



SEVEN DIRECTIONS
A CENTER FOR INDIGENOUS PUBLIC HEALTH

Indigenous Social Determinants of Health

TRAINING MODULES

FALL 2023





SEVEN DIRECTIONS

A CENTER FOR INDIGENOUS PUBLIC HEALTH

UNIVERSITY of WASHINGTON

About

In 2016, **Seven Directions** was formally recognized as the first national public health institute in the United States to focus solely on Indigenous health and wellness. We joined the **University of Washington** in 2018. Our vision is for all Indigenous Peoples to live long and healthy lives for generations to come.

Our aspiration is to advance American Indian, Alaska Native, and Indigenous peoples' health and wellness by honoring and acting within Indigenous knowledge, sovereignty, and self-determination; strengthening tribal and urban Indian public health systems; and cultivating innovation, creativity, and collaborations.

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Acknowledgment & Dedication

We would like to thank our community partners and advisory board who joined us in 2021 to develop and complete the **Indigenous Social Determinants of Health (ISDOH)** project. We extend our gratitude to community members who have joined Gathering Grounds, a community of practice, over the years and those who joined us from across the country for **Our Nations, Our Journey** conference in June 2023. We appreciate the time and contributions from the ISDOH advisory board over the years: Stephanie R. Carroll, DrPH; Ilima Ho-Lastimosa, MSW; Felicia Mitchell, MSW, PhD; Lydia Jennings, PhD, and Myra Parker, MPH, JD/PhD. We are at the start of our relationships and look forward to our continued connections to in our shared work for Indigenous peoples' aspirations and community realizations.

Indigenous social determinants of health that was shared while piloting the trainings. We thank the teams from **Marimn Health** serving the **Coeur d'Alene Tribe** and the **Pascua Yaqui Health Services Division** for piloting the training modules with us. This is dedicated to all the community members and relatives working for Native nations' and Indigenous communities' healing, health and well-being with passion, dedication and commitment. May it be a resource that supports the good work you are already doing!



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INTRODUCTION



Background

Over the past twenty years, global and national public health efforts have increasingly focused on leveraging resources, developing programs, and implementing policies to address social determinants of health for individual and collective health equity or referred to in these trainings as community health equity (Braveman et al., 2011; Marmot et al., 2008; Mitchell, 2012; Warne et al., 2019). However, as exemplified through the present COVID-19 pandemic, American Indians and Alaska Natives¹ (AIAN) continue to experience the highest level of social inequities and health disparities in the U.S. (Hathaway, 2020; Hutchinson et al., 2014; Kruse et al., 2022; Niklaus et al., 2022). To eliminate health disparities and improve health equity within and across AIAN communities, researchers and public health practitioners have begun to map out the critical factors that help support AIAN health and wellbeing along with those that have been major barriers, specifically for AIAN individuals and communities (Carroll et al., 2022; Huyser et al., 2022).

While the World Health Organization (WHO) and U.S. Centers for Disease Prevention and Control (CDC) social determinants of health frameworks and models (CDC, 2022-a; Solar & Irwin, 2010) illustrate how socioeconomic and political policies and subsequent conditions, like unequal access to resources, can have greater impact on health status and outcomes than individual genetics, behavior, or direct care from the health care system (CDC, 2022-b), Indigenous communities' traditional ways of life (DeBruyn et al., 2020), knowledge systems (Lines & Jardine, 2019), and connection to the land, one another, and the surrounding environment (Johnson-Jennings et al., 2020) also impact AIAN health and well-being. Both Western and Indigenous frameworks were examined in the development of this training.

What are Social Determinants of Health?

The Centers for Disease Control and Prevention define social determinants of health as, “nonmedical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies, racism, climate change, and political systems” (CDC, 2022-a).

Think about how this might look in **your community**. How do education and employment affect a person's health? How can a person's relationship with their culture and community affect their health? How has U.S. policy shaped the conditions within reservation and urban Indian communities? How does this continue to affect AIAN health?

Understanding the social determinants of health includes identifying and defining the community or group of people we are focusing on, examining the current major trends in the community's social environment and context, reviewing the historical policies and other important impacts for this community, and mapping how these forces may have an impact on the health of community members. Mapping the important social determinants of health for a particular AIAN community will provide a comprehensive understanding of how different forces may shape community health and well-being, which in turn offers an array of possible solutions to address the health needs of the community. Tribal public health professionals and health researchers have also identified Indigenous social determinants of health (ISDOH) – the specific factors that only AIAN peoples experience that impact AIAN health and well-being. This could include our connection to our traditional lands, tribal sovereignty,

¹ Seven Directions uses Indigenous to refer to members of communities that are deeply tied to place and often have traditional stories, as well as ancestral connections that share their relationship with their land (Eakins et al., 2023).

tribal governance, our unique tribal or urban Indian health care system, the access we have to our traditional life-ways, native languages, traditional foods, ceremonies, relationships, and many more factors. The process of mapping social determinants of health with and for AIAN communities can and should include the factors or conditions that are only found in our tribal or urban Indian settings. This is a set of six training modules that offers a path toward mapping these important conditions. The aim of the training is to strengthen and restore the beneficial conditions unique to our communities and identify and remove or buffer those conditions that are harmful to our health and well-being.

Tribal governments and urban Indian leaders may find these types of Indigenous social determinants mapping exercises helpful in identifying social and health program priorities, changes in tribal or local laws and policies that may be needed to improve the conditions within which community members live, and framing the changes needed within an appropriate time frame. We are currently healing and rebuilding from the effects of 500+ years of colonization and it may take significant time to regain the health status we desire.



Indigenous Social Determinants of Health Training Development

Further, this examination of literature confirmed the need for a framework that adequately accounts for the unique histories and worldviews of Indigenous communities. As SDOH content continues to grow, there is a recognized urgency to examine traditional Indigenous healing, the importance of Indigenous relationships and social support, or other uniquely Indigenous social determinants of health. The project advisory board includes Indigenous knowledge experts who provided guidance and expertise in the development of this training. Advisory board members' expertise in traditional healing, land and kinship, language, Indigenous knowledge, and tribal sovereignty (political, data, and cultural) were instrumental in selecting a process of how to best include Indigenous-specific perspectives on health and wellness. The **Storywork approach** (Archibald, 2007; Archuleta, 2019) has helped to identify Indigenous stories about lived experiences related to health and well-being, and the ways in which our communities practice wellness.

To begin this work, we held community meetings across the United States in four different regions with attendees representing different Indigenous communities, age groups, professions/backgrounds, and tribal affiliations. The purpose was to raise visibility of Indigenous perspectives of health, healing, and well-being; celebrate tribally specific knowledge and practices; and begin to identify and describe Indigenous social determinants of health. Each workshop included a facilitated, participatory, and collective process in which everyone was encouraged to share their perspectives and to tell their stories. The discussion was guided with open-ended questions designed to ensure attendees drove the direction and content of the process.

The discussions focused on broader stories of cultural perceptions of health, histories, and Indigenous knowledge and how they related to health and well-being today. From these community discussions, a graphic artist helped to distill the most important drivers of health within each community. We then examined all the information, to identify common issues across Indigenous communities. This training provides an opportunity to explore and apply the Indigenous Social Determinants of Health to community work, including health practice.

How Can Indigenous Social Determinants of Health Help Improve Tribal and Urban Indian Public Health Practice?

The purpose of this training is to offer tribal and urban Indian public health departments an approach to develop their own health framework tailored to the issues, contexts, and culture(s) represented in their community. The training provides key definitions, opportunities to apply the content, and examples of Indigenous social determinants of health for a variety of health outcomes. Attendees will learn about and have an opportunity to use the tools to identify and describe Indigenous social determinants of health. This training offers attendees the opportunity to participate in a forum for discussing long-term applications within tribal and urban Indian public health teams, with the aim of replicating this strategy within and across their own communities.

Overall Training Objectives:

At this end of this training, attendees will be able to:

- Describe Indigenous concepts of healing, health, and wellness and how they relate to Indigenous Social Determinants of Health (ISDOH).
- Describe the CDC Social Determinants of Health (SDOH) domains and applications within Indigenous populations.
- Identify and define ISDOH that are distinct from those identified within other SDOH frameworks.
- Describe structural and systemic determinants of health specific to Indigenous communities.
- Provide public health tools and exercises to identify and describe ISDOH (i.e., root cause analysis, talk-story, visual), as well as to plan for measurement and development of health indicators that align with Indigenous community health goals.

ISDOH Training Modules:

The ISDOH training includes six modules designed to offer tribal and urban Indian public health practitioners with the essential practice and content necessary to map out their own Indigenous Social Determinants of Health framework. The modules use interactive and engaging activities and vignettes to develop an understanding of ISDOH at the individual, family, and community levels to consider connections to health and well-being.

The first module: Our Stories, Our Journeys focuses on exploring, with community partners, the important aspects of the tribal or urban Indian community that impact health and well-being at the individual, family, and community levels.

The second module: Social Determinants of Health provides attendees with a series of exercises to explore and define SDOH and examine how these factors contribute to AIAN health.

The third module: Indigenous Social Determinants of Health supports an examination of Indigenous-specific social determinants of health in AIAN communities. It also provides examples of how to examine health outcomes and behaviors from an ISDOH perspective to best support individual and community health equity.

The fourth module: Structural Determinants of Health provides attendees with an opportunity to examine health outcomes and the intersection with ISDOH from the community / population level. This is to support a systems approach to understanding and mapping how tribal governments and urban Indian institutes and organizations can organize a support system community wide to improve health outcomes.

The fifth module: Systemic Determinants of Health provides attendees the opportunity to consider the impact of systemic inequities such as discrimination on access and use of health services. Asserting rights to access and use of health services is discussed through tribal sovereignty and governance. The activity to support understanding of the concept is called “wayfinding.”

The sixth module: Training Application examines how the SDOH and ISDOH may be related to one another and offers a process for identifying those factors that are priorities for departmental intervention and programming.

How Should the Training Be Implemented?

Identifying a team lead who works across multiple programs within and outside the local tribal or urban Indian health department or related organization will ensure continuity and completion of the ongoing effort. This training may be broken up into separate modules, spaced out over a month or a year, depending on the needs of the given community. The next step is to identify key program leads, such as community health workers, or cross-sector teams from multiple programs / departments who work on a particular health outcome or issue. Developing a core group who already work together can help examine the health issues involved from a holistic, comprehensive perspective.

Delivery:

- Facilitator (team lead or contractor)
- 3–4 hours per module
- Virtual or in person

Materials:

- Training guide (this document)
- PowerPoints for each Module
- Facilitation Guide (detailed with script & materials needed)
- Worksheets: Activities, vignettes / stories, and discussion questions

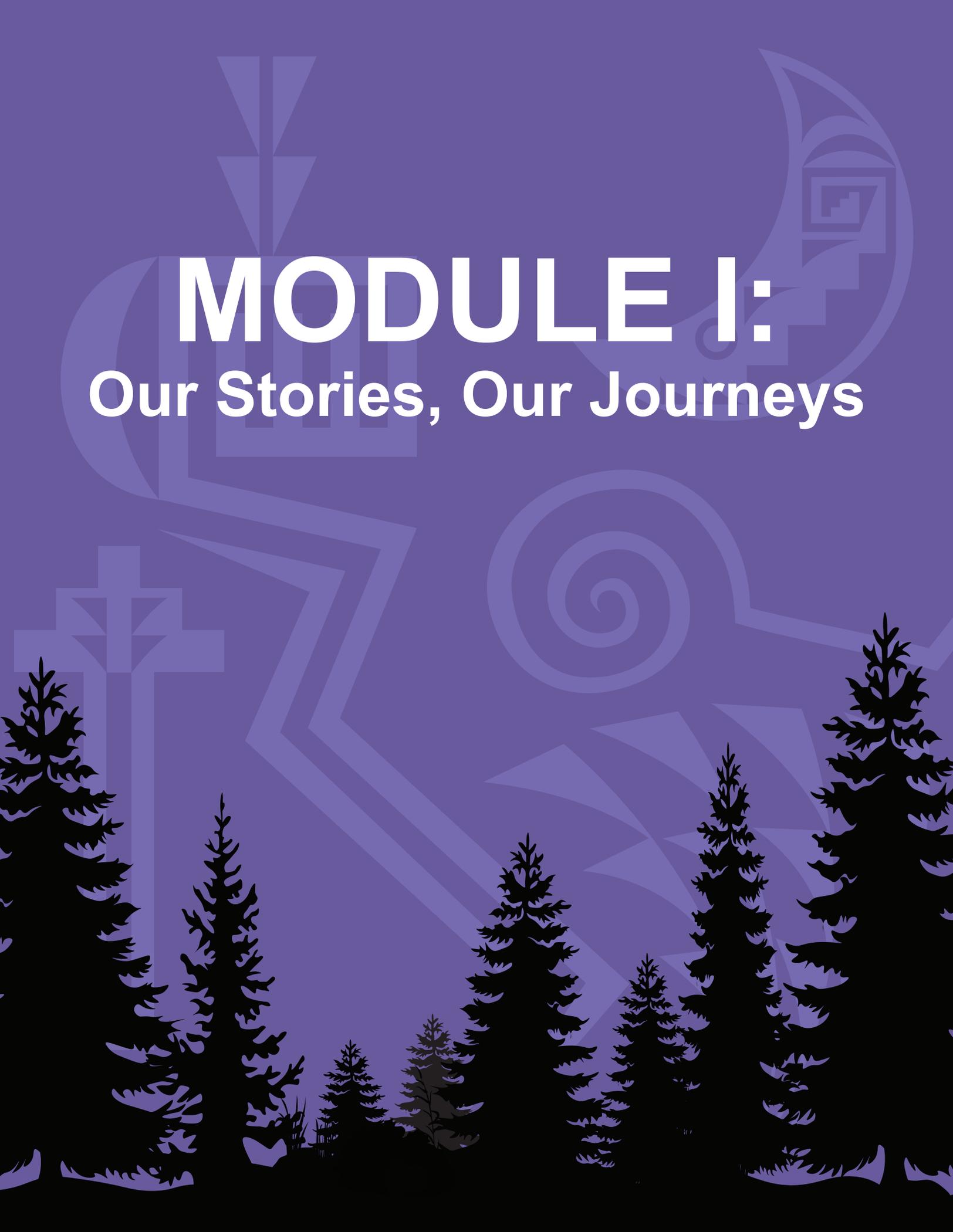
About This Training Guide

This training guide includes six training modules, each of which align with the overall learning objectives for the resource. Each module contains a brief description of the module (i.e., purpose and learning objectives), content material, activity, resources / literature, and vignettes. The stories/ vignettes are central to understanding how these selected topic areas / modules are connected to bring an understanding of how to identify, describe, and apply ISDOH in tribal public health work or practice.

Bibliography

- American Indian and Alaska Native People: A scoping review to inform future research and policy needs. *Advances in Nutrition*, 13(5), 1566–1583. <https://doi.org/10.1093/advances/nmac008>
- Archibald, J. (2007). An Indigenous Storywork Methodology. In J. G. Knowles & A. L. Cole. (Eds.) *Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples, and Issues*. (pp. 371-386). SAGE Publications. <http://dx.doi.org/10.4135/9781452226545.n31>
- Archuleta, M. (2019). Storywork toolkit. Retrieved August 13, 2023, from https://www.ihs.gov/sites/dccs/themes/responsive2017/display_objects/documents/nccs2019/storyworktoolkit.pdf
- Braveman, P., Egerter, S., & Williams, D. R. (2011). The social determinants of health: coming to age. *Annual Review of Public Health*, 32: 381-98
- Carroll, S. R., Suina, M., Jäger, M. B., Black, J., Cornell, S., Gonzales, A. A., Jorgensen, M., Palman-ter-Holder, N. L., De La Rosa, J. S., & Teufel-Shone, N. I. (2022). Reclaiming Indigenous Health in the US: Moving beyond the Social Determinants of Health. *International Journal of Environmental Research and Public Health*, 19(12), 7495. <https://doi.org/10.3390/ijerph19127495>
- Centers for Disease Control and Prevention. (2022-a, December 8). Why is Addressing Social Determinants of Health Important for CDC and Public Health? Retrieved August 31, 2023, from <https://www.cdc.gov/about/sdoh/addressing-sdoh.html#:~:text=SDOH%20have%20been%20shown%20to,higher%20risk%20of%20premature%20death.>
- Centers for Disease Control and Prevention. (2022-b, December 8). Social Determinants of Health at CDC. Retrieved August 13, 2023, from <https://www.cdc.gov/about/sdoh/index.html>
- DeBruyn, L., Fullerton, L., Satterfield, D., & Frank, M. (2020). Integrating culture and history to promote health and help prevent Type 2 diabetes in American Indian/Alaska Native communities: Traditional foods have become a way to talk about health. *Preventing Chronic Disease*, 17, E12. <https://doi.org/10.5888/pcd17.190213>
- Eakins, D., Gaffney, A., Marum, C., Wangmo, T., Parker, M., & Margarati, M. (Feb. 2023) *Indigenous Evaluation Toolkit for Tribal public health programs: An actionable guide for organizations serving American Indians/Alaska Native communities through opioid prevention programming*. 7D-Indigenous Evaluation-Toolkit-For-Prevention-Programs.pdf
- Hathaway, E. D. (2020) American Indian and Alaska Native People: Social vulnerability and COVID-19. *Journal of Rural Health*. 37(1), 256-259.
- Hutchinson, R. N., & Shin, S. (2014). Systematic review of health disparities for cardiovascular diseases and associated factors among American Indian and Alaska Native populations. *PloS one*, 9(1), e80973.
- Huyser, K. R., Yellow Horse, A. J., Collins, K. A., Fischer, J., Jessome, M. G., Ronayne, E. T., Lin, J. C., Derkson, J., & Johnson-Jennings, M. (2022). Understanding the associations among social vulnerabilities, Indigenous Peoples, and COVID-19 cases within Canadian health regions. *International Journal of Environmental Research and Public Health*, 19(19), 12409. <https://doi.org/10.3390/ijerph191912409>

- Johnson-Jennings, M., Billiot, S., & Walters, K. (2020). Returning to our roots: Tribal health and wellness through land-based healing. *Genealogy (Basel)*, 4(3), 91. <https://doi.org/10.3390/genealogy4030091>
- Kruse, G., Lopez-Carmen, V. A., Jensen, A., Hardie, L., & Sequist, T. D. (2022). The Indian Health Service and American Indian/Alaska Native health outcomes. *Annual Review of public health*, 43, 559-576.
- Lines, L.-A., & Jardine, C. G. (2019). Connection to the land as a youth-identified social determinant of Indigenous Peoples' health. *BMC Public Health*, 19(1), 176–176. <https://doi.org/10.1186/s12889-018-6383-8>
- Marmot, M., Friel, S., Bell, R., Houweling, T. A., & Taylor, S. (2008). Closing the gap in a generation: health equity through action on the social determinants of health. *The Lancet*, 372(9650), 1661–1669. [https://doi.org/10.1016/S0140-6736\(08\)61690-6](https://doi.org/10.1016/S0140-6736(08)61690-6)
- Mitchell, F. M. (2012). Reframing diabetes in American Indian communities: A social determinants of health perspective. *Health & Social Work*, 37(2), 71–79. <https://doi.org/10.1093/hsw/hls013>
- Nikolaus, C. J., Johnson, S., Benally, T., Maudrie, T., Henderson, A., Nelson, K., Lane, T., Segrest, V., Ferguson, G. L., Buchwald, D., Blue Bird Jernigan, V., & Sinclair, K. (2022). Food insecurity among
- Solar, O., & Irwin, A. (2010). A conceptual framework for action on the SDOH. Geneva, Switzerland: World Health Organization. <https://www.who.int/publications/i/item/9789241500852>
- Warne, D., & Wescott, S. (2019). Social determinants of American Indian nutritional health. *Current Developments in Nutrition*, 3(Supplement 2), 12–18. <https://doi.org/10.1093/cdn/nzz054>



MODULE I:

Our Stories, Our Journeys

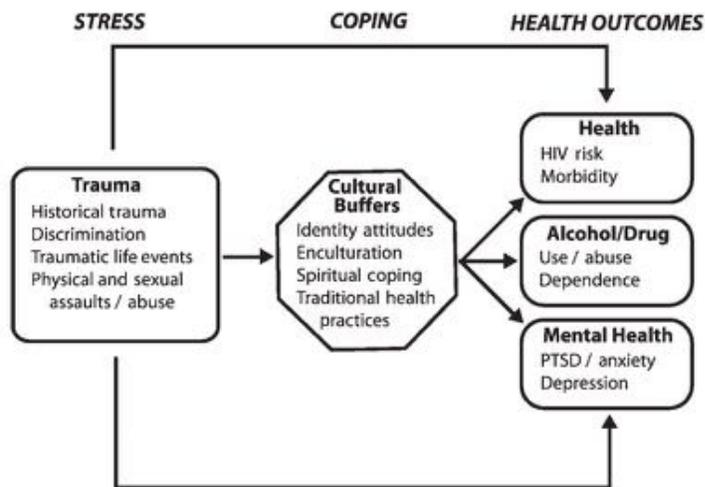
Purpose:

The purpose of this module is to explore how American Indian and Alaska Native (AIAN) communities understand health and well-being, including some of the important community practices that impact health at the individual and community level. **The Indigenist Stress Coping Model** (Walters & Simoni, 2002), Figure 1 below, provides a theoretical basis for this process.

Figure 1: The Indigenist Stress Coping Model

Source: (Walters & Simoni, 2002)

As the first model to include AIAN cultural connectedness as a buffer for major stressors, the Indigenist Stress Coping Model provides an approach to explore how Indigenous knowledge and ways of knowing inform AIAN health. The activities included in this module will help identify: 1) AIAN ways of knowing; 2) ways in which communities approach and understand healing, health, and well-being; and 3) how to identify connections among public health, social determinants of health (SDOH), and Indigenous social determinants of health (ISDOH).



Note. PTSD = posttraumatic stress disorder.

FIGURE 1—Indigenist model of trauma, coping, and health outcomes for American Indian women.

The Indigenist Stress Coping Model describes the stress and coping processes. Arrows are used to articulate the relationship between stress and health outcomes, and the interplay of cultural buffers.

Learning Objectives:

At this end of this module, attendees will be able to:

- Use the River of Life activity to map important aspects of community health and well-being.
- Interpret community input to better understand community-specific understandings of health and the behaviors and practices common across the community that are related to health and well-ness.
- Connect the key SDOH and ISDOH to important health outcomes and understandings of community wellbeing.

Background:

Our Stories, Our Journeys is a two-part workshop, in which individuals are invited to create a visual aid to describe their life journeys and then share their experiences in a community group setting. In **Part I** of the activity, we employ an adapted **River of Life** activity (Parker et al., 2020), where individuals are asked to reflect on their life journeys using the metaphor of a river.

In **Part II**, attendees are asked to share their River of Life drawings and discuss common themes, along with community-specific teachings, beliefs, and/or practices that affect health and wellness.

Activity:**Part I: Use the River of Life exercise to reflect on personal experiences and underlying morals and values that you bring to your health and well-being.**

The **Our Stories, Our Journeys** activity offers an opportunity to reflect and examine AIAN worldviews as they relate to health and wellness through examining lived experiences. Approaches to public health often exclude Indigenous ways of knowing, being, and doing. Operating from Western perspectives and neglecting to consider the unique histories and cultures of Indigenous and tribal communities necessarily limits understandings of health and wellness to a narrow perspective. As Indigenous scholars, public health professionals, and tribal leaders have stressed the urgent need for culturally grounded approaches and practices and have begun to integrate Indigenous worldviews, values, and systems of science and knowledge in their work, it has become possible for tribal and urban Indian public health practitioners to do the same. A central tenet of Indigenous methodologies is understanding positionality in relation to community work, and centering community values, lived experiences, and traditional knowledge. Values within an Indigenous worldview is defined as collective – cultural lessons and teachings that inform thoughts and actions.

Attendees should be encouraged to start with their own experiences, and then be ready to share during the second part of the exercise. Remember to set group ground rules to ensure that attendees are comfortable sharing and feel they will be heard and respected. These may include turning off phones or setting them to the silent setting, refraining from judgement or comments, holding questions until the end of the exercise, and keeping whatever is shared in the exercise private. It may be helpful to brainstorm other rules with attendees prior to beginning the exercise and write them up on the board or a place attendees can refer to them easily.

Instructions:

Step 1: Using a blank sheet of paper, draw a river winding from the lower left corner of the page to the upper right corner of the page. Label the left “Beginning” and the right “Present.”

Step 2: Be creative when drawing your river. Let the shape and features of the river represent your own unique life experience. Where do you find yourself presently, with regard to your health? What were some important moments that led you to where you are today?

Step 3: Label your river with symbols (islands, bridges, waterfalls) to represent major life events. Consider the places you have lived, the relationships that have been most impactful to you, and external factors that have helped shape the course of your journey.

Step 4: Along the side of the river, consider adding moments that were difficult or affirming for your life. Think about values, community context, and connection to people, land, and the environment.

Reflection:

- What values do you hold? How have they formed over your journey?
- How do your values influence choices you make about your health and/or wellness?
- What relationships have been instrumental to your life journey?
- How can you apply or center your values in your profession?
- How would you relate what you see in your river to the work you do with communities?

Part II: Sharing our Stories to Identify Common Themes Concerning Health and Wellness

The next step is to share the River of Life drawings with all attendees. This can be done in a variety of ways depending on the available space, time, and comfort. Some groups prefer a gallery walk, where the pictures are posted around the room and attendees may examine them individually. Other groups may prefer to have one person present at a time, with an explanation of the imagery used in their river drawings to help with the interpretation. Other groups may like to use a combination of approaches. There is no right or wrong way to share out. Use what works best for the group. The main goal is to be able to examine common themes and trends across the drawings. If possible, it may be useful to post all the pictures on a wall or website. Then use different colored yarn or stickers to indicate common themes across the River of Life diagrams from each attendee.

The following discussion questions will be helpful in analyzing the images drawn for the Rivers of Life activity and preparing for the next module:

- What are some of the common values that are noted in most of the rivers shared? Are any of these values specific to the local tribe(s) or urban Indian community?
- What are some of the ways these values can influence people's health? Are there any common trends that seem important to the local tribal or urban Indian community?
- How are relationships portrayed across the attendees' rivers? How are relationships related to health and well-being for these attendees?
- What values are important to the work we do with our community? Are there values that attendees hold in common? What are some of the differences among attendees?
- In what ways can these differences or common values be important in the public health work that is needed in this tribal or urban Indian community?

Summary

This module uses the **River of Life** activity as a tool to reflect on personal experiences and allows opportunity for introspection to identify and examine values and beliefs that inform your worldview. It also holds space for reflection that is important in framing the public health praxis work needed to address AIAN health disparities and inequities. The use of metaphor aligns with a storytelling approach and allows individual tribal and urban Indian public health practitioners to reflect on their own values, beliefs, and perceptions that inform how individuals view the same health outcome or situation very differently (Brown & Duenas, 2019). The second step also provides an opportunity for reflection, this time across the team as the River of Life drawings are shared. This second step allows teams an opportunity to understand and communicate their worldviews with the aim of exploring how a problem is perceived and the array of options in how to address it. Module II provides an orientation to SDOH concepts and domains. The activities in Module I will assist attendees as they consider the applicability of the CDC and WHO frameworks in the context of tribal communities.

Bibliography:

Brown, M. & Duenas, A. (2019). A medical science educator's guide to selecting a research paradigm: Building a basis for better research. *Medical Science Educator*, 30, 545-553

Parker, M., Wallerstein, N., Duran, B., Magarati, M., Burgess, E., Sanchez-Youngman, S., Boursaw, B., Heffernan, A., Garoutte, J., & Koegel, P. (2020). Engage for equity: Development of community-based participatory research tools. *Health Education & Behavior*, 47(3), 359–371. <https://doi.org/10.1177/1090198120921188>

Walters, K. L., & Simoni, J. M. (2002). Reconceptualizing Native women's health: An "Indigenist" stress-coping model. *American Journal of Public Health* (1971), 92(4), 520–524. <https://doi.org/10.2105/AJPH.92.4.520>



MODULE II:

Social Determinants of Health



Purpose:

This module explores the background, definitions, and application of the social determinants of health (SDOH) in public health practice to achieve the goals of social and health equity. The **World Health Organization (WHO)** framework informed the **Centers for Disease Control and Prevention (CDC)** definition of SDOH along with the indicators and measures for use within the U.S. public health system (Solar & Irwin, 2010; Healthy People 2023, 2020; CDC, 2022-b). This module provides activities and discussion questions to examine the SDOH and consider their applicability within tribal and urban Indian communities.

Learning Objectives:

At the end of this module attendees will be able to:

- Define Social Determinants of Health and discuss the importance to public health practice.
- Describe the CDC framework for Social Determinants of Health using examples.
- Apply the Social Determinants of Health framework to tribal and urban Indian communities.

Overview:

In the previous module, **Our Stories, Our Journey**, we reflected on the importance of AIAN ways of knowing and being, how these ways inform community healing, health, and well-being, and made connections between community wellness and public health. We began to map out how some of these important behaviors and contexts might be related to health and well-being.

This module on **Social Determinants of Health** begins the process of matching these behaviors and contexts to the SDOH definitions and examples. This process will support developing a shared language and understanding of SDOH for applications within and across specific AIAN communities. This module is written for tribal and urban Indian communities with attention to how they can map out the individual, family, community, and environmental settings in which community members can heal, be healthy and well.



What are the Social Determinants of Health (SDOH)?

The **Social Determinants of Health** is a term used globally to describe the “wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies, racism, climate change, and political systems” (CDC, 2022-b; Adelman). This definition recognizes the impact SDOH has on achieving equity, which has become central to public health practice.

Health equity refers to achieving a fair, anti-racist, or discriminatory distribution of and access to power, resources, and information for all peoples, individuals, communities, and populations to achieve their highest level of health (Braveman & Gruskin, 2003; Willen et al., 2021). The SDOH framework helps explain the conditions that can elevate or exacerbate a community’s or population’s access to and use of information and resources for health and wellness.

Encouraging health and wellness among AIAN communities includes community-centered, specific, and inclusive approaches to understanding health and well-being. The pathway to healing, health and wellness has been shaped by current and historic factors, community and cultural understandings of health and wellness, and diverse AIAN community contexts, requiring a diversity of tools to understand and take action to change SDOH.

The five domains that the CDC has identified through research reflect this understanding of the levels and relationships among determinants.

CDC Domains

The CDC SDOH webpage includes five SDOH domains. The following provides a brief definition of each domain, along with the state of the evidence for each domain among AIAN populations:

Economic Status: This SDOH includes several individual characteristics that relate to financial resources such as income level and employment status. Poverty level, food security, and housing stability also fall within this category (Healthy People 2030, 2020). While limited studies have been conducted among AIAN populations, trends tend to mirror the relationship between economic status and health status seen in other racial and ethnic populations in the U.S., though the size of the effect appears to be larger for the AIAN population compared to other races. For example, among AIAN elders, one study found that native elders at low- or middle-income levels who participated in the study were 1.3 times more likely to report having a chronic disease (Adamsen et al., 2018).

Education Status: Higher education status is related to improved health and well-being. High school graduation, receipt of higher education, educational attainment, language, literacy, and early childhood education and development have been shown to be related to health status. Limited research has been conducted within AIAN communities. Yet among AIAN populations, educational outcomes are significantly poorer as compared to white Americans, with only 0.6 percent of enrolled postsecondary students being AIAN in Fall 2020 and only 15.4 percent of AIANs aged 25 and older had obtained a bachelor’s degree or higher as compared to 37 percent of all races (Postsecondary National Policy Institute, 2023). From 2010 to 2021, AIAN enrollment in higher education decreased 37 percent. Moreover, one study has demonstrated that living in areas with low educational attainment is related to a greater likelihood of being obese over the age of 50 among AIANs in fifteen service areas in an Indian Health Service project (Goins et al., 2022). More research is needed to confirm and define the relationship between education level and health status.

Health Care Access and Quality: Being able to meaningfully access the health care needed to adequately address health issues, along with access to primary care services, and health insurance coverage are related to health status. Prior to the Patient Protection and Affordable Care Act of 2010, AIAN individuals who did not have health insurance through their provider relied on the Indian Health Service (IHS), emergency room care, or simply went without care as most were not enrolled in state-federal Medicaid programs. A study of the 1997 and 1999 National Survey of America's Families data found that among low-income AIAN families, the rate accessing employer provided insurance was half that of white Americans and nearly a quarter only had IHS coverage (Zuckerman et al., 2004). Low-income AIAN people were more likely to be dissatisfied with the quality of health care they received and were less likely to feel confident they would be able to access health care if they needed it. Among those who had health insurance coverage, utilization rates were not significantly different from those of white Americans, though AIANs were more likely to be dissatisfied with the quality of care received. Limited research has been conducted since passage of the Affordable Care Act, though qualitative studies suggest AIAN elders still find access to care problematic (Jaramillo & Willing, 2021). Moreover, in a study of 2018 National Financial Capability Study survey data confirmed that AIANs were more likely to have medical debt and defer prescriptions because of cost (Hubbard & Chen, 2022). More research is needed to improve understanding of how IHS eligibility, health insurance and access to care are related to health outcomes among AIAN people.

Neighborhood and Built Environment: Neighborhood and the built environment (i.e., characteristics such as housing quality, access to transportation, access to clean air and water, healthy food access, and exposure to violence and crime) have been shown to be related to individual health outcomes. More research has included AIAN people in this area, with studies of neighborhood characteristics related to diabetes risk (Jaing et al., 2018), risk of COVID-19 infection (Rodriguez-Lonebear et al., 2020), and access to healthy foods (Chodur et al., 2016).

Social and Community Environments: These SDOH could include community cohesion, civic participation, discrimination, racism and xenophobia, cultural norms, interpersonal violence, workplace conditions, and incarceration. Some research has examined the effects of discrimination on AIANs, with over one third of AIANs reporting experiencing violence or being threatened or harassed, high levels of discrimination experienced in health care settings, judicial and law enforcement encounters, and employment contexts (Fingling et al., 2019). In addition, AIANs who lived in areas with higher proportion of AIANs per capita had higher odds of reporting systemic discrimination. More research in this area is needed to better understand impacts on health and wellbeing.



While the SDOH may not include all the important conditions that affect AIAN health, the overall framework provides a starting point to begin to map the conditions of particular importance to a given tribal or urban Indian community. The following section provides an exercise to identify and describe the relevant SDOH and how they impact community health and well-being.

Part 1: Identifying Social Determinants of Health

Identify and Describe the SDOH Important in Your Community

- Find a partner to work with.
- Take 10-15 minutes and review and discuss the CDC SDOH Five Domains: <https://health.gov/healthypeople/priority-areas/social-determinants-health>
 - o How do you define SDOH?
 - o Do you agree with the CDC domains?
 - o Would you add any areas?
- Consider Table 1, below, and review the SDOH domains. Work with your partner to complete the Table 1 “Factor” column using examples from Figure 2.
 - o What factors from the list in Figure 2 are important for your community?
 - o Are there other factors you would like to include?
 - o How do they play a role in the health status of your community?

Table 1: Domains, Factors, and Measures

SDOH Domains	Factors
Social and Community Context	
Access to Health and Healthcare	
Neighborhood and Environment	
Economic Stability	
Access to Education	

Figure 2: Social Determinants of Health Factors

Group of icons listing examples of social determinants of health factors. Examples include income, occupation, crime rates, mental health care access, playground and park access, transportation, family support, health insurance, literacy, access to medical care, discrimination, and healthy foods.



Part 2: Thinking Critically About Social Determinants of Health Using Vignettes.

The following vignette provides an opportunity to explore SDOH from within the context of a specific health outcome. Sometimes it is helpful for attendees to learn by example and by listening to stories to which they can relate. The following story frames a health care issue within the context of a tribal setting. Attendees should read the vignette, review the questions, and be ready to speak to the social determinants of health they observe. Facilitators can read the vignette aloud, and then provide time for attendees to answer each question individually, share with small groups of 2-4 attendees, and report out to the larger group. **Take home messages from this group discussion could include:**

1. A list of identified SDOH.
2. A figure or other description of how these SDOH may affect one another along with the health issues at hand for a given individual and family.
3. A figure or other description of how the tribal community could implement support for all tribal members to address the needs of patients diagnosed with diabetes.

Example 1: Mark lives in a rural community with his wife and two children. The town has a population of 4,000 residents and includes a grocery store, one gas station, a community clinic, and an elementary and high school. Mark's community is a tight-knit agricultural community. Recently, Mark has been diagnosed with type-2 diabetes. His doctor is a rotating doctor at the community clinic and only sees patients in Mark's community on Fridays. He has prescribed Mark a personal diet plan and medication to manage his blood glucose level.

Question 1: An SDOH perspective views health inequities as avoidable occurrences that are influenced by the social, economic, and political conditions in which people are born, live, learn, and grow. With this perspective, can you identify risk conditions that might have influenced Mark's recent diagnosis?

Question 2: A year has gone by, and Mark has been able to manage his diabetes and adopt a new healthy diet with regular exercise. However, more individuals have been diagnosed with diabetes in the community. Can you describe why an individual-based strategy like a prescribed diet is not sufficient to address the social conditions that are causing an increase in diabetes? With your team, draw a diagram of what social determinants could be shifted within this tribal setting to improve diabetes management. Draw another diagram of what social determinants could be shifted within this setting to prevent diabetes. How are the two diagrams the same? How are they different?

Summary

This module includes the background and definitions of social determinants of health as described by the CDC domains. These are the basis for public health work and practice to identify factors that are related to health outcomes. This module provides activities to support discussion about the SDOH and to practice identifying SDOH within the communities served. Module III will provide a definition of the Indigenous social determinants of health and ways to identify and describe them, and their impact on health and well-being within tribal and urban Indian communities.

Resources:

Episode 4 Bad Sugar: <https://unnaturalcauses.org/>



Bibliography:

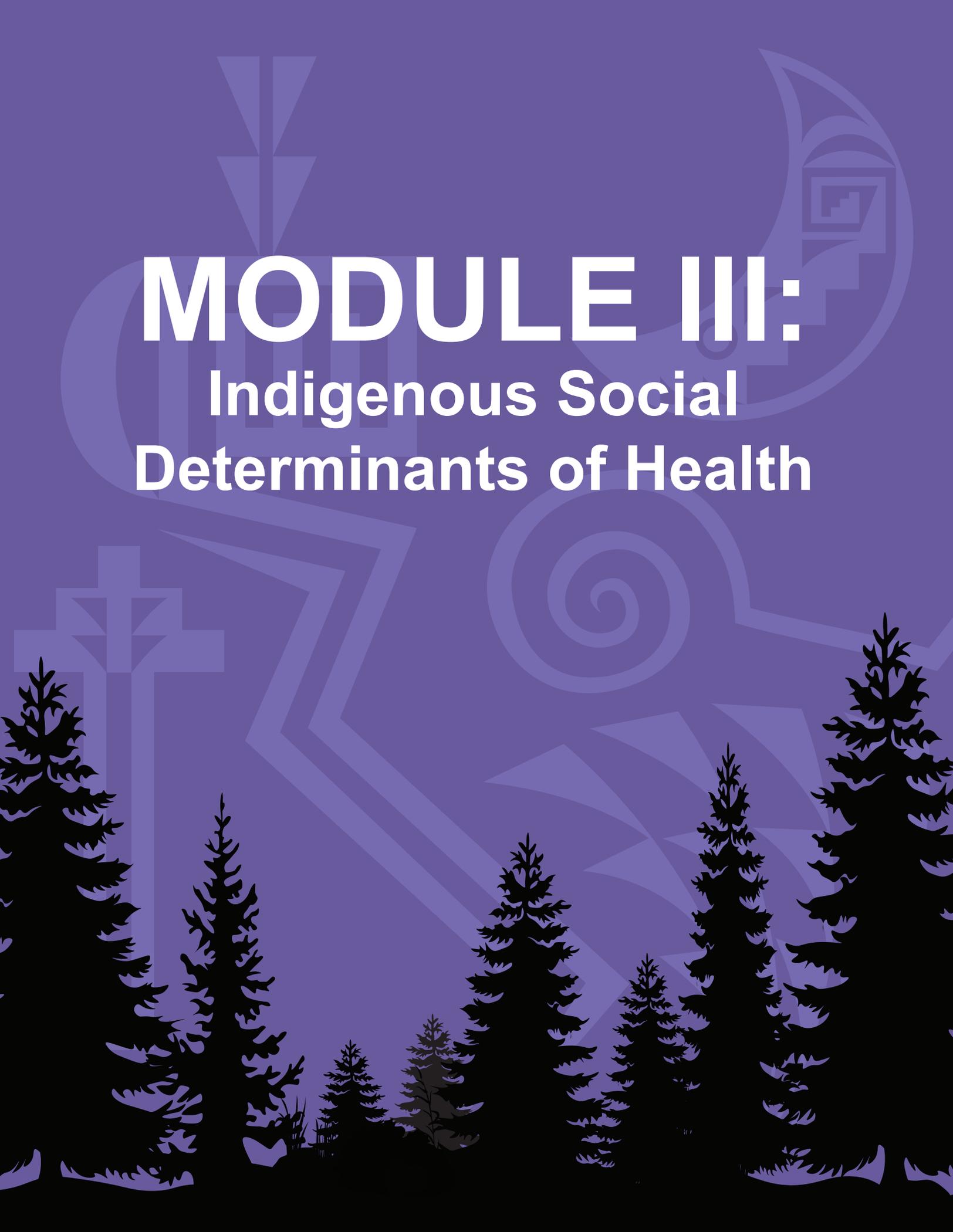
- Adamsen, C., Schroeder, S., LeMire, S., & Carter, P. (2018). Education, income, and employment and prevalence of chronic disease among American Indian/Alaska Native elders. *Preventing Chronic Disease*, 15, E37–E37. <https://doi.org/10.5888/pcd15.170387>
- Adelman L. (2007). Unnatural Causes: Is Inequality Making Us Sick? *Preventing Chronic Disease*, 15;4(4):A116. PMID: PMC2134831.
- Braveman P & Gruskin S. (2003). Defining equity in health. *J Epidemiol Community Health*, 57:254–8. doi: 10.1136/jech.57.4.254. <https://doi.org/10.1777>
- Centers for Disease Control and Prevention. (2022-b, December 8). Social Determinants of Health at CDC. Retrieved August 13, 2023, from <https://www.cdc.gov/about/sdoh/index.html>
- Chodur, G. M., Shen, Y., Kodish, S., Oddo, V. M., Antiporta, D. A., Jock, B., & Jones-Smith, J. C. (2016). Food environments around American Indian Reservations: A mixed methods study. *PLoS One*, 11(8), e0161132–e0161132. <https://doi.org/10.1371/journal.pone.0161132>
- Findling, M. G., Casey, L. S., Fryberg, S. A., Hafner, S., Blendon, R. J., Benson, J. M., Sayde, J. M., & Miller, C. (2019). Discrimination in the United States: Experiences of Native Americans. *Health Services Research*, 54(S2), 1431–1441. <https://doi.org/10.1111/1475-6773.13224>
- Goins, R. T., Conway, C., Reid, M., Jiang, L., Chang, J., Huyser, K. R., Brega, A. G., Steiner, J. F., Fyfe-Johnson, A. L., Johnson-Jennings, M., Hiratsuka, V., Manson, S. M., & O’Connell, J. (2022). Social determinants of obesity in American Indian and Alaska Native peoples aged ≥ 50 years. *Public Health Nutrition*, 25(8), 2064–2073. <https://doi.org/10.1017/S1368980022000945>
- Healthy People 2030. (2020) U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved August 31, 2023, from <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>
- Hubbard, S., & Chen, P. M. (2022). Falling Short: Examining medical debt and cost avoidance in American Indian and Alaska Native households. *Journal of Health Care for the Poor and Underserved*, 33(4), 1757–1771. <https://doi.org/10.1353/hpu.2022.0136>
- Jaramillo, E. T., & Willging, C. E. (2021). Producing insecurity: Healthcare access, health insurance, and wellbeing among American Indian elders. *Social Science & Medicine* (1982), 268, 113384–113384. <https://doi.org/10.1016/j.socscimed.2020.113384>
- Jiang, L., Chang, J., Beals, J., Bullock, A., & Manson, S. M. (2018). Neighborhood characteristics and lifestyle intervention outcomes: Results from the Special Diabetes Program for Indians. *Preventive Medicine*, 111, 216–224. <https://doi.org/10.1016/j.ypmed.2018.03.009>
- Postsecondary National Policy Institute. (2023). Native American Students in Higher Education Fact-sheet. Retrieved August 16, 2023, from <https://pnpi.org/factsheets/native-american-students/>

Rodriguez-Lonebear, D., Barceló, N. E., Akee, R., & Carroll, S. R. (2020). American Indian Reservations and COVID-19: Correlates of early infection rates in the pandemic. *Journal of Public Health Management and Practice*, 26(4), 371–377. <https://doi.org/10.1097/PHH.0000000000001206>

Solar, O., & Irwin, A. (2010). A conceptual framework for action on the SDOH. Geneva, Switzerland: World Health Organization. <https://www.who.int/publications/i/item/9789241500852>

Willen, S.S., Walsh C.C., & Williamson A.F. (2021). Visualizing health equity: Qualitative perspectives on the value and limits of equity images. *Health Education & Behavior*;48(5):595-603. doi:10.1177/1090198121994520

Zuckerman, S., Haley, J., Roubideaux, Y., & Lillie-Blanton, M. (2004). Health service access, use, and insurance coverage among American Indians/Alaska Natives and Whites: What role does the Indian Health Service play? *American Journal of Public Health* (1971), 94(1), 53–59. <https://doi.org/10.2105/AJPH.94.1.53>



MODULE III:

Indigenous Social Determinants of Health

Purpose:

This module will guide health practitioners and professionals in identifying and defining Indigenous social determinants of health (ISDOH). The examples provide ISDOH that are tribally specific, and the activities provide attendees with an approach to explore how and whether these ISDOH are relevant in their own community.

Learning Objectives:

At this end of this module, attendees will be able to:

- Define the term “**Indigenous Social Determinants of Health**” and describe how ISDOH help identify, define, and study those SDOH that are unique to AIAN communities.
- Recognize that the ISDOH framework can address unique cultural and contextual needs and effects on health and wellness for AIAN communities.
- Connect the ISDOH factors and specific AIAN communities.
- Describe how to create programs and policies inclusive of the ISDOH framework.

Overview

The previous module provided a definition of social determinants of health along with examples and how they are important in understanding and supporting improvements in tribal health, behavioral health, and other systems. This module focuses on Indigenous Social Determinants of Health (ISDOH), which include those SDOH that are unique to AIAN communities.



What are Indigenous Social Determinants of Health?

Indigenous Social Determinants of Health are the conditions specific and unique to Indigenous communities that impact health and wellbeing (Carroll et al., 2022). **These conditions can include:**

- **Indigenous Knowledge**
 - o Ways to process, understand, teach, and take collective actions (Gone 2019).
 - o Ways to be in community, including but not limited to benefiting from prayer, mutual aid, togetherness, cultural connectedness, and other shared experiences that support wellness (Straits et al., 2019).
- **Language and Identity**
 - o Speaking Indigenous languages with other speakers, passing on and practicing cultural teachings, engaging in practices that support collective identity (Gonzalez et al., 2021).
 - o Revitalizing and growing Indigenous language use, reclaiming traditional knowledge, beliefs, and practices, finding ways to support community in maintaining and growing cultural connection opportunities (Jacob et al., 2019).
- **Land and Kinship**
 - o Connection to the geography of a people and to one another (Greenwood & Lindsay, 2019).
 - o Recognizing and reaffirming that Indigenous peoples are rooted in traditional understandings of specific places, be it land, water, or ice-based locations. This group of determinants includes traditional stories, Indigenous language names for locations and landmarks, and traditional ways of being with and respecting the land and environment (Hodge et al., 2022).
- **Sovereignty**
 - o Sovereign rights of tribal governments to ensure healing, health, welfare, and safety of their people and ancestral lands (Mays, 2022).
 - o Governance practices, both current and traditional, that support wellness for individuals, families, communities, and the environment around us (Rasmus et al., 2020).
- **Structural and Systemic Factors**
 - o Access to resources and consideration of various factors such as historical trauma, exposure to racial discrimination and microaggressions based on skin color and/or tribal membership (Lewis et al., 2023).

This list is not exhaustive and there may be other ISDOH that are important for some communities and not as much for others. In addition, there are likely SDOH that are not Indigenous per se, meaning other communities also are affected by them, and yet how they function within Indigenous communities may be important to understand as they play out in unique ways. The ISDOH listed above include references to articles in the research literature where researchers and communities have explored the effects of these factors in certain communities. There is more research to be done to see how these factors may affect tribal communities in different ways, yet they offer examples of ISDOH that may be helpful for tribal public health practitioners as they begin to identify and address health outcomes from an ISDOH framework.

Part 1. Explore and Apply Indigenous Social Determinants of Health

With your team and/or community members, draw a map or diagram of the ISDOH for your community. Use the list above as a guide for your discussion and mapping process and consider if there are additional ISDOH that need to be included in your map. When you complete your map, discuss the following questions:

- How would you describe these ISDOH? How would you define them? What makes them particular to your Indigenous community?
- What trends do you see?
- What stands out to you?
- What issues can be addressed by your team or program? By the tribal community overall? By the tribal government / community leadership?
- What strategies could be used to improve one ISDOH within your community? How could you and your team measure the impact of this improvement? How could you examine its impact on health and wellness?

Applying Indigenous Social Determinants to Community Health.

Addressing and supporting ISDOH at the community level includes identifying and mapping ISDOH among community members. This exercise provides an initial step to gather information about ISDOH specific to a given community for the purpose of defining, understanding, mapping, and applying ISDOH to community health practice.

AIAN communities have been in contact with Europeans for over 500 years. The forces of colonization have had an indelible impact on AIAN populations, cultures, languages, and access to traditional lands and resources. While these forces have had a disproportionate impact on AIAN communities, our Indigenous understandings, practices, and beliefs have been retained through hard fought efforts to maintain languages, preserve cultural and community connections, sustain relationships and supports, and protect and sustain our connections to our lands and other living beings that are part of our shared environments. While there are many shared similarities among tribal nations, we are also culturally, legally, and linguistically distinct, with unique contexts and histories. The following exercise honors the diversity both within and across tribal nations and urban Indian communities. It offers an opportunity for community members and public health practitioners the space to reflect on the meaning of health and wellness from their unique cultural lenses.

Approach

Photovoice is an approach that community members can participate in by using their phone camera and/or stored photos on their devices. The purpose of the photos is to depict specific ISDOH factors in the community. For example, attendees could take a photo of what health means to them, and from these photos, attendees could examine the diversity and subjectivity of what health means to each attendee.

Most individuals will use mobile devices. However, accessibility should be considered within this activity. Therefore, this activity can be flexible. Individuals can use mobile devices to take photos, use newspaper images or headlines, or bring in printed photographs.

Activity – Using Photovoice to Explore Indigenous Social Determinants of Health.

Time = up to 60 minutes

- **Step 1:** Ask attendees to use their personal devices for this activity (e.g., phones, tablets, etc.), or whatever materials are available (e.g., pencil, paper, crayons, markers, stickers, construction paper, etc.)
- **Step 2:** Ask attendees to develop questions related to the topic of interest (e.g., health and wellness, resources, community, language, etc.).
 - o For example, for a focus on reducing the risk of diabetes:
 - How is diabetes diagnosed?
 - How does our community understand what is needed to treat diabetes?
 - What community resources are available to prevent or reduce the risk of diabetes?
 - What does diabetes look like for our community?
 - What does diabetes prevention look like for our community?
 - What Indigenous language terms are used to describe diabetes?
 - What cultural practices are used to treat or prevent diabetes?
 - What traditional activities were in place before contact that might have reduced the risk for diabetes among our ancestors?
- **Step 3:** Allocate ample time for attendees to take pictures that help them answer the question(s) through the photos or images they select.
- **Step 4:** If comfortable, ask attendees to share the photos with facilitators and add to the group slideshow.
- **Step 5:** Hold a group share out, including the slideshow with various photos from attendees or other images. Ask attendees to share how their photos relate to the various questions and help connect to the social determinants of health specific to their Indigenous community.
 - o **Discussion Questions could include:**
 - What strategies might be unique to certain groups in the community?
 - How might this be different for other local tribes?
 - What are some ways these findings could be applied to tribal public health programming?
- **Step 6:** If time permits, open this activity up for discussion and ask attendees how this activity went for them and/or any feedback for next time.

Part 2: Thinking Critically About Indigenous Social Determinants of Health Using Vignettes.

The following vignette provides an opportunity to explore ISDOH from another perspective and within the context of a specific health outcome. Sometimes it is helpful for attendees to learn by example and by listening to stories that they can relate to. The following story frames a health care issue within the context of a tribal setting. Attendees should read the vignette, review the questions, and be ready to speak to the ISDOH they observe. Facilitators can read the vignette aloud, and then provide time for attendees to answer each question individually, share with small groups of 2-4 attendees, and report out to the larger group. **Take home messages from this group discussion could include:**

1. A list of identified ISDOH.
2. A figure or other description of how these ISDOH may affect one another along with the health issues at hand for a given individual and family.
3. A figure or other description of how the tribal community could implement support for all tribal members to address the needs of patients diagnosed with diabetes.

Vignette Exercise

Example 1: In addition to his care plan from his physician, Mark decides to seek traditional advice from a traditional healer in his community. The traditional healer is part of the health services program offered at the tribal clinic to patients who have been diagnosed with diabetes. The traditional healer begins with a prayer and washes Mark and his wife off using smudging. Then he asks Mark about his day and his family. Mark shares that he has a stressful job, which often requires him to work 60-80 hours per week. His team is short staffed, and they have multiple grants due at the same time. He also shares that his wife takes care of his and her elderly parents, who live in their own homes across the reservation from Mark's family's home. She and Mark do not have a lot of time to cook, or time with their children. They also have limited time for selfcare, or to participate in traditional activities.

Question 1: Thinking about Mark's situation from an ISDOH perspective includes mapping out the constellation of possibilities of support and healing available within the tribal community. By doing so, individuals, families, and communities can plan to integrate these supports into their daily lives, the time they spend with loved ones, and tribal programs. With this perspective, can you identify some traditional supports that the traditional healer might recommend?

Question 2: A year has gone by, and Mark has been able to reverse his diabetes diagnoses by reducing his stress, regular prayer, and exercise through traditional activities. In addition, his family, including his and his wife's parents, also take part in the traditional activities of harvesting traditional plants, hunting, dancing, and observing ceremonial times. However, fewer and fewer families speak the tribal language and participate in cultural activities. Describe some possible approaches the tribe could take to support tribal members in participating in traditional activities.



Summary

This module examined the SDOH that are specific to Indigenous communities. These ISDOH include but are not limited to (1) Indigenous Knowledge, (2) Language and Identity, (3) Land and Kinship, (4) Sovereignty, and (5) Structural and Systemic factors. This module offered activities to support deeper understanding of these ISDOH, including a mapping exercise of ISDOH specific to attendees' communities and programs, a photovoice exercise to support the development of ISDOH definitions and identify potential programming opportunities, and a deep review and discussion of two vignettes to confirm ISDOH understanding and application to a particular health outcome (e.g., type 2 diabetes). The next module will build on the content from this module by exploring the history and basis for Indigenous Structural and Systemic Determinants of Health and examining how tribal and urban Indian communities' understanding of these structural and systemic determinants may support program planning, implementation, and community-level change.

Resources

Implementing Photovoice in Your Community - Community Toolbox: [Link Here](#)

Data Storytelling using Participatory Multimedia - Seven Directions: [Link Here](#) (launch May 2024)



Bibliography

Carroll, S. R., Suina, M., Jäger, M. B., Black, J., Cornell, S., Gonzales, A. A., Jorgensen, M., Palman-
teer-Holder, N. L., De La Rosa, J. S., & Teufel-Shone, N. I. (2022). Reclaiming Indigenous health in
the US: Moving beyond the Social Determinants of Health. *International Journal of Environmental
Research and Public Health*, 19(12), 7495–. <https://doi.org/10.3390/ijerph19127495>

Gone, J. P. (2019). “The Thing Happened as He Wished”: Recovering an American Indian cultural
psychology. *American Journal of Community Psychology*, 64(1-2), 172–184. [https://doi.org/10.1002/
ajcp.12353](https://doi.org/10.1002/ajcp.12353)

Gonzalez, M. B., Sittner, K. J., Saniguq Ullrich, J., & Walls, M. L. (2021). Spiritual connectedness
through prayer as a mediator of the relationship between Indigenous language use and positive men-
tal health. *Cultural Diversity & Ethnic Minority Psychology*, 27(4), 746–757. [https://doi.org/10.1037/
cdp0000466](https://doi.org/10.1037/cdp0000466)

Greenwood, M., & Lindsay, N. M. (2019). A commentary on land, health, and Indigenous knowl-
edge(s). *Global Health Promotion*, 26(3_suppl), 82–86. <https://doi.org/10.1177/1757975919831262>

Hodge, F. S., Pasqua, A., Marquez, C. A., & Geishirt-Cantrell, B. (2002). Utilizing traditional story-
telling to promote wellness in American Indian communities. *Journal of Transcultural Nursing*, 13(1),
6–11. <https://doi.org/10.1177/104365960201300102>

Jacob, M. M., Sabzalian, L., Johnson, S. R., Jansen, J., & Morse, G. S. (2019). “We Need to Make
Action NOW, to Help Keep the Language Alive”: Navigating tensions of engaging Indigenous educa-
tional values in university education. *American Journal of Community Psychology*, 64(1-2), 126–136.
<https://doi.org/10.1002/ajcp.12374>

Lewis, M. E., Myhra, L. L., Hartwell, E. E., & Smith, J. (2023). Effects of a decolonizing training on
mental health professionals’ Indigenous Knowledge and beliefs and ethnocultural empathy. *Ameri-
can Indian and Alaska Native Mental Health Research*, 30(1), 136–150. [https://doi.org/10.5820/
aian.3001.2023.136](https://doi.org/10.5820/aian.3001.2023.136)

Mays, V. M., Echo-Hawk, A., Cochran, S. D., & Akee, R. (2022). Data equity in American Indian/
Alaska Native populations: Respecting sovereign nations’ right to meaningful and usable COVID-19
data. *American Journal of Public Health* (1971), 112(10), 1416–1420. [https://doi.org/10.2105/
AJPH.2022.307043](https://doi.org/10.2105/AJPH.2022.307043)

Rasmus, S. M., Whitesell, N. R., Mousseau, A., & Allen, J. (2020). An intervention science to advance
underrepresented perspectives and Indigenous Self-Determination in health. *Prevention Science*,
21(Suppl 1), 83–92. <https://doi.org/10.1007/s11211-019-01025-1>

Straits, K. J. E., deMaría, J., & Tafoya, N. (2019). Place of strength: Indigenous artists and Indigenous
Knowledge is prevention science. *American Journal of Community Psychology*, 64(1-2), 96–106.
<https://doi.org/10.1002/ajcp.12376>

Walters, K. L., Johnson-Jennings, M., Stroud, S., Rasmus, S., Charles, B., John, S., Allen, J., Kahlo-
okula, J. K., Look, M. A., de Silva, M., Lowe, J., Baldwin, J. A., Lawrence, G., Brooks, J., Noonan, C.
W., Belcourt, A., Quintana, E., Semmens, E. O., & Boulafentis, J. (2020). Growing from Our Roots:
Strategies for developing culturally grounded health promotion interventions in American Indian, Alas-
ka Native, and Native Hawaiian Communities. *Prevention Science*, 21(Suppl 1), 54–64. [https://doi.
org/10.1007/s11121-018-0952-z](https://doi.org/10.1007/s11121-018-0952-z)



MODULE IV:

Indigenous Structural Determinants



Purpose:

This module provides definitions for the structural and systemic determinants that impact collective health and well-being within and across tribal and urban Indian communities, along with examples of how they interplay with other social determinants of health (SDOH). Structural and systemic determinants represent important environmental factors that may derive from: 1) federal government laws and policies (i.e., economic, education, employment, environmental, health, social services), 2) the exercise of tribal sovereignty, and 3) the way tribes employ tribal public health authority & governance. These structural and systemic determinants have implications for the creation, operationalization, and modification of tribal and urban American Indian and Alaska Native (AIAN) systems for healing, health, and wellness along with selection and implementation of tribal and urban public health and other programs.

Learning Objectives:

At this end of this module, attendees will be able to:

- Recognize the impact of structural determinants on AIAN communities.
- Evaluate the difference and/or connection between structural determinants using case study examples.
- Define the role tribal sovereignty and tribal public health governance have on health for American Indian and Alaska Native communities.

Overview:

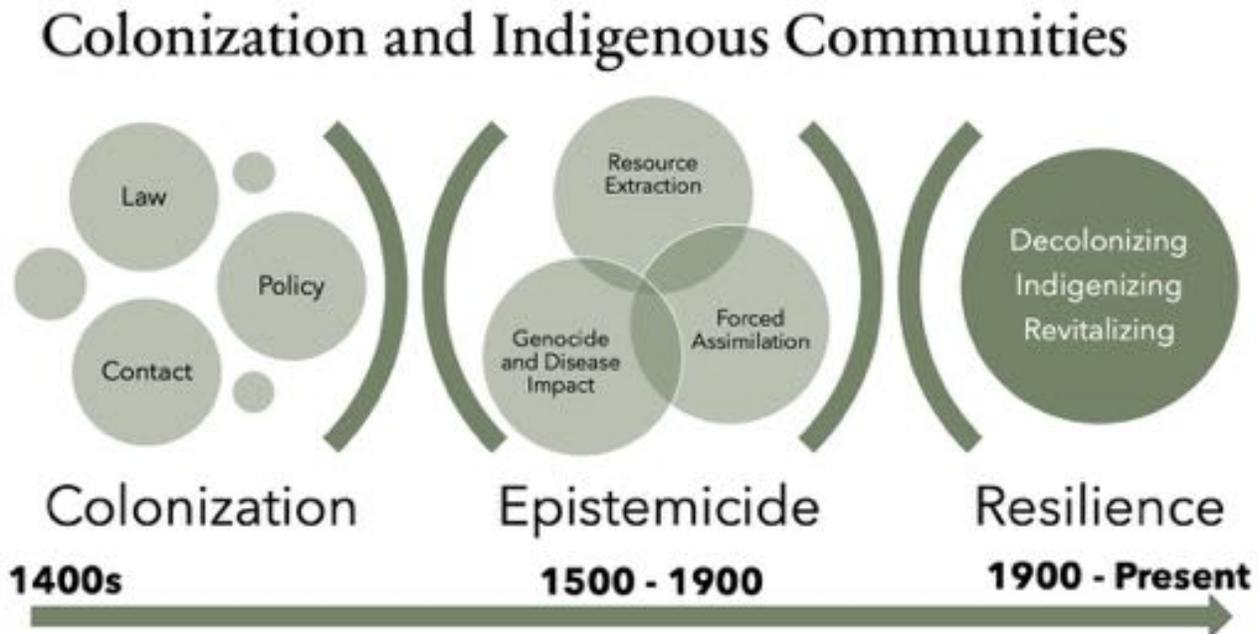
AIAN communities employed complex systems of governance, health, and social support long before European contact (Unal, 2018). Upon contact, these structures were destroyed, dismantled, and/or deteriorated as colonists made incursions into tribal territories; novel (to the tribal communities) diseases resulted in the death of millions of Indigenous Americans; and Federal policies overrode traditional tribal governance systems (Solomon et al., 2022). Entire ways of life, peoples, languages, and knowledge systems were lost due to colonization. Many of these effects were deliberate, such as the decimation of the buffalo and other traditional foods relied upon for centuries for physical, psychological, and cultural sustenance (Byker Shanks et al., 2020). Land seizure, abrogation of treaty rights, assimilation policies, poorly funded systems, and omission from infrastructure support constitute important SDOH that resulted in conditions that are associated with poor health outcomes, increased co-morbidity, and lower life expectancy (Warne et al., 2019; Mitchell, 2012). Some of these factors represent Indigenous social determinants of health (ISDOH). Some also represent structural or systemic determinants of health specific to Native communities. Connecting these historical policies and their impact on SDOH can help identify indicators specific to tribal and urban Indian communities.

Definition

Structural determinants include aspects of our lives that operate across communities and regions. These can include the living conditions that we experience in our home communities, the service environments that we have access to, the social setting within which we are placed, and the economic environment that we experience.

Figure 3: Colonial Impacts on Indigenous Communities

Timeline of colonial impact on Indigenous communities. Timeline is grouped into three major events: Colonization that began in 1400s; Epistemicide caused by genocide and forced assimilation policies in the 1500s; the last phase in the timeline is Resilience of Indigenous communities that began in 1900s to present day.



As a result of the forces of colonization, many AIAN communities and individuals also experienced historical trauma, the cumulative, multigenerational, collective experience of emotional and psychological harm present among AIAN communities and descendants. See Figure 3, (Evans-Campbell, 2008). Examples of historical trauma include genocide, forced relocation and assimilation, and the forced removal of youth to attend government funded boarding schools. The traumatic effect on mental and physical health has been significant and has resulted in disproportionately high levels of substance misuse, depression, anxiety, post-traumatic stress disorder, diabetes, cancer, high blood pressure, cardiovascular disease, and many other health and behavioral health outcomes (Evans-Campbell et al., 2012; Sebwenna-Painter et al., 2023).

Understanding AIAN health from a historical trauma perspective can help identify the way tribal governments and urban Indian health institutions can best support healing and well-being among their respective communities. Unique to AIAN governments, tribal treaty rights and provisions in federal and state law recognize the political status of AIAN peoples. While tribal nations are subject to Federal law, they also retain all the sovereign rights not taken away by Congress. This status, known as tribal sovereignty, offers opportunities for tribal governments to make their own laws and policies, including those that support public health (Bryan et al., 2009).

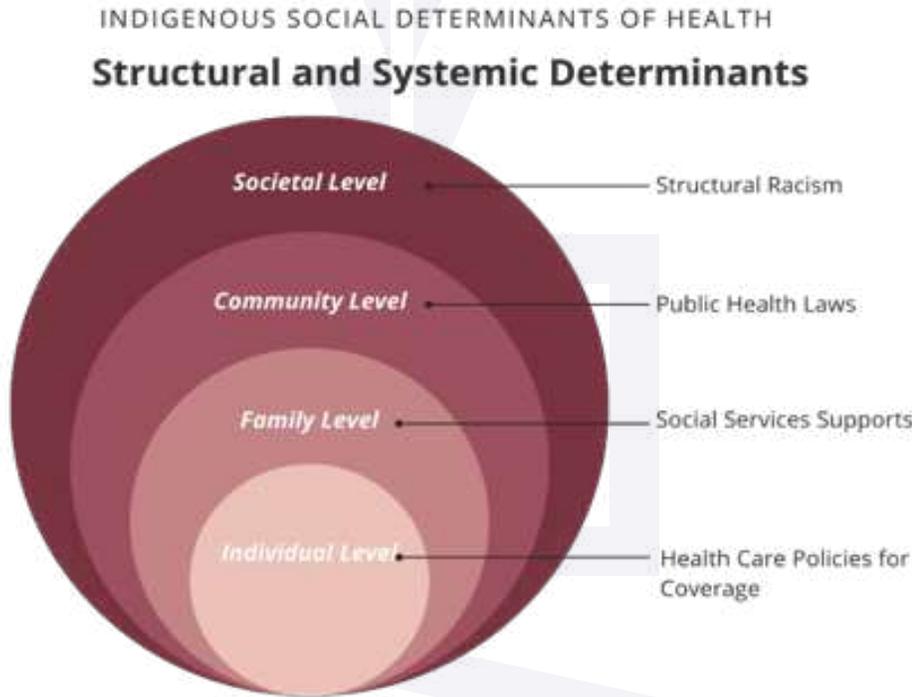
The following Figure 4 provides examples of Indigenous structural and systemic determinants of health across the individual, family, community, and societal levels. Tribal governments have the authority to make determinations such as eligibility for health services (individual), the provision of specific social services available within the tribal setting (family), the tribal public health laws and manner of enforcement (community), and the buffers in place to address structural racism that members of the community may experience in seeking non-tribal services, for example, provision of home loans (societal). Its form references the socio-ecological model for multi-level interpretation of social determinants of health (Dahlgren & Whitehead, 2021). The individual programs and services provided by the tribal government represent the Indigenous structural social determinants of health, and the combined array of tribal supports provided represent the Indigenous systemic determinants of health (Hoss, 2019).

Figure 4: Socioecological Model for Structural and Systemic Determinants and Indigenous Health

The socioecological framework is a multilevel conceptualization of health that includes individual, interpersonal (family), community, and societal level factors that influence health outcomes. The framework considers the relationships and interplay between the four levels.

Part I. Applying a Principle of Design to Support Behavior Change at the Tribal System Level

“Nudging” refers to “any aspect of the choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting the fruit at eye level counts as a nudge. Banning junk food does not.” (Thaler & Sunstein, 2008, p. 6, as quoted in Marchiori et al., 2017).



Source: Parker, Seven Directions, 2023

Marchiori and colleagues (2017) describe the psychology behind human decision making, noting the science suggests that humans tend to make quick decisions based on feelings and habits rather than take the time to make logical decisions after reviewing the benefits and costs. Keeping this in mind and considering the impact of ISDOH, AIAN governments may explore how tribal governance could serve as the means to develop a series of “nudges” across tribal systems of care to address priority health issues. For example, in supporting community members with a diabetes diagnosis who live with food insecurity (Love et al., 2019), tribal governments could develop laws and policies concerning planning and placement of nutritious foods in prominent areas of grocery stores on tribal lands, which could lead to improved food choices among those with specific nutritional needs.

Activity – Identifying a “Nudge” to Support Behavior Change at the Tribal System Level

This activity will focus on identifying the important “nudges” that could be put in place to better support community members facing a new diagnosis of diabetes.

- **Step 1:** Consider the picture developed in Part 1 of this module. How well do patients do in accessing tribal services and supports for those with a new diabetes diagnosis? What are some important things that help new patients stay on track with diabetes management? What are some critical barriers or challenges that patients face that hinder them from staying on track? Make a list of each and map them onto the points in your diagram where there may be an issue.
- **Step 2:** What are some key adjustments that could be made to help them stay on the paths they need to adjust to this diagnosis? Think about what other patients have shared, having gone through the diagnosis and adjustment process. Also consider important diabetes data that is important for patients in knowing whether they are successful in managing their condition. How could tribal services be adjusted to help “nudge” them towards a successful diabetes management process? Are there ways to monitor or track how helpful these “nudges” are in better supporting patients?
- **Step 3:** Make a list of the “nudges” that could help support patients. What resources would each item on the list require to implement? Which ones seem most important? Which are most likely to be accepted by the leadership? By patients? Construct a graph or list of the advantages and disadvantages of each “nudge” -- which one(s) could be implemented by the community?
- **Step 4:** Determine how to evaluate the “nudges” that are adopted. See the Indigenous Evaluation Toolkit in the Resources section, below, for a step-by-step guide to develop an evaluation plan and strategy specific to a particular tribal or urban Indian community.

Summary:

This module provides opportunities to explore how tribal communities could use the wayfinding approach to map the ISDOH specific to their communities to the pathways individual tribal members use to access treatment services or other supports. The wayfinding activity asks teams to imagine what it might be like to receive a new diagnosis, and to think about how patients access tribal services and how services could be better positioned to improve access. The second activity in this module offers teams the opportunity to explore what environmental social determinants of health could either be created or improved upon to help “nudge” patients into improving health behaviors. This activity supports tribal teams in exploring how tribal sovereignty and public health governance may play a role in establishing the community and societal level support needed to improve health outcomes. These approaches will be helpful in the next module, which will focus on reviewing the previous three modules with the aim of identifying SDOH and ISDOH priorities that can be addressed and reviewed annually to improve health and wellbeing of individuals, families, and communities.

Resources:

Eakins, D., Gaffney, A., Marum, C., Wangmo, T., Parker, M. Magarati, M. (Feb. 2023). Indigenous Evaluation Toolkit for Tribal Public Health Programs: An Actionable Guide for Organizations Serving American Indian/Alaska Native Communities through Opioid Prevention Programming. [7D-Indigenous Evaluation-Toolkit-For-Prevention-Programs.pdf](#)

Bibliography

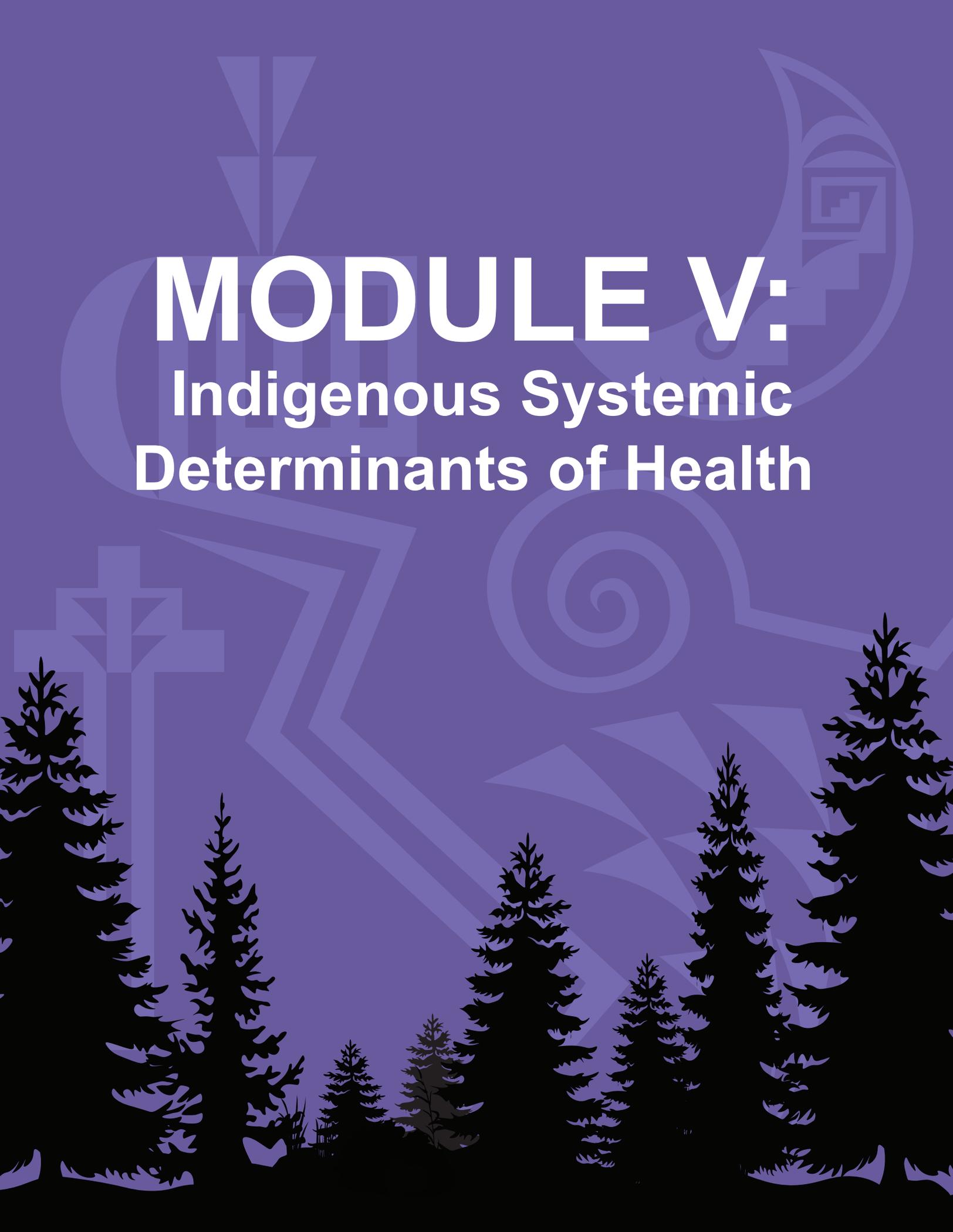
- Bryan, R. T., Schaefer, R. M., DeBruyn, L., & Stier, D. D. (2009). Public health legal preparedness in Indian Country. *American Journal of Public Health* (1971), 99(4), 607–614. <https://doi.org/10.2105/AJPH.2008.146522>
- Butler, J., Holden, K., Lidwell, W. (2023). *Universal Principles of Design, Updated and Expanded Third Edition*. Rockport Publishers.
- Byker Shanks, C., Ahmed, S., Dupuis, V., Houghtaling, B., Running Crane, M. A., Tryon, M., & Pierre, M. (2020). Perceptions of food environments and nutrition among residents of the Flathead Indian Reservation. *BMC Public Health*, 20(1), 1536–15. <https://doi.org/10.1186/s12889-020-09584-7>
- Dahlgren, G., & Whitehead, M. (2021). The Dahlgren-Whitehead model of health determinants: 30 years on and still chasing rainbows. *Public health*, 199, 20-24. <http://doi.org/10.1016/j.puhe.2021.08.009>
- Evans-Campbell, T. (2008). Historical Trauma in American Indian/Native Alaska Communities: A multilevel framework for exploring impacts on individuals, families, and communities. *Journal of Interpersonal Violence*, 23(3), 316–338. <https://doi.org/10.1177/0886260507312290>
- Evans-Campbell, T., Walters, K. L., Pearson, C. R., & Campbell, C. D. (2012). Indian Boarding School experience, substance use, and mental health among urban Two-Spirit American Indian/Alaska Natives. *The American Journal of Drug and Alcohol Abuse*, 38(5), 421–427. <https://doi.org/10.3109/00952990.2012.701358>
- Hoss, A. (2019). Federal Indian Law as a Structural Determinant of Health. *The Journal of Law, Medicine & Ethics*, 47(4_suppl), 34–42. <https://doi.org/10.1177/1073110519898041>
- Love, C. V., Taniguchi, T. E., Williams, M. B., Noonan, C. J., Wetherill, M. S., Salvatore, A. L., Jacob, T., Cannady, T. K., Standridge, J., Spiegel, J., & Bird Jernigan, V. B. (2019). Diabetes and obesity associated with poor food environments in American Indian communities: The Tribal health and resilience in vulnerable environments (THRIVE) Study. *Current Developments in Nutrition*, 3(Supplement_2), 63–68. <https://doi.org/10.1093/cdn/nzy099>
- Marchiori, D. R., Adriaanse, M. A., & De Ridder, D. T. D. (2017). Unresolved questions in nudging research: Putting the psychology back in nudging. *Social and Personality Psychology Compass*, 11(1). <https://doi.org/10.1111/spc3.12297>
- Mitchell, F. M. (2012). Reframing Diabetes in American Indian Communities: A Social Determinants of Health perspective. *Health & Social Work*, 37(2), 71–79. <https://doi.org/10.1093/hsw/hls013>
- O'Connor, M. R. (2019). *Wayfinding: the science and mystery of how humans navigate the world* (First edition.). St. Martin's Press.
- Sebwenna-Painter, K., Beckstein, A., & Kraus, S. (2023). Psychological impacts of historic loss and current events surrounding American Indian Boarding Schools. *American Indian and Alaska Native Mental Health Research*, 30(2), 1–21. <https://doi.org/10.5820/aian.3002.2023.1>

Solomon, T. G. A., Starks, R. R. B., Attakai, A., Molina, F., Cordova-Marks, F., Kahn-John, M., Antone, C. L., Flores, J., & Garcia, F. (2022). The generational impact of racism on health: Voices from American Indian communities. *Health Affairs Web Exclusive*, 41(2), 281–. <https://doi.org/10.1377/hlthaff.2021.01419>

Thaler, R. H. & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wellness, and happiness*. Yale University Press.

Unal, D. (2018). Sovereignty and social justice: how the concepts affect federal American Indian policy and American Indian health. *Social Work in Public Health*, 33(4), 259–270. <https://doi.org/10.1080/19371918.2018.1462287>

Warne, D., & Wescott, S. (2019). Social Determinants of American Indian Nutritional Health. *Current Developments in Nutrition*, 3(Supplement_2), 12–18. <https://doi.org/10.1093/cdn/nzz054>



MODULE V:
**Indigenous Systemic
Determinants of Health**

Purpose:

The purpose of this module is to provide a definition of systemic determinants of health and some approaches to addressing these issues among American Indian and Alaska Native (AIAN) communities.

Learning Objectives:

At this end of this module, attendees will be able to:

- Recognize the impact of systemic determinants on AIAN communities.
- Apply the concept of systemic determinants to public health topics within AIAN communities using case study examples.
- Define the role tribal sovereignty, tribal public health governance, and Federal policy have on health for AIAN communities.

Systemic determinants of health refer to the discrimination that occurs within and across macro-level systems that affect health – for individuals, families, and communities. One example is structural racism – the lack of equitable access to goods or services or being denied human rights based on race. We can think about other characteristics that communities might share that might be the basis for structural discrimination. For example, age, ability, education, income, LGBTQ2S status, gender, etc. These experiences impact health through increasing stressors at many levels. (Dennis et al., 2021; Veterans Affairs, 2023).

We see evidence of these systemic determinants of health across multiple systems. The inequity in pay persists, even within occupations. This suggests the effect of persistent, systemic inequity based on race. American Indian and Alaska Native children are significantly more likely to be removed from their families as compared to white children. This suggests child removal based on race across multiple systems. According to the Children's Bureau (n.d.), American Indian children in Minnesota were 28.7 times more likely to be in the state foster care system than White children.

Tribal sovereignty offers tools like public health governance to address the systemic inequities experienced by American Indians and Alaska Natives. Tribal housing, employment opportunities, schools, and many other programs provide tribal members with needed support to fully access basic human rights and services.



Part I – Adapting Wayfinding to Improve Navigation through Tribal Programs and Systems

Imagine a time before GPS, the internet, and even before paper maps. There are no telephones or other devices available to get help or directions. How would tribal or urban Indian community members find their way to access a particular service? How can public health and other agencies orient community members to the available services and offer guidance on how to choose a route forward? This activity provides an adapted wayfinding approach to developing a useable guide for community members to navigate the complex tribal and urban Indian health systems and other key community services to address health outcomes.

A wayfinding approach includes developing a guide for “spatial navigation” to help community members identify where they need to go to achieve their goals (O’Connor, 2019; Butler et al., 2023). It could be as simple as providing a map of the dialysis clinic (a community-level ISDOH) to improve access to diabetes care (an individual-level SDOH). It could also be complex, with multiple routes to address issues like support of community members after receiving a diabetes diagnosis. In this example, there may be multiple routes included, such as paths to secure a blood glucose monitor, ways to set up ongoing nutrition counseling, plans to access diabetes education or physical exercise training, and options for joining support groups. By mapping these services and supports and relating them to a holistic, Indigenous approach to health through the identification of ISDOH and how these factors function across a given tribal system, attendees will employ a strategy for leveraging knowledge of Indigenous Social Determinants of Health to improve Indigenous Systemic Determinants of Health.



Activity – Using Wayfinding to Map Structural Indigenous Social Determinants of Health.

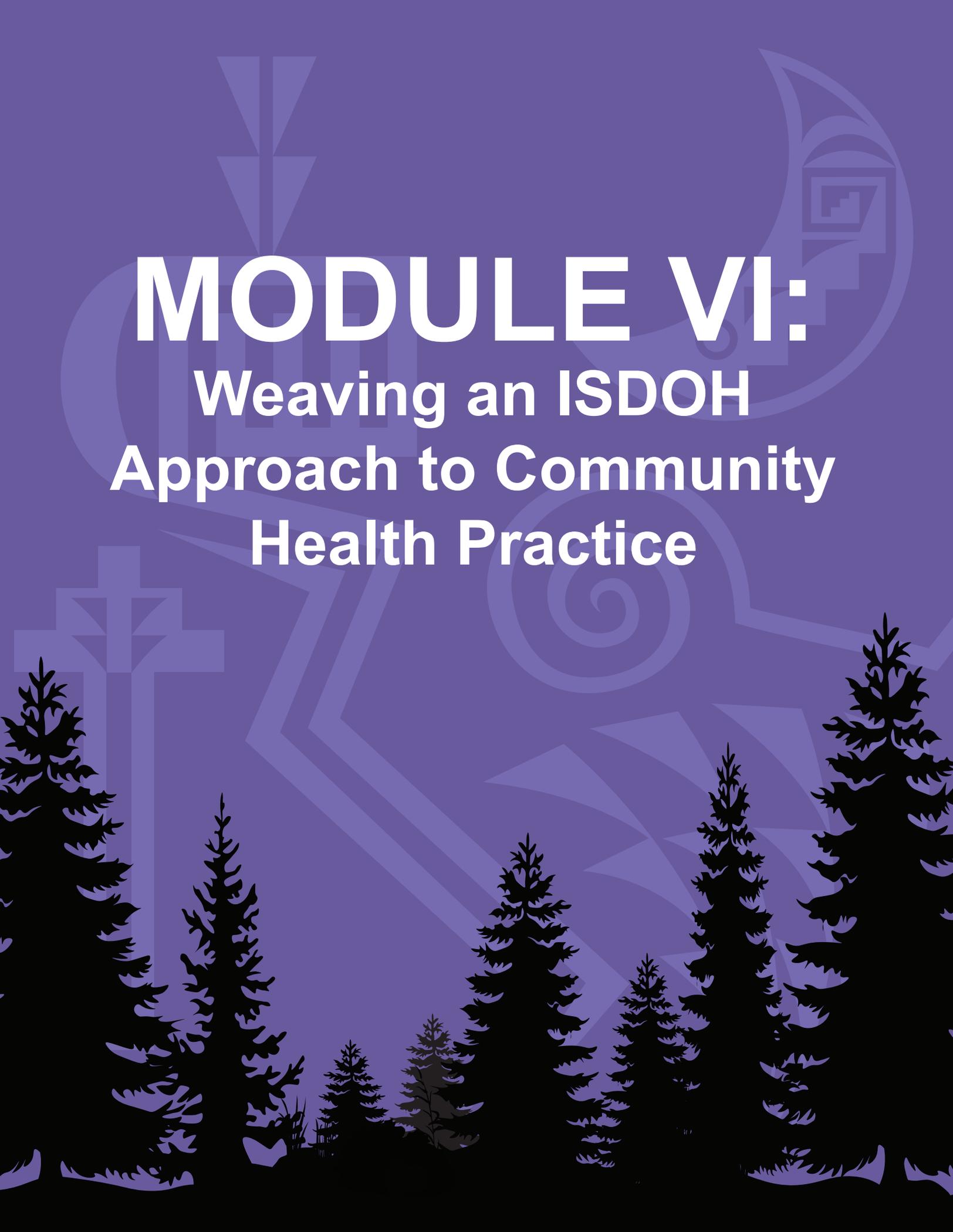
Time = up to 60 minutes

Imagine you are newly diagnosed with diabetes (or chose another health issue if preferred). What are some of the challenges to accessing needed services you might face?

- **Step 1:** Ask attendees to use a pencil, paper, crayons, markers, stickers, construction paper, etc., to draw a picture of what happens when someone receives a diagnosis of diabetes or other health outcome. Where do / should they go to access support? Draw a picture of all the points of service or support available in the community.
- **Step 2:** Next ask attendees to answer the following questions.
 - o For steps individuals can take to manage their diabetes upon diagnosis:
 - How do those who have received a diabetes diagnosis access individual support for diabetes management? What role does their doctor or primary care provider play? What role does referral to specialists play in a diabetes diagnosis?
 - What support is available for family members of those receiving a diabetes diagnosis?
 - What community resources are available to prevent or reduce the risk of diabetes? How can those newly diagnosed learn about and access these resources?
 - What cultural practices are used to treat diabetes or otherwise support those with a diabetes diagnosis?
 - What traditional activities are available to those newly diagnosed?
 - Are there other important questions that need to be addressed that are specific to the given tribal or urban Indian community?
- **Step 3:** Allocate ample time for attendees to draw the map of services and to take notes on the responses to the questions.
- **Step 4:** If comfortable, ask attendees to share the pictures with the other attendees to confirm and revise the map of services available.
- **Step 5:** Hold a group share out, including the pictures developed. Ask attendees to share how their pictures relate to the various questions.
 - o Discussion questions could include:
 - What strategies might be unique to certain groups in the community (e.g., youth, elders, veterans, those with disabilities, etc.)?
 - How long does it take to access one service versus another?
 - To what extent are the available services easily accessed in one day versus one week or one month?
 - What are some things that work well for those with a new diabetes diagnosis?
 - What are some things that need to be changed to improve access to care or support, improve health outcomes, or access cultural supports?

- **Step 6:** If time permits, open this activity up for discussion and ask attendees how this activity went for them and/or any feedback for next time.
 - o How do we ensure meaningful access to needed services?
 - o What policies or practices can be put in place to address the systemic determinants of health that may be at play?



The background is a solid purple color. It features several faint, light-colored geometric patterns, including a large spiral in the center, a cross-like shape on the left, and various angular shapes. At the bottom, there are black silhouettes of several evergreen trees of varying heights and widths, creating a forest-like border.

MODULE VI:

Weaving an ISDOH Approach to Community Health Practice

Purpose:

This module examines Indigenous social determinants of health (ISDOH) and how an ISDOH framework can inform public health, behavioral health, health, and social services. The activities begin with a review of the previous activities from Modules I – V. The first exercise includes identifying SDOH and ISDOH definitions that are community-specific. The second exercise includes defining specific connections between SDOH and ISDOH for a given community. Finally, attendees will brainstorm ways these new definitions and concepts can inform their own work.

Learning Objectives:

- Develop definitions of SDOH and ISDOH that are community specific.
- Identify the connections between SDOH and ISDOH.
- Describe ways these new understandings can inform public health practice.

Overview:

This module provides an opportunity to review the completed activities from previous modules and begin to make connections for applications in specific contexts and communities.

In Module I, the first activity explored individual attendees' River of Life – the major events and influences that shaped where they are today. The exercise asked attendees to reflect on their values and how these values influenced their behaviors, and in turn, how these behaviors may be related to their health. Attendees were then asked to discuss their Rivers of Life with the larger group. The group discussion focused on identifying common values, influences on health, and relationships. The final discussion question asked attendees to brainstorm how the common trends they identified might relate to how they do their work in public health.

In Module II, attendees began to define the SDOH important in their community and compare it to the CDC domains. Attendees then discussed whether there were any important differences between their list and the CDC domains.

In Module III, attendees began to map the ISDOH in their communities. They developed definitions of their community-specific ISDOH and discussed trends they saw in how these ISDOH might be related to health outcomes. They also identified some specific actions and strategies that could be used to address the health issues in their community knowing that these ISDOH must be included in the action plan or strategy. They then took part in a photovoice activity to apply the ISDOH lens to a specific health outcome for their community.

In Module IV, the activity supported thinking through how tribal government programs and services could assist in “nudging” as a way of supporting community members to access what they need for diabetes management.

In Module V, the activity focused on using a wayfinding approach to map out how a patient with a new diagnosis of diabetes might access existing community resources to manage their diagnosis.

In this module, attendees will review all these previous diagrams and discussions to establish community-specific definitions of the SDOH and ISDOH that are important in their community. They will then use these lists and definitions to map connections between these important SDOH and ISDOH. The final exercise provides an opportunity to brainstorm how this community-specific framework can help inform their work in their department. It includes a process to prioritize those SDOH and ISDOH that are most relevant for their work, and list out concrete goals of how to include these SDOH and ISDOH in existing programming.



Activities: Applying SDOH & ISDOH in Community Health Practice

The purpose of the following three activities is to weave together SDOH & ISDOH, how to identify and describe them, and put them into action for community health practice.

Activity 1 – Identify & Define Community Specific SDOH & ISDOH

- **Step 1:** Create a list of SDOH & ISDOH for your setting.

Convene a core team from various departments like public health, social services, behavioral health, health care (4-6 individuals). The team should be able to speak to health and other trends across the community, either from their professional role or lived experience. It may be helpful to choose a health or behavioral health outcome to focus on for the purpose of discussion. In this training, the vignettes have provided the example of a patient newly diagnosed with diabetes. The team may use this as a starting point to begin to identify the key SDOH and ISDOH, or they may select another health issue that is important to address.

Gather diagrams, lists and summaries from *Module I (Our Stories, Our Journey), II (Social Determinants of Health), III (Indigenous social determinates of health), IV (Structural), V (Systemic)*.

- Break into groups of 2-3 for each module.
- Review, discuss, and list SDOH and ISDOH that are community specific. (20 minutes)
 - o Identify determinants or factors that fall within the CDC domains. (20 minutes)
 - How would you identify and describe them in your community?
 - Identify determinants or factors that are ISDOH. (20 minutes)
 - How would you identify and describe them in your community?
- Use the figure below to begin sorting the SDOH and ISDOH into the three categories. As a team, place them within the following three areas depicted in **Figure 5**. The categories include (1) Indigenous Social Determinants of Health (Unique), (2) Indigenous Social Determinants of Health (Shared), and Social Determinants of Health (Broad). The following provides a description and example:
 - o **Indigenous Social Determinants of Health (Unique, Diverse, Specific)**
 - This term refers to the factors that influence conditions within AIAN communities that contribute to healing, health status, and wellness. They are specific to the culture of the community. For example, they may include the tribe's worldview; ways of being, knowing, and doing; lands (water, land, celestial, all beings); creation stories; songs; prayers; stories; jokes (humor); time; beliefs; ways of being in relation; clanship / kinship ways; customary governance; and/or experience of colonization / settler colonialism.
 - o **Indigenous Social Determinants of Health (Shared)**
 - This term refers to factors that may be identified as shared across AIAN communities that influence the conditions that contribute to healing, health

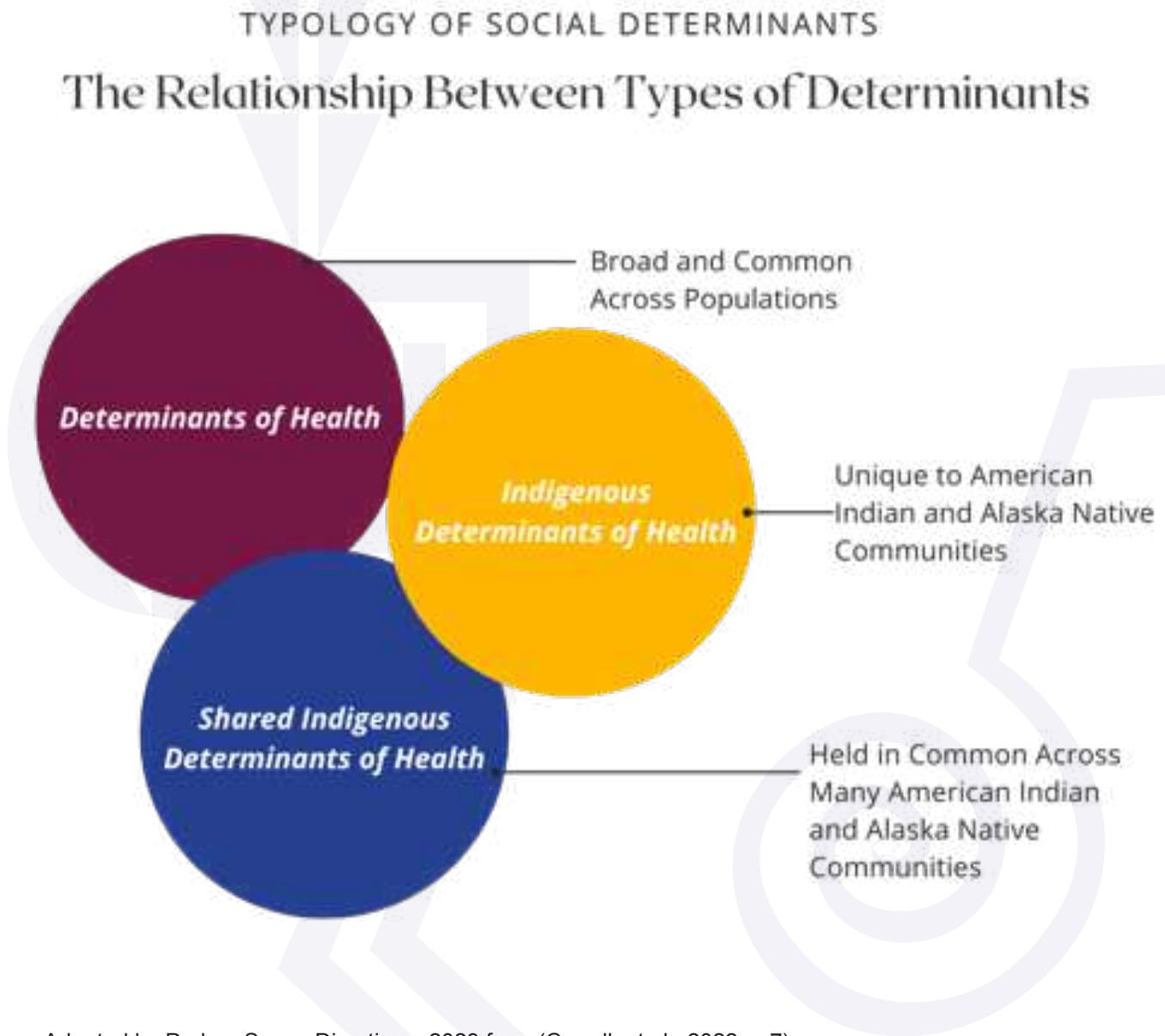
status, and well-being. These could be broadly related to federal, state, or tribal legislation, policies and practices developed in response to colonization / settler colonialism. Examples include boarding school attendance, extraction of natural resources within tribal jurisdictions or in sacred / traditional territories, and/or access to Indian Health Service. These factors could also include shared Indigenous knowledge and values that impact behavior and create the conditions for healing, health, and well-being. For example, Indigenous language revitalization, property in Trust (land back), centering the community, and stories (humor).

o **Social Determinants of Health (Broad – Indigenous & non-Indigenous)**

- This term refers to the conditions all humans experience in their daily lives that relate to opportunities for healing, health, and wellness. The SDOH are the “standard” domains (e.g., access to education, access to health and health care, socio-cultural context, built environment, and financial stability).
- On a large whiteboard using post-it notes, draw the three circles, and label them.
- In small groups, review the list and discuss where they would be placed. This will support making connections between SDOH and ISDOH and describing them with community members in the next activity.

Figure 5 - Broad, Shared, and Unique Determinants of Health for AIAN

Diagram of the typology of social determinants. The determinants include broad and common determinants, shared Indigenous determinants that are common across Indigenous communities, and unique Indigenous determinants of health that are specific to tribal communities.



Source: Adapted by Parker, Seven Directions, 2023 from (Carroll, et al., 2022, p.7).

Activity 2 - Making the Connection between SDOH & ISDOH

Step 1: Host 2 -3 Community Meetings – Confirming Community specific SDOH and ISDOH

Hearing community perspectives at different points in the process can help triangulate SDOH and ISDOH patterns and identify priorities. Hosting a community event or coalition / network meeting can provide a group of interested community members who are willing to review the team's SDOH and ISDOH framework and provide feedback. Taking notes or employing a graphic recorder can help document the discussion.

Pre-Meeting Instructions:

Invite community members (5-8 individuals) to the meeting and be clear they should expect it to last 2-3 hours and that they will be asked to participate in a discussion or other activity. Providing food, drink, childcare, and transportation or offering gift cards to defray the cost of travel can help incentivize attendance and make sure the community members stay for the duration of the meeting. This information should be shared in flyers, radio announcements, newspaper articles or advertisements, and other communications to advertise the event. Send the list of SDOH and ISDOH identified in **Activity 1** to the attendees. Ask that they review them prior to the meeting. Print copies for the day of the meeting.

There are two options to choose from to format the meeting activities. The team may do both or choose to do only one. Both options are considered experiential, generative, cultural / community grounded and creative. Making the decision depends on how well the community members know each other, their availability, and the timeline for completion. Hire a graphic recorder or notetaker with audio recorder.

Meeting Guide:

Provide an overview of the meeting and thank attendees for taking the time to participate. Offer an orientation to the purpose of the meeting and provide written or graphic materials to guide community members through the activity and definitions. Provide a time for introductions to make sure attendees know one another. Set the intention for the meeting to be clear on what you hope to have at the end of your time together.

1. Create a circle with chairs, as the space permits, and share the overview description (above).
2. Review the purpose of the activity to hear community members' thoughts, feedback, and experience with the unique aspects of their community experience that affect healing, health, and well-being in the community.
3. Define the social determinants of health and provide examples of how they create the conditions that impact individual, family, and community health. Example: The need for potable water from the river to farm and its impact on financial stability (work) and ability to grow nutrient-rich foods.
4. Break into smaller groups (3-4 each) for detailed discussions.

5. Review the lists of SDOH/ISDOH.
 - a. Ask the smaller groups to review the community-specific SDOH / ISDOH. Provide a handout listing the SDOH and ISDOH for their reference.
 - b. Pose the following questions for discussion:
 - i. What is your initial reaction to this list of SDOH and ISDOH?
 - ii. Do you have any questions about the list of SDOH and ISDOH?
 - iii. What SDOH and ISDOH would you keep the same and why? What SDOH and ISDOH would you change, and why?

6. **Storytelling.** Provide a setting for community members to share their life experiences that relate to these SDOH and ISDOH. The purpose of this exercise is to understand the nuances within the SDOH and ISDOH to better understand their definitions, the connections among them, and how they relate to community health and wellness. The stories shared in this exercise may offer key examples of how to relate the community-specific SDOH and ISDOH framework back to community health education and other outreach initiatives. Arrange to take notes or otherwise record these stories. Obtain appropriate consent from community members to share these stories in the future.
 - a. Choose 1-2 SDOH and 1-2 ISDOH
 - b. Think about how they contribute to your community's healing, health, and well-being. How are people in your community impacted by them? Do they facilitate or keep back? Are they supporters or barriers? How do they impact healing, health, and well-being?
 - c. Do you have a story / lived experience to share about the SDOH and ISDOH that you chose?
 - d. Please share a series of stories for the SDOH / ISDOH that you selected that represents it in the past, present, and future. In other words, what did/will the community look like in the past, present, and future? What do the SDOH / ISDOH look like each time? How are they impacting individuals, families, communities, and ancestors?
 - e. Draw out how and where the SDOH and ISDOH have an impact in the community. Example: school buildings, river/lake, industry, fields, forest, hospitals/clinics, traditional food sources.

Step 2. Map out the Connections – Community-Specific SDOH & ISDOH “Framework”

After the meetings, the team can synthesize the stories / lived experiences and imagery shared by community members to depict the SDOH / ISDOH specific to the community. The tribal health department team should review the graphic recordings, transcripts, and notes. From this review, team members will be able to identify the SDOH / ISDOH and related stories / experiences depicted in the images developed and the notes. These community meetings will confirm and/or expand the list of SDOH and ISDOH. It is an important activity for identifying and describing SDOH and ISDOH in the community. The outcome from this activity is a community-specific SDOH and ISDOH framework that may be used in program planning and implementation.

Activity 3 – Applying the SDOH/ISDOH Framework to Community Health Practice

The purpose of this activity is to brainstorm how the community-specific framework developed in the previous activity can help inform tribal community health practice. It includes a process to prioritize those SDOH and ISDOH that are most relevant for community health practice and develop a list of concrete goals of how to include these SDOH and ISDOH in existing programming.

To prepare for this final activity, team members should develop a summary document and diagram of the community-specific SDOH and ISDOH framework. Noting the stories and other evidence gathered in previous activities can help understand how these factors influence community health. The compendium of activities from earlier modules should also be provided as a review of the process and outcomes of these discussions.

The team should select an outcome related to health status or condition (e.g., chronic to focus on for this activity). Brainstorming will be supported best by selection of one health outcome to focus the discussion. Once a health outcome is selected, the team should discuss each SDOH and ISDOH in the framework and identify whether and how each factor is related to the health outcome. Developing a list of connections should be the aim of the first part of this discussion.

Upon development of the list of connections between the SDOH and ISDOH to the selected health outcome, team members should then focus their discussion on what the team can do to help address each of the SDOH and ISDOH to improve the health outcome in their community. Upon completion of these activities, the team should sort these activities by proximal, intermediate, and distal effects on the given health outcome. This means that each activity should be evaluated by whether it will have an immediate effect on the health outcome, or whether the effect is more long term. Once the activities are sorted in these three categories, the team should then discuss which activities they should prioritize based on the availability of resources, the feasibility of accomplishing these activities, and the immediate needs of the community. A summary document of the selected activities should be prepared for this discussion.

Upon completion, workgroups at the departmental level or interdepartmental level may be created to track completion of activities and outcomes from these activities. It would also be helpful to select measures of the impact of proposed activities to assess annually and review the success of the activities in improving health and well-being.

Summary:

This module offered attendees an opportunity to review the previous six modules for the purpose of establishing community specific definitions of the SDOH and ISDOH that are important in their community. Attendees then began to map connections between the important SDOH and ISDOH to better understand how they relate to one another and how tribal and urban Indian programs might be developed to better influence the SDOH and ISDOH most relevant to improve community health. The final brainstorm offered space to connect the community-specific framework to departmental priorities. Prioritizing the key SDOH and ISDOH and identifying concrete goals of how to include these SDOH and ISDOH in existing programming will assist attendees to tailor their efforts to specific community health needs.

Bibliography:

Carroll, S. R., Suina, M., Jäger, M. B., Black, J., Cornell, S., Gonzales, A. A., ... & Teufel-Shone, N. I. (2022). Reclaiming Indigenous Health in the US: moving beyond the Social Determinants of Health. *International journal of environmental research and public health*, 19(12), 7495.



CONCLUSION



This training offers an opportunity to educate local public health and other community practitioners--those who are working directly with the community to address health disparities. It supports local practitioners in understanding and developing programs using both the lens of social determinants of health and Indigenous knowledge, ways of life, and cultures. This tool helps to develop a process for assessing where our communities are in terms of health outcomes and identify and address the root causes of health inequity. This process leads to improved programs, along with a more detailed understanding of where we have been, where we are at, and where we aim to be in the future on certain health outcomes.

This training is the embodiment of the movement to celebrate our stories and experiences, and uplift and center Indigenous knowledge. It offers a step toward achieving healthy equity and inclusion for Indigenous peoples within public health, research, and policy through the uplifting and representation of lived experiences and storytelling.

To achieve this vision of strength-based, cultural, or Indigenous knowledge creative programs and services within AIAN nations and communities, we have developed the training with six modules. The key aspects of each module build upon each other so that the concepts are accessible to diverse, inter-disciplinary teams. Those key aspects are as follows:

Module I: Our Stories, Our Journey provides an opportunity to come together as a team in relation to one another and the communities to which the team is responsible and accountable. The activities provide an opportunity to reflect on individual and collective journeys of healing, health, and wellness. The journeys are reflective of health equity within the community.

Module II: Social Determinants of Health provides an opportunity to define SDOH and consider how they reflect the nuance and complexity of AIAN nations' and communities' lived realities. The activities and discussions support development of meaningful SDOH tools, resources, programs, and services within tribal and urban Indian health systems.

Module III: Indigenous Social Determinants of Health provides an opportunity to identify and describe SDOH that are connected to Indigenous knowledge, ways of being and doing: Ways that continue to keep AIAN nations and communities healthy and well; ways that can counter SDOH that negatively impact individuals, families, and communities; ways that can support addressing the structural and systemic determinants, both historic and contemporary, which require collective action and political will by AIAN leadership.

Module IV: Indigenous Structural Determinants of Health provides an opportunity to identify and reflect on the impact of laws, policies, and the systems created that impact SDOH (e.g., education, health and health care, discrimination, racism). For the vision of this training to be realized, power and control over resources and opportunities must be shared with tribes. The U.S. government needs to defer to tribal cultural sovereignty when developing or sustaining AIAN tribal and urban Indian health systems to address social determinants, Indigenous social determinants, and public health.

Module V: Indigenous Systemic Determinants of Health provides an opportunity to identify and reflect on the ways systems impact SDOH and ISDOH. This training provides activities to apply a Wayfinding map approach to understand access to care for the community.

Module VI: Weaving an ISDOH Approach to Community Health Practice provides an opportunity to review the SDOH and ISDOH identified in previous modules for the purpose of prioritizing those factors that are most relevant to address community health needs and those that could be most readily measured and tracked. This review process could be repeated annually or semi-annually to review progress and select additional factors for consideration.

The appendices contain PowerPoints for each of the modules. The PowerPoints contain the content (i.e., concepts and examples and instructions for the accompanying activities. Each module and PowerPoint has a facilitator guide. The guide provides the facilitator with the information needed to deliver the modules to the team: slide, anticipated length of time, script / language, and materials / assistance needed.

The content in this training is based on the latest evidence-based practice in these areas and practice-based approaches identified through a scoping review of Indigenous social determinants of health in peer-reviewed and gray literature. It does not replace a thorough and comprehensive review of these materials given the unique context of a given community. We hope this training provides practitioners with the groundwork for developing an Indigenous social determinants of health framework that works best for their respective Tribal or urban Indian community.

APPENDICES



APPENDICES

Appendix A: Training PowerPoints

Appendix B: Glossary

Appendix C: Bibliography



Appendix A

Training PowerPoints & Scripts

- Module I: Our Stories, Our Journey
- Module II: Social Determinants of Health
- Module III: Indigenous Social Determinants of Health
- Module IV: Indigenous Structural Determinants of Health
- Module V: Indigenous Systemic Determinants of Health
- Module VI: Weaving an Indigenous Social Determinants of Health Approach

Appendix B

Glossary

Colonization:

The concept of colonization refers to the control of power over people and land (Kruse et al., 2022). The process of colonization was the genocide, forced removal from land, assimilation policies, and disruption to Indigenous Knowledge Systems.

Economic Status:

This SDOH includes several individual characteristics that relate to financial resources such as income level and employment status. Poverty level, food security, and housing stability also fall within this category (Healthy People 2023, 2020).

Education Status:

Higher education status is related to improved health and well-being. High school graduation, receipt of higher education, educational attainment, language, literacy, and early childhood education and development have been shown to be related to health status (Healthy People 2023, 2020).

Health Care Access and Quality:

Refers to having access and using health care (i.e., behavioral health, medical, dental) to adequately address diseases, conditions, and promote healing and health. Access is also dependent on having appropriate and adequate health insurance coverage (Healthy People 2023, 2020).

Health Equity

Health equity is defined as the absence of major social determinants of health between social groups. The inequities exacerbate systematically already existing social advantages / disadvantages within social groups (Braveman & Gruskin, 2003; Marmot et al., 2008).

Historical Trauma:

The cumulative, multigenerational, collective experience of emotional and psychological harm present among AIAN communities and descendants (Evans-Campbell, 2008).

Indigenous Social Determinants of Health:

The conditions specific and unique to Indigenous communities that impact collective healing, health, and wellbeing (Carroll et al., 2022).

Indigenous Knowledge:

Refers to ways to process, understand, teach, and take collective actions (Gone, 2019) and to be in community, including but not limited to benefiting from prayer, mutual aid, togetherness, cultural connectedness, and other shared experiences that support wellness (Straits et al., 2019).

Language and Identity:

Refers to the connection to the geography of a people and to one another (Greenwood & Lindsay, 2019) and recognizing and reaffirming Indigenous peoples are rooted in traditional understandings of specific places, be it land, water, or ice-based locations. This group of determinants includes traditional stories, Indigenous language names for locations and landmarks, and traditional ways of being with and respecting the land and environment (Hodge et al., 2022).

Neighborhood and Built Environment:

Neighborhood and the built environment (i.e., characteristics such as housing quality, access to transportation, access to clean air and water, healthy food access, and exposure to violence and crime) have been shown to be related to individual health outcomes (Healthy People 2023, 2020).

Nudging:

Refers to the concept of choice environments, in which decision-making contexts are used in ways to promote positive behavior change. Nudging maintains freedom of choice and should be transparent and open. (Thaler & Sunstein, 2008, p. 6, as quoted in Marchiori et al., 2017).

River of Life Activity:

An interactive activity used with individuals or groups who are asked to reflect on their personal experiences and underlying collective values and principles that contribute to one's health and well-being by also using the metaphor of a river (Parker et al., 2020).

Social Determinants of Health:

Refers to the “wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies, racism, climate change, and political systems” (CDC, 2020-a).

Socio-ecological model:

The socio-ecological model illustrates the varying levels of influence that broadly defined social determinants of health have from individual to community, relationships, and their interactions. It is used to highlight the non-medical factors or the conditions in which we live, work, and play. This figure was an important step in public health moving away from individual risk and protective factors to looking at the conditions that set up individuals and communities for certain health outcomes. It offers a more complex examination of the factors at multiple levels that create conditions that promote or inhibit health and wellbeing (Dahlgren & Whitehead, 2021).

Social and Community Environments:

These SDOH could include community cohesion, civic participation, discrimination, racism and xenophobia, cultural norms, interpersonal violence, workplace conditions, and incarceration (Healthy People 2023, 2020).

Sovereignty:

Refers to the rights of tribal governments to ensure healing, health, welfare, and safety of their people and ancestral lands (Mays, 2022). The practice of sovereignty includes governance practices, both current and traditional, that support wellness for individuals, families, communities, and the environment around us (Rasmus et al., 2020).

Structural and Systemic Factors:

Are the influences or factors that impact access to resources and consideration of various factors such as historical trauma, exposure to racial discrimination and microaggressions based on skin color and/or tribal membership (Lewis et al., 2023).

Due to colonial contact, structures were destroyed, dismantled, and/or deteriorated as colonists made incursions into tribal territories; novel (to the tribal communities) diseases resulted in the death of millions of Indigenous Americans; and Federal policies overrode traditional tribal governance systems (Solomon et al., 2022).

Wayfinding Approach:

Refers to an approach that includes “spatial navigation” or visualization of pathways that will support a team or group achieve their goals (Butler et al., 2023; O’Connor, 2019).



Appendix C

Bibliography

- Adamsen, C., Schroeder, S., LeMire, S., & Carter, P. (2018). Education, income, and employment and prevalence of chronic disease among American Indian/Alaska Native elders. *Preventing Chronic Disease*, 15, E37–E37. <https://doi.org/10.5888/pcd15.170387>
- Adelman L. (2007). Unnatural Causes: Is Inequality Making Us Sick? *Preventing Chronic Disease*, 15;4(4): A116. PMID: PMC2134831.
- American Indian and Alaska Native People: A scoping review to inform future research and policy needs. *Advances in Nutrition*, 13(5), 1566–1583. <https://doi.org/10.1093/advances/nmac008>
- Archibald, J. (2007). An Indigenous Storywork Methodology. In J. G. Knowles & A. L. Cole. (Eds.) *Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples, and Issues*. (pp. 371-386). SAGE Publications. DOI: <http://dx.doi.org/10.4135/9781452226545.n31>
- Archuleta, M. (2019). Storywork toolkit. Retrieved August 13, 2023, from https://www.ihs.gov/sites/dccs/themes/responsive2017/display_objects/documents/nccs2019/storyworktoolkit.pdf
- Braveman, P., Egerter, S., & Williams, D. R. (2011). The social determinants of health: coming to age. *Annual Review of Public Health*, 32: 381-98. doi: 10.1146/annurev-publhealth-031210-101218
- Braveman P & Gruskin S. (2003). Defining equity in health. *J Epidemiol Community Health*, 57:254–8. doi: <https://doi.org/10.1136/jech.57.4.254>
- Brown, M. & Duenas, A. (2019). A medical science educator’s guide to selecting a research paradigm: Building a basis for better research. *Medical Science Educator*, 30, 545-553
- Bryan, R. T., Schaefer, R. M., DeBruyn, L., & Stier, D. D. (2009). Public health legal preparedness in Indian Country. *American Journal of Public Health* (1971), 99(4), 607–614. <https://doi.org/10.2105/AJPH.2008.146522>
- Butler, J., Holden, K., Lidwell, W. (2023). *Universal Principles of Design, Updated and Expanded Third Edition*. Rockport Publishers.
- Byker Shanks, C., Ahmed, S., Dupuis, V., Houghtaling, B., Running Crane, M. A., Tryon, M., & Pierre, M. (2020). Perceptions of food environments and nutrition among residents of the Flathead Indian Reservation. *BMC Public Health*, 20(1), 1536–15. <https://doi.org/10.1186/s12889-020-09584-7>
- Carroll, S. R., Suina, M., Jäger, M. B., Black, J., Cornell, S., Gonzales, A. A., ... & Teufel-Shone, N. I. (2022). Reclaiming Indigenous Health in the US: moving beyond the Social Determinants of Health. *International journal of environmental research and public health*, 19(12), 7495. doi: 10.3390/ijerph19127495
- Centers for Disease Control and Prevention. (2022-a, December 8). Why is Addressing Social Determinants of Health Important for CDC and Public Health? Retrieved August 31, 2023, from <https://www.cdc.gov/about/sdoh/addressing-sdoh.html#:~:text=SDOH%20have%20been%20shown%20to,higher%20risk%20of%20premature%20death>.

Centers for Disease Control and Prevention. (2022-b, December 8). Social Determinants of Health at CDC. Retrieved August 13, 2023, from <https://www.cdc.gov/about/sdoh/index.html>

Chodur, G. M., Shen, Y., Kodish, S., Oddo, V. M., Antiporta, D. A., Jock, B., & Jones-Smith, J. C. (2016). Food environments around American Indian Reservations: A mixed methods study. *PLoS One*, 11(8), e0161132–e0161132. <https://doi.org/10.1371/journal.pone.0161132>

Dahlgren, G., & Whitehead, M. (2021). The Dahlgren-Whitehead model of health determinants: 30 years on and still chasing rainbows. *Public Health*, 199, 20-24. doi: <https://doi.org/10.1016/j.puhe.2021.08.009>

DeBruyn, L., Fullerton, L., Satterfield, D., & Frank, M. (2020). Integrating culture and history to promote health and help prevent Type 2 diabetes in American Indian/Alaska Native communities: Traditional foods have become a way to talk about health. *Preventing Chronic Disease*, 17, E12. <https://doi.org/10.5888/pcd17.190213>

Eakins, D., Gaffney, A., Marum, C., Wangmo, T., Parker, M., & Margarati, M. (Feb. 2023) Indigenous Evaluation Toolkit for Tribal public health programs: An actionable guide for organizations serving American Indians/Alaska Native communities through opioid prevention programming. [7D-Indigenous Evaluation-Toolkit-For-Prevention-Programs.pdf](#)

Evans-Campbell, T. (2008). Historical Trauma in American Indian/Native Alaska Communities: A multilevel framework for exploring impacts on individuals, families, and communities. *Journal of Interpersonal Violence*, 23(3), 316–338. <https://doi.org/10.1177/0886260507312290>

Evans-Campbell, T., Walters, K. L., Pearson, C. R., & Campbell, C. D. (2012). Indian Boarding School experience, substance use, and mental health among urban Two-Spirit American Indian/Alaska Natives. *The American Journal of Drug and Alcohol Abuse*, 38(5), 421–427. <https://doi.org/10.3109/00952990.2012.701358>

Findling, M. G., Casey, L. S., Fryberg, S. A., Hafner, S., Blendon, R. J., Benson, J. M., Sayde, J. M., & Miller, C. (2019). Discrimination in the United States: Experiences of Native Americans. *Health Services Research*, 54(S2), 1431–1441. <https://doi.org/10.1111/1475-6773.13224>

Goins, R. T., Conway, C., Reid, M., Jiang, L., Chang, J., Huyser, K. R., Brega, A. G., Steiner, J. F., Fyfe-Johnson, A. L., Johnson-Jennings, M., Hiratsuka, V., Manson, S. M., & O’Connell, J. (2022). Social determinants of obesity in American Indian and Alaska Native peoples aged ≥ 50 years. *Public Health Nutrition*, 25(8), 2064–2073. <https://doi.org/10.1017/S1368980022000945>

Gone, J. P. (2019). “The Thing Happened as He Wished”: Recovering an American Indian cultural psychology. *American Journal of Community Psychology*, 64(1-2), 172–184. <https://doi.org/10.1002/ajcp.12353>

Gonzalez, M. B., Sittner, K. J., Saniguq Ullrich, J., & Walls, M. L. (2021). Spiritual connectedness through prayer as a mediator of the relationship between Indigenous language use and positive mental health. *Cultural Diversity & Ethnic Minority Psychology*, 27(4), 746–757. <https://doi.org/10.1037/cdp0000466>

Greenwood, M., & Lindsay, N. M. (2019). A commentary on land, health, and Indigenous knowledge(s). *Global Health Promotion*, 26(3_suppl), 82–86. <https://doi.org/10.1177/1757975919831262>

Hathaway, E. D. (2020) American Indian and Alaska Native People: Social vulnerability and COVID-19. *Journal of Rural Health*. 37(1), 256-259.

Healthy People 2030. (2020) U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved August 31, 2023, from <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>

Hodge, F. S., Pasqua, A., Marquez, C. A., & Geishirt-Cantrell, B. (2002). Utilizing traditional storytelling to promote wellness in American Indian communities. *Journal of Transcultural Nursing*, 13(1), 6–11. <https://doi.org/10.1177/104365960201300102>

Hoss, A. (2019). Federal Indian Law as a Structural Determinant of Health. *The Journal of Law, Medicine & Ethics*, 47(4_suppl), 34–42. <https://doi.org/10.1177/1073110519898041>

Hubbard, S., & Chen, P. M. (2022). Falling Short: Examining medical debt and cost avoidance in American Indian and Alaska Native households. *Journal of Health Care for the Poor and Underserved*, 33(4), 1757–1771. <https://doi.org/10.1353/hpu.2022.0136>

Hutchinson, R. N., & Shin, S. (2014). Systematic review of health disparities for cardiovascular diseases and associated factors among American Indian and Alaska Native populations. *PloS one*, 9(1), e80973. doi: <https://doi.org/10.1371/journal.pone.0080973>.

Huyser, K. R., Yellow Horse, A. J., Collins, K. A., Fischer, J., Jessome, M. G., Ronayne, E. T., Lin, J. C., Derkson, J., & Johnson-Jennings, M. (2022). Understanding the associations among social vulnerabilities, Indigenous Peoples, and COVID-19 cases within Canadian health regions. *International Journal of Environmental Research and Public Health*, 19(19), 12409. <https://doi.org/10.3390/ijerph191912409>

Jacob, M. M., Sabzalian, L., Johnson, S. R., Jansen, J., & Morse, G. S. (2019). “We Need to Make Action NOW, to Help Keep the Language Alive”: Navigating tensions of engaging Indigenous educational values in university education. *American Journal of Community Psychology*, 64(1-2), 126–136. <https://doi.org/10.1002/ajcp.12374>

Jaramillo, E. T., & Willging, C. E. (2021). Producing insecurity: Healthcare access, health insurance, and wellbeing among American Indian elders. *Social Science & Medicine* (1982), 268, 113384–113384. <https://doi.org/10.1016/j.socscimed.2020.113384>

Jiang, L., Chang, J., Beals, J., Bullock, A., & Manson, S. M. (2018). Neighborhood characteristics and lifestyle intervention outcomes: Results from the Special Diabetes Program for Indians. *Preventive Medicine*, 111, 216–224. <https://doi.org/10.1016/j.ypmed.2018.03.009>

Kruse, G., Lopez-Carmen, V. A., Jensen, A., Hardie, L., & Sequist, T. D. (2022). The Indian Health Service and American Indian Alaska Native Health Outcomes. *Annual Review of Public Health*, 43(1), 559–576. <https://doi.org/10.1146/annurev-publhealth-052620-103633>

Leviton, L. C., Nwaozuru, U. C., & Rhodes, S. D. (2023). Public Health Systems and Their Role in Society. *Jonas and Kovner’s Health Care Delivery in the United States*, 95.

- Lewis, M. E., Myhra, L. L., Hartwell, E. E., & Smith, J. (2023). Effects of a decolonizing training on mental health professionals' Indigenous Knowledge and beliefs and ethnocultural empathy. *American Indian and Alaska Native Mental Health Research*, 30(1), 136–150. <https://doi.org/10.5820/aian.3001.2023.136>
- Lines, L.-A., & Jardine, C. G. (2019). Connection to the land as a youth-identified social determinant of Indigenous Peoples' health. *BMC Public Health*, 19(1), 176–176. <https://doi.org/10.1186/s12889-018-6383-8>
- Love, C. V., Taniguchi, T. E., Williams, M. B., Noonan, C. J., Wetherill, M. S., Salvatore, A. L., Jacob, T., Cannady, T. K., Standridge, J., Spiegel, J., & Bird Jernigan, V. B. (2019). Diabetes and obesity associated with poor food environments in American Indian communities: The Tribal health and resilience in vulnerable environments (THRIVE) Study. *Current Developments in Nutrition*, 3(Supplement_2), 63–68. <https://doi.org/10.1093/cdn/nzy099>
- Marchiori, D. R., Adriaanse, M. A., & De Ridder, D. T. D. (2017). Unresolved questions in nudging research: Putting the psychology back in nudging. *Social and Personality Psychology Compass*, 11(1). <https://doi.org/10.1111/spc3.12297>
- Marmot, M., Friel, S., Bell, R., Houweling, T. A., & Taylor, S. (2008). Closing the gap in a generation: health equity through action on the social determinants of health. *The Lancet*, 372(9650), 1661–1669. [https://doi.org/10.1016/S0140-6736\(08\)61690-6](https://doi.org/10.1016/S0140-6736(08)61690-6)
- Mays, V. M., Echo-Hawk, A., Cochran, S. D., & Akee, R. (2022). Data equity in American Indian/Alaska Native populations: Respecting sovereign nations' right to meaningful and usable COVID-19 data. *American Journal of Public Health* (1971), 112(10), 1416–1420. <https://doi.org/10.2105/AJPH.2022.307043>
- Mitchell, F. M. (2012). Reframing diabetes in American Indian communities: A social determinants of health perspective. *Health & Social Work*, 37(2), 71–79. <https://doi.org/10.1093/hsw/hls013>
- O'Connor, M. R. (2019). *Wayfinding: the science and mystery of how humans navigate the world* (First edition.). St. Martin's Press.
- Parker, M., Wallerstein, N., Duran, B., Magarati, M., Burgess, E., Sanchez-Youngman, S., Boursaw, B., Heffernan, A., Garoutte, J., & Koegel, P. (2020). Engage for equity: Development of community-based participatory research tools. *Health Education & Behavior*, 47(3), 359–371. <https://doi.org/10.1177/1090198120921188>
- Postsecondary National Policy Institute. (2023). *Native American Students in Higher Education Fact-sheet*. Retrieved August 16, 2023, from <https://pnpi.org/factsheets/native-american-students/>
- Rasmus, S. M., Whitesell, N. R., Mousseau, A., & Allen, J. (2020). An intervention science to advance underrepresented perspectives and Indigenous Self-Determination in health. *Prevention Science*, 21(Suppl 1), 83–92. <https://doi.org/10.1007/s1121-019-01025-1>
- Rodriguez-Lonebear, D., Barceló, N. E., Akee, R., & Carroll, S. R. (2020). American Indian Reservations and COVID-19: Correlates of early infection rates in the pandemic. *Journal of Public Health Management and Practice*, 26(4), 371–377. <https://doi.org/10.1097/PHH.0000000000001206>

Sebwenna-Painter, K., Beckstein, A., & Kraus, S. (2023). Psychological impacts of historic loss and current events surrounding American Indian Boarding Schools. *American Indian and Alaska Native Mental Health Research*, 30(2), 1–21. <https://doi.org/10.5820/aian.3002.2023.1>

Solar, O., & Irwin, A. (2010). A conceptual framework for action on the SDOH. Geneva, Switzerland: World Health Organization. <https://www.who.int/publications/i/item/9789241500852>

Solomon, T. G. A., Starks, R. R. B., Attakai, A., Molina, F., Cordova-Marks, F., Kahn-John, M., Antone, C. L., Flores, J., & Garcia, F. (2022). The generational impact of racism on health: Voices from American Indian communities. *Health Affairs Web Exclusive*, 41(2), 281–. <https://doi.org/10.1377/hlthaff.2021.01419>

Straits, K. J. E., deMaría, J., & Tafoya, N. (2019). Place of strength: Indigenous artists and Indigenous Knowledge is prevention science. *American Journal of Community Psychology*, 64(1-2), 96–106. <https://doi.org/10.1002/ajcp.12376>

Thaler, R. H. & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wellness, and happiness*. Yale University Press.

Unal, D. (2018). Sovereignty and social justice: how the concepts affect federal American Indian policy and American Indian health. *Social Work in Public Health*, 33(4), 259–270. <https://doi.org/10.1080/19371918.2018.1462287>

Walters, K. L., Johnson-Jennings, M., Stroud, S., Rasmus, S., Charles, B., John, S., Allen, J., Kaholokula, J. K., Look, M. A., de Silva, M., Lowe, J., Baldwin, J. A., Lawrence, G., Brooks, J., Noonan, C. W., Belcourt, A., Quintana, E., Semmens, E. O., & Boulafentis, J. (2020). Growing from Our Roots: Strategies for developing culturally grounded health promotion interventions in American Indian, Alaska Native, and Native Hawaiian Communities. *Prevention Science*, 21(Suppl 1), 54–64. <https://doi.org/10.1007/s11121-018-0952-z>

Walters, K. L., & Simoni, J. M. (2002). Reconceptualizing Native women's health: An "Indigenist" stress-coping model. *American Journal of Public Health* (1971), 92(4), 520–524. <https://doi.org/10.2105/AJPH.92.4.520>

Warne, D., & Wescott, S. (2019). Social Determinants of American Indian Nutritional Health. *Current Developments in Nutrition*, 3(Supplement_2), 12–18. <https://doi.org/10.1093/cdn/nzz054>

Willen, S.S., Walsh C.C., & Williamson A.F. (2021). Visualizing health equity: Qualitative perspectives on the value and limits of equity images. *Health Education & Behavior*;48(5):595-603. doi: <https://doi.org/10.1177/1090198121994520>

Zuckerman, S., Haley, J., Roubideaux, Y., & Lillie-Blanton, M. (2004). Health service access, use, and insurance coverage among American Indians/Alaska Natives and Whites: What role does the Indian Health Service play? *American Journal of Public Health* (1971), 94(1), 53–59. <https://doi.org/10.2105/AJPH.94.1.53>