Break the Cycle of Health Disparities for Indigenous Children

Break the Cycle of Health Disparities for Indigenous Children requires incorporation of the concepts of an intergenerational cycle into the Traditional Tribal Medicine Wheel:

Although children from Indigenous communities constitute less than 5% of the US population, they represent approximately 30% of all children in poverty. Along with poverty they suffer from disproportionate health disparities with nutritional disorders and high levels obesity with obesity-related cardiovascular and metabolic disorders, developmental and learning disorders, as well as behavioral disorders as a consequence of transgenerational trauma with high rates of mental health concerns, including substance use, injury, violence, and suicide. They are also at greater risk for exposure to environmental hazards that further compromise their health, and, to compound the situation, they have limited access to quality education and quality health care which perpetuates the Cycle of Health Disparities.

Our goal is to raise awareness and develop strategies to Break the Cycle of Health Disparities for this long-neglected group of vulnerable children. We invite and encourage young people from these communities to participate in this process and gain confidence to Break the Cycle and become active future leaders in their communities. With this knowledge and confidence, and building on the resiliency of these communities, they can work to assure that generations to come do not suffer the same physical and mental health disorders and engender dignity and pride. (See adaptation of Tribal Medicine Wheel below.)

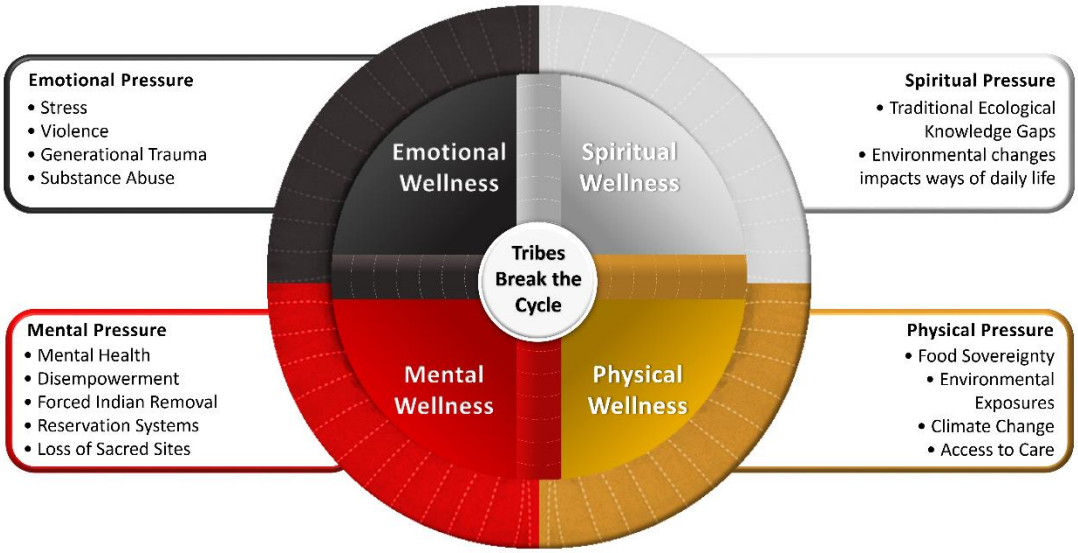

Image: Diagram of Medicine Wheel containing four quadrants of well-being conditions (in clockwise order: Emotional Wellness shown in black, Spiritual Wellness shown in white, Physical Wellness shown in yellow, and Mental Wellness shown in red) accompanied by the stressors that impact achieving or sustaining these conditions for Native Americans. The stressors are described further on this page.

Note: The listed well-being factors do not fit neatly into the four quadrants of the Medicine Wheel, nor is the list exhaustive. For instance, generational traumas impact all aspects of Indigenous well-being. Similarly, the list does not apply to all tribes and not every pressure will be relevant to community. The Medicine Wheel is a means to help Break the Cycle of Health Disparities and advocate for positive changes.

Emotional Wellness (Black): Emotional wellness in the Medicine Wheel encompasses all those variables of health within a child's mood and with the surrounding environment; that affects a child's emotional health, including fetal-maternal relationship. The 'environment' means both the natural and built environment, as well as political or social factors that might influence a child's environment (community violence, exposure to pollutants, etc.). A child's health can also be impacted by cumulative effects of stressors in time (historical, current, and future) or space (for instance, generational trauma).

- **Stress**
  - Stress of marginalization
  - Stress of living near pollution exposure
  - Racism
  - Children being accepted outside of the reservation
- **Violence**
  - Domestic Violence
  - Community Violence
  - Missing/murdered indigenous people
- **Generational Trauma**
  - Insecurity (jobs, housing, income, food, health care access)
  - Climate Change forcing repeated relocation

Physical Wellness (Yellow): Physical wellness in the Medicine Wheel encompasses all those physical variables of health within a child's body and with the surrounding environment, that affects a child's physical health, including fetal-maternal relationship. Children spend most of their time in indoor environments (homes or learning environments). The 'environment' means both the natural and built environment, as well as political or social factors that might influence a child's environment (such as forced relocation). A child's health can also be impacted by cumulative effects of stressors in time (historical, current, and future) or space (for instance, by lack of access to traditional foods or medicine).

- **Food Sovereignty**
  - Food Deserts/Cost
  - Lack of Access to Native Foods (i.e., access to salmon and bison)
  - Costs of non-traditional foods
  - Lack of access to clean water
  - Preventable Illnesses (obesity, diabetes, heart disease)

- **Environmental Exposures** (pollution burdens and resultant poor health outcomes)
    - Degraded Built Environments
        - unhealthy homes: lead, poorly maintained, planned, or ventilated (i.e., exposure from indoor cooking), mold, radon
        - unhealthy learning environments
        - community infrastructure: walkability (leading to obesity)
    - Developmental, learning, and behavior disorders among children
    - Inability to voluntarily relocate (trapped) away from exposures
- **Climate Change**
    - Heat Waves and Drought
    - Reduced access to clean water
    - Natural Disasters (smoke exposure from wildfires)
    - Sea level rise
    - Village/Community Relocation (involuntarily)
- **Access to Care**
    - Preventable Illnesses (asthma, obesity, diabetes, heart disease, liver disease from substance abuse)
    - Limited access to quality health care
    - Access to traditional medicine/provider
    - Pregnancy vulnerabilities (lack of or poor prenatal care, adverse impacts to fetus, infant mortality, prematurity)

Spiritual Wellness (White): Spiritual wellness in the Medicine Wheel encompasses all those variables of health within a child's energy and life-giving force, and with the surrounding environment, that affects a child's spiritual health, including the fetal-maternal relationship. A child's health can also be impacted by cumulative effects of stressors in time (historical, current, and future) or space (for instance, generational trauma).

- **Traditional Ecological Knowledge Gaps**
    - Lack of access to traditional healers/medicine people
    - Lack of integration of historical legacy/protection of storytelling and language
    - Lack of intergenerational teaching (elders to children)
- **Environmental changes impact ways of daily life**
    - Decline in animal/fish/plant populations lead to reduced use in spiritual ceremonies
    - Difficult to maintain subsistence way of life when changes impact food resources
    - Lack of access and protection of nature decreases cultural practices
    - Changes to the Climate are causing the retreat of previously available natural resources
    - Inability to spiritually connect in nature

Mental Wellness (Red): Mental wellness in the Medicine Wheel encompasses all those variables of health within a child's body and with the surrounding environment, that affects a child's mental health, including fetal-maternal relationship. The 'environment' means both the natural and built environment, as well as political or social factors that might influence a child's environment (such as forced relocation). A child's health can also be impacted by cumulative effects of stressors in time (historical, current, and future) or space (for instance, generational trauma).

- **Mental health**
  - Substance Abuse
  - Chronic Stress
  - Post-Traumatic Stress Disorder (PTSD)
  - Climate Change-related stress (lack of access to hunting areas, edible/medicinal wild plants, sacred and historic sites)
- **Disempowerment**
  - Loss of language
  - Reduced capacity for social engagement
  - Suppression by the federal government
  - Disempowered by lack of political voice, lack of investment
  - Oppressed by limited education, employment, and income
- **Forced Indian Removal**
  - Displaced Tribal members often adopted out to non-tribal families (prior to ICWA)
  - Tribal members who must move off reservation for jobs, housing, etc. loose community contact and have a higher risk for substance abuse, suicide, and other negative behaviors
  - Impacts of boarding schools
- **Reservation Systems**
  - Forced displacement of Tribes to reservations away from ancestral lands
- **Loss of Sacred Sites**
  - Sources of pollution inundating sacred sites

Take Action

The following tools and resources can help begin to identify and address health disparities among Native children.

- Air Quality Flag Program: The Air Quality Flag Program
- Air Sensor Loan Program
  - EPA/CDC's Help Your Child Gain Control of Your Asthma;
  - Why is Coco Orange
- 3Ts Program: EPA's 3Ts Program is an outline for testing for lead in water, specifically designed for schools and childcare facilities.
- Help Yourself to a Healthy Home: Checklist to address indoor environments

- Tribal Lead Curriculum: EPA, in coordination with Tribal governments, developed a curriculum to address lead exposure among tribal communities

References

Poverty and Health Disparities for American Indian and Alaska Native Children: Current Knowledge and Future Prospects

> *American Indian and Alaska Native people today represent roughly 1.5% of the total U.S. population. Relative to the general U.S. population, it is a young and growing population, with one-third of people younger than 18 years and fertility rates that exceed those of other groups. More than one-quarter of the American Indian and Alaska Native population is living in poverty, a rate that is more than double that of the general population and one that is even greater for certain tribal groups (e.g., approaching 40%). American Indian and Alaska Native children and families are even more likely to live in poverty. U.S. Census Bureau statistics reveal that 27% of American Indian and Alaska Native families with children live in poverty, whereas 32% of those with children younger than 5 years do—rates that are again more than double those of the general population and again are even higher in certain tribal communities (e.g., 66%). Discrepancies in education and employment are also found. Overall, there are fewer individuals within the American Indian and Alaska Native population who possess a high school diploma or GED (71% versus 80%) or a bachelor's degree (11.5% versus 24.4%).Such educational discrepancies appear early, with American Indian and Alaska Native children's math and reading skills falling progressively behind those of their white peers as early as kindergarten to fourth grade, as well as other challenges persisting throughout the school years, including higher dropout rates and grade retention. American Indian and Alaska Native people have lower labor force participation rates than those of the general population, whereas family unemployment rates range from 14.4% overall to as high as 35% in some reservation communities. The poverty and unemployment observed in American Indian and Alaska Native communities is related to broader economic development challenges in American Indian and Alaska Native communities, including geographic isolation and the availability of largely low-wage jobs.*
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> Sarche M, Spicer P. Poverty and health disparities for American Indian and Alaska Native children: current knowledge and future prospects. Ann N Y Acad Sci. 2008;1136:126-36. doi: 10.1196/annals.1425.017. PMID: 18579879; PMCID: PMC2567901.

American Indian and Alaska Native Children and Families

American Indian and Alaska Native (AI/AN) children confront tremendous adversity with service systems that are under-resourced and often based on service models that are oblivious to native cultures and contexts (Gone & Trimble, 2012; Sarche & Spicer, 2008, 2012). While there is great deal of overlap between the needs of Al/AN children and families and those from other populations, here we emphasize the unique opportunities that arise for advocacy for tribes, given their direct relationship with the federal government, and for models that are informed by specific local tribal cultures. For many Americans, AI/AN issues seem to be of little contemporary relevance. AI/AN people may seem eerily absent from American society (Wilson, 1998), but AI/AN communities are rapidly growing with strong assertions of tribal sovereignty with regard to economic development, education, and health services. These dynamics shape the environment for advocacy on children's issues and provide a unique perspective on relationships between researchers and advocacy. In the case we focus on here, the work of the American Indian and Alaska Native Head Start Research Center, research was designed to respond directly to advocacy from tribal communities. (PsycInfo Database Record (c) 2021 APA, all rights reserved)

Willis, D. J., & Spicer, P. (2013). American Indian and Alaska Native children and families. In A. McDonald Culp (Ed.), Child and family advocacy: Bridging the gaps between research, practice, and policy (pp. 191–201). Springer Science + Business Media. https://doi.org/10.1007/978-1-4614-7456-2_13

American Indian/Alaska Native Child Health and Poverty

One in three American Indian/Alaska Native (AI/AN) children live in poverty. This rate is higher in some reservation communities. The alarming rates of physical, mental, and social health inequities (eg, poverty) experienced by AI/AN children are symptoms of genocide, a legacy of inhumane Federal Indian policy, and ongoing structural violence. The chronically underfunded Indian Health Service (IHS) is just one example where AI/AN children are not universally guaranteed equitable health care or opportunity to thrive. Poverty is highly predictive of educational achievement, employment opportunities, violence, and ultimately health outcomes. COVID-19 has not only exacerbated physical and mental health inequities experienced by AI/AN communities, but has also intensified the economic consequences of inequity. Thus, it is vital to advocate for programs and policies that are evidence based, incorporate cultural ways of knowing, and dismantle structurally racist policies.

Allison Empey, Andrea Garcia, Shaquita Bell, American Indian/Alaska Native Child Health and Poverty, Academic Pediatrics, Volume 21, Issue 8, Supplement, 2021, Pages S134-S139, ISSN 1876-2859, https://doi.org/10.1016/j.acap.2021.07.026.

Ethics in Public Health Research:
Changing Patterns of Mortality Among American Indians

Mortality rates for American Indians (including Alaska Natives) declined for much of the 20th century, but data published by the Indian Health Service indicate that since the mid-1980s, age-adjusted deaths for this population have increased both in absolute terms and compared with rates for the White American population. This increase appears to be primarily because of the direct and indirect effects of type 2 diabetes. Despite increasing appropriations for the Special Diabetes Program for Indians, per capita expenditures for Indian health, including third-party reimbursements, remain substantially lower than those for other Americans and, when adjusted for inflation, have been essentially unchanged since the early 1990s. I argue that inadequate funding for health services has contributed significantly to the increased death rate.

Stephen J. Kunitz, 2008: Ethics in Public Health Research.
American Journal of Public Health 98, 404_411,
https://doi.org/10.2105/AJPH.2007.114538