



National Institute of Environmental Health Sciences
Your Environment. Your Health.

The Value of Tribal Ecological Knowledge

Workshop Background, Purpose, Aims and Outcomes



Symma Finn,
National Institute of Environmental Health Sciences
Mose Herne,
Indian Health Service

Background

Ensuring Equity in Tribal-Academic Partnerships



Background

Smithsonian Working Group on Native Health and Culture



2015 Working Group Meeting, Western Carolina University
Fish Fry with Community Members
in Cherokee, North Carolina

TEK in Context

Traditional Folk Knowledge

Indigenous Traditional Knowledge (ITK)

Tribal Ecological Knowledge (TEK)



What is Tribal Ecological Knowledge?

TEK is traditional knowledge and, like Western science, is based on accumulation of observations. It entails a cumulative body of **knowledge** transmitted through generations, **practice** in how tribes carry out resource use practices, and **beliefs** about how people fit into ecosystems. (Berkes, 2000)

TEK exists as a result of a particular *way of life* – one that assumes that humans are one of the many inter-related components of an ecological system. TEK is also a product of generations of observation and experimentation in a place, and the intimate connections that are made with the non-human world, as reflected in oral traditions and spiritual/religious beliefs. (Carroll, 2015)

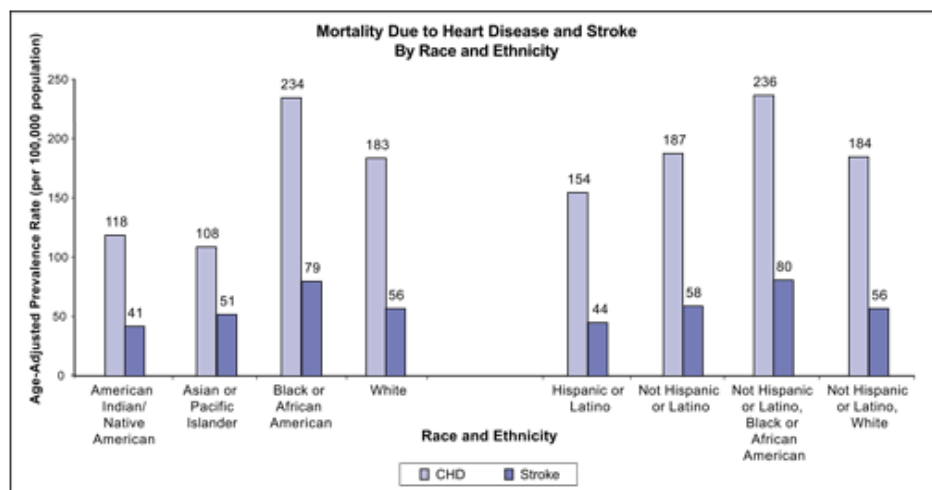
Coordination with Other Federal & Tribal Efforts

This workshop was planned as a focused exploration of specific ways to improve trust about research with tribal communities. It acknowledges and builds off of other federal and tribal meetings on related topics.

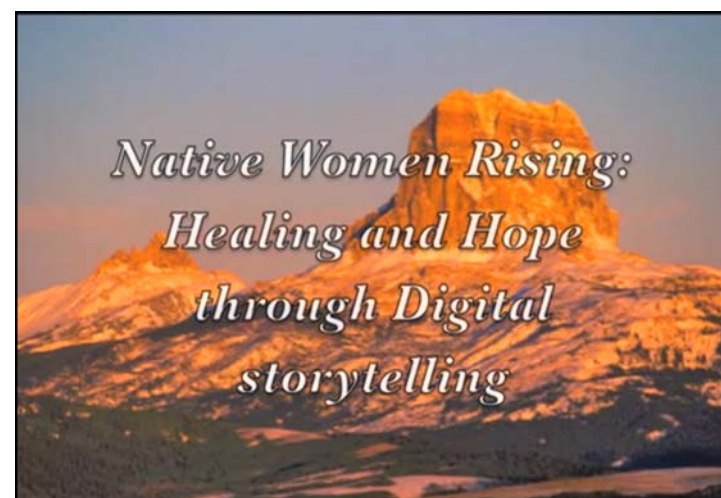
- Tribal Environmental Summit, Salish Kootenai Tribal College, June 2014 (organized by NIEHS and EPA) to highlight tribal-led research
- NIH Native American/Alaska Native Research Forum, October 2014 (organized by NIMHD) to identify research needs
- Trans-NIH Citizen Science Working Group ELSI Workshop, January 2015 to identify ethical issues in research with citizen scientists
- Smithsonian Native Health and Culture Symposia, March 2014 and April 2015 to highlight the value of TEK and the connections between culture and health

Mutual Respect and Knowledge Sharing

Narratives, Stories and Scientific Presentations



Source: CDC Wonder. DATA2010...the Healthy People 2010 Database.
Centers for Disease Control and Prevention, January 2004



Workshop Outcomes

- Presentation of TEK workshop recommendations to the NIH Tribal Consultation Advisory Committee in Feb
- An invited commentary to be submitted to *Environmental Health Perspectives (EHP)* in March
- A review article to be submitted to EHP in Sept
- Planning for a workshop in 2017 on Climate Change and Elderly with IHS, EPA, CDC/ATSDR, NIA and NIEHS
- Inclusion of TEK as a topic in funding announcements, e.g. Research to Action
- Provision of emergency response safety training to tribal communities



Workshop Recommendations

Respecting Indigenous culture in research

- Incorporate the Indigenous worldview in research areas identified for funding
 - Human health depends on the health of the entire ecosystem
 - Traditional knowledge is as valid as statistical data when assessing the health of Tribal communities
- Research must benefit people in the communities sharing their knowledge
- Promote health as a continuum of care, e.g., prevention, treatment, and aftercare, that requires multiple disciplines and attention to culture and spirituality
- Help dispel the notion of Pan-Indianism, i.e., that all Indians are the same, and respect the differences between Tribes

Workshop Recommendations

Research Strategies and Collaboration

- Find ways to include ITK/TEK in biomedical research
 - Support the development of conceptual models for integrating cultural understanding into ecosystem and human health and bridge understanding between TEK and western science by supporting trans-disciplinary team-based science
 - Fund more mixed methods research blending qualitative and quantitative investigative approaches
- Require community participation in the study design, collection and analysis of data, and interpretation of findings
- Improve dissemination of research findings to Native communities, including use of Native language
- Improve communication between federal representatives and Tribes
- Increase funding for research into protective factors/resilience more generally, and evaluate current promising practices that incorporate ITK and cultural practices

Workshop Recommendations

Building research and health literacy capacity

- Provide opportunity for research training and experience for Native youth
- Increase clinical providers' knowledge of environmental health
- Increase impact of science-based knowledge and best practices within Tribal communities
- Establish training programs and fellowships that promote study and evaluation of ITK/TEK

Policy Considerations

- Increase funding for Tribally-driven participatory research and Tribal IRBs to help empower Tribal control of research
- Acknowledge the intellectual property of Tribes
 - Respect Tribal Ownership and interpretation of experimental data
- Provide grant funding for communities to develop plans to mitigate the loss of environmental (and thus cultural) resources
- Use ITK/TEK principles to guide and inform NIH strategic planning
- Coordinate federal research activities related to NA research



National Institute of Environmental Health Sciences
Your Environment. Your Health.

A photograph of a sunset over a body of water. The sky is filled with large, colorful clouds in shades of orange, red, and purple. In the background, a large, multi-story building with many windows is visible, some of which are lit up. The building's reflection is visible in the water. The foreground shows a grassy bank and some trees on the left.

THANK YOU!
Symma Finn
finns@niehs.nih.gov
Mose Herne
mose.herne@ihs.gov