**Tribes and the Covid 19 Pandemic—Impacts and Responses[[1]](#footnote-1)**

By

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**ABSTRACT** : *Historical inequities placed American Indians and Alaska Natives in the headlights of the oncoming Covid-19 epidemic. Vulnerability was greatly increased by the lack of infrastructure for key services like water, housing, electricity, broadband access and educational facilities and by underlying health conditions. Initial impacts of the virus predicted a devastating future, especially from the potential loss of elders. Multiple agencies and organizations involved in Native American health began to mobilize but credible, coordinated data was lacking for important actions like contact tracing. Despite these obstacles and continuing unequal losses, Tribes rose up with effective innovations through the strength of culture, trust and self-governance by asserting their sovereign rights. Through these means they developed unique and effective responses.*

**PART I: A HISTORY OF INEQUITY**

The history of abuse and unethical treatment of tribal communities by scientific and medical institutions, particularly those attached to government policy, is long and painful. Tribes managed to survive over centuries of epidemics from smallpox to tuberculosis, although with massive drops in population and historical trauma spread across communities. Dr. Donald Warne, Oglala and Lakota Sioux of the Pine Ridge Reservation, noted that the memory of blankets infected with smallpox represented the first case of bioterrorism with the purpose of killing American Indians. (Hedgpeth, 2021) ”We need to remember that our communities have survived tuberculosis and smallpox and a long history of lies and wrongdoing from the federal government,” said Dr. Dakotah Lane, Health Director for the Lummi Nation. (UW and NWIC, 2021)

The *Washington Post* notes how Native Americans were finally vaccinated against smallpox 180 years ago, but only as part of government policy so they could push them off their indigenous lands and move them westward. (Hedgpeth, 2021) The disease ravaged Native American communities in the 1830’s and threatened to stymie the federal government’s agenda to move Indians from their lands in the East and push them West. Nearby white communities feared contact with Native Americans who were suffering under widespread impacts of smallpox. In 1832 the government passed the Indian Vaccination Act aimed at vaccinating Indians living near White settlements. The reason for the vaccination was not well-intentioned for the good of Indian people. It was simply part of the mechanism to move them. Politics played a part in the rollout of the vaccine, as it was provided to “selectively protect American Indian Nations who were involved in favorable treaties with the United States. (Pearson, J. Diane, 2003)

The impacts of these unethical atrocities continue to affect Native responses to disease. Donald Warne, an Oglala Lakota doctor from Pine Ridge Reservation said the Indian Removal Act, the massacre at Wounded Knee and other atrocities have contributed to vaccine hesitancy. (Hedgpeth, 21) More recently in the 1990’s Arizona State University took blood samples for a DNA study from the Havasupai Tribe on false pretenses. The samples were supposed to be used for research on high rates of diabetes, but instead were used in unauthorized ways that violated tribal traditions. The University was forced to make a major settlement with the Tribe for the deception. The Fort Sill Apache Tribe of Oklahoma had a similar experience with researchers who claimed tribal benefit but published results for different reasons. In the 1970’s the General Accounting Office found that 3,400 Native American women who suffered from mental health issues were sterilized—and this may be an under reported figure. Stories of involuntary sterilization by government health services are widespread on many Indian Reservations.

The Navajo Tribe suffered an epidemic of researchers during the Hantavirus outbreak that stereotyped the disease to tribal communities and lifeways, despite infection rates that were higher in Phoenix than on the reservation. (Stumpff, 2012) As a result, the Tribe created an IRB review board. The lack of full and informed consent for other medical procedures and testing was rampant, ranging from forced sterilization to experimental testing and deception. Older members of Native communities have painful memories of these events.

From the data we do have, Tribes suffered mortality at 1.8 times the rate of non-Indians in 2020 (CDC, 2020), while other reports show American Indians/Alaska Native (AI/AN) mortality at 3.5 times the rate of non-Indians. (O’Keefe and Walls, 2021). These are all probably undercounts. Only 14 states even record American Indian data. With many states not recording data for Tribes, the lack of consistent data plagued tribal response to the epidemic. More focused studies revealed shocking statistics on Indian health. In Montana, age adjusted death rates for AI/AN are seven times higher than for whites. (Akee et al, 2021) According to an article in the medical journal, *The Lancet*, they are 3.5 times more likely to be diagnosed with Covid. (Burki, 2021) Indigenous people account for more than 50% of New Mexico Covid positive cases, while they are only 10% of the population. Overall, Tribes faced a high incidence of serious Covid-19 cases and death. The death rate was already high, with 5.5 years less lifespan than the average and generally high rates of death and disease. Tribes responded to the crisis with high vaccination rates and closures.

Covid-19 highlighted a major problem with the lack of tribal access to relevant and accurate data during a public health emergency. They experienced data dependency on data sources that were inconsistent, inaccurate, irrelevant and lacked indigenous control and ownership. This led to negative impacts. (Carol, et al 2021). This made it harder for Tribes with their already limited resources to devise systems, analytical methods and codes to address the epidemic. The history of bad data collected by external sources resulted in a lack of trust. Accurate data was needed for critical responses like contact tracing. As a result, Tribes experienced a data disaster at a critical moment.

 “…some communities were left wondering where they stood, officially. The state

 or the Indian Health Service would give another; the Tribe was left to answer

 why the numbers didn’t match….Some may ask why officials would not release

 pertinent data. This is a rabbit hole so deep you are going to think that you are

 Alice before we are through.” (Sims, 2021)

In addition, data for Native Americans was sometimes melded into larger regions or for a national scope, making it useless for needed actions like contact tracing on the Reservation. Data collected by multiple agencies that may not share was another problem and some state agencies do not even collect data on Native Americans. Sometimes state or county data for Native Americans living in urban areas might be added to Reservation data where they do not reside. If data is collected by a federal agency, it is protected by privacy laws and can’t be reported unless a data-sharing agreement with another agency has been signed. Clinics located on or near tribal lands may serve both Indians and non-Indians, but data is not necessarily separate or available. State, federal, tribal, nonprofit and contracting organizations are all involved in data collection, without any shared standards or formats. Data discrimination showed up in some instances. A hospital in Tucson, Arizona segregated all Native American patients as likely carriers of Covid-19 based on their identity data.

**Covid-19 Impacts to Tribal Mental Health**

Covid-19 epidemic added to mental stress in tribal communities through economic loss, separation from community members, deaths among elders, and children losing parents and loved ones. Inequity in mental health care followed the same pattern as care for physical conditions. A Journal of Clinical Nursing article focused on inequity and higher incidences of mortality. Researched by a team of indigenous nurses who also held PhDs, they noted that segregation and discrimination toward Tribes are negatively impacting their health and well being (Powers, et al 2020). Lack of care combined with the Missing and Murdered Indigenous Women issue, numerous stressors and triggers, increased violence and substance abuse led to more substance abuse and disruption of support systems and cultural practices. This perfect storm of variables offers a warning with projections of significant increases in mental health services and the need for more data to document the damage to Native American populations.

Despite improvements in state-tribal mental health relationships outlined in the Indian Behavioral Health Act of 2020 in Washington State, tribal leaders noted problems in state agency compliance with notifying the Tribe when tribal citizens are involuntarily committed or admitted off the reservation and the problem of effecting inclusion of Tribal governments and Indian health care providers in the state behavioral crisis system. American Indian Health Commission Chair Stephen Kutz spoke at the annual Centennial Accord Meeting, “These entities are not being held to task when they fail to respond to reform,” and he recommended a survey to identify recent examples of these occurrences. (Brennan, 2020) Actual plans and actions have been slow to emerge despite the projections of impending disaster in mental health care to serve Tribes. In a Canadian study of First Nations indigenous peoples, 60% of respondents felt their mental health had worsened since the onset of the pandemic (Tanana, 2020). Some of the current emphasis on telehealth may help as a means of filling the gaps, but this type of alternative delivery is challenged by the lack of access to broadband and potential loss of cultural connection.

**Historical Vulnerability**

Covid-19 revealed multiple systemic inequities that fueled the epidemic throughout Native America. Lack of infrastructure, housing, health care access and delivery systems, toxic and environmental degradation that contaminates lands and waters all contributed to vulnerability in addition to the problem of failed access to accurate data systems. Lack of access to safe housing and safe school infrastructure along with exposure to toxic air quality, smoke from stoves, lack of insulation, lack of access to clean running water and electricity, lack of broadband access all added to Native American vulnerability. Intergenerational residence increased vulnerability, but was also important to mutual support. The American Indians/Alaska Natives (AI/AN) experienced high rates of underlying health issues like diabetes, heart disease and obesity making them even more vulnerable to serious cases of Covid-19. Due to variables such as underlying conditions and higher mortality rates, tribal populations are generally younger with fewer elders. Losses from this smaller population of culture-bearing elders signaled a cultural catastrophe.

**PART II FEDERAL INSTITUTIONS (and others) INVOLVED IN TRIBAL HEALTH**

The federal government has a responsibility to provide health care to tribal communities as a result of treaties and the federal trust responsibility. Many agencies and bureaus share those responsibilities. The multiplicity of agency and organizational responsibilities led to increased complexity and a lack of coordination. The federal government has so failed to provide reasonable access to tribal health care over the years that many other players have jumped into the arena, creating a complex and sometimes tangled web of health care.

Past history led to suspicion of federal health programs and vaccines. At the same time, this past history and supposed Native fears could be used by the government as an excuse to not provide the medical services, doses and funding needed to deliver the vaccine to remote areas. Funding was also needed for effective and culturally appropriate education programs that could be implemented by Native people with the cultural and language skills to work with their people.



Three major divisions in the Department of Health and Human Services, the lead federal agency for Indian health care, hold significant tribal roles. They are chronically underfunded, leading to the sad proverb “Don’t get sick after June” since tribal health care budgets can run dry by then.

**1. Indian Health Service**

The federal Indian Health Service (IHS) is mandated to provide healthcare to tribal communities. In the past, funding and services have often been woefully inadequate. Existing within the Department of Health and Human Services, the IHS, provides the healthcare delivery system for over 2.6 million AI/AN who belong to 574 federally recognized tribes in 37 states. Meeting different needs from urban to remote rural populations, diverse cultures and rural access becomes incredibly complex. Healthcare services and structures are often limited and not locally accessible. IHS clinics and hospitals lack many capacities and the agency is historically underfunded. It has no office of emergency operations or other structures or resources to directly deal with an epidemic like Covid-19.

(https://www.ihs.gov)

**2. The Centers for Disease Control and Prevention (CDC)**

The CDC has an Office of Minority Health and Health Equity that includes Tribes and a Tribal Advisory Board. They claim their role as principal advisor to policy-level officials, principal contact for all public health activities, and coordinator for toxic substances and disease registry programs and policies for American Indians and Alaska Natives. The CDC maintains data, statistics, multimedia resources and public health campaign resources. It provides some Covid-19 funding for Tribes. It recognizes health disparities on its website and it sends out incident command, infection prevention and other kinds of teams. As a distant national organization, it can encounter difficulties in efficient and accurate responses to the issues and needs specific to the diversity of Native American cultures. (Stumpff, 2012) Its significant media and public information campaigns may not be effective in messaging for tribal areas. Its effectiveness depends on how well it developed consultation and meaningful relationships with a Tribe before a pandemic occurs.

As of Sept 2020, the CDC had provided $208.7 million to tribal nations, exceeding the $165 million directed by Congress through the Coronavirus and Response Supplemental appropriations Act of 2020 and the Coronavirus Aid, Relief and Economic Security (CARES) Act. More was forthcoming with the American Rescue Plan (ARP) Act funding. However, the allocation of the money was slow as it passed through the Treasury Department, where there was no direct experience distributing money to 346 tribal recipients including tribal nations, 25 tribal consortia and 31 tribal organizations to reach 490 tribal entities in addition to the issue of how to distribute to Alaska Native Corporations and Alaska Native tribal governments. Almost immediately a debate broke out about whether funds should be distributed to Alaska Native Corporations versus federally recognized tribal governments and the dispute led to a court case in the Confederated Tribes of *Chehalis v. Mnuchin.* Late federal disbursements, unclear guidelines and extremely short spending timelines plagued tribal responses, but they managed to get quite a bit done through community participation and considerable creativity.

(<https://www.cdc.gov>)

 **3. Tribal Epidemiology Centers (TECs)**

Twelve Tribal Epidemiology Centers (TECs) are located throughout the United States in IHS regions with an additional Center in Seattle that serves Indian populations living in urban areas throughout the U.S to tribal citizens. They are a division of the IHS and receive funding through that agency. Funding also comes from the CDC, the National Institutes for Health, the Office of Minority Health and other agencies and organizations. Epidemiology is the medical discipline that employs the scientific, data-driven and systematic study of epidemics and the distribution and causes of health related states of specific populations. Epidemiology focuses on populations and communities rather than individual data. TECs work directly with tribal partners to tailor programs to tribal priorities and needs. They must work with multiple Tribes, and federal, state and local partners and with nongovernmental institutions.

Obtaining accurate data from multiple sources is both enormously complicated and vital especially with the Covid-19 epidemic. The Urban Indian Health Institute, located in Seattle, is part of the Seattle Indian Health Board. It specifically notes that the decolonization of data for and by indigenous people is a priority mission. It specifically assists private, nonprofit organizations that serve American Indians and Alaska Natives in select cities with a range of health and social services. Its role is important because according to the 2010 census, 78% of American Indians live outside the tribal statistical areas, with 60% in metropolitan areas, while just 22% live on Reservations or trust lands (minorityhealth.hhs.gov, n.d.) Typically, the urban population has less access to health services and institutions.

The TECs have a specific mission to “improve the health status of American Indians and Alaska Natives by identification and understanding of health risks and inequities, strengthening public health capacity and assisting in disease prevention and control.” (tribalepicenters.org, n.d.) Playing multiple roles, they manage information systems, collect data, manage disease prevention and control, respond to public health emergencies and coordinate with other agencies. “We hold the responsibility of holding the knowledge of our ancestors,” stated the director of the Urban Indian Health Institute (UIHI), Abigail Echo-hawk. (tribalepicenters.org, n.d.) Since the UIHI has a national responsibility in cities across the U S, outreach is constantly needed. Tribes may not be aware of external conditions about to impact them and the broadband gap even in some semi-urban areas contributes to the problem. In addition to the governmental data collection, the UIHI recognizes the sacred responsibility of data. Data collection was always done and indigenous engagement by elders and knowledge-holders is needed to bring cultural knowledge into focus. <https://tribalepicenters.org> and https://uihi.org

The video, “What is a Tribal Epidemiology Center?,” produced by Southern Plains Creative is highly recommended for understanding how these centers operate.

**Other Federal Institutions and Agencies With Direct Impacts on Indian Health**

**1. Department of Veterans Affairs: Veterans Administration (VA)**

Indian veterans may have to travel long distances to access Veterans Hospitals. Patients with serious coronavirus infections often have to be removed from their communities into distant non-IHS or non VA hospitals to access services. Lagging appointments and services are a national problem, while lack of local referrals troubles this system.

**2. The Bureau of Indian Affairs (BIA)**

The Bureau of Indian Affairs encompasses a number of divisions that hold roles for providing support, services and funding mechanisms for Tribes. They play a major role as a pass-through for funding for Tribes in many areas including infrastructure, schools and services where they sometimes control either budget or direct services. Within the BIA, the Bureau of Indian Education (BIE) manages a system of schools in chronic disrepair: many are without proper ventilation or adequate space and basic maintenance. The BIE schools had mixed effects. Some of their parking lots provided hotspots where students could access information and lessons. Lacking effective Wi-Fi connections, some BIE schools completely closed down in spring of 2020. When money finally came through the CARES Act to improve the deteriorated school facilities, distribution of funds was glacially slow. June 2020 found Senator Sinema and soon-to-be Senator Kelly of Arizona demanding the BIE and other agencies immediately disburse the long since approved funds to the tribal schools and other projects. https://bia.gov

3. The **Bureau of Indian Education (BIE)** schools and school facilities on Reservations continued to deteriorate over the decades and now present health hazards with the advent of the pandemic. The National Congress of American Indians and the National Indian Education Association express deep concern regarding re-opening plans for the Bureau of Indian Education schools due to the unhealthy conditions and lack of maintenance and good ventilation. Key preventative measures and conditions do not exist inside BIE schools. The lack of decent conditions places the safety of students, school workers, administrators and students at risk. (NCAI.org August 14, 2020) School buildings are often without funding for needed upgrades of the old structures. Things like adequate ventilation and room for social distancing seem far from the reality.

**Other Agencies and Organizations**

1**. Indian Health Boards**

The National Indian Health Board is connected to regional Indian Health Boards. These nonprofit organizations assist in coordinating community health responses between many different health entities with a broad scope and numerous income streams. The Seattle Health Board works with epidemiology, health responses and with federal, state, local and tribal governments and nonprofit entities. They make agreements with the Department of Policy and Advocacy for Washington State. They operate as 501(c) 3 nonprofit organizations, bringing in funding and cooperation from the IHS, the CDC, state and local agencies and a wide variety of external organizations. For example, the Portland Indian Health Board coordinates health care responses from all of those sources for Tribes throughout the Pacific Northwest. Indian Health Boards hold Public Health Authority that was originally embedded in the Affordable Health Care Act. They make agreements and coordinate with many state and local organizations. ( https://www.nihb.org)

2. **State agencies** typically have numerous health agreements with Tribes. On a national level the Department of Health and Human Services developed a strategy that allowed tribal health programs and urban Indian organizations to have a choice on how they receive Covid-19 vaccine, enabling them to use IHS or state resources. Some states like Washington and New Mexico have extensive agreements to provide health care services to Tribes directly and through contractors. These pre-existing relationships are important in public health emergencies. These multiple agreements can be simplified and streamlined. Master of Public Administration, Tribal Governance students in Washington State at The Evergreen State College completed a final Capstone project that rolled multiple state-tribal health agreements into one, streamlining the process and reducing costs and site visits in ways that honored tribal sovereignty and decision-making. They received an award from the Governor when their research was implemented.

Some states, like South Dakota conducted conflicting relationships with Tribes. The Governor threatened legal action against tribal attempts to manage entrance to roads through the reservation during the height of the epidemic. At the other end of the spectrum, Governor Wallace created a positive relationship, especially since the Lieutenant Governor is a White Earth tribal member. Tribal leaders have been conferring with the Governor and federal leaders every day at 4pm. (DuPuis, 2021) Because a strong consultation policy assures all 25 of the state commissions have a tribal liaison, they have the ability to understand what Tribes are doing. Strong communication structures allowed positive things to happen.

3. The **National Congress of American Indians** is a 501(c) 4 nonprofit organization established in 1944. It is the oldest, largest and most representative American Indian and Alaska Native organization serving the broad interests of tribal governments and communities. The National Congress of American Indians Policy Institute began a major research program on Tribes and health in advance of the pandemic. It produced a publication that outlined the key elements of governance, trust and culture as they enfold differently in a variety of contexts---the legal and political arenas and in provider/patient/ business/customer/ parent/child/friendship, and romantic relations. They continue to publish weekly updates online on Covid-19 and additional resources for Tribes. (www.ncai.org)

# 4. The American Indian Health Commission (AIHC) is a Washington State non-profit and Tribal organization operated by the twenty-nine federally recognized Tribes and two Urban Indian Health Programs (UIHPs) plus the American Indian Community Center in the state.

# Ensure the process to follow Centennial Accord agreement and RCW are institutionalized within the Agencies that work with the Tribes and UIHOs in the area of health

# Ensure that the knowledge and expertise of the care provided by Indian Health Care Providers to Tribal member and community members is honored. Remove barriers to care and payments from third party revenue sources.

# *Tribes and UIHPs have infrastructure and capacity to utilize their own data, including the ability to create their population health and community health needs reports and the ability to share data as needed while remaining ownership over their own data.*

# *Ensure state policies for public health programs do not act as barriers for program funding to Tribal Government, Indian Health Care Providers and for services to American Indians and Alaska Natives in Washington State; work to ensure state policies and programs rules work to address AI/AN health disparities in a culturally appropriate an tribally driven manner.*

AIHC supports the Tribal and Urban Indian Health Immunizations Coalition (TUIHIC) which is the only Tribal immunizations coalition in the nation. https://aihc-wa.com

4. . All the rest Numerous nonprofit, private and religious organizations may be involved in tribal health care. They may have independent programs or work as contractors for state or federal agencies. Access to online resources is a strong need during the pandemic for access to information and many health care services. Big tech has done little for reservations, mostly taking action to improve coverage only when funded by federal, state or local sources. Smaller companies like Sacred Wind Communications are devoted to providing hotspots or whatever Wi-Fi connections are possible to the Tribes, using creative solutions like a solar panel hooked to a wireless router. (Melhado, 21) Some Tribes, like the Jemez Pueblo in New Mexico, have set up their own internet systems. This is an ideal model, but it is much more difficult for large, rural Tribes to achieve in part due to jurisdictional difficulties across checkerboarded lands managed by many different agencies.

**PART III: SOVEREIGNTY: STRENGTH THROUGH-GOVERNANCE, TRUST AND CULTURE**

It came to pass that tribal sovereignty provided the strongest basis for fighting Covid-19. While distant agencies could miss their mark, tribal self-governance fired up the core engine that protected Tribes and implemented tribally- effective programs. This practical truth pushes back the deficit narrative that chronicles only tribal vulnerabilities and leaves out the success stories of applied sovereignty through governance, trust and culture.

Tribal governance systems recognize that tribal definitions of health may differ from those outlined by federal health institutions like the IHS or the EPA. The National Library of Health created a special exhibit on Native peoples’ concepts of health and illness based on interviews with healers, community members and elders from across the United States. (Bradley, et al, 2016). Tribes have differences and alternative reasons that may not fit with federal agency guidance. For example, the EPA sets health limits to servings of shellfish based on the analysis of the toxins. In the view of the Salish Tribes of Washington, eating more shellfish is a basic element of healthy living. It could be argued that limiting shellfish servings could result in worse health due to substitution of less healthy store-bought foods, not to mention the spiritual, family and cultural impacts of removing traditions of gathering and sharing. No one did the risk assessment of the loss of a major food for healthy diet and cultural sustainability versus the impacts of toxins in the salmon.

**Self-Governance**

The legal fact of tribal rights based on sovereignty has been recognized for centuries through treaties and the trust responsibility. These sovereign rights are operationalized through self-governance. An excellent definition of tribal self-governance comes from Joe DeLaCruz, the nationally known tribal leader from the Quinault Nation in Washington State:

 “No right is more sacred to a nation, to a people, than its right to freely determine

 its social, economic, political and cultural future without external influences. The

 full expression of this right occurs when a nation freely governs itself.”

 Joe DeLaCruz, Quinault Indian

Tribal relationships to federal agencies get implemented under three different regimes. Some receive direct services from the Bureau of Indian Affairs. A second group implements many health services and clinics through 638 contracting, whereby the Bureau of Indian Affairs contracts with the Tribe so the tribal government delivers services and implements services in specific categories. The third type of relationship is through self-governance compacts where the Tribe can negotiate the categories to deliver programs and services more specifically tailored to their needs. The IHS has its own system of negotiating self-governance compacts with Tribes. Tribes must undergo a detailed application process including audits to develop a self-governance relationship for health with the federal government. Stronger emphasis on tribal control has proved highly effective in utilizing resources to reduce vulnerabilities, deliver services and provide vaccines. Through each of these regimes, Tribes continue to seek to strengthen their sovereignty and widen self-governance as they forge pathways through a bureaucratic forest by devising innovative ways to lessen government control of budgets and operations.

Self-governance acknowledges the right to pass Tribal Codes and Closures

The National Congress of American Indians and most tribal leaders emphasized closures and curfews and took enforcement actions on tribal roads to assure closure to non-members for extended periods to reduce external contacts and curfews and closures for tribal citizens. Jemez Pueblo in New Mexico passed some of the strictest regulations. Exit and entrance to the Pueblo was strictly controlled, even for tribal members. Vaccinations were required for exit and entrance, non-Jemez Pueblo peoples were strictly monitored for entry for essential services, and almost complete shutdowns ordered for weekends. Jemez Pueblo worked closely with neighboring communities to enforce the regulations. By July 2, the Pueblo reported zero cases of Covid-19. The Navajo Nation, with heavy impacts in the first stages of Covid-19, enforced strict shutdowns and curfews as waves of Covid-19 occurred. By July 2021, they had reduced cases to the point that they could reopen selected tourist and recreation areas. The White Mountain Apache Reservation followed a similar regime. Indian Pueblos in New Mexico cancelled Feast Days and dances that represented the most important ceremonial events of the year. Major events like Indian Markets and pow-wows were cancelled across the country in 2020. Dr. Fauci noted that tribes were a model of public health action during the epidemic. (Krisst, 2020)

**Indigenous Data Sovereignty and Governance**

As the future of the world becomes more data-driven, the control of data to assure its accuracy and relevance becomes of great importance to indigenous people. Data has long been embedded in indigenous practice and cultural principles derived from indigenous knowledge based on generations of observation and practice. These data systems rely on shared community responsibility, interdependence and understanding of relationships. (Carrol, et al, 2019) Indigenous data sovereignty parallels indigenous data governance because it aligns the collection, application, use and stewardship of data with a Tribe’s values, culture and interests.

Even when Western forms of data collection are employed, data sovereignty includes respect for tribal protocols and codes and a willingness to incorporate indigenous knowledge and methods into the design. Only then can inaccurate and irrelevant data, mistrust, external control of data and the description of indigenous people through the deficit lens be avoided. (Carrol, et al, 2019) The epidemic revealed strong needs to support more infrastructure and capacity to increase indigenous data governance. Some of the Covid -19 legislation may help with this along with strong efforts by Native-based organizations like the American Indian Science and Engineering Society that assists in supporting Native students in the data sciences.

**Effective Governance Through Political Advocacy**

Tribes attained national media coverage during the epidemic. Navajo Nation President Nez was especially effective in going to national media outlets. He emphasized the capacity of his Tribe and beat back the deficit analysis, destroying negative stereotypes of “the poor Indian,” while making sure to advocate for the needed resources.(US News and World Report, Nov 9, 2020) He took pride in Indian Nations as resilient over-comers and effective responders to the impacts. He stopped taped interviews so he could make real points that could not be edited out. He used media to encourage and inspire Native American citizens who modeled how people can overcome adversity. He and other tribal leaders emphasized how Native Americans have contributed to the freedoms and resources of this country. He further emphasized how it is time tribal and congressional leaders understand nation-to-nation relationship in the Constitution and take notice that we are equals. He noted that a US congressional representative is the same as an elected tribal councilman or a representative to the Navajo Nation Congress. They are all elected to represent their region in their respective congresses. Nez and other tribal leaders emphasized that the monies from the CARES Act is their share---not a handout.

It did take much longer for Tribes to access the funds due to bureaucratic fiat, but President Nez was clear that they started helping Native people anyway, even as resources were slow to arrive. He was extremely effective in the policy arena, bringing some of the largest funding and support to the Navajo Nation ever received. He was so effective that the Tribes enrolled citizen numbers increased by 25% making it the largest Tribe in the United States. (Romero, 2021) He was also effective in making public his orders for curfews, codes and closures as Covid-19 waves occurred. He oversaw enforcement while inspiring spontaneous organizations that helped deliver food and water to remote areas. The Navajo Nation largely avoided polarizing resistance to public health responses due to tribal leadership.

President Nez brought up outrageous conditions like lack of running water and electricity that increase vulnerability. His clear communication skills were critical to bringing resources to Native People. Nez portrayed wearing a mask as an act of Love. He emphasized that Tribes need access to all kinds of science and data. Communication was critical and Tribes need access to all sources of science. Tribal advocacy was effective this time. Eight billion from the CARES Act goes to Covid relief among Tribes: 1.32B for IHS, 15M for substance abuse. High risk conditions like the diabetes program were needed as Native Americans are at the highest risk in the US. Later, 31.2 billion more for Tribes followed under the American Rescue Plan.

Tribal leaders like Nez pointed out that tribal self-governance can’t work as well as it should unless it is clear that recognition of it applies to the whole federal government. Gaps must be filled---it was astonishing that the head of the Indian Health Service was not on the National Covid-19 Task Force. Finally, Tribes need to have freedom to make effective local and culturally appropriate decisions. Although Tribes were able to get substantial resources during this epidemic, nevertheless the funds continued to arrive in government budget categories that may stifle the most relevant, effective and innovative responses.

**Sovereignty and Trust**

Trust encompasses accountability and the importance of meaningful relationships between participants as it is framed by respect for sovereignty. A strong foundation of internal trust enabled tribal nations to achieve acceptance of frequent closures, economic loss and reduced social opportunities based on trust through regulations applied through self-governance. Tribal members accepted frequent closures, economic loss and reduced social opportunities based on trust in self-governance that delivered regulations based on ensuring community health, even when they were economically and socially painful. Tribal and inter-tribal trust led to effective action where tribal communities came together to agree to restrictions, worked to achieve high vaccination rates and helped each other as well as helping other local communities. Although much has been written about the well-founded tribal mistrust of medical and scientific research and activities, Covid-19 brought about old realizations of epidemics and vaccinations that engendered a new-found interest in vaccines. (Lucero, et al 2020)

The National Congress of American Indians Policy Institute began a major research program on Tribes and health through the Native American Research Centers for Health. It produced a publication that outlined the key elements of trust as it enfolds differently in a variety of contexts like the legal and political arena, provider/patient, business/customer, parent/child/friendship, and romantic relations and they note that power, in addition to risk and safety is a key feature of trust. (NCAI, 2018 p.45) Trust is important to cooperation in situations like a

public health epidemic.

Major elements of trust include respect and safety in a culturally and emotionally safe environment, the demonstration of a sense of responsibility as being able to complete tasks, dependable, reliable and accountable performance and shared values and goals to create solidarity. (NCAI, 2018 p. 47) If these characteristics are not in place, a trust deficit exists and operations are hampered by the lack of safety, poor communication and delays with unreliable results. The existence of trust or trust-deficit profoundly affects decision-making at all levels.

Some of the characteristics of trust within the indigenous community are abridged from a NCAI publication (NCAI, 2018, p.48) below:

*Connectedness—*sense of community is shared

*Relational—*holding places and contests where relationships are acknowledged and issues are addressed

*Peer-led—*opportunities for community voice, collective action and cultural infusion

*Indigeneity—activities incorporate values and practices specific to the Indigenous community (story-telling, and other approaches to indigenous learning and sharing)*

*Adaptable—*Establishing priorities and approaches with a structure that adapts to community needs.

*Equitable—*power structures and relationships are examined in relation to cultural appropriateness and fairness

*Valued*—value in belonging to the community underlies sustainable relations over time

**Trust in Data and Presentation of the Vaccine**

Tribes are in the best position to collect and report their own data and then understand and address their health care needs. Trust based on common experience, understanding and community knowledge is basic to successful response to a highly contagious pandemic. Funding the resources and personnel for tribally-based data collection and legal and governmental expertise to develop agreements with external sources and tribal-serving organizations is critical to supporting that capacity.

With trust in place, Tribes ran vaccination programs with amazing results. By May 2021, Sandia Pueblo of New Mexico reached nearly 90% and the Indian Pueblos of Laguna, Acoma, and Kewa (Santo Domingo) achieved over 70% of adults and they were moving ahead with youth vaccination programs. By May 2021, the Navajo Nation achieved a 90% rate of vaccination for those eligible on the reservation. (Romero, 2020) Knowing the basic demographics of a people was essential to the success of these programs, and the recognition that knowledge rests locally was critical.. The model for indigenous data governance that aligns the collection, applied use and stewardship of Indigenous Peoples’ data with their value, cultures, interests and priorities proved highly effective in tribal vaccination efforts.

In the meantime, the National Congress of American Indians began presenting an update on Covid-19 data for American Indians and Alaskan Natives every Tuesday on their website from the existing sources including the IHS, although they note that this data probably underestimates the real situation. As of July 13, 2021 Covid-19 was the highest cause of death, the probably under reported rate of vaccination was 7.5% over the national average and this is probably an undercount. Daily rates of reported cases are much reduced, but showed an uptick in July 2021, partially driven by a larger uptick specifically in the Oklahoma service area and followed lows in May and June.(ncai.org, October2021) Where community values, responsibility and accountability existed, Tribes made progress in fighting the pandemic and local champions emerged doing everything from delivering food to ferrying community members to vaccination sites.

**Culture as the Sovereign Engine of Resistance Against Covid-19**

Culture-centeredness involves building problem definitions, solutions and operations from within the culture, a truly sovereign right. The research arm of the NCAI suggests there are some characteristics to look for in cultural centeredness responses. The following characteristics are abridged from their publication “Holding Space” (NCAI, 2018, p.83):

---Inclusion of community voice reflecting historical/social circumstances and cultural values

---structural transformation that empowers the community and builds capacity

---culture-bearers have access to decision-makers

---cultural humility and open-mindedness among partners

Navajo Nation President Jonathan Nez spoke out on the power of Navajo culture to combat Covid. He knew that culture makes it possible to advance scientific support and knowledge. Current studies suggest that meaningful public health responses to the pandemic include a community’s history, culture, language and traditions. (Akee, et al, 2021) This involves looking at issues and alternatives from a spiritual viewpoint. Narratives of emergence, teachings from the elders, monsters, and the story of the hero-twins who were given weapons to combat hunger, poverty, and old age, all placed a cultural frame on the epidemic. The new enemies were now diabetes, suicide and Covid-19. Everyone can be a warrior with the weapons like the mask and the power of the vaccine. The real weapon then becomes using the way of life teaching from indigenous culture, about taking care and love of others around you. In this way the community gains strength to endure the long lock downs and social isolation that are key to conquering the pandemic.

Through culture, medicine itself is indigenized and tribal institutions can align educational efforts with culture. Language is a powerful tool and Covid-19 was interpreted through Navajo names and the cultural experience. Healthy diet and food sovereignty comes into focus. Tribal culture also enabled community organized responses and ignited the relationships between youth and elders. It initiated an emphasis on traditions of mutual support through community sharing and regard for elders. This emphasized the benefits of kinship in multi-generational housing, invoked the knowledge of healing herbs and access to healers and energized community support systems. Rituals and ceremonies, when they could be held, strengthened connections. Young people stepped up to assist elders by providing health information, assistance and supplies to ensure that elders could stay home. A new interest in farming and community agriculture, hunting and ranching sparked. Many beneficial activities occurred spontaneously that were tied to language and traditional practices, stories and culture. Young people stepped up to protect their elders in Native Nations. (Gable, 2020)

In a recent webinar, Ciarra Greene, Nez Perce, a faculty member at Northwest Indian College offered the Nez Perce definition of culture as “the thing that causes survival.” (Webinar, UW/NWIC 2021) This was truly a definition appropriate during the Covid-19 epidemic. Cultural classes, multiple commissions and spontaneous self-organizing efforts based on indigenous culture helped tribal members to engage with social media. Tribal culture also enabled community organized responses. When Professor Cierra Greene of Northwest Indian College thinks of Indian carrots, she thinks of the resilience of Nimipuu connections for her Nez Perce Tribe. (Webinar UW/NWIC 2021) Tribal culture also fueled community organized response. Greene shared the idea of Liki-yu---a Nez Perce phrase meaning all around, a circle of what we need to do as a people encompassing language, different views from the community and bringers of knowledge, and kinship built around the idea of all my relations. Participants in her webinar emphasized how Western science comes from the outside and though important, it is not enough. Indigenous knowledge is critical because it comes with responsibility and reciprocity.

Michele Baker Montgomery noted that it is time to uplift indigenous knowledge to create platforms ourselves rather than be told by others how things must be done and the epidemic is nothing less than a time to create hope and share knowledge. (Webinar UW/NWIC 2021) In another webinar, Chairman DuPuis of the Fond du Lac Band of Lake Superior Chippewa noted that during the epidemic Natives had time to go back in the woods, gathering plants in the spring in the Ashinabe way. (US News and World Report, Nov. 9, 2020) With travel outside Native lands limited, one can see more clearly and return to the woods, back to “the medicines we were taught to take care of us, going back to that part of who you are” became easier. (US News and World Report Nov. 9, 2020)

**SUMMARY--RESOLVE, RESTORE, RESILIENCE**

Tribes worked through the pandemic with major gaps in infrastructure like the lack of running water and electricity that seemed outrageous. Tribal leaders spoke out about these gaps and asserted their stories in the media and to the Congress with exceptional clarity. Historical inequity in health services and poverty led to a vulnerable population with significant underlying conditions like the highest rate of diabetes in the United States that spread more serious Covid-19 infections.

The resolve of tribal governance to limit contact and ensure social distancing worked despite the initial high numbers of infection and mortality. Many Tribes were quick to apply emergency measures through codes and laws that resulted in closure, curfews and mask mandates. While the United States faced three waves of the virus, the Navajo Nation’s quick actions limited it to two waves. Many tribal vaccination rates soared to the 90% level.

Covid-19 resulted in moves to ensure resilience by restoring some cultural knowledge sharing and indigenous activities along with a wider access to multiple sciences. Through major congressional and presidential funding actions, some of the government’s trust responsibilities were at least partially restored and the largest government investment in Tribes in history were made. Tribal leaders and journalists were able to articulate the need for increased capacity and enhanced tribal decision making. They identified and conveyed the needs for more flexibility and less rigid categories for funding and the extent of the data mess along with the need to increase tribal capacity for determining, stewarding and analyzing critical data.

Tribal resilience was strengthened by the success of its information campaign and the demonstrated will of tribal communities to work together during emergencies.

Tribal nations followed through on public health recommendations and achieved high rates of vaccination early on. The call went out to be a warrior in this public health emergency, to identify the mask as the armor, and the way of life teaching about taking care and showing love for others around you as weapons. Although Tribes were able to get substantial resources during this epidemic, nevertheless they remained alert to the continuing need to extend programs over longer terms and assure that funds do not come in government categories that stifle the most relevant, culturally appropriate and innovative responses.

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