutrition program that’s also supported by matching funds from Fred Hutch

Mendoza is heading the administrative core and Parker the community engagement core.

Mendoza is associate program head of the Cancer Prevention Program in the Public Health Sciences Division at Fred Hutch and director of the Office of Community Outreach & Engagement (OCOE). He is also associate director of community outreach and engagement for the Fred Hutch/University of Washington/Seattle Children's Cancer Consortium.

Parker is program lead for Indigenous populations for OCOE and a faculty leader for ICHE-i. She is also an associate professor in the Department of Psychiatry and Behavioral Sciences at the University of Washington School of Medicine and director of Seven Directions: A Center for Indigenous Public Health, based within the Center for the Study of Health and Risk Behaviors at the University of Washington.

A commitment to serve

When working with communities in a research context, the most important thing for researchers to remember is that they are the servants and must follow the directions they get from the community they serve, Nelson said. The nutrition program is a good example. It will provide healthy food boxes to community groups to distribute to their constituents.

"This was a specific ask from our tribal partners, and we had to think creatively about how to support it because it's not part of a specific intervention that's being measured," said Nelson. "Ultimately, my purpose is to enhance the health and well-being of my relatives. But I can't just do that in whatever way I think is best. I need to ask them what they think is best and try to help them achieve what they want for themselves."

Craig Dee (Diné), project manager for the CANOE Partnership and the ICHE-i, described the relationship between Fred Hutch researchers and tribal partners similarly.

"The tribal communities are true partners in decision-making, including how research and community projects move forward," he said. "Our goal is to support tribal partners in advancing cancer control programs within their communities, while honoring their self-determination and tribal sovereignty. We are committed to ensuring this work is done thoughtfully and respectfully."

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