

Spirit of
Community
Health

Final
Report

Investigating Characteristics of Tribal Public Health
System Organization and Performance

2015

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EXECUTIVE SUMMARY

STUDY PURPOSE AND RESEARCH QUESTIONS

The purpose of this study was to begin to create an evidence base around how tribes organize and partner to deliver public health services to protect and promote the health of their communities. The study aimed to explore the partnerships within one selected tribal public health system that protected and promoted health by examining how and through what relationships this tribal public health system delivered public health services, and by assessing the key characteristics of this system that addressed health disparities. The study used a case study design to enable deep and rich understanding of one tribal public health system.

The study was organized around a conceptual framework that guided the research questions and focused the scope of the study. This conceptual framework combined the Public Health System framework (Handler, Issel, & Turnock, 2001), the Relational Worldview Model (Cross, 1997), and the Social-Constructivist Model (Dressler, 2001). The framework placed both service delivery and health outcomes in a broader context that reflected and valued the ways in which health is defined and wellness is pursued in Native American communities. The components of a public health system that guided the study included: goals and mission, structure and sociocultural context, services, and health outcomes.

The study was guided by the existing literature on public health systems and services research (PHSSR) and was designed to begin to address the substantial gaps in this literature related to tribal public health system structure, organization, and performance. Research on tribal public health systems is very limited, and research on the impact of system characteristics on public health outcomes for tribes is virtually nonexistent. The National Indian Health Board (NIHB) Profile (2010) provided one of the few sources of information on tribal public health structure, organization, and performance, and highlighted the need for further investigation in this area. Furthermore, there is a lack of research exploring the role of culture in shaping tribal public health systems. Culture is an often understudied concept in health and public health research, and when culture is included in study designs, it is often measured using race and/or ethnicity as a representation, which does not capture the complexity of culture or the particular ways in which culture impacts health. The lack of attention to culture serves to perpetuate the dominance of Western views of mind, body, nature, and spirit as separate entities in science and leads to a favoring of that view and a devaluing of other ways of knowing (Isaacs, Huang, Hernandez, & Echo-Hawk, 2005; Kagawa-Singer, Dressler, George, & Elwood, 2015; NIHB, 2012b).

The study used an explicit focus on the broader sociocultural context in which tribal public health system exists. The study addressed the following research questions:

1. How are tribal public health systems conceptualized and organized by tribes, and why?
2. Who are the key actors and decision-makers within a tribal public health system, and why?
3. In what ways are tribal public health system partners monitoring system performance and tracking health outcomes?

4. How do the environment and infrastructure (organizational, financial, workforce) within a tribal public health system influence public health approaches, especially those addressing health disparities?
5. What influence do the environment, infrastructure, and interorganizational relationships and interactions within a tribal public health system have on its ability to impact health disparities?

METHODS

This study utilized an intrinsic case study design. This design was well suited to both the tribal setting and the exploratory nature of the research (Creswell, 2007; Stake, 1995). The case study involved detailed examination of a single tribal public health system, which was selected through an open call with community research partners. This design was preferred for understanding the complexities of a single selected tribal public health system over gathering aggregate or prescriptive data from multiple tribal public health systems. The ultimate purpose of a more rigorous intrinsic case study design is not generalizability of findings, but rather deep understanding of the phenomenon under study that can lead to models and theoretical methods which in turn can inform further research. Data sources included interviews with public health system partners, ecomaps completed by public health system partners, focus groups with community members, and document review.

In order to protect the rights of study participants and ensure the selected tribe benefited from participating in the study, the study methods used principles of tribal community-based participatory research. Participants were defined not only as data sources but also as active participants in the creating and disseminating knowledge. Building trust and transitioning power from researchers to community members was a priority in the process of participant recruitment, data collection, and analysis. Additionally, the research procedure was guided by tribal oversight, the use of a facilitator, and a Tribal Advisory Group. The Tribal Board (governing body) adopted a resolution to approve participation in this study. A tribal staff workgroup was formed to work with the study team to develop recruitment materials and research instruments, review preliminary analysis, and participate in member checking. The Director of the Tribe's Health Division approved all research protocols. The Institutional Review Board at MPHI approved this study, and informed consent was obtained from all study participants.

STUDY CONTEXT

At the time of the study, the Tribe's federally designated service area covered seven counties and an area of approximately 8,500 square miles. Within this area, there were 11 cities and 80 recognized townships. Approximately 49% of the service area was considered rural, with an average population density of 20.6 persons (Native and non-Native) per square mile. The Tribe had nine reservations/trust-land sites in the service area. According to U.S. Census 2010, the tribal service area had a total population of approximately 185,890 people, ranging from 6,685 to 66,514 per county. Of the total population in the service area, on average, approximately 7.8% were Native American. The percent of people who were Native American ranged from 2.3% to 17.2% per county. Within the tribal service area, there were approximately 14,000 tribal members.

The median household income for all people in the service area was \$38,056. On average, 16.3% of all households in the service area lived below the federal poverty level, and the average child poverty rate was 23.2% for the service area (US Census Bureau, 2015). According to the most recent tribal population survey, over 30% of tribal households made \$20,000 or less per year, while another 24% made less than \$35,000 per year (Laing et al, 2015).

The Tribe's government was driven by its Constitution which was adopted in 1975. The governing body of the Tribe was the Board of Directors, which consisted of 12 Board members and one chairperson who were elected into office for four-year terms. Board members represented the five units of the Tribe's service area. Services for the Tribe's members were administered through the Tribe's Membership Services, which provided programs through each of its major divisions: Enrollment, Community and Family Services, Culture, Education, Elder Services, Natural Resources, Housing, Recreation, and Health. The Health Division's mission was to "provide high quality patient-centered health care that is responsive, courteous, and sensitive to individual, family, community, and cultural needs with an emphasis on disease prevention and health promotion."

RESULTS

FORCES THAT SHAPE THE PUBLIC HEALTH SYSTEM

The case study site's public health system was shaped by their history with the Indian Health Service (IHS) health delivery system, their journey toward self-governance, their tribal and non-tribal partnerships, their culture, and the economic, political and physical environment. These forces emerged as the key factors that explained why the public health system was structured and functioned as it did. Key findings included:

- The legacy of the IHS Health Delivery System continued to influence the Tribe's public health infrastructure and services.
- Public health activities were both supported and challenged through exercising self-determination.
 - Elected Tribal leaders were directly involved in the oversight, design, and management of public health policies and programs.
 - Self-governance had some limitations which influenced the Tribe's ability to take some actions that impact public health.
 - Self-determination created opportunities for the Tribe to take some actions that impact well-being.
 - According to tribal public health system partners, the role of the Tribal Board in public health was administrative, legal, and supportive.
- Formal relationships between the Tribe and other non-tribal agencies can be complicated and personal relationships were vital to success.
 - Most non-tribal partners did not understand the Tribe's culture and environment.
 - There were some gaps in communication and coordination with other governmental entities, in particular with the State.

- Cultural beliefs and practices influenced community needs and how services were delivered.
 - There was diversity within the Tribe in the degree to which tribal members felt connected to traditional cultural teachings and practices.
 - Relational connections and interpersonal relationships were important characteristics of the community structure and interactions.
 - Incorporating culture and tailoring services to traditional culture was a clear priority of tribal service providers.
- Social, physical, economic, and other environmental factors influenced tribal priorities and health outcomes. Participants from the community identified how social norms influenced unhealthy behaviors, and how generational trauma had lasting impacts on the community.
 - The regional economy and the economic status of the population impacted programs, services, and health status.
 - Physical geography and climate created barriers to providing and receiving public health services.

KEY HEALTH ISSUES

Data abstracted from a survey of community health status that was conducted in 2012-2013 identified priority community health needs as well as health disparities. Both interview and focus group participants revealed similar key health issues facing the community plus additional health issues, not found in the available data but also of concern to community members. At the time of the study, the Tribe had been strategically working toward addressing priority health problems for more than a decade. Key findings included:

- Survey data revealed relatively high rates of chronic disease, poor mental health, and unhealthy behaviors among tribal adults, as well as unhealthy behaviors among children.
 - The tribal population experienced a substantial burden of chronic disease.
 - Poor mental health affected a substantial proportion of tribal adults.
 - Too few tribal adults and children were eating healthy and participating in daily physical activity.
 - Commercial tobacco use and exposure affected a relatively large proportion of tribal adults.
- Tribal members had greater access to health care and utilized clinical preventive services more often than all adults in the state.
- Both community members and public health system partners were aware of key community health needs.
 - Chronic disease, mental health, and substance abuse were key health issues of concern.
 - Some main health issues were not adequately documented or measured.
- The tribal population experienced disparities in physical health, health risk behaviors, and mental health.
 - Community members were aware of health disparities affecting their community.
 - Participants did not talk about elimination of health disparities or health equity as a goal of their agencies.

CONCEPTUALIZING PUBLIC HEALTH IN A TRIBAL CONTEXT

The conceptual framework for a public health system includes four major components, one of which is the system's mission and goals. In addition to the mission and goals of individual agencies within the tribal public health system, the Tribe had responsibilities, both formal and informal, for protecting and promoting the health of tribal members. Formal goals were communicated through the Tribal Code, Board resolutions, and their IHS Funding Agreement. Key findings included:

- The definition and purpose of public health included: prevention, educating and informing, providing safety net care, working together, and community health and wellness.
- Participants shared the mission and goal of improving individual and community wellbeing.
 - Organizations with health promotion as a goal were working to make the healthy choice the easy choice.
 - Organizations focusing on prevention typically focused on chronic disease.
 - Most participants identified providing integrated, community-based services as a goal of their organization.
 - Tribal participants identified preservation of culture and traditions as a goal of their organization.
 - Public health system partners were working toward a goal of ensuring financial sustainability.
- The Tribe's responsibility for health is described through formal agreements, such as its compact with IHS and tribal codes and resolutions.
 - The Tribe's Compact with IHS describes the Tribe's responsibilities for delivering health programs, services, functions, and activities to its members.
 - Many chapters of the Tribal Code and resolutions describe the potential impact on health and wellbeing of tribal members.
- Participants felt the Tribe's responsibilities for protecting and promoting health included self-governance, service provision, cultural preservation, prioritizing health, and supporting health promotion and education.
- Community members felt the responsibilities of the Tribe included listening to the wisdom of the elders, improving current programs, engaging young people, and supporting individuals to make healthy choices.

INFRASTRUCTURE

The tribal public health system was comprised of tribal and non-tribal organizations from many different organizational sectors. Partnering between tribal departments, as well as between the Tribe and non-tribal organizations, was vital to the provision of public health service. Public health and health care services were highly integrated within the Tribe. The Health Division is funded through IHS, third party revenue, and federal, state, and private grants. However, funding across the public health system was not sufficient for meeting the public health needs of the community. Many participants discussed difficulties they face due to staffing shortages and turnover, which impact the availability of services and the ability to collaborate with other organizations. Key findings included:

- The tribal public health system had jurisdiction covering seven counties and included tribal and non-tribal organizations from 20 different organizational sectors. All sectors had connections with the Tribal Health Division.
 - The Tribal Health Division served a population of approximately 15,600 people in the service area.
 - The Tribal Health Division was governed by the Tribal Board of Directors.
 - The tribal public health system connected a variety of organizations within one network.
 - The tribal public health system included both tribal and non-tribal organizations.
- Partnering benefited both tribal and non-tribal organizations; however, it was not always easy to negotiate how services should be delivered through these partnerships.
 - Partnerships were key to the provision of public health services.
 - Partnering between tribal and non-tribal organizations takes work and strong relationships.
- Many different departments within the Tribe partnered to provide public health services and to protect and promote the health of tribal members and their families.
 - There was a high degree of integration between public health and health care services within the Tribe.
- Participants identified a variety of key actors within the public health system, including local health departments, the tribal community health program, local hospitals, the Tribe, and individuals.
- The Tribal Health Division operated on several sources of funding; however, funding was inadequate to meet public health needs.
 - The Tribal Health Division had a total budget of \$32 million for delivering public health and health care services.
 - The most common sources of funding reported by key informants were grants, federal and state funding, tribal funds, and private donations.
 - Many activities of the tribal public health system were driven by grants.
- The Tribal Health Division had a large staff of health care providers and public health professionals but faced workforce challenges.
 - The Tribal Health Division employed approximately 237 staff.
 - Organizations within the tribal public health system engaged in a variety of methods to promote staff professional development.
 - Organizations within the tribal public health system experienced difficulties with staffing shortages and turnover.

SERVICES

The Tribe's public health system was described as delivering services to protect and promote health that were community-driven, culturally tailored, informed by data and best practices, and both supported and constrained by funding. Interview data were collected using the 10 Essential Public Health Services (10 EPHS; Harrell & Baker, 1994) as a framework; however, the 10 EPHS did not accurately capture the

core services described by members of this tribal public health system. The analysis process identified eight core services, summarized as follows:

- Assure personal health services are person-centered, holistic, culturally-tailored, integrated, and available to all community members.
 - The Tribal Health Division offered personal health services, community health services, and linkages to services not provided by the Health Division.
 - The Tribal Health Division operated like a medical home that was available to the whole community.
 - The Tribal Health Division operated within a network of human service providers to meet the needs of the whole person across the life-course.
- Design and administer culturally tailored community health programs to improve population health.
 - Public health system partners offered programs and services to prevent chronic disease, control communicable disease, and improve maternal-child health.
 - The Tribal Health Division and their partners in other tribal divisions culturally tailored their programs and services, aligning them with the experience and culture of members of the Tribe.
- Offer education and information to community members to engage them in health improvement; shift knowledge, beliefs, behaviors, and norms; and honor traditions and values.
 - Health education was provided on a variety of topics and delivered through a variety of modes.
 - The education strategy considered most effective varied depending on the goal.
 - Health education messages were most effective when they resonated with their intended audience.
- Build networks and engage with partners across systems to impact priority health issues.
 - The Tribal Health Division had partners from all the key sectors involved in delivering public health services.
 - Partnerships were critical to delivering public health services due to the level of funding, the rural setting, and the need to assure that services reflect the culture of the Tribe.
 - Partnerships created benefits for tribal and non-tribal organizations.
 - Coalition work played a key role in how the Tribe builds and mobilizes their partnerships.
 - Partnerships have achieved important public health outcomes for the Tribe.
- Monitor threats to health and plan for and respond to emergencies on tribal lands and across jurisdictional boundaries throughout the service area.
 - The Tribe worked with local and state public health to monitor threats to health.
 - Investigating threats to health tended to be very issue-specific, required a few key people, and involved working through complicated relationships across jurisdictions.
 - Various methods and systems for communicating threats to health were used depending on the source of the information, the type of threat, and the intended audience.

- The Tribe had an emergency preparedness team that coordinated the Tribe’s response to emergency situations that threaten people’s health.
- Advocate for policy, funding, programs, and services that would improve the community’s health.
 - The Tribal Health Division played a key role in bringing information to the Tribal Board to inform policy decisions.
 - Community Health staff supported partners (tribal and non-tribal) in their efforts to advocate for policy decisions that support health.
 - The Tribe lacked a Public Health Code or an overarching legal framework that laid the groundwork for health policy and public health authority.
- Assess health status around specific issues and develop plans to address community health concerns.
 - Assessment data were collected and analyzed in order to understand needs, monitor progress, make decisions, and plan for improvements.
 - Assessment and planning were guided by emerging issues, program priorities, and funding requirements.
 - The assessment and planning process often involved working in collaboration with partners.
 - Tribal Health Division staff valued strategic planning and they have worked toward achieving the goals articulated in a strategic plan, which was in the process of being updated.
- Use data and best practices to improve services, both for the tribe and through sharing lessons learned.
 - Tribal Health Division staff and their partners valued the use of best practices, but recognized the importance of adapting best practices to fit the culture and community.
 - Evaluation was used to learn about program implementation and outcomes in order to make improvements.
 - Performance management and quality improvement were integrated into the personal health services provided by the Tribal Health Division.
 - Tribal Health Division staff frequently shared what they had learned in practice in a variety of informal and formal ways.

DISCUSSION

This case study provided a starting point for building a research base for understanding tribal public health services and systems. The answers to the study questions were complex and interrelated, and, in many ways, aligned well with the conceptual framework that guided the study and will be used in discussing the study’s core findings.

PURPOSE, GOALS, AND MISSION

The definition and purpose of public health, as conceptualized by participants, was mostly consistent with the CDC Foundation’s and World Health Organization’s definitions of public health, which describe

public health as focused on protecting and promoting the health of entire populations through a broad array of organized strategies which create conditions in which people can be healthy and supporting healthy practices and behaviors through assessment, policies, and assurance of access to health care (CDC Foundation, 2015; World Health Organization, 2015). The definitions were similar in their focus on prevention and on creating the conditions in which all people can be healthy. However, there were a few differences. The most notable differences were that participants from tribal organizations identified preservation of culture as a major goal of public health, and ‘working together’ was deemed an important aspect of defining the purpose of public health. The inclusion of concepts like cultural preservation, collectivism, and collaboration described by participants reinforced the idea that the purpose, mission, and goals of the tribal public health system were culturally constructed by system participants.

STRUCTURAL AND SOCIOCULTURAL CONTEXT

Within the conceptual framework for the study, the structural components of the system -along with the sociocultural context- were depicted as a medicine wheel in order to emphasize the interrelated nature of the public health system’s structural capacity and the broader social and cultural context within which the system exists. Each of these elements was found to play an important role in the structure, organization, and performance of the tribal public health system.

The tribal public health system was shaped by the historical role of IHS and current reliance on grant funding for public health activities, and the core features of the Tribe’s system were laid out in its compact with IHS. Additionally, the public health system operated as a diverse network of partners. The Tribal Health Division was central to this partnership but achieved impact through convening partners, spreading best practices, identifying opportunities to share resources, and, when appropriate, pursuing integration. Personal and professional relationships were fundamental to the functioning of the tribal public health system, and linkages between individual people were identified as a powerful force.

Public health systems require a variety of resources in order to deliver public health services, such as informational resources, organizational resources, physical resources, human resources, and fiscal resources (Handler et al., 2001). While all of these resources were important to the tribal public health system, the case study found that human resources and fiscal resources-or the lack thereof- had a very large impact on the functioning of the system. Furthermore, findings suggested an additional resource that is missing from Handler et al.’s (2001) model: community knowledge. Indeed, the Tribe’s approach to evaluating public health programs aligned with a practice-based evidence approach by valuing community knowledge as a resource.

The study found that, overwhelmingly, culture was a highly integral part of the structure, organization, and performance of the tribal public health system. In terms of the impact of culture on the system, the tribal agencies valued a culturally-sensitive approach to public health and tailored their services to the tribal community. However, most non-tribal participants did not have a thorough understanding of the Tribe’s culture and struggled to understand whether and how to culturally tailor their services to tribal members.

Finally, the tribal public health system was heavily influenced by a number of factors related to the broader context within which it was situated. In particular, the economic context and the rural setting of the Tribe's jurisdiction influenced the ability of public health system partners to protect and promote the health of the community.

PROCESSES OR SERVICES

One of the central questions explored by this study was the degree to which the 10 EPHS and PHAB's translation of these services into a set of domains, standards, and measures for public health accreditation aligned with and accurately described the services delivered by the Tribe. While there was substantial overlap between the services delivered by the Tribe and the 10 EPHS, there were also key differences.

The services delivered by the Tribe's public health system involved:

- Assuring personal health services are person-centered, holistic, culturally tailored, integrated, and available to all community members.
- Designing and administering culturally tailored community health programs to improve population health.
- Offering education and information to community members to engage them in health improvement; shift knowledge, beliefs, behaviors, and norms; and honor traditions and values.
- Building networks and engaging with partners across systems to impact priority health issues.
- Monitoring threats to health and planning for and responding to emergencies on tribal lands and across jurisdictional boundaries throughout the service area.
- Advocating for policy, funding, programs, and services that would improve the community's health.
- Assessing health status around specific issues and developing plans to address community health concerns.
- Using data and best practices to improve services, both for the tribe and through sharing lessons learned.

For the most part, the 10 EPHS and PHAB's Domains aligned well with how the tribal public health system educated people about health issues, diagnosed and investigated health problems, mobilized community partnerships, engaged with the policy making process, and used research for new insights and innovative solutions. However, the Tribe had potential gaps in services defined by the 10 EPHS and PHAB's Domains around enforcing laws and regulations that protected health and ensured safety; and assuring a competent public health workforce.

There were also areas where the 10 EPHS and PHAB's Domains did not correspond with the services delivered by the Tribe. Participants described the role of tribal public health system partners in designing and administering community health programs, and this type of activity is not reflected in the 10 EPHS. Additionally, the Tribe's approach to assessment and planning was dynamic and impactful but not as established as in PHAB's standards and measures. When talking about evaluation and quality improvement, participants emphasized the needs of the customer, and, while quality improvement and

performance management were formally part of tribal health care delivery, they were not built into the delivery of community health services.

The Tribe's role in delivering personal health services went well beyond what the 10 EPHS or PHAB suggest is the role of public health. Assuring the provision of personal health services and health care was at the core of the Tribe's public health system. The Tribe decided how and where services will be provided, by whom, and at what cost. The Tribe was responsible for assuring that all community members had access to care- although there were barriers to fully realizing this goal- and that the care provided was of high quality. The Tribe also made sure health care services were well integrated to meet the needs of the whole person within the context of their family and community as well as over the life course. This holistic approach assured that health care played a meaningful role in improving population health outcomes. The Tribe's provision of community and clinical services provided a model for what integration looks like in practice.

Making sure that the services they delivered aligned with their culture was at the heart of how participants described the Tribe's service delivery model. Across all services – from education to policy development to evaluation to health care – integrating culture and adapting to the social context were described as primary strategies for making sure actions taken lead to improving the health of the community. Adapting services to the sociocultural context is not part of the 10 EPHS, but is critical to the work of this Tribe.

OUTCOMES

The majority of health outcomes, such as preventable chronic disease, are the result of complex interactions between individual, community/cultural and environmental factors. The effect of context is an important part of understanding and addressing these public health issues. While the Western approach places high value on observations and measurements, Indigenous ways of knowing are based on relationships, interconnections, and remembering (Isaacs et al., 2005; as cited in NIHB, 2012b). Consistent with Indigenous ways of knowing, the outcomes of the tribal public health system were founded on culturally constructed definitions of health among community members and health priorities for public health system partners. Further, holistic health was identified as a primary outcome of a well-functioning tribal public health system (rather than the elimination of disparities).

FUTURE DIRECTIONS

The exploratory nature of the case study design provides a wealth of ideas for future directions in both tribal public health research and practice. Future directions include:

- Build resources to support development of tribal public health codes, ordinances, and laws to clarify public health authority, resolve jurisdictional issues, and protect tribal sovereignty.
- Explore financing options for Tribal Public Health that decrease reliance on grant funds.
- Consider the value of a practice-based evidence approach to public health programs and services that values community knowledge of what works.

- Identify factors that make assessment and planning, as well as evaluation and quality improvement, impactful at a community level.
- Look to tribes to learn about integrated public health and health care service delivery.
- Explore strategies for adjusting public health performance models to reflect the extent to which programs and services meet the needs of the community and address the community's sociocultural reality.
- Focus future research on the degree to which the Ten Essential Public Health Services align with what public health systems look like in practice.
- Develop a research agenda for tribal public health systems.

INTRODUCTION

In the 2010 US Census, 5.2 million people identified themselves as American Indian or Alaska Native, which represented a little less than 2% of the US population (US Census, 2015). Despite relatively small population numbers, there were 566 federally recognized tribes throughout the US in 2015 (Indian Affairs, 2015). Tribes are sovereign nations. Tribal sovereignty has been described as the “inherent right to govern and protect the health, safety, and welfare of Tribal citizens” (Indian Health Service, n.d.). Tribes interact with the US government on a nation-to-nation basis. Further, the federal government has a trust responsibility, originating with treaties, to each tribe. The federal trust responsibility is a unique obligation to provide for the education, health care, and other services in exchange for Tribal land and natural resources as was promised in the treaties.

The Snyder Act of 1921 was a landmark event of the US Congress aimed toward improving the general health of American Indians by authorizing the expenditure of federal funds for the “relief of distress and conservation of health of Indians” (Pevar, 1992). However, until 1955, Indian health programs were administered by the Interior Department through the Bureau of Indian Affairs, which did a notoriously poor job of securing funds and providing health care. In 1955, the Indian health program was transferred to a special branch of the US Department of Health and Human Services Public Health Service known as the Indian Health Service (IHS). Appropriations dedicated to Indian health were doubled from \$18M to \$36M for IHS and the array of services that IHS provided expanded to include both medical care and public health services (Rhoades & Rhoades, 2014).

Passage of Public Law 93-638, the Indian Self-Determination and Educational Assistance Act of 1975, provided tribes the authority to directly administer health programs within their own communities by entering into contracts and compacts with IHS. The US responsibility to provide for health of members of American Indian tribes was reaffirmed again in the passage of the Indian Health Care Improvement Act in 1976. As IHCA states:

*“The Congress hereby declares that it is the policy of this Nation, in fulfillment of its special responsibilities and legal obligation to the American Indian people, to meet the national goal to **provide the highest possible health status to Indians**, and to provide existing Indian health services with **all resources necessary to effect that policy.** (25 U.S.C Sec. 1602 as cited in Pevar, 1992, p. 275)”*

Together, the laws of 1975 and 1976 fostered a movement toward greater community involvement and assumption of program management by tribes to provide for health and welfare of tribal members. Over the years, a growing number of tribes have assumed management of their own health systems through contracts and compacts with IHS. Approximately 2 million American Indian and Alaska Native people, particularly those living on or near federal Indian reservations or nearby communities, are provided health services through the IHS funded system (Sequist, Cullen & Acton, 2011). Historically, IHS has been grossly underfunded – the annual per person expenditure on health care is far lower than any

other federal health program and the federal estimate of unmet need is around 50% (Sequist et al., 2011).

National health data from various sources consistently reveal figures which illustrate the fact that American Indian people experience poorer health outcomes and have shorter average life expectancy than the overall US population. Despite IHS' documented advancements and successes in health program improvement, disparities in morbidity and mortality rates for the American Indian population have persisted (IHS, 2015; Rhoades & Rhoades, 2014; Sequist et al., 2011). Targeting the leading causes of death in tribal communities, including cardiovascular disease, cancer and unintentional injuries, seems an obvious priority for tribal health systems. Moreover, the major causes of premature death may also be identified as top priorities for tribal health improvement, including diabetes, alcohol-induced disorders, communicable disease (flu, pneumonia, tuberculosis), intentional injuries (homicide, suicide), and unintentional injuries (motor vehicle accidents).

Tribal health agencies generally face a number of challenges to improving health, such as social inequities, cross-cultural barriers, limited access to care, and lack of parity in financial resources available through the federal government, in addition to other challenges unique to each community. Effectively addressing these causes of disease and death requires interventions outside of a medical office exam—preventive services, chronic care management, community-based health services—interventions that are inherent to the public health. Public health is focused on protecting and promoting the health of entire populations through a broad array of organized strategies which create conditions in which people can be healthy and supporting healthy practices and behaviors through assessment, policies, and assurance of access to health care (CDC Foundation, 2015; World Health Organization, 2015). Governmental public health agencies lead the charge for addressing the greatest threats to the health of the communities, in partnership with other organizations and stakeholders in the public health system.

Given the severity and persistence of health disparities experienced by tribal populations, it is imperative to explore how Tribal health agencies can effectively improve health of tribal members and eliminate the disproportionate burden of poor health through tribal public health system organization and delivery of essential public health services.

As sovereign nations, Tribes have a vested interest in providing valuable public health services to their communities. The goal of this study was to begin to create an evidence base around how Tribes organize and partner to deliver public health services and protect and promote the health of their communities. The study aimed to explore the partnerships within a tribal public health system that protected and promoted health; examine how and through what relationships a tribal public health system delivered public health services; and assess the key characteristics of a tribal public health system that addressed disparities. The study used a case study design in order to generate deep and rich understanding of one tribal public health system.

CHAPTER 1: BACKGROUND AND LITERATURE

CONCEPTUAL FRAMEWORK

To guide our design of questions, to direct our exploration, and to focus the scope of this study, we developed a conceptual framework. The conceptual framework did not intend to test any theories about the tribal public health system. Rather, it served to build the conceptual organization of ideas to seek understanding; it provided conceptual bridges from what is already known about public health and tribal communities; and created structure to guide data gathering and interpretation. We describe the conceptual framework from which the study team began this work to provide the reader with greater understanding of the scope and foundation of the study.

PUBLIC HEALTH SYSTEM MODEL

This study drew from Handler, Issel, and Turnock's (2001) conceptual framework of the public health system. According to this framework, the public health system includes four components: mission, structural capacity, processes, and outcomes. The mission of the public health system includes its goals and how those goals are put into practice. The structural capacity of the system includes all the resources necessary to deliver public health services, such as informational resources, organizational resources, physical resources, human resources, and fiscal resources. Public health processes are described by the ten essential public health services, which interact with one another in a cyclical fashion. Within this model, outcomes include changes experienced by individuals, families, communities, providers, and populations. These four components are affected by the macro context, which includes social, economic, and political forces. The macro context illustrates how the system is engaged with forces that are outside of its own mission and purpose.

RELATIONAL WORLDVIEW MODEL

In order to adapt Handler et al.'s (2001) conceptual framework to a tribal context, the study also drew from Cross's (1997) concept of the relational worldview model. The relational worldview model is based upon traditional Indigenous ways of knowing, which see and accept complex relationships between the many interrelating factors in one's circle of life. Every event is understood in relation to all other events regardless of time, space, or physical existence, and the balance and harmony in relationships between the various elements are the essence of this way of thinking (Chino & DeBruyn, 2006; Hodge, Limb, & Cross, 2009; Kaur Legha & Novins, 2012). The relational worldview model is contrasted to the linear worldview, which is logical, time oriented, and systematic, with an emphasis on cause and effect, rather than relationships (Chino & DeBruyn, 2006; Hodge et al., 2009). It stands in contrast to the U.S. culture of biomedicine, which views a split between mind and emotions, and body, nature, and culture (Kagawa-Singer, Dressler, George, & Elwood, 2015).

The relational worldview model is depicted with the image of a circle that is divided into four quadrants, known as the Medicine Wheel. The four quadrants are often identified as mind (intellectual), body (physical), spirit (spiritual) and context (social). The values and beliefs conveyed through the Medicine Wheel have been accepted by nearly every tribe in North America. Through this model, harmony

(wellbeing) is a state of balance within individuals and with all of creation. Wellness of the individual is inseparable from harmony in the family and community (United States National Library of Medicine [NLM], n.d.). In this way, the relational worldview model and teachings of the Medicine Wheel are also applicable to community health and wellbeing; the goal of achieving harmony and balance at this level is related to infrastructure (mind), resources (body), community spirit (spirit), and the environment (context). The relational worldview and the Medicine Wheel were incorporated into the theoretical framework for the study by considering the “macro context” to be a more relational component of the public health system, rather than an element that is external to that system.

The relational worldview model also provided a framework for the incorporation of traditional practices into an understanding of the public health system. The natural world has great significance in Native culture, and the connection between the individual and community and the gifts of the Earth are paramount to wellbeing. The cyclical patterns of the Medicine Wheel mirror the patterns of the natural world and signify the importance of accepting all gifts of the natural world to create balance of the whole (NLM, n.d.). The four directions represented in the Medicine Wheel each have significance and meaning with implications for healing. Connecting the individual to the Creator and the spirit world through the use of sacred medicines (such as tobacco and cedar) in remedies, rituals, purification, and ceremonies is a fundamental element in traditional healing methods (NLM, n.d.). While traditional healing is not generally included in the body of evidence for “what works” to address health disparities and improve health outcomes, it is critical to understanding how tribal communities perceive health and wellness (Chino & DeBruyn, 2006; Gone, 2011; Hodge et al., 2009; Kaur Legha & Novins, 2012).

STRUCTURAL/CONSTRUCTIVIST MODEL

In order to more explicitly address the interaction of culture and structure, this study also drew from a structural-constructivist model of understanding health (Dressler, 2001). This model emphasizes the importance of taking both a cultural constructivist and a structural approach to understand health and illness. A cultural constructivist perspective focuses on meaning, particularly the meaning that people construct to understand and interpret health and illness. A structural perspective focuses on structures that exist outside of the meaning people ascribe to them and which guide and constrain behavior. Examining the intersection of cultural constructivism and structuralism allows us to see how cultural construction takes place within the constraints of structure.

Incorporating this model provided the opportunity to explore how racial and cultural stratification have influenced tribal public health system infrastructure, approaches to health, and disparities, while also exploring how tribal community members constructed health-related goals and experienced disparities. It also encouraged exploration of the role of traditional healing and medicine in informing individual, community, and system-level constructions of health.

CONCEPTUAL FRAMEWORK FOR THE STUDY

Combining the public health system framework, the relational worldview model, and the social-constructivist model resulted in a framework for exploring tribal public health systems that placed both service delivery and health outcomes in a broader sociological context that reflected and valued the

ways in which health is defined and wellness is pursued in Native American communities. The resulting conceptual framework appears in Figure 1.

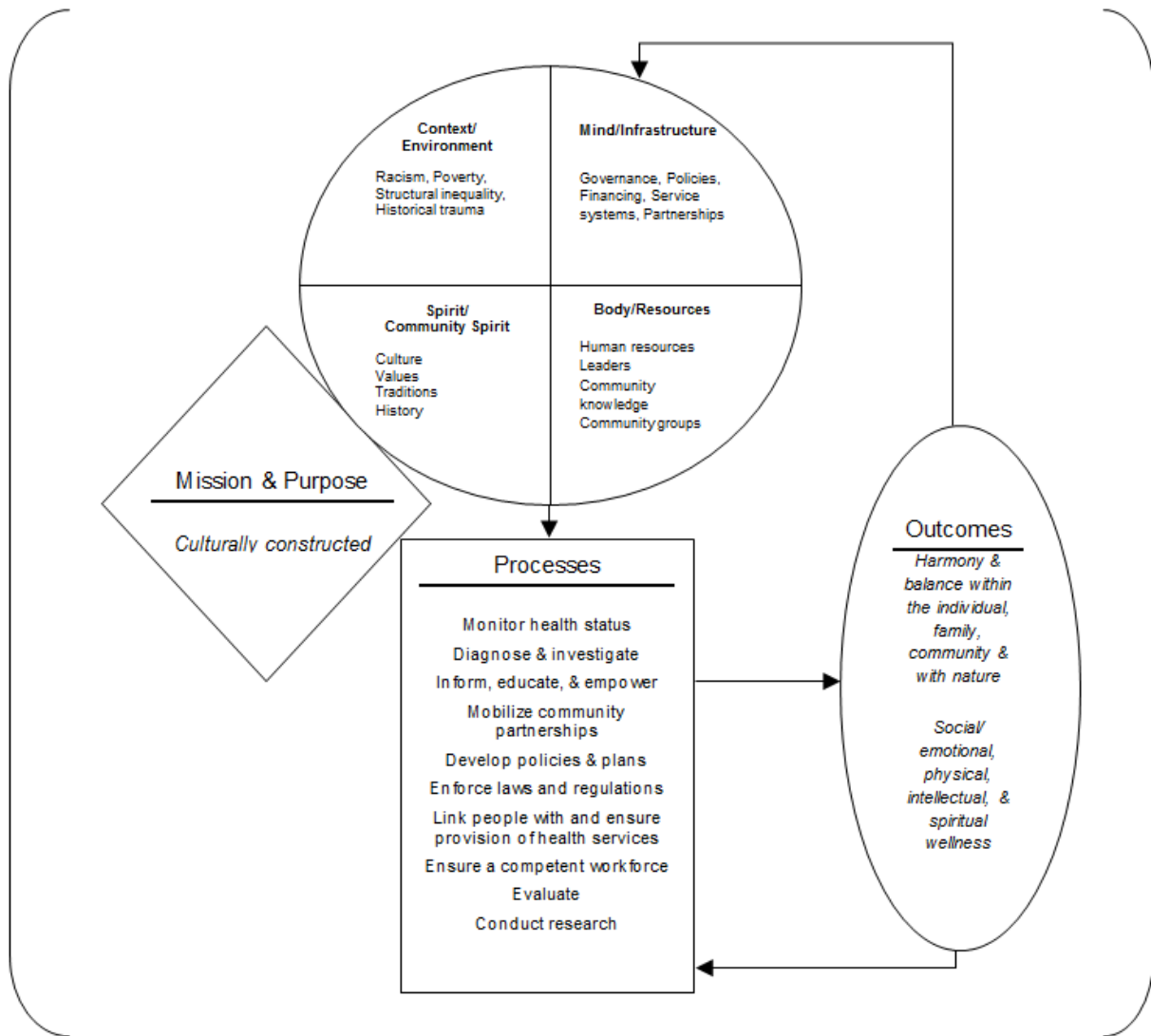


Figure 1. Conceptual Framework

REVIEW OF THE LITERATURE

This study brings together the growing literature on public health services and system research (PHSSR) with the literatures on culture and tribal health and wellness. PHSSR is a growing field that examines the structure and organization of public health systems, how they perform, and the impact of these characteristics on community health outcomes. Much of the growth in PHSSR was spurred by the Institute of Medicine's (IOM) *The Future of Public Health* (1988), which presented the idea of the public health system. To date, research on public health systems has focused largely on descriptive studies of structure, organization, and service delivery. There has been less research on predictors of public health performance and the impact of public health system characteristics on population health status.

Within this broader literature, research on tribal public health systems is very limited, and research on the impact of system characteristics on public health outcomes for tribes is virtually nonexistent. The National Indian Health Board (NIHB) Profile (2010) provides one of the few sources of information on tribal public health structure, organization, and performance, but it lacks in-depth investigation of these characteristics. Furthermore, while the NIHB Profile did include questions about culture, such as the presence of traditional healers and culturally relevant prevention programs, its methods did not allow for a full exploration of the important role of culture in shaping tribal public health systems. Through a rigorous case study design, this study provides a comprehensive, in-depth exploration of one tribal public health system and begins to address these gaps in the literature. The following section begins with a summary of the existing literature on tribal public health systems, providing comparisons to state and local public health agencies. It then provides a background on culture and health, with a focus on tribal culture, and reviews recent research on cultural tailoring of services for tribal communities.

THE STRUCTURE AND ORGANIZATION OF PUBLIC HEALTH

Information about the structure and organization of governmental public health agencies come primarily from three sources: The NIHB 2010 Tribal Public Health Profile survey, the National Association of County and City Health Officials (NACCHO) National Profile of Local Health Departments surveys, and the Association of State and Territorial Health Officials (ASTHO) Profile of State Public Health surveys. The NIHB Profile was a web-based survey completed by 145 tribal health organizations, including tribal health departments, Indian Health Service (IHS) Facilities, Area Indian Health Boards or Inter Tribal Councils, and Urban Indian Health Centers. The most recent NACCHO Profile (2013b) was a web-based survey completed by 2,000 local health departments from across the United States. The most recent ASTHO Profile (2014) was a web-based survey completed by 49 state public health agencies.

TRIBAL HEALTH DEPARTMENTS HAVE A SMALLER JURISDICTION THAN LOCAL HEALTH DEPARTMENTS.

The vast majority (78%) of tribal health departments represent a single tribe. The jurisdiction size for tribal health departments is much smaller than that for local health departments, on average. According to the NIHB Profile (2010), nearly half of all the tribal health organizations who participated in the survey (44%) serve less than 5,000 people and only 19% serve more than 20,000. In comparison, according to the NACCHO Profile (2013b), only 17% of local health departments serve a population of less than 10,000 people and 59% serve a population of 25,000 or more.

TRIBAL BOARDS OF HEALTH ARE SIMILAR TO THOSE OF LOCAL AND STATE HEALTH AGENCIES, BUT PUBLIC HEALTH AUTHORITY IS NOT WELL-DEFINED.

Governmental public health agencies operate under a variety of governance structures, depending on the relative power of states, counties, and boards of health, as well as differences in the composition of boards of health (Hays et al., 2012). The NIHB Profile (2010) found that 85% of tribal health organizations have a tribal health committee, board, or group. In comparison, 70% of local public health agencies are governed by a board of health (NACCHO, 2013b) and 53% of state public health agencies (ASTHO, 2014) are governed by a board or council of health. There are some key differences in the

composition of boards of health between tribal health organizations and local and state health agencies. Boards of health for local and state health agencies are most often appointed by the local government and state governor, respectively, and are commonly made up of public health professionals, citizens, consumers, and business professionals (Hyde & Shortell, 2012). Similarly, nearly half of tribal health committees include appointed community members (42%). However, more than half (53%) include elected tribal council members (NIHB, 2010).

Boards of health play a similar role in tribal health organizations, local health departments, and state health agencies. Tribal health committees primarily serve in advisory roles (80%), followed by the roles of inform or advocate on behalf of the community (59%) and policy planning and development (58%) (NIHB, 2010). Most local boards of health play an advisory role (86%) or set local health department policies (79%) (NACCHO, 2013b). Responsibilities of state boards/councils include promulgating rules, advising elected officials on public health policies and concerns, developing state public health policies, and developing legislative public health agendas (Hyde & Shortell, 2012).

While the federal government has authority to act in the interest of public health and safety, states have the authority to protect and promote the welfare of the people in a wide variety of areas of public health, such as control of communicable diseases and administration of maternal and child health services. This power is spread across multiple state agencies. Local governments are subsidiaries of their states and have powers delegated to them by the state over public health matters of local concern, such as water pollution and animal control (Gostin & Hodge, 2000). Jurisdictional authorities over public health are much more complex in tribal communities, because public health services are spread across tribal, county, state, and federal public health systems. Tribes are usually not subject to state public health laws, because of tribal sovereignty. However, in a recent review of tribal legal codes from 70 tribes across 25 states, only 7% included legal provisions for the establishment of tribal health boards or health divisions, and none of those clearly articulated the public health authority of those entities (Bryan, McLaughlin Schaefer, DeBruyn, & Stier, 2009).

IHS PLAYS A LARGE ROLE IN THE FINANCING OF TRIBAL PUBLIC HEALTH.

According to the NIHB Profile (2010), nearly half (44%) of tribal health organizations reported having a total budget of \$1,000,001 - \$5,000,000 for the fiscal year, and another 34% reported having a budget of more than \$5,000,000. IHS plays a large role in the financing of public health for tribes. Contracting and compacting are common, as 30% of tribal health organizations in the NIHB Profile (2010) reported compacting all IHS services and 44% reported contracting one or more IHS services.

IHS is the most common source of funding for tribal health organizations (NIHB, 2010). For tribal health departments, in particular, the most common sources of funding included IHS, state funding, federal grants (e.g., Centers for Disease Control and Prevention, Health Resources and Services Administration, Substance Abuse and Mental Health Services Administration), tribal funding, and private grants. The authors of the NIHB Profile (2010) state that the ability of tribal health organizations to address community needs is limited when federal funding is passed through states, and therefore, federal funding needs to be provided directly to the tribes.

In their systematic review, Hyde and Shortell (2012) found that funding for local health departments comes from local and state contributions, federal pass-through funds, Medicaid/Medicare reimbursements, and other grants and fee sources. The greatest proportion of funds comes from local contributions. Funding for state health agencies comes from federal, state, local, and private sources, with the greatest proportion coming from federal grants, contracts, and cooperative agreements, although this does vary by state. State and local funding averages \$149 per person, although this varies by centralization and governance structure.

THERE ARE KEY DIFFERENCES IN THE WORKFORCE OF TRIBAL HEALTH ORGANIZATIONS COMPARED TO STATE AND LOCAL PUBLIC HEALTH AGENCIES.

The average number of employees at tribal health organizations is 64, and 54% of tribal health organizations have less than 50 employees (NIHB, 2010). The tribal health organization workforce is larger than local health departments, on average, but smaller than state health agencies. The median number of full time employees (FTEs) at local health departments is 17 (NACCHO, 2013b), although this does vary greatly depending on the jurisdiction size. Local health departments with a jurisdiction of less than 10,000 people had a median FTE of 4 and those with 1,000,000+ people had a median of 453. The median number of FTEs in state health agencies is 1,151 (ASTHO, 2014). The workforce for both local and state health agencies has decreased in recent years.

Administrative/clerical staff, nurses, and public health managers are occupational categories commonly employed by tribal, local, and state health agencies (ASTHO, 2014; NACCHO, 2013b; NIHB, 2010). There are some interesting differences between the workforce of tribal health organizations and local and state health departments. On average, 57% of employees of tribal health organizations are members of federally recognized tribes, while the average percentage of state health agency staff who are American Indians/Alaska Natives is 1.1%. Another key difference is that tribal health organizations more often report employing behavioral health professionals (78% of tribal health organizations vs. 25% of local health departments). Additionally, only 6% of tribal health organizations have an epidemiologist/statistician on staff, while 36% of local health departments employ an epidemiologist and state health agencies employ a median of 34 epidemiologist/statistician FTEs per agency.

PARTNERSHIPS ARE AN IMPORTANT COMPONENT OF PUBLIC HEALTH SYSTEMS.

Tribal health organizations form partnerships with multiple tribal, local, and state agencies, universities, and community organizations (NIHB, 2010). Oftentimes, these partnerships are formed around specific services, such as oral health, HIV/AIDS education, and elder care. Partners with whom collaboration was most highly rated included neighboring tribes, Area Indian Health Boards, IHS, hospitals, Tribal Epidemiology Centers, state government, and local county and city governments.

Partnerships between tribes and other governmental entities for public health services are at times challenging. The IOM (2003) points to one such challenge being that American Indians are eligible as individual citizens to participate in state health programs. However, in some instances, tribal–state relations are strained, and there are often misunderstandings about the relative responsibilities of states and tribes for the financing of health care and population-based public health services.

While research on partnering within tribal public health systems is limited, Mays, Scutchfield, Bhandari, and Smith (2010) conducted a study of local public health agencies that assessed, in part, the extent to which public health services were provided through relationships with other organizations. They found that local health departments varied in their amount of collaboration with other organizations. Contributions from state and local government agencies, hospitals, and community-based organizations were common. They also found that the proportion of activities contributed by different organizations increased over time, with the largest increases for community health centers, federal agencies, and educational institutions. Similarly, Wholey, Gregg, and Moscovice (2009) found, using social network analysis, that local health departments are relatively central within the public health system (network), but not the most central organization. They also found that the density, or degree of interconnectedness, varied by degree of centralization and jurisdiction size. Also, density varied by the type of public health function or service being performed, with assessment networks being the densest.

One area where we need more research is the integration of public health and health care. Despite the fact that public health and health care share the goal of improving health outcomes, historically these two fields have been siloed (IOM, 2012b). However, attention to this issue has grown with recent encouragement from the Affordable Care Act and the Public Health Accreditation Board to integrate public health and health care (Shah, 2015). The IOM's (2012b) report *Primary Care and Public Health* identified a set of principles to support successful integration. They include a common goal of improving population health, involving the community in defining and addressing needs, strong leadership, sustainability, and the collaborative use of data and analysis. The report also identified degrees of integration, from mutual awareness to partnership. Mutual awareness is when primary care and public health are informed about each other's activities. Cooperation occurs when there is some sharing of resources. Collaboration includes joint planning and execution of combined efforts. Finally, partnership occurs when there is no separation from individuals' perspectives.

PUBLIC HEALTH PERFORMANCE

As the definition of public health has been refined and the body of research on public health system structure and organization has grown, standards for public health system performance have also developed. Standards for public health performance, and the measurement of performance, focus on the core functions and essential services that a public health agency should provide to the community. While there are a number of standards for performance, there is very limited data on the performance of tribal health departments.

PUBLIC HEALTH AGENCIES SHOULD FULFILL CORE FUNCTIONS AND ESSENTIAL SERVICES.

There are several sets of standards for public health performance that outline the key services and functions that public health agencies should fulfill. Public health activities are designed to identify and investigate health threats, promote healthy lifestyles, prepare for emergencies and disasters, and ensure the quality of water, food, air and other resources necessary for good health (Baker et al., 1994). In 1988, the IOM's *The Future of Public Health* defined the mission of public health as "the fulfillment of society's interest in assuring conditions in which people can be healthy" (p. 40). The authors identified three core functions of public health: assessment, policy development, and assurance (see Table 1).

Table 1. Three Core Functions of Public Health

Assessment	Systematically collecting, assembling, and analyzing information on community health
Policy Development	Leading the development of comprehensive public health policies
Assurance	Making sure necessary services are provided to constituents, either by encouraging or requiring others to provide them or by providing services directly

In 1994, the Core Public Health Functions Steering Committee developed the three core functions into the 10 Essential Public Health Services (10 EPHS; Harrell & Baker, 1994).

1. **Monitor** health status to identify and solve community health problems.
2. **Diagnose and investigate** health problems and health hazards in the community.
3. **Inform, educate, and empower** people about health issues.
4. **Mobilize** community partnerships and action to identify and solve health problems.
5. **Develop policies and plans** that support individual and community health efforts.
6. **Enforce** laws and regulations that protect health and ensure safety.
7. **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. **Assure** competent public and personal health care workforce.
9. **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services.
10. **Research** for new insights and innovative solutions to health problems.

The IOM's (2003) updated report *The Future of the Public's Health in the 21st Century*, called for the establishment of a national Steering Committee to examine the benefits of accrediting governmental public health departments. In response, the Exploring Accreditation Steering Committee investigated the feasibility and desirability to implement a national public health accreditation program. In 2006, they issued their recommendations. The Public Health Accreditation Board (PHAB) was formed as the non-profit entity to implement and oversee national public health department accreditation in 2007. In 2011, they released Version 1.0 of the PHAB Accreditation Standards and Measures and the Guide to National Public Health Department Accreditation (PHAB, 2011). Version 1.5 was released in 2013 (PHAB, 2013). The PHAB Standards and Measures include 12 domains that align with the three core functions and 10 Essential Public Health Services.

1. Conduct and disseminate **assessments** focused on population health status and public health issues facing the community
2. **Investigate** health problems and environmental public health hazards to protect the community
3. **Inform and educate** about public health issues and functions

4. **Engage with the community** to identify and address health problems
5. Develop public health **policies and plans**
6. Enforce **public health laws**
7. Promote strategies to improve **access to health care**
8. Maintain a competent public health **workforce**
9. Evaluate and **continuously improve** processes, programs, and interventions
10. Contribute to and apply the **evidence base** of public health
11. Maintain **administrative and management** capacity
12. Maintain capacity to engage the public health **governing entity**

THERE ARE MINIMUM PACKAGES OF PUBLIC HEALTH SERVICES THAT EVERY PUBLIC HEALTH AGENCY SHOULD PROVIDE.

Alongside the development of public health performance standards that address the broader function of public health agencies, there has also been an effort to define minimum packages of public health services. The IOM's (2012a) *For the Public's Health: Investing in a Healthier Future* recommended the development of a minimum package of public health services that every community should receive from its health department. In response, NACCHO (2012) released a report titled, *Minimum Package of Public Health Services*, which divides minimum services for local health departments into foundational public health capabilities (e.g., health assessment and planning, epidemiology capacity and expertise), basic programs provided because no one else in the community provides them or they are provided inadequately (e.g., communicable disease control, environmental health), and programs that create conditions that promote health, but may not be provided by local health departments (e.g., maternal and child health promotion, injury prevention and control).

Also in response to the IOM recommendation, The Public Health Leadership Forum, with funding from the Robert Wood Johnson Foundation and organization and management from RESOLVE, defined a minimum package of public health services for governmental public health departments. The minimum services are divided into 1) foundational public health services and 2) programs and activities specific to a health department or community needs. Foundational public health services include foundational capabilities (e.g., assessment, policy development) and foundational areas (e.g., communicable disease control, maternal child and family health).

LAWS ARE IMPORTANT TO THE SUCCESS OF PUBLIC HEALTH.

Across standards for public health performance, there is an emphasis on the importance of public health policy and the enforcement of public health laws. Public health laws can be defined as “any laws that have significant consequences for the health of defined populations” (Moulton, Goodman, & Parmet, 2007, p. 4), and include constitutions, statutes, rules and regulations, ordinances, policies, and judicial rulings and case law. Laws are incredibly important to public health and have played a key role in many of public health's greatest achievements.

Goodman et al. (2006) outlined the role that laws played in what CDC has identified as the ten great public health achievements of the 20th century: control of infectious diseases, motor vehicle safety,

fluoridation of drinking water, recognition of tobacco use as a health hazard, vaccination, decline in deaths from coronary heart disease and stroke, safer and healthier foods, healthier mothers and babies, family planning, and safer workplaces (CDC, 1999). The list of laws they present illustrates the wide range of legal actions that have an impact on public health. Some laws created boundaries around public health issues through restrictions, limitations, and prohibitions (e.g., prohibiting the sale of alcohol to minors). There were laws that created requirements and mandates (e.g., mandatory vaccinations). Some laws served the function of deterring behavior with penalties (e.g., penalties for grossly negligent worker injury or death). Others regulated through standards and licensure (e.g., crash standards for motor vehicles). There were laws that established public health financing (e.g., funding anti-smoking campaigns) or established public health programs (e.g., WIC). Additional laws established authorities (e.g., the authority to quarantine). Finally, judicial rulings also played an important role in public health achievements (e.g., rulings on contraceptive use).

Public health law is an area in development for many tribes. In Bryan et al.'s (2009) review of legal codes for 70 tribes across 25 states, they found that 20% of the tribes had no relevant public health provisions. Among the 56 tribal codes that did include public health statutes, provisions could be grouped into the categories of: environmental health and sanitation; public safety and injury prevention; protection from violence and abuse; substance abuse, mental illness, and tobacco; and communicable disease control, surveillance, and research. Within these broader categories, the most common provisions included housing ordinances (33% of tribes' codes), motor vehicle/traffic safety (34%), child abuse (32%), and alcohol control (31%). Only ten tribal codes (18%) contained at least one law specifically addressing disease control and surveillance authorities.

The National Congress of American Indians (2015) Policy Research Center provides a resource on tribal public health law that has identified 12 law categories: agriculture and food safety; alcohol, tobacco and other drugs; animal management and control; emergency planning and management; environmental health; health data; health services; health systems governance; infectious disease management; injury and violence prevention; public health infrastructure; health and cultural resource protections. The Great Plains Tribal Chairmen's Board (2005) has provided a model tribal health and safety code that includes the following chapters: general provisions; sanitation and contagious disease; food establishments; pollution and poisons; domestic animals; regulation of motor vehicles; emergency aid; elderly and adult protection; nuisance; burial; sale of toxic substances and gasoline; tobacco; explosives; civil defense; and alcoholic beverage control.

HEALTH CONSIDERATIONS SHOULD BE INCORPORATED ACROSS POLICY AREAS.

Building upon the standards of policy development and collaboration, there has recently been growing attention to the concept of Health in All Policies (HiAP). HiAP is "a collaborative approach to improving the health of all people by incorporating health considerations into decision-making across sectors and policy areas" (Rudolph, Caplan, Ben-Moshe, & Dillon, 2013, p. 6). HiAP is built upon recognition of the social determinants of health, acknowledging that health is impacted by the social, physical, and economic environments. In order to promote healthy communities, therefore, public health must address areas as diverse as transportation, education, environment, access to healthy food, and

economic opportunities. A HiAP approach encourages collaboration with these diverse sectors. It is a comprehensive approach to addressing complex health problems. It also strives to ensure that decision-makers are informed about the potential health consequences of policies during the process of policy development and that policies are routinely examined for impacts on health equity (ASTHO, 2013).

TRIBAL PUBLIC HEALTH DEPARTMENTS PROVIDE A SET OF SERVICES THAT IS SIMILAR TO LOCAL HEALTH DEPARTMENTS.

Public health performance is most often measured by assessing the extent to which public health agencies are performing the three core functions and ten Essential Public Health Services (10 EPHS). The two most widely used instruments for assessing performance are the Miller/Turnock 20 (Miller et al., 1995), which is built around the three core functions, and the National Public Health Performance Standards (NPHPS) Local Public Health System Assessment Instrument (NACCHO, 2013a), which is built around the 10 EPHS. The NIHB Profile (2010) drew upon the NPHPS instrument when developing their 50-item questionnaire to assess tribal health organizations' structure and performance.

The NIHB Profile found that, in the previous three years, 44% of tribal health organizations had conducted a community health assessment and half had developed a community health improvement plan. Over half of tribal health organizations (54%) had staff dedicated to data management (although only 26% were employed full-time). In terms of surveillance, the most common activities of tribal health departments were in regards to behavioral risk factors, chronic disease, and communicable/infectious disease.

In the area of policy development, nearly one third of tribal health organizations reported adopting a new local public health policy, ordinance, or regulation in the past two years. The majority of these (83%) pertained to emergency preparedness and planning, followed by tobacco prevention and control (44%). The most common emergency preparedness activities were drills/exercises and emergency preparedness response plans. Most emergency preparedness plans focused on pandemic flu, natural disasters, and infectious diseases.

Given that Native communities often face a number of barriers in accessing health care, assuring access to care is an important function of tribal health organizations, and 83% reported having an initiative or mechanism to enroll eligible individuals into public benefit programs such as Medicaid/Medicare. One area where tribal health organizations were less engaged was participation in health research. Just under half (47%) of tribal health organizations reported participating in health research in the past and 28% reported currently participating in health research. This may be tied to distrust of research resulting from the historical exploitation of Native culture and violation of the rights of Native communities by researchers.

The NIHB Profile Final Report (2012a) compared tribal health departments to local health departments in the same state, matched on the size of population served. While there were more commonalities than differences, one key finding of this comparison was that local health departments are significantly less likely to provide health screenings and mental health/behavioral health services than tribal health departments. Behavioral health services had the biggest difference, with 75% of tribal health

departments providing these services and only 2.6% of matched local health departments and 10.3% of other local health departments in the same state providing them. Tribal health departments were significantly below the average of matched local health departments for communicable disease/infectious disease activities. Also, while 51% of local health departments have conducted a community health assessment in the past three years, only 37% of tribal health departments had done so in that time period.

RESEARCH ON PREDICTORS OF PUBLIC HEALTH PERFORMANCE DOES NOT FOCUS ON TRIBES.

Some research on performance has examined the impact of structure and organization on public health agency performance, but this research has focused primarily on state and local health agencies. Shah, Luo, and Sotnikov (2014) studied the most commonly provided services for local health departments, and found that services provided varied by jurisdiction population size, governance, and workforce size. In terms of jurisdiction size, one of the larger differences was the frequency of diabetes screening, which was ranked 5th for jurisdictions with a size of less than 25,000, while it was 31st for those with a size of 100,000+. Also, STD screening and treatment and HIV/AIDS screening ranked between 5th and 8th for jurisdictions with a size of 100,000+, while they were 17th or lower for smaller jurisdictions. In terms of governance, for locally governed local health departments, the frequency of WIC services was ranked as 26th, while for state governed local health departments it was ranked 6th and for those with shared governance it was ranked 7th. In terms of workforce, local health departments with a workforce size of less than 2.44 FTEs per 10,000 people ranked blood lead screening 6th, while it was 45th-48th for all local health departments with a larger workforce.

Not surprisingly, financing is often found to have an impact on performance. Local health departments with higher per capita spending provide more services and a broader array of services (Mays & Smith, 2009; Shah et al., 2014). Hyde and Shortell's (2012) systematic review found that increases in expenditures and per capita spending are related to better performance. However, two studies in the systematic review found little to no relationship between the level of state and local funding and performance at the local level. The systematic review also found that the strongest predictor of performance is the size of the jurisdiction served by a public health agency. Larger jurisdictions perform better up to a population of 500,000 and then performance decreases. Also, larger numbers of staff and more staff per population increase performance.

HEALTH OUTCOMES ARE RELATED TO PUBLIC HEALTH SYSTEM PERFORMANCE

Research on the impact of public health system structure, organization, and performance on health status is very limited, and is virtually non-existent for tribal health organizations. Research on local public health departments has found that increases in expenditures per capita are associated with decreases in infectious diseases and increases in FTEs per capita are associated with decreases in cardiovascular disease mortality (Hyde & Shortell, 2012). There is also limited research on the impact of public health network structure on health status and the findings are mixed. Wholey et al. (2009) found that network density is related to some better outcomes and some worse outcomes, depending on the size of the jurisdiction and centralization.

Findings are also mixed when it comes to the impact of public health performance on health status. It is difficult to accurately measure the impact of performance on health outcomes given the dynamic relationship between the two (performance can change in response to community health status) and because of the time lag for an impact of performance on health outcomes. Schenck, Miller, and Richards (1995) found that high performance was associated with poor health status. Kanarek, Stanley, and Bialek (2006) used the Miller-Turnock instrument and found relationships between performance and four of the nine health status measures from the Community Health Status Indicators instrument, but did not explore magnitude or direction. Ingram, Scutchfield, Charnigo, and Riddell (2012) found that some aspects of performance are related to some outcomes. For example, higher scores on assessment are related to lower percentage of mothers receiving no prenatal care first semester and higher scores on research (EPHS number 10) are related to lower rates of coronary heart disease. Mays, Halverson, and Scutchfield (2003) point out that this is a difficult relationship to measure and that much of the current research is cross-sectional, and we need longitudinal data.

CULTURE IS INTEGRAL TO HEALTH

The role of culture cannot be overlooked in investigations of tribal public health systems, as it likely has an impact on system organization and function. Culture is an often understudied concept in health and public health research (Kagawa et al., 2015). When culture is included in study designs, it is often measured using race/ethnicity as a proxy, which does not capture the complexity of culture or the particular ways in which culture impacts health. The lack of attention to culture serves to perpetuate the dominance of Western views of mind, body, nature, and spirit as separate in science and leads to a privileging of that view and a devaluing of other ways of knowing (Isaacs, Huang, Hernandez, & Echo-Hawk, 2005; Kagawa et al., 2015; NIHB, 2012b). Therefore, it is important to incorporate culture into programs and services, and investigations of public health services and systems should include considerations of culture.

THERE ARE SEVERAL STRATEGIES FOR ENSURING SERVICES ARE CULTURALLY COMPETENT.

The privileging of Western views in science extends to practice through Evidence Based Practices (EBP). EBPs are often based on research that did not include diverse populations and was not inclusive of cultural factors (Kagawa et al., 2015; NIHB, 2012b). Within tribal organizations, staff can feel pressure from their grants to implement evidence-based treatments even though they do not feel those treatments are a good fit for their community (Kaur Legha & Novins, 2012). When programs and services are inconsistent with culture, this can make them less effective (Gone, 2011; Hodge et al., 2009).

One concept that has been developed to address the problems with EBPs is Practice Based Evidence (PBE). Isaacs et al. (2005) define PBE as “a range of approaches that are derived from, and supportive of, the positive cultural attributes, belief systems, and traditions of the local society and traditions” (p. 16). They are accepted as effective by the local community through community consensus. Traditional tribal practices are an example of PBE (NIHB, 2012b). In addition to PBE, programs and services can be culturally tailored by adapting existing programs for certain subpopulations (Hodge et al., 2009; Pasick, D’Onfrio, & Otero-Sabogal, 1996). Resnicow, Soler, Braithwaite, Ahluwalia, and Butler (2000) provide a

useful model for understanding cultural sensitivity in service provision. They explain that cultural sensitivity can be broken down into two levels: surface structure and deep structure. Surface structure is more superficial, incorporating observable social and behavioral characteristics, such as language, music, and food. Deep structure involves integrating cultural, social, historical, environmental, and psychological factors that influence the health and behavior of the target population.

Adapting Western models to indigenous communities is a common strategy, either through surface structure or deep structure. For example, Kaur Legha and Novins (2012) describe a substance abuse program that was built upon a foundation of traditional beliefs and values, such as the importance of relationships and the healing power of restoring clients' cultural identity. Their program integrated culture through the inclusion of specific cultural practices like ceremonies, rituals, and traditional healers, while also adapting Western models of treatment by using programs that had already been adapted (e.g., Wellbriety) and altering content to include things like historical trauma or medicine wheel imagery. Similarly, Gone (2011) studied a healing lodge that offered services for substance abuse, where the medicine wheel formed the foundation of services and staff focused on helping clients pursue balance among the physical, mental, emotional, and spiritual. The lodge employed a full-time traditional counselor. The lodge also combined mainstream Western practices and traditional indigenous practices in several ways. For example, they chose Western approaches they considered to be spiritual, such as Alcoholics Anonymous, and combined them with other alternative practices, such as reiki and guided imagery. Cultural practices were also institutionalized in the treatment setting, such as smudging, talking circles, and sweat lodges. Chino and DeBruyn (2006) describe a process they called Community Involvement to Renew Commitment, Leadership, and Effectiveness (CIRCLE). This four-step process for building community capacity includes elements of mainstream capacity building strategies, but, in the early stages goes beyond "action planning" and "engaging leadership" by spending more time on building relationships and skills in order to create a positive collective identity that can better address the wounds of colonization, historical trauma, and disparities.

INDIVIDUALS WHO SHARE A CULTURE ARE NOT UNIFORM.

One very important point to keep in mind when culturally tailoring or studying the tailoring of any program is that there is diversity even within the same cultural groups (Isaacs et al., 2005; Kagawa et al., 2015; Resnicow et al., 2000). While the relational worldview model is a cultural model that resonates with many Native Americans (Hodge et al., 2009), there are 566 federally-recognized tribes in the U.S., and each has their own cultural worldview. Furthermore, within those tribes, individuals vary in the extent to which their Native culture is central to their identity and practices.

CULTURE SHOULD BE UNDERSTOOD FROM THE PERSPECTIVE OF THE CULTURAL GROUP.

Kagawa et al. (2015) highlight the importance for researchers to "draw the cultural realities of target population members into the central inquiry" (p. 69). Because there is limited research on the role of culture in public health system structure, organization, and performance, the current study used an inductive and participatory approach to investigating culture. The study explored the details of the Tribe's culture, as defined by tribal members, and sought the input of public health system partners and

community members in understanding how culture impacts the structure and functioning of the public health system and how it is incorporated into public health activities.

RESEARCH QUESTIONS

The current study builds upon the existing literature on public health services and systems by addressing gaps in knowledge regarding tribal public health system structure, organization, and performance, with an explicit focus on the broader sociocultural context in which that system exists. The study addressed the following research questions:

6. How are tribal public health systems conceptualized and organized by tribes, and why?
7. Who are the key actors and decision-makers within a tribal public health system, and why?
8. In what ways are tribal public health system partners monitoring system performance and tracking health outcomes?
9. How do the environment and infrastructure (organizational, financial, workforce) within a tribal public health system influence public health approaches, especially those addressing health disparities?
10. What influence do the environment, infrastructure, and interorganizational relationships and interactions within a tribal public health system have on its ability to impact health disparities?

CHAPTER 2: METHODS

STUDY DESIGN

This study utilized an intrinsic case study design. This design was well suited to both the tribal context and the exploratory nature of the research questions (Creswell & Clark, 2007; Stake, 1995). The case study involved detailed examination of a single tribal public health system. The design prioritizes understanding the complexities of a single selected tribal public health system over gathering more diluted or prescriptive data regarding multiple tribal public health systems. The purpose of a rigorous intrinsic case study design is not generalizability, but rather generating a deep understanding of the phenomenon under study that can lead to models, theories, and methods that can inform further research.

To ensure the study was utilization focused and culturally relevant, it was informed by a tribal advisory group with members from national, regional, and local tribal agencies. Referred to as the Tribal Advisory Group, this group included tribal public health professionals and decision makers who have been engaged in public health practice in Indian Country at all levels and are rooted in tribal culture and practices.

Additionally, in order to ensure the rights of study participants were protected, the research process was empowering, and the community benefited from the research process, a community-based participatory approach was utilized. Participants were defined not only as data sources but also as active participants in the process of creating and disseminating knowledge. Building trust and transitioning power from researchers to community members was prioritized in the process of participant recruitment, data collection, and analysis. Additionally, the research process was guided through tribal oversight (including contractual agreements), the use of a facilitator (Inter-Tribal Council), and through the Tribal Advisory Group. The Tribal Board (governing body) adopted a resolution approving participation in this study. A tribal staff workgroup was formed to work with the study team to develop recruitment materials and research instruments, review preliminary analysis, and participate in member checking. The Director of the Tribe's Health Division approved all research protocol. The Institutional Review Board at MPHI approved this study and informed consent was obtained from all study participants.

STUDY PARTICIPANTS

CASE STUDY SITE SELECTION

To select the case study site, a Call for Community Partners was released through the MPHI website, listservs, partner listservs, and email newsletters. The Call requested tribal public health agencies to complete a brief application to participate in the study. The application included a questionnaire (organizational assessment) which incorporated questions from the National Indian Health Board (NIHB) Tribal Public Health Profile (NIHB, 2010). Next, the three applications that were submitted by tribal public health agencies were reviewed by the study team and the Tribal Advisory Group. A set of guidelines for establishing inclusion and exclusion criteria were used to instruct the Tribal Advisory

Group through the selection process. Factors that would affect the suitability of the community to serve as the case study site, such as population size, tribal ownership of reservation land or trust land, evidence of public health capacity outside of the clinical setting, and progress toward PHAB accreditation readiness, were considered in the guidelines for selection. For example, the case study site needed to have a sufficient tribal population size to allow for an adequate sample of key informants and partners. Also, the site needed to have public health programs or services in place to allow the study to investigate how such programs were carried out and organized. The Tribal Advisory Group held a virtual meeting to discuss the applications and their assessment of the sites against the criteria. Using a consensus decision-making process, the Tribal Advisory Group selected the case study site.

KEY INFORMANTS

Potential key informants from public health system partner organizations (e.g. local health departments; hospitals; law enforcement; housing; tribal administration) were identified by a tribal staff workgroup and through snowball sampling of key informants. A total of 104 individuals were recruited through emails sent by study staff at MPH and the Tribe. This resulted in 50 key informant interviews. Participants were offered a \$20 gift card in exchange for their participation.

TRIBAL COMMUNITY MEMBERS

Tribal community members were recruited through personal contacts made by tribal staff members, personal mailings, and flyers posted and distributed at tribal buildings. Recruitment focused on six specific groups of community members: youth (13-17 years old), parents, tribal elders, tribal housing residents, health board members, and general adult population. A total of 54 community members participated in seven focus groups: two with youth, one with parents, two with elders, one with tribal housing residents, and one with health board members. The number of individuals per focus groups ranged from 2-15. Participants were offered a \$20 gift card in exchange for their participation.

MEASURES

KEY INFORMANT INTERVIEWS AND ECO-MAPS

Key informant interviews were conducted by the study team between October 2014 and February 2015. Interviews were conducted in person and over the phone. The interviews asked about the mission and purpose of the public health system and individual organizations; the structural capacity of the tribal public health system (i.e., organizational, financial, workforce) and how it influences collaboration and communication across entities; the power and influence of key decision-makers on public health practices; the role of other macro-systemic forces in shaping system organization and functioning; and implementation of 10 EPHS.

As part of the interview, participants were also asked to complete an eco-map. Eco-mapping is an approach that involves a semi-structured interview with a person of interest and development of a visual diagram over the course of the dialogue (McCormick et al., 2005). Eco-maps were used to visually display the relationships and interactions of professionals within the tribal public health system. During

the key informant interview, the interviewers took note of specific organizations and individuals mentioned by the participants. After the interview, the interviewers worked with the participants to diagram their relationships to each person and to individuals at the organizations listed. For each relationship, participants identified the direction and intensity of the exchange of information and resources, as well as which of the 10 EPHS they performed with that person. Each person in the eco-map, including the participant, was labeled with their organization, title, and supervisor. Eco-maps were completed with 38 of the 50 key informants.

Interviews and eco-maps lasted an average of 1 and ½ hours, with a range of 34 minutes to 4 hours and 7 minutes. All interviews and eco-maps were semi-structured and all were audio-recorded.

FOCUS GROUPS

Focus groups were conducted by the study team between January and April 2015. Focus groups asked about how participants defined health and the health outcomes that are valued within their community. They also asked about how effectively the public health system performs with regards to access to services, community engagement, evidence-based interventions, education about public health issues and functions, strategies addressing health disparities, and public health laws. Supplemental questions were added to the focus group protocol for the parent and elder focus groups that asked about experiences particular to those groups (e.g., parent concerns about raising healthy children, unique health issues affecting elders). A separate focus group protocol was used for youth that used developmentally appropriate language. All focus groups were semi-structured and all were audio-recorded.

TRIBAL PUBLIC HEALTH SYSTEM CAPACITY ASSESSMENT QUESTIONNAIRE

The tribal staff workgroup completed a capacity assessment adapted from a questionnaire created by NIHB to assess the capacity and performance of tribal public health departments (NIHB, 2012a). The questionnaire contained 56 items, mostly Likert scale or closed-ended questions, which asked about the Tribe's Health Division, including data about organizational structure, workforce capacity, financial support, programming, policies and procedures. The capacity assessment questionnaire was completed by using an in-person interview with key staff of the Tribal Health Division to ensure accuracy of information and researchers' understanding of the data. Assessment data were validated in person with the Health Division Director in June 2015.

SECONDARY DATA SOURCES

Existing documents and records were assessed to extract relevant secondary data on historical and current tribal context, public health system organization, performance, and outcomes. Particular attention was given to processes related to performance monitoring and tracking health outcomes, service delivery, community mobilization, tribal public health law implementation and enforcement, tribal workforce, and policies and procedures. Secondary data sources included: a report on findings from the population-based health survey (*Tribal Health Survey 2012-2013*) conducted by the Tribe; the US Census 2010; the Tribe's current Multi-Year Funding Agreement with IHS; the Strategic Health Plan

2000; the Tribal Constitution; available Tribal Codes chapters 10 to 99 (56 in total); all Board Resolutions passed from January 2013 through July 2015; the Tribe's website (webpages and downloadable files) and newspaper. Sections of confidential documents were provided with permission for use by the Health Division Director. Publically available documents were downloaded from the Tribe's website.

ANALYSIS

INTERVIEWS AND FOCUS GROUPS

All interviews and focus groups were transcribed verbatim by professional transcription services. Analysis followed the methods of Taylor and Bogdan (1998). The members of the study team developed a coding scheme based on emerging ideas, themes, concepts, and propositions discovered through transcript analysis. Using the coding scheme, each interview transcript was coded independently by two study team members, using the qualitative software NVivo. Any coding discrepancies were discussed until a consensus was reached. Once the data from the interviews and focus groups had been coded, the study team reviewed the data to develop interpretations, findings, and conclusions.

ECO-MAPS

Eco-maps were analyzed using the network analysis software, NodeXL. Each relationship present in the eco-maps were entered as an edge into a single NodeXL file. The result was a network graph of all of the eco-maps combined, representing the tribal public health system. The characteristics of each relationship (e.g., resources, 10 EPHS) were also entered into the NodeXL file. Public health services were categorized as one of the three core functions of public health (Assurance, Assessment, and Policy Development) for analysis. Using the reported organization for each person in the network, the study team categorized the organizations as tribal/non-tribal and as one of 20 different organizational sectors adapted from the National Public Health Performance Standards' description of a public health system (CDC, 2014), the IOM's model of a public health system (IOM, 1988), and the partner sectors described in the County Health Rankings Roadmaps to Health Take Action model (County Health Rankings & Roadmaps, 2015). Data from the interviews indicated that staff from the Tribe's medical clinic and Community Health Program did not consider themselves to be two separate entities, but rather, all part of one agency – the Health Division. This finding was confirmed through member checking. Therefore, individuals in the network graph who worked for the tribal medical clinic or Community Health Program were all assigned to one organizational sector, Tribal Health Division, for analysis. Data from interviews also indicated that the 10 EPHS did not accurately represent the core services and functions performed by the Health Division. Therefore, the 10 EPHS were collapsed into the IOM's (1988) three core functions of public health for analysis: Assessment (EPHS 1 & 2), Policy Development (EPHS 3-5), and Assurance (EPHS 6-9).

Graph metrics were calculated for the tribal public health system network graph. Groups were created based on the assigned organizational sectors and group metrics were also calculated. A description of each metric calculated can be found in Table 2.

Table 2. Network graph metrics

Graph Metric	Description
Connected component	Vertices that are connected to each other, but disconnected from other parts of the network.
Density	The degree or level of interconnectedness.
Geodesic distance	The shortest path between two vertices (e.g., people).
Degree centrality	The total number of connections for a vertex.
Betweenness centrality	How often a given vertex is on the shortest path between two vertices (geodesic distance). In other words, how often does one individual serve as a bridge connecting other individuals in the network, on average, determined by how well connected an individual is to others in the network.

TRIBAL PUBLIC HEALTH SYSTEM CAPACITY ASSESSMENT QUESTIONNAIRE

Answers to the capacity assessment questionnaire were used to supplement the interview, focus group, and eco-map data. Analysis focused on questions regarding the Health Division’s structure and organization, financing, and workforce. Qualitative and quantitative information were abstracted from the questionnaire and summarized by study team members.

SECONDARY DATA SOURCES

HEALTH SURVEY

Data from the Tribal Health Survey 2012-2013 were extracted ‘as is’ from the report and presented in this report. No additional analyses of the health survey data were conducted for this study. The Tribal Health Survey used a multi-stage probability sampling method to survey one adult and one child from selected tribal member households from the tribal membership enrollment list. Surveys were conducted by mail. The overall response rate to the survey was 36% and the total survey sample size for analysis was N=1,611. Survey data were weighted to the tribal population and analysis was conducted using SAS and SPSS to construct prevalence estimates and 95% confidence intervals. Measures pertaining to health status and health outcomes of Tribal households were selected for inclusion based on their relevance to the services provided by the Health Division and the key health issues identified by interview and focus group participants. Similarly, information from the IHS Funding Agreement and the Strategic Health Plan (2000) was extracted from the text verbatim and used to describe the system’s goals, financing, workforce, services, population, and organization.

DOCUMENT REVIEW

Legal documents, including Tribal Code, Tribal Constitution, and Board resolutions were analyzed using a basic conceptual approach to content analysis. The existence of the term 'health' and related concepts (e.g. healthy, wellbeing, wellness) within the documents were used to identify and describe three types of policies: tribal public health policies and laws, tribal laws and policies with health implications, and non-health laws and policies. The number of policies and resolutions in each category were counted. In addition, conceptual analysis within the public health laws and policies and policies with health implications was conducted to identify existence of text which describes purpose, goals, authority, jurisdiction, enforcement, key agencies and individuals, and implications of each policy within the tribal community.

MEMBER CHECKING

Member checking focuses on respondent validation, and for this study, checking took place once qualitative data were interpreted and summarized. Member checking involves going back to research participants to provide them the opportunity to critically analyze the study findings to ensure they reflect their experiences (Richards, 2015). It also affords members of the Advisory Group and additional stakeholders the opportunity to vet the findings and speak to the extent to which the findings from the selected tribal public health system resonate and are reflective of the experiences of members within other tribal public health systems.

Preliminary analysis from all data sources was presented to the tribal staff workgroup and other tribal public health stakeholders through a series of meetings and workshops in order to engage stakeholders in interpretation and member checking. A total of six member checking meetings were conducted during the preliminary analysis phase; three with tribal workgroup members and three with tribal public health stakeholders more broadly. In addition, three member checking meetings were conducted upon completion of the full analysis and draft report in order to finalize the research findings and recommendations before publication and to help inform dissemination efforts, including two virtual meetings with the Advisory Group.

CHAPTER 3: CONTEXT

The public health system, including the actors, structure and performance, are inextricably related to the context in which the system operates. In order to gain understanding and draw meaningful conclusions from these results, we must relate them to community context. Therefore, we begin the presentation of study findings with a description of the context.

This section explores the community context with respect to community spirit (history, traditions and culture), community environment (geography, social structures), community resources (community assets, human resources), and the broader community infrastructure (governance and legal system, service systems). Unless otherwise stated, data used to construct the findings in this section came mainly from secondary data sources and document review, which are described in detail in the methods section. Citations in this section are not included to avoid direct identification of the Tribe in the text.

HISTORY OF THE TRIBE

Before European settlers came to America, tribes governed themselves. After the European settlers arrived, tribes continued to govern themselves and they made treaties with the settlers, who came to govern themselves as a nation of peoples, the United States of America. In the 1836 Treaty, the ancestors of the case study Tribe ceded over 3.8 million acres of natural resources in exchange for promises made by the U.S. government to provide for their rights to hunting and fishing and the provision of education and health.

The era of Indian termination policies, beginning in the 1940s, involved acts of the U.S. Congress and U.S. Supreme Court which systematically terminated numerous tribal rights, tribes, and treaties. The traditional lifeway began to deteriorate as U.S. policies were enacted that resulted in tribal people being placed on reservations, sent to boarding schools, along with other attempts to assimilate them into U.S. mainstream society and strip them of their culture. A change in philosophy for relations with tribes began in 1970 with President Nixon's "Special Message to the Congress on Indian Affairs," from which arose Public Law 93-638, or the Indian Self-Determination and Education Assistance Act of 1975. The law authorized federal agencies, such as the Bureau of Indian Affairs, to contract with federally recognized Indian tribes. This provided Tribes with the option to exercise their right to self-determination by assuming control and management of programs previously administered by the Federal government, and gave the tribes greater control over their funding.

The modern governmental organization of the case study Tribe is traced back to a group of "Original Bands" that was incorporated under state law in the early 1950s. This group sought federal recognition as an Indian Tribe for over a decade. In the early 1970s, the leaders of the original bands of the Tribe traveled to Washington D.C. and successfully submitted their historical findings and legal argument to the Secretary of the Interior, who granted the Tribe federal status in 1972.

TRADITIONAL WAYS AND CULTURE

According to oral teachings, the people of the case study Tribe have lived in the region for millennia. Tribal oral teachings share history of migrations to and from the region over the centuries and about the

way of life for people of the Tribe. Teachings were passed down from elders to the next generation and their children. Teachings tell of tribal ancestors from fishing tribes whose settlements were located along the lakes and rivers. Ancestors gathered for the summers and broke up into family units for the winter. They hunted, fished, gathered, and preserved food for the winter. They were respectful to their elders and treasured their children. They conducted ceremonies for good health, thanksgiving, war, funerals and other things, and strove to conduct their lives in a good way. Tribal ancestors lived this way for hundreds of years until the arrival of European settlers in the 1600s, which brought with it dealings with first the French, then the English, then the United States.

Tribal beliefs centered on the circle of life — the four seasons, the four directions, four phases of life, the four sacred medicines. The four seasons predicated what resources were available and what needed to be prepared in advance, and where and how people would live. The four phases of life — baby, child, adult and elder — dictated one's role and activities. The four sacred medicines -- tobacco, sweet grass, sage, and cedar-- are gifts of the Creator used for offerings, smudging, prayer, purification, protection, education, and other ceremonial purposes.

Following the Seven Grandfather Teachings guided the people of the Tribe to live in a good way. These teachings were instructions for honoring wisdom, love, respect, bravery, truth, humility, and honesty. Decisions were made with an eye to the seventh generation. This means planning ahead and looking forward to see how future generations will be affected by one's decisions.

Dodems, or clans, dictated one's traditional role in the society. There were seven original clans: Crane, Loon, Bear, Fish, Marten, Deer and Bird. More clans were added, Wolf and Eagle, as the tribal people spread across the region. To ascertain one's clan and be given a name, a person would have to seek a tribal elder or traditional healer to have one bestowed upon him or her.

During the termination period, many aspects of tribal culture were lost to most people — language, ceremonies, spirituality, way of life, and traditional diet. Some people took on the duty of saving traditional life ways by taking them “underground until the day they could be rekindled.” Much of the Tribe's culture existed within the language. During the period of U.S. termination policies, many tribal children were taken away from their communities and placed in mission schools. They were dressed as white children and forced to give up their Native language. Many had an aversion to speaking their native language as adults because of how they were treated when they were caught speaking it at the mission schools. Few people were fluent speakers of the Native language afterwards, and fewer still knew it as their first language. The tribal community had been working hard to regain what was lost to them, developing language curricula, language lessons, language programs for schools and immersion programs.

GEOGRAPHY

At the time of the study, the Tribe's federally designated service area covered seven counties, an area of approximately 8,500 square miles in the shape of a triangle 90 miles wide at the base and 170 miles long. Within this area, there were 11 cities and 80 recognized townships. Approximately 49% of the service area was considered rural, with an average population density of 20.6 persons (Native and non-

Native) per square mile. The Tribe had nine reservations/trust land sites in the service area. The tribal service area was located on a peninsula, bounded by three large lakes, and sharing an international border with Canada. There were three other federally-recognized Tribes located within or nearby the Tribe's service area. One of these tribes was located within the same county as the Tribe's headquarters.

The Upper Peninsula region in which the Tribe was currently located experiences long, cold winter seasons. From November through March, the average daily high temperature generally ranges from 20.5 to 36.9 degrees Fahrenheit, and the average daily minimum temperature ranges from 3.3 to 23.3 degrees Fahrenheit. The average snow accumulation during the same period ranges from 18.7 inches to 37.8 inches per month (PureMichigan Film Office, n.d.). In 2013-2014, the Tribe's service area had an average of 62 days below zero degrees Fahrenheit (Boguth & Lawrence, 2015). In 2015, two cities within the Tribe's service area, including the city in which the Tribe is headquartered, earned the title of 'snowiest in the nation' with approximately 158 inches of snow accumulation recorded for the season, well above the average accumulation of 110 inches (The Washington Post, 2015; Fritz, 2015).

PEOPLE

According to U.S. Census 2010, the tribal service area had a total population of approximately 185,890 people, ranging from 6,685 to 66,514 per county. Of the total population in the service area, on average, approximately 7.8% were Native American. The percent of people who were Native American ranged from 2.3% to 17.2% per county. The median household income for all people in the service area was \$38,056. On average, 16.3% of all households in the service area lived below the federal poverty level, and the average child poverty rate was 23.2% for the service area (United States Census Bureau, 2015).

Tribal members are citizens of their tribe, the state in which they reside, and the U.S., as such they have rights in each jurisdiction. Tribal membership is determined through a formal application process through the enrollment department and required proof of ancestry to the original rolls. In 1998, the Tribe's membership rolls were closed to all adults. The biological minor children of full bona fide members were still being enrolled. To enroll a minor child, at least one biological parent must be enrolled with the Tribe as a full bona fide member. Applicants must furnish documentation proving their Native ancestry. As enrolled citizens of the Tribe, members are eligible for services and benefits of the Tribe, such as serving as elected or appointed officials, receiving health care, and participation in tribal programs.

Within the tribal service area, there were approximately 14,000 tribal members. According to the most recent tribal population survey, over 30% of tribal households make \$20,000 or less per year, while another 24% make less than \$35,000 per year. Regarding level of educational attainment, approximately 44% had a high school education or less, 39% completed some college, and 17% were college graduates. Nearly half of tribal adults (47.1%) were employed full-time and another 11.5% were employed part-time. Almost ten percent (9.9%) reported being out of work, 11.1% were retired, 5.6% were homemakers, and 5.1% were students (Laing et al, 2015).

GOVERNANCE AND LEGAL FRAMEWORK

The Tribe's government was driven by its Constitution which was adopted in 1975. The Constitution and Bylaws were submitted and approved by the U.S. Secretary of the Interior and adopted by tribal membership at an election in the same year. The Tribe's Constitution and Bylaws described the territory of the Tribe as encompassing all lands and waters owned by the Tribe or held in trust for the Tribe by the United States. Jurisdiction of the Tribe was extended to all lands and waters described in the 1836 Treaty as consistent with Federal law. The Constitution further describes the rules of membership, the governing body, elections, removals from office, powers, individual rights, referendum, Board of Director proceedings, duties of officers, and maintenance of tribal records.

We, the members of the [Tribe], in order to provide for the perpetuation of our way of life and the welfare and prosperity of our people, to preserve our right of self-government, and to protect our property and resources, do ordain and establish this constitution and bylaws.

The governing body of the Tribe was the Board of Directors, which consisted of 12 Board members and one chairperson who were elected into office for four year terms. Board members represented the five units of the Tribe's service area. The chairperson was elected at large and served as a member of the Board. Elections were held every two years, at which time half of the Board seats are up for election during each cycle, with the chairperson seat up for election every four years. Regular Board meetings were held twice per month, and were started with an open community hour for public comments. General meetings, special meetings and workshops were generally open to the public. Resolution and voting records for each meeting were made publically available as well.

As outlined in the Constitution, and subject to any laws imposed by the United States, the Board of Directors was entitled to exercise powers including (but not limited to):

- negotiating and consulting with Federal, state, and local governments;
- expending funds for public purposes of the Tribe;
- promulgating and enforcing ordinances governing the conduct of persons within the jurisdiction of the Tribe;
- establishing a court and defining its duties and powers;
- adopting resolutions, ordinances and codes;
- providing for the licensing, regulation and control of tribal and nontribal persons within the territory or jurisdiction of the Tribe for the purpose of recreational boating, hunting, fishing, trapping, gathering wild rice or other fruits of the earth or other usual rights of occupancy;
- dealings with the tribal lands, interest in lands and water, or other tribal assets;
- managing any and all economic affairs and enterprises of the tribe; and
- establishing and delegating to subordinate boards, organizations, tribal officers, committees, or other tribal groups, any of the foregoing powers, and reserving the right to review any action taken by virtue of such delegated power or to cancel any delegation.

According to the Tribe's organizational chart, several top governmental administrators reported directly to the Tribal Chairperson, including the Executive Director, Chief Financial Officer, Chief of Police, Judge, Gaming Commission Executive Director, and Tribal Registrar. The Chairperson also had direct oversight for the Tribal Natural Resources Division.

The Tribal Law Enforcement Department had a main office located in the tribal headquarters and satellite offices in three other towns within the service area. Tribal Law Enforcement officials served a total of nine communities on tribal land throughout the service area. Under the umbrella of Tribal Law Enforcement was Emergency Management, which provided emergency support throughout the service area to include information, equipment, emergency notification and planning.

The Board of Directors, under the authority set forth in the Constitution and Bylaws of the Tribe established the Tribal Court by resolution in 1977. The Tribal Code provided that the Tribal Court had jurisdiction to hear the following types of cases: criminal, child welfare, juvenile delinquency, landlord-tenant, guardianship, civil garnishment, adoptions, conservation, torts, workers compensation, traffic, civil infraction, enforcement of foreign judgments, civil contempt, emancipation, general civil, and personal protection orders. Tribal Law Enforcement and the Tribal Court were charged with enforcing tribal law as expressed by the Tribal Code.

COMMUNITY ASSETS

The Tribe had many community assets and provided a robust spectrum of services to members. The Tribe operated several administrative departments responsible for providing internal services for the administrative functions of the Tribe, including Communications, Human Resources, Purchasing, Management Information Systems, Telecommunications, Planning and Development, Accounting, Facilities, Legal, Legislative, and Insurance.

The official newspaper of the Tribe, operating for nearly 40 years, was published once monthly and mailed for free directly to tribal elders and tribal member households upon request, in addition to a digital version being posted online. The newspaper featured articles to educate and inform tribal members on local, state, and national issues affecting the Tribe, as well as announcements, Board Member reports, letters to the editor, and advertisements.

The Tribe also had several economic enterprises. The Tribe owned and operated five gaming properties across the service area. Three of these properties were also hotel/conference centers. Pursuant to State law, the Tribe disbursed 'two-percent payments' based on casino slot revenues twice per year to local communities and organizations throughout the service area. Other economic enterprises included restoration cleaning service and supply company, development and property management company, convenience stores, home furnishings store, and residential rental properties.

SERVICES FOR TRIBAL MEMBERS

The Tribe's Membership Services strived to improve the quality of life for tribal members and their families by providing numerous programs through each of the major divisions: Enrollment, Community and Family Services, Culture, Education, Elder Services, Natural Resources, Housing, Recreation, and

Health. The programs were funded from a combination of federal funds, state community grants blocks, competitive grants and tribal revenue.

Established in the early 1950s, the Enrollment Department was the first membership service program. It was formed to document membership, enabling the Tribe to petition the U.S. government for federal recognition. The Enrollment Department oversaw the tribal member enrollment and maintained its databases, offering tribal member services such as tribal membership cards, tuition waiver certifications, blood quantum certifications, relinquishment requests, new and modified enrollments, and assistance with obtaining a treaty fishing license.

Community and Family Services Division provided human services and social services for the Tribe. The department oversaw child placement, advocacy resources, and direct assistance for Indian child welfare, among other services.

The Culture Division was comprised of four departments: Cultural Training, Repatriation, Culture Camp, and Language Department. The Cultural Training Department researched, developed and delivered cultural awareness of traditional customs. The Cultural Camp provided cultural activities for the tribal community and its members, including camps for winter survival, lodge teachings, workshops to make traditional clothing and crafts; and field trips such as sweetgrass, birch bark, and medicine picking. The Language Department strived to teach people to speak the language and preserve sovereignty through providing classes online and across the service area, including as part of the Early Childhood Education Program, and through immersion camps at the Culture Camp. The Culture Division collectively worked on powwows, traditional funerals and other ceremonies and conducts outreach within other tribal programs.

The Education Division provided educational services to tribal members of all ages, including programs such as: early childhood programs (e.g. Early Head Start, Head Start, childcare), Youth Education Activities program, senior employment program, adult education program, career mentoring program and Workforce Investment Act programs. The Education Division also helped establish a public charter academy that serves tribal children.

The Elder Services Division offered personal care, respite care, homemaking assistance, transportation, outreach service, and advocacy. Elder programs provided meals, transportation, and in-home care among other services.

The Natural Resources Division contained two national resource programs and the environmental department. Natural resource programs provided biological services for the Tribe's hunting, fishing and gathering reserved rights under the 1836 Treaty. The Environmental Department provided solutions and information on environmental issues and concerns affecting the Tribe, tribal members and tribal enterprises.

The Recreation Program had a recreation center which offered fitness equipment, classes, and fitness club. The recreation program also offered summer recreation programs and youth recreation programs to community members.

The Health Division (tribal health department) was first established in 1978. In the early 1990s, following amendments to the Indian Self-Determination and Education Assistance Act, the Tribe participated in a demonstration project in which individual tribes negotiated directly with the U.S. Congress for funding. The project became permanent and the Tribe became a “self-governance” tribe in 1995. Self-governance tribes exercise even greater control over their funding for provision of health for tribal members by administering health services provided directly to members (IHS, n.d.).

The Health Division’s mission was to “provide high quality patient-centered health care that is responsive, courteous, and sensitive to individual, family, community, and cultural needs with an emphasis on disease prevention and health promotion.” Within the Health Division there are numerous departments and programs, such as medical care, traditional medicine, dental, community health, laboratory, optical, pharmacy, audiology, radiology, behavioral health and purchased and referred care. In 2015, the Tribe reorganized and moved the Health Division under Membership Services, and the Director of the Division began reporting directly to the Tribe’s Executive Director. As the health department for the tribal public health system, the Health Division will be described in greater detail in the next several sections of this report.

Responding to public health threats: The Tribe, the state, and the H1N1 vaccine

“...we have kind of felt that we were not being taken, um, we were kind of like the afterthought for some of the funding and the trickle down of the supplies and vaccines....you want to be a player at the table—at the beginning of the table; you don’t want to be the one that they think of as a last resort. And I—I think it’s getting better. But, um, that was an example where some of that communication piece broke down between the tribes and the state and the local health departments.”

In 2009, when the H1N1 (influenza) pandemic began, vaccines for the virus were developed and available by mid-October, but the initial supply was not enough to meet demand. As a result, the CDC recommended that vaccination programs and providers vaccinate targeted groups first (e.g., health care personnel, pregnant women, children). Because the virus was spreading rapidly, providers were urged to vaccinate as many persons as possible in the recommended target groups as quickly as possible. The Tribe proactively developed an emergency preparedness policy and procedure, including plans for vaccination and to help prevent the spread of illness in the tribal health centers. During this period, the Tribe was participating in planning calls with state and national leaders. However, when the vaccines were ready for distribution, the supplies were sent directly to the state health department which was charged with distributing the vaccines throughout the state. Because the Tribe was not receiving the needed vaccines in time to execute their response, they developed an alternative plan to work with supplies provided by Indian Health Service (IHS). IHS had a limited amount of supplies that they were able to send the Tribe, which was only enough to vaccinate the front line medical staff and their families. The Tribe did eventually receive a supply from the state; however, it was after the height of the pandemic, and the Tribe ended up having to send much of it back unused.

CHAPTER 4: FORCES THAT SHAPE THE SYSTEM

Some of the factors within the community context emerged as key drivers of the organization and performance of the tribal public health system. These factors are presented and briefly described in this section, and examples are provided to support these factors as key drivers. Evidence of these factors as forces that shape the system are further supported in the chapters to follow. Data to support the findings in this section come from key informant interviews, focus groups, and secondary data sources, namely the IHS Funding Agreement, Tribal Constitution and Codes, and organizational chart.

HISTORY: THE LEGACY OF THE IHS HEALTH DELIVERY SYSTEM CONTINUED TO INFLUENCE THE TRIBE'S PUBLIC HEALTH INFRASTRUCTURE AND SERVICES.

The Tribal Health Division developed out of the IHS system. Even as the agency grew and evolved through tribal self-determination, IHS had a sustained influence on the organization, structure, and goals of the tribal public health system.

As Rhoades and Rhoades (2014) described, the Indian health care program which predated the IHS, began by delivering preventive health care services to tribal communities focused mainly on reducing infectious disease, and environmental health hazards through improved sanitation, facilities, and water supply. The influence of this program can be seen in the legal codes the Tribe has adopted (see chapter 6). Additionally, following the 1921 Snyder Act, the Indian health program added programs which included health education and personal health services delivered in the home by public health nurses and later, health aides. These would remain as prominent hallmarks of the IHS delivery model and are consistent with the Tribe's delivery of services as well (see chapter 7).

IHS also had a sustained financial influence on the Tribe. As a sovereign tribe, the Tribe was promised funding by way of treaties for health and education welfare. However, IHS funding was insufficient to meet need, and, as a result, the Tribe had come a long way in being able to provide health services for its members through third party reimbursement. Despite significant increases in other sources of funding, IHS remained a primary funding source for the Tribal Health Division and continued to shape services through limitations or strings attached to funding (see chapter 6).

SELF-GOVERNANCE: PUBLIC HEALTH ACTIVITIES WERE BOTH SUPPORTED AND CHALLENGED THROUGH EXERCISING SELF-DETERMINATION.

ELECTED TRIBAL LEADERS WERE DIRECTLY INVOLVED IN THE OVERSIGHT, DESIGN, AND MANAGEMENT OF PUBLIC HEALTH POLICIES AND PROGRAMS.

At the foundation of the tribal public health system was the compact between the tribal government and IHS. The Tribe's governing body, the Tribal Board, was the entity with vested authority for the tribal public health system by nature of the IHS agreement and the Tribal Constitution and legal codes.

The Board had direct oversight for all financial decisions for the Health Division. The organizational structure of the Tribe placed the Health Division under the direct oversight of the Tribe's chief executive who reported to the Tribal Chairperson. The Health Board also reported to the Tribal Board.

SELF-GOVERNANCE HAD SOME LIMITATIONS WHICH INFLUENCED THE TRIBE'S ABILITY TO TAKE ACTIONS THAT IMPACT PUBLIC HEALTH.

Public health system partners described ways in which tribal self-governance had limitations or created challenges for protecting health and wellbeing of tribal members. Difficulties working with other (non-tribal) governmental authorities were related to jurisdiction and responsibility for health problems. The Tribe had jurisdictional boundaries that didn't cover all tribal members, or provide protection to members in all circumstances. For example, the Tribe had legal jurisdiction to operate a drug court which had a culturally constructed philosophy for treating drug use as a disease and determining appropriate interventions for tribal members. However, if a tribal member was arrested and later processed through the state court system then he or she may or may not be able to enter the tribal court if the appropriate agreements weren't in place with local justice agencies. Further, the fact that tribal membership was dispersed across the service area (on and off tribal land), and there were numerous governmental entities and jurisdictional boundaries encompassed within the service area, raised the potential for jurisdictional challenges to arise similar to the drug court issue.

Partners also described how self-determination may be cause the Tribe to be more intensely focused on maximizing internal resources and not fully maximizing external resources. Partners believed that current funding and internal resources weren't enough to address the disparities that existed. Resources that were described in particular included land and human resources. Land was deemed an important resource, the Tribe had limited land. In terms of human resources, partners described needing more staff, staff training, and knowledge of regulations to be more self-determined in specific areas, such as environmental health.

SELF-DETERMINATION CREATED OPPORTUNITIES FOR THE TRIBE TO TAKE ACTIONS THAT IMPACTED WELLBEING.

Many of the opportunities that self-determination created for tribal public health described by participants were the reverse of the challenges. For example, although jurisdictional issues are complicated by boundary lines, they also grant the Tribe some protection or immunity from state and local intervention unless it's called for by the Tribe itself. A clear example of this in practice is a story told about the handling of a "monkey issue" on tribal land (see pg. 119): the pet was a public health threat and although the local public health agency had public health authority to act, their first step was to contact the leadership of the Tribe and request permission to intervene on tribal lands. Only after permission was granted by tribal leaders, did local agencies provide assistance and resources to the Tribe, which were not available internal to the Tribe.

Another way that partners said self-determination created public health opportunities for the Tribe was that they were free to choose what they wanted to provide for members, and what the priorities were for spending limited resources in the community. With this authority, the Tribe had demonstrated a commitment to integrating traditional medicine and cultural practices into health care delivery and improving health access (see chapter 7).

Finally, the Tribe was able to determine their own public health laws and regulations on tribal lands (e.g. licensing, environmental services, sanitation), but could choose whether to adopt State laws or make their own laws, which may be more or less stringent than State regulations. This can be seen in the Tribe’s legal documents, where they opted to adopt State regulations in some codes (see chapter 5). In other areas of public health, such as environmental health, partners described how the Tribe is working toward building greater internal capacity in order to develop more regulatory authority and to work directly with federal agencies on developing and enforcing protections (e.g. surface water, ground field development, environmental clean-up, solid waste management, and air quality).

ACCORDING TO TRIBAL PUBLIC HEALTH SYSTEM PARTNERS, THE ROLE OF THE TRIBAL BOARD IN PUBLIC HEALTH WAS ADMINISTRATIVE, LEGAL, AND SUPPORTIVE.

Tribal public health system partners explained that tribal leaders are key actors in promoting and protecting the health of tribal membership. The nature of the role of the Board in the public health system was described as being decision makers and advocates.

Tribal public health system partners explained that all decisions about the tribal public health system, both administrative and legal, went through the Board. It was commonly known that in the absence of written policy or code that stated differently, decisions that impacted tribal member health were within the purview of the Board.

Finally, tribal public health system partners discussed how tribal leaders serve the membership through representing the Tribe on national boards and advisory committees that discuss health issues affecting them, advocate for more direct consultation with state and federal agencies, and ensure there are no gaps in tribal representation on local boards in the community which can limit impact of public health activities and resources for addressing shared health issues.

PARTNERSHIPS: FORMAL RELATIONSHIPS BETWEEN THE TRIBE AND OTHER NON-TRIBAL AGENCIES CAN BE COMPLICATED AND PERSONAL RELATIONSHIPS WERE PARAMOUNT TO SUCCESS

Sovereignty can be a difficult concept for non-tribal agencies to fully understand, particularly the inherent right of the Tribe to self-govern within its jurisdiction. Tribal members have two sets of rights—those as a US citizen and those of a tribal member. Tribal members should have access to whatever services they may otherwise be eligible for in the broader community. Moreover, there are certain factors that affect the health of all community members, regardless of tribal affiliation or jurisdictional boundaries (e.g., the environment) and tribal and non-tribal agencies need to work together. A few issues emerged as potential barriers to the Tribe and non-tribal agencies working effectively together, including lack of knowledge or understanding of the Tribe’s culture, questions about payment for services delivered to tribal members, and perceptions that the other doesn’t want to coordinate services.

MOST NON-TRIBAL PARTNERS DID NOT UNDERSTAND THE TRIBE’S CULTURE AND ENVIRONMENT.

Many non-tribal agency participants stated that they are not very knowledgeable about the Tribe's culture. Several of them said that they should be more knowledgeable or are trying to be more knowledgeable. One thing that many people said they knew about the Tribe's culture, and that they often said they tried to incorporate in their work, is that tribal members place a strong emphasis on respect for the environment and/or living in harmony with the environment.

It was common among non-tribal agency participants to say that tribal members were part of the whole community, rather than recognizing the unique needs of tribal members as separate from the broader community. Non-tribal partners also described their work as serving tribal members along with everyone else, rather than having services tailored.

THERE WERE SOME GAPS IN COMMUNICATION AND COORDINATION WITH OTHER GOVERNMENTAL ENTITIES.

Several non-tribal agency participants mentioned that the Tribe has done a lot to improve the lives of members, and that they offer a variety of high-quality services. Others recognized the positive work that the Tribe had done through building partnerships and collaborative groups for their community health grants and the positive impacts that have been observed on the broader community (e.g. Safe Routes to School programs, smoke-free parks and campuses, and Complete Streets policies). It was evident from interviews that the success of these partnerships with local agencies was based on personal relationships between individuals and trust. For example, there was clearly a close personal relationship between some of the health officers at local health departments and key health division staff, particularly with respect to emergency preparedness and improving healthy food access (see chapter 7).

However, one issue around coordination between tribal and non-tribal agencies was the question of who should pay for certain forms of care or services for tribal members – the tribe or the local/state agencies. This seemed to be linked to the idea among some non-tribal agencies that the Tribe had a wealth of money to pay for services (e.g., through casino profits, grants, federal money).

Additionally, the Tribe's relationship with the State was described as being strained. Public health system participants described the Tribe's interactions with the state health department for delivering public health services as very limited. The Tribe received a very small amount of grant funding from the state health department specifically for emergency preparedness. The amount of funding was particularly small relative to the size of the Tribe's jurisdictional service area and the level of effort the Tribe contributed to regional emergency preparedness capacity compared to the amount of funding that local health departments receive for the same activities. Further, there had been instances in which the Tribe was well positioned to carry out core public health functions (e.g. H1N1 response, program certified HIV education testing and counseling services) and the state did not come through with the resources necessary for the Tribe to fulfill these functions.

CULTURE: CULTURAL BELIEFS AND PRACTICES INFLUENCED COMMUNITY NEEDS AND HOW SERVICES WERE DELIVERED

THERE WAS DIVERSITY WITHIN THE TRIBE IN THE DEGREE TO WHICH TRIBAL MEMBERS FELT CONNECTED TO TRADITIONAL CULTURAL TEACHINGS AND PRACTICES.

Perceptions about the relevance of traditional cultural practices and teachings varied significantly among different generations and groups within the tribal community. For example, some elders who participated in focus groups recalled traditional medicine teachings they learned from their grandparents or other family members, while others did not. Some elder participants felt that the traditional and cultural teachings were exclusive to those already knowledgeable to it and that teachings weren't shared widely among tribal members. Elders did not feel the tribal facilities and programs were consistent with cultural teachings and practices. For example, elders voiced concerns about tribal programs being paid for by the federal government, such as their meals and healthcare, which they believed meant rules had to be followed that weren't aligned with traditional ways of living. Other elder participants talked about how some foods being provided may be thought of as traditional foods, but they were not actually traditional, such as fry bread. Elders were upset about the stark contrast between cultural practices and the environment. One of the elder participants called the food served at holiday meals "ethnic cleansing food." Additionally, some elders were outraged about a coke machine located in the cultural building:

"I think it's spiritually and emotionally offensive to walk into that cultural building and see that Coke machine."

The youth focus group participants described learning about traditional medicine from their parents and grandparents. They also learned traditional stories from their families and teachers. However, other youth participants mentioned there was a lack of cultural teachings in the Tribe. Youth wanted the elders to pass on their knowledge of traditions and medicine to younger generations. Youth participants were interested in learning more of the culture and wanted there to be more culture classes and camps to learn about traditions. Many felt that their schools were focused on assimilating Native students into the broader culture rather than providing opportunities to learn about their own culture.

Participants in the parent focus group remarked that their kids in the early childhood program were learning the Native language and traditions of which they were not familiar. Participants in the parent and housing focus groups, which included mostly middle aged people, expressed not feeling like culture was a part of their overall definition of health and they did not practice or seek out traditional practices. Although, some members of these groups did say that they participated in some of the traditional practices like smudging and attending powwows and felt better afterwards.

RELATIONAL CONNECTIONS AND INTERPERSONAL RELATIONSHIPS WERE IMPORTANT CHARACTERISTICS OF THE COMMUNITY STRUCTURE AND INTERACTIONS.

Partners from tribal organizations described a core value within the Tribe of caring for and supporting all members of the community and helping each member discover their own tribal identity in order to live life holistically and in optimal health. This value was reflected in the ways in which people collaborated

to meet tribal members' needs and provide services. Partnering with other people, within and across departments, was the default way of working among tribal organizations to coordinate patient care, conduct health events, conduct assessments, develop plans, and carry out activities.

Interpersonal relationships also had some negative influence on the public health system. For example, elders and adult focus groups expressed disappointment and frustrations with the influence of personal relationships within tribal politics. Some participants believed that tribal government was run by members in "the right family."

The youth focus groups discussed the impact of their interpersonal relationships between themselves and adults in their community. Youth expressed that people don't care for one another as they should or as their cultural values would teach them to live. The youth feel that their teachers, parents, and elders needed to spend more time talking to them about the tough issues (e.g. drugs) and adults needed to step in and help them deal with complicated issues such as bullying. The youth also wanted to have more support when dealing with tragic events, such as suicide of a community youth. Youth reported experiencing or seeing lots of bullying in their communities, even in the aftermath of suicides.

INCORPORATING CULTURE AND TAILORING SERVICES TO TRADITIONAL CULTURE WAS A PRIORITY OF TRIBAL SERVICE PROVIDERS.

Tribal public health system partners had the resources and capacity to incorporate culture and traditions into tribal programs and services and they often viewed this as a top priority. Most notably, creating a Traditional Medicine program within the health system and institutionalizing traditional health practices across disciplines emerged as characteristics influencing the organization and delivery of public health services (see chapter 7).

ENVIRONMENT: SOCIAL, PHYSICAL, ECONOMIC, AND OTHER ENVIRONMENTAL FACTORS INFLUENCED TRIBAL PRIORITIES AND HEALTH OUTCOMES

In addition to the impact of culture, there were several environmental factors that emerged as being forces that shape the public health system both through influencing priorities for services and health behaviors and health outcomes for community members.

SOCIAL NORMS HAD A PERVASIVE INFLUENCE ON UNHEALTHY BEHAVIORS.

Elder participants talked about how things were when they were growing up and how much different it is now for young people. They said that when they were young they were raised off of the land and ate more traditional foods like wild game, whereas now people feed their kids at fast food restaurants which are everywhere. Additionally, participants across all focus groups believed that kids don't play outside now like they used to because of technology or lack of encouragement to go out and do something physically active. Both elders and youth felt like no one was teaching young people life skills.

Further, there were concerns raised by key informant interview participants about the normalization of poor health or risky behaviors (e.g., missing teeth, loss of sensation in feet, obesity) and how this contributes to the difficulty of getting some people to seek medical care or make lifestyle changes.

Partners mentioned the need for health education and promotion to challenge these norms. Similarly, focus group participants talked about the impact of living in a family and community environment where behaviors such as sedentary behavior, unhealthy eating, and substance abuse are the norm. They acknowledged that it can be difficult to change the community's perspective on issues of importance to public health when unhealthy behaviors, such as smoking, are the norm.

Youth were very aware of the influence of the social environment. They talked about how there were some unhealthy habits that were hard to break because there was a lack of ambition and motivation to stop them. Also, peer pressure, the belief that everyone does drugs or drinks, and the availability of drugs and alcohol in the community, played roles in their risky behaviors.

GENERATIONAL TRAUMA HAD LASTING IMPACTS ON THE COMMUNITY.

Participants in several groups discussed the pervasive and lasting impact of generational trauma, referring to it as the reason why a substantial number of Native Americans are overweight or have high rates of substance use. Many participants felt that families experiencing generational trauma were overcompensating with their own children because they wanted them to have better than what they had. Most participants expressing this belief felt that people in the community did this by over feeding their children, indulging them with fast food or unhealthy foods, and letting them overuse technology. Alternatively, some participants suggested that due to parental issues with addiction, children weren't able to access services because of their parent's poor behavior. Some youth also stated that certain family issues can impact unhealthy behaviors, leading kids to think that drugs and alcohol are the only way to deal with problems.

THE REGIONAL ECONOMY AND THE ECONOMIC STATUS OF THE POPULATION IMPACTED PROGRAMS, SERVICES, AND HEALTH STATUS.

Discussions of factors within the economic environment had two primary foci. The first was the impact of the overall economy on funding for programs and services. For example, there was a belief that there wasn't as much funding available at the time as there used to be for agencies. This was attributed to the economic downturn in recent years. For tribal organizations, this was also discussed in reference to casino profitability. Casino revenues affected availability and allocation of funding for some tribal programs. People mentioned the problem of limited funding for prevention, in particular (see chapter 6).

The second focus was on the economic status of the population. Many public health system partners discussed how poverty is a root cause of poor health that needs to be addressed in order to truly impact health (e.g., people making choices between basic needs and healthy foods, obtaining medical care, etc.). Participants said many communities within the service area had high unemployment rates, and people described the importance of jobs to a healthy community overall.

Additionally, public health system partners felt that individual income was a key factor in whether or not people would or could access needed services. The high cost of healthy food was discussed across the

groups as a challenge to being healthy. Some elders felt that the farmers markets were a positive addition to the community, while others complained that food sold at the farmers markets was too expensive. Youth participants felt that people in the community do not choose to eat vegetables and other healthy foods because junk food and fast food is much cheaper. Other participants felt that lower-income families were less educated and aware of healthy behaviors. Participants mentioned that families often do not have enough money to pay for gas to get to services or they have to use their limited income to pay for food or heat over paying to go see a doctor.

PHYSICAL GEOGRAPHY AND CLIMATE CREATED BARRIERS TO PROVIDING AND RECEIVING PUBLIC HEALTH SERVICES.

The main factors within the physical environment that shaped the public health system were related to the rural environment where people and services were largely spread out, the limited availability of services, the large service area, limited transportation, and weather. These factors and their impacts on the system were interrelated.

The limited availability of services was due, in part, to the rural nature of the area and to the Tribe's large service area - limited resources were spread out across a large area. Some people mentioned how this creates the need for providers to travel and for home-based services, but not all providers are willing or able to do this. Within the large rural service area, tribal members had to drive long distances to reach available services, which highlighted the impact of lacking a transportation system. Further, people without cars or who were unable to afford gas to drive long distances were particularly affected by the limited public transportation options. Even in areas with bus systems operating, the buses did not tend to run frequently, which made using public transportation a time consuming process.

Transportation and the spread of services across the service area was a commonly cited barrier to accessing health services among community focus group participants. Participants mentioned that there were limited or no modes of public transportation and many individuals cannot afford their own cars or gas. Elders mentioned that if it was difficult to receive services at their local tribal Health Center then they went to another neighboring Tribe's facility to receive services but they had to find their own transportation to get there. When asked where they go to for care, most youth participants said they go to a Health Division clinic and others mentioned going to local hospitals or other community clinics. One youth mentioned that the first place they seek care is the emergency room because it is the closest facility to where they live.

Transportation issues were also exacerbated by the weather, which frequently made it difficult to travel throughout the long winter season. Also, focus group participants in all groups mentioned that the regional climate was often a barrier to physical activity.

CHAPTER 5: KEY HEALTH ISSUES

Data abstracted from a survey of community health status indicated priority community health needs related to chronic disease, risky health behaviors, and mental health. Community members were generally aware of the key health issues facing the community and were concerned about them. The Tribe had been strategically working toward addressing priority health issues for more than a decade. In some instances, the Tribe was lacking data to measure some of the health issues of greatest concern to community members. Of the health issues being measured with population-level data, there were health disparities observed for the tribal population compared to the general state population in the same region, as well as between groups *within* the tribal population. Notably, both tribal and non-tribal public health system partners did not talk about disparities as a key goal of their organizations.

COMMUNITY HEALTH STATUS

The only available source of population based health survey data, the Tribal Health Survey 2012-2013 (Laing et al., 2015), was used to understand health status of the tribal community. The survey did not provide measures of health status for a comprehensive set of health indicators. The data available only covered a few core areas of health and related behavioral risk factors including: chronic disease, physical activity, nutrition, tobacco use, obesity, and quality of life. These data revealed relatively high rates of chronic disease, poor mental health, and unhealthy behaviors among tribal adults. Tribal children also exhibited high rates of unhealthy behaviors. However, the data also showed a high rate of health care coverage and use of clinical preventive services.

THE TRIBAL POPULATION EXPERIENCED A SUBSTANTIAL BURDEN OF CHRONIC DISEASE.

Overall, almost half (48.2%) of adults were diagnosed with one or more of three major chronic diseases, including high blood pressure, high cholesterol, or diabetes. Among tribal adults, 13.4% were ever diagnosed with diabetes, 33.6% had ever been diagnosed with high cholesterol, and 37.1% had ever been diagnosed with high blood pressure. Notably, 8.1% were diagnosed with all three of these conditions.

The percent of adults categorized as overweight or obese according to Body Mass Index (BMI) was also high. Nearly three-quarters of tribal adults had an unhealthy body weight status. Approximately 37% of tribal adults were obese, and a similar percent were overweight. Remarkably, the vast majority of all adults (94.8%) believed it was important to maintain a healthy weight.

Almost half of tribal children were at a healthy BMI (46.6%), but 16.4% were overweight, and about a quarter were obese (26.6%). Male (42.6%) children were much more likely to fall into the obese category than females (14.5%).

POOR MENTAL HEALTH AFFECTED ABOUT 1 IN 5 TRIBAL ADULTS.

Approximately 21% of adults had poor mental health, defined as 14 or more days in the past month that the individual felt their mental health was not good. Low-income adults were much more likely to experience poor mental health than adults with higher household income. Females (24.3%) were twice

as likely as males (12.3%) to have been taking medication or receiving help for a mental health condition.

TOO FEW TRIBAL ADULTS AND CHILDREN WERE EATING HEALTHY AND PARTICIPATING IN DAILY PHYSICAL ACTIVITY.

Nearly half of adults ate less than one serving of fruit and one serving of vegetable per day. Additionally, over 87% of children were not eating enough servings of fruit and vegetables each day which included three servings of vegetables and two services of fruit each day. For more than one third of adults (37.9%) fruits and vegetables were not available at a good price and quality near their homes.

Only one third (33.4%) of adults participated in physical activity which met the CDC's Physical Activity Recommendations for Adults, and 45.2% did not participate in physical activity outside of work or school at all. Most tribal children were also not meeting physical activity recommendations; slightly more than one quarter of children (26.9%) were physically active for at least 20 minutes per day.

COMMERCIAL TOBACCO USE AND EXPOSURE AFFECTED A RELATIVELY LARGE PROPORTION OF TRIBAL ADULTS.

Traditional tobacco is used in everyday life for spiritual medicine, and in ceremonies to connect with the Spirit world for prayer and offering. According to survey data, 16.2% of tribal adults used tobacco in a traditional way. However, about 66% of these adults used commercial tobacco for ceremonial purposes. Traditional tobacco, or *nicotiana rustica*, is one of the plants used alone or in combination with other botanicals such as cedar, bark of the red willow, sweet grass or sage. Traditional tobacco is generally free of impurities and is not usually inhaled when smoked in a pipe.

By comparison, commercial tobacco is manufactured with cancer-causing chemicals and is sold in stores and used for cigarettes, cigars, chewing tobacco and packaged pipe tobacco, sometimes known as *nicotiana tabacum* (Brokenleg & Tornes, 2013). One-third of tribal adults were current smokers of commercial tobacco (33.3%), and smoking rates were higher among males than females. Well over half (57.6%) of all adult smokers had tried to quit in the past 12 months, and across all age groups, 50% or greater of current smokers had attempted to quit smoking in the past 12 months. Yet, over three-quarters of adults do not allow secondhand smoke in their home at any time (75.1%), and four out of five (80.5%) adults were aware of the harms of secondhand smoke exposure.

TRIBAL MEMBERS HAD GREATER ACCESS TO HEALTH CARE AND UTILIZED CLINICAL PREVENTIVE SERVICES MORE OFTEN THAN ALL ADULTS IN THE STATE.

A relatively low rate of tribal adults (5.9%) had no health care access due to cost, well below the state rate of 15.1% for all adults (Fussman, 2013). The majority of tribal adults visited a tribal health center for their health care needs, with at least 50% or greater reporting use of tribal health facilities across all age, education, and income categories. Nearly three-quarters (72.7%) of tribal adults reported having had a physical exam in the past year, compared to only 67% of all adults in the state. Nearly all tribal adults reported ever having their blood pressure checked, with 88.9% having had it checked within the past

year. Blood cholesterol screenings were also well utilized among tribal adults; 79.9% of tribal adults had their cholesterol checked in the past year.

AWARENESS OF HEALTH ISSUES

BOTH COMMUNITY MEMBERS AND PUBLIC HEALTH SYSTEM PARTNERS WERE AWARE OF COMMUNITY HEALTH NEEDS FOR KEY HEALTH ISSUES OF CONCERN INCLUDING CHRONIC DISEASE, MENTAL HEALTH AND SUBSTANCE ABUSE.

Community focus group participants discussed a variety of key health issues affecting their communities. Across groups, much of the discussion about health issues focused on diabetes, mental health, and substance abuse. The discussions about mental health and substance abuse included a wide range of topics such as alcohol and tobacco use, domestic violence, suicide, drug overdose, gambling addiction, and overmedication.

Focus group discussions about key health issues frequently included conversation about the health and behaviors of young people. Both the elder and youth focus groups raised concerns about adolescent suicide, as well as other unhealthy behaviors identified as related to poor health including overuse of technology, consumption of energy drinks, drug use, and bullying.

Key informant interview participants focused on similar health issues during interviews. Mental health issues mentioned most often included substance abuse, depression, and suicide, as well as general statements about mental health being an important issue in the community. Physical health issues mentioned most often included obesity, diabetes, and cardiovascular disease. Smoking and secondhand smoke was discussed often as a specific issue affecting health.

Interview participants also talked about other factors that needed to be addressed in order to resolve these issues. These factors were increasing healthy eating and access to healthy foods, increasing active living and access to physical activity opportunities, improving health awareness and knowledge, improving access to care, and improving economic status. Notably, participants also talked about the importance of focusing strategies on the youth population.

SOME KEY HEALTH ISSUES WERE NOT ADEQUATELY DOCUMENTED OR MEASURED.

Public health system participants noted other potential health issues which were more difficult to identify due to a lack of or limitations in data. These difficult to identify issues included mental health, physical health and social determinants of health.

With regards to mental health, participants felt they did not have enough information or data about community members' experiencing depression, suicidal thoughts, prescription medication dependency, and dementia. Participants were concerned about youth mental health in particular, and about people being afraid or uncomfortable with seeking help, and about there not being enough resources to adequately address the problem.

The physical health issues participants were concerned about being undetected or unmeasured included Hepatitis C, sexually transmitted infections, and injuries. Regarding Hepatitis C, providers are aware of this being a serious trend for Native Americans nationally but did not know if it could be a problem in their community. Concerns about the stigma associated with sexually transmitted infections and not wanting to talk about it with people in the community were raised by participants.

Participants discussed a wide range of social issues they believed were key factors in community health but were difficult to identify. Examples included access to healthy foods, discrimination, hunger, poverty, homelessness, and the use of new drugs and substances.

Many of the issues discussed as difficult to identify were described as such because of the lack of data and systems to capture the information. For example, participants said the Tribal Health Division's electronic health records were not adequately capturing information on some key health issues in a way that enables the information to be used for data purposes, such as measuring the percent of patients who report drug use. Participants explained that these issues may be documented in the notes fields by providers but there was not a specific data collection field to track and measure this information for the clinic patient population. Participants were also concerned with not having health care data for tribal members who are not patients at the tribal health centers.

Although there were more data available recently than in previous years, there were lingering concerns about the lack of systems to compile existing data and use it in a meaningful way. Some participants also had concerns about the quality of some data being collected, the consistency in the methods used to collect data, and the ability to look at trends in data over time due to issues with data collection, management, and sustainability.

For participants from non-tribal agencies, they discussed a noticeable lack of data for Native Americans within their service population. Community health assessment processes described by non-tribal public health and health care agencies did not have any data collection activities that focused on Native Americans specifically; their data was "rolled into" the broader community health assessment and monitoring activities of the entire service population. Further, participants from non-tribal agencies were not able to describe any data sources that may be available to define or measure needs for the Native American or tribal population.

THESE KEY HEALTH ISSUES HAD BEEN PRIORITIES OF THE TRIBAL HEALTH DIVISION FOR OVER A DECADE.

The Tribe's Strategic Health Plan, adopted by the Tribal Board in 2000, identified the following health issues as priorities for the agency: heart disease, diabetes, cancer, alcohol and substance abuse, and access to health care. For each priority issue, a mission, a vision, goals, health indicators, process and outcome measures, and objectives and strategies were identified. Strategies for tackling the key health issues included establishing cross-sector workgroups and collaborative partnerships, modifying and adopting policies, increasing availability of health education and promotion services, conducting community-wide media campaigns, providing culturally specific intervention programs, increasing

preventive health care services, improving coordination of clinical and community health care services, provider training, and program evaluation.

Several of the participants from the Health Division specifically referenced the Strategic Health Plan in their discussion of organizational goals and key health issues. A Board resolution passed in June 2014 reiterated access to health care as a major priority area for the Tribe, acknowledged successful progress made toward systemically addressing this issue in the past; and communicated this as a continued priority moving into the future:

“WHEREAS, health access for Tribal Members is of critical importance and has been consistently rated as one of the top three priorities for the Tribe; and WHEREAS, the health division team has been phenomenally successful in virtually eliminating the need for “tribal support” revenues by accessing grants and increasing “third party” revenues, thereby demonstrating the self-sufficiency of operations; and WHEREAS, the United States Affordable Care Act of 2010, provides many new opportunities for Tribes to expand health access through innovative and entrepreneurial efforts. NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors hereby directs the creation of an Adhoc Health Access Exploratory Group...”

The challenges associated with identifying and measuring key health issues due to a lack of data that was described by participants was also supported by documentation. Until the most recent tribal health survey, there were even more substantial gaps in health data for the tribal member population, as evidenced by the Strategic Health Plan (2000). The Plan listed 45 health outcome and impact measures, of which all 45 were in need of baseline data. Prevalence rates of the five selected health conditions among adult tribal members were unknown at the time, as well as the key behavioral risk factors such as commercial tobacco use, lack of physical activity, lack of access to health care, and poor nutrition.

HEALTH DISPARITIES

Nationally, Native Americans experience chronic diseases such as heart disease, diabetes, obesity, and cancer, at greater rates than other race and ethnic populations (CDC, 2015). Survey data and community member perspectives documented similar experiences were true for the Tribe, and there was awareness of these disparities. However, participants, particularly those from non-tribal agencies, did not talk about their organization’s purpose or goals with a specific focus on health disparities.

THE TRIBAL POPULATION EXPERIENCED DISPARITIES IN PHYSICAL HEALTH, HEALTH RISK BEHAVIORS, AND MENTAL HEALTH.

A comparison of physical health and mental health status of tribal adults to the general adult population in the state revealed health disparities for the tribal population. According to the Health Survey, the prevalence of diabetes among tribal adults was 13.4% compared to 10.5% of the general adult population. The obesity rate among tribal adults was 36.8% compared to 31.1% of the general adult population.

Among tribal adults, the prevalence of no leisure time physical activity was almost 15% higher than the general adult population (37.8% compared to 23.3%). Adult smoking rates within the Tribe were 10% higher than the general adult population (33.3% compared to 23.3%) and a much lower percent of tribal adults had never smoked than the general adult population (38.9% compared to 50.9%). Remarkably, the rate of exposure to secondhand smoke in the home was actually lower among tribal adults than the general adult population (24.0% compared to 27.9%).

Poor mental health was experienced by a much greater percent of tribal adults than the general adult population (21.2% compared to 13.0%). Further, tribal adults were almost twice as likely to experience food insecurity and housing insecurity as compared to the general adult population in the state. Tribal adults had higher rates of feeling worried about having enough money to buy nutritious meals (55.4% compared to 21.9%), and feeling worried about having enough money to pay rent or mortgage (59.3% compared to 34.8%) in the past month.

Further, tribal health survey data also revealed health disparities *within* the tribal population among groups with different income and education levels. The two groups at greatest risk for poor health and health risk behaviors were households with lower income levels (below State median household income) and adults with a high school diploma or lower level of educational attainment. For example, the lowest rates of daily fruit and vegetable consumption, the highest prevalence of no leisure time physical activity, and the highest prevalence of current smoking was among adults with household incomes of less than \$20,000 and adults with less than a high school diploma. The prevalence of poor mental health was also highest among those with less than a high school diploma and adults with household incomes of less than \$20,000.

COMMUNITY MEMBERS WERE AWARE OF HEALTH DISPARITIES AFFECTING THEIR COMMUNITY.

Focus group participants specifically acknowledged that Native Americans had higher rates of substance addiction and diabetes. The perception of health disparities among community members was that they were more likely to have these health issues than other people. In the words of one participant:

“And there should be a little more focus onto some of the problems that we have because Native Americans are prone to things, especially addiction.”

PARTICIPANTS DID NOT TALK ABOUT ELIMINATION OF HEALTH DISPARITIES OR EQUITY AS GOAL OF THEIR AGENCIES.

Generally, participants did not discuss the issue of health disparities or health equity. Participants from non-tribal agencies made no mention of terms like health disparities or health equity at all in their discussion of their organizational mission or goals, but they were generally able to name or acknowledged some of the key health issues experienced by tribal members as health disparities:

"I'd be guessing but I'm going to say certainly substance abuse and mental health counseling, the high rate of suicide in a native population, alcohol and tobacco prevention and vaccinations, immunizations, I think all of those things we could probably do a better job of for the [Tribe]."

Participants from tribal agencies also did not specifically address the issue of health disparities in their explanations of the mission and goals of their organizations. Participants did, however, mention as key health issues in the tribal community the areas of disparity that are illustrated by the survey data as described above.

"Goals. Well, we used to have a strategic plan and we—we wanted—in that plan, we wanted to improve the health status of—of the main, um, diseases that were causing the most problem, the most morbidity and mortality, and that was cardiovascular disease, cancer, diabetes, and, um, alcohol and substance abuse."

Tribal agency participants tended to talk about the mission and goals of their organizations with regards to addressing health outcomes using language such as 'preventing more adverse health outcomes' and achieving the 'best possible health outcomes' among tribal members.

"...we are providing the best care that we possibly can within standardized care and best practices, for the best possible outcomes."

Only one tribal participant discussed health disparities using the specific term "disparities," and only one other participant talked about differences in health outcomes between the tribal population and other populations or groups in terms of disease rates being higher for the Tribe. These comments acknowledged that the Tribe's efforts to improve health outcomes was making a difference but was nowhere near eliminating existing disparities:

"I mean we're not there yet, you know, obviously...because right now we're still like, the disparity is still there. The health disparities are still there. The funding's not here and that has been trusted to us from the federal government."

"Teach them what it is to be healthy. You know what, if they don't follow that, you know, you've done your best but we're not introducing those preventative programs that preventative information at a fast enough rate because, well, we can't say that we are because we know that our disease rates are higher than the general public."

CHAPTER 6: CONCEPTUALIZING PUBLIC HEALTH IN A TRIBAL CONTEXT

The conceptual framework for a public health system includes four major components, one of which is mission. The mission of the public health system includes its goals and how those goals are put into practice. This section explores the tribal public health system with respect to the mission and goals of the system as described from the perspective of participants. This section also describes the responsibility of the Tribe for protecting and promoting public health through a formal, legal lens as well as from the view of stakeholders. Data from this section came from the Tribal Code, Board resolutions, IHS Funding Agreement, key informant interviews and community member focus groups.

THE DEFINITION AND PURPOSE OF PUBLIC HEALTH INCLUDED PREVENTION, EDUCATING AND INFORMING, PROVIDING SAFETY NET CARE, WORKING TOGETHER, AND COMMUNITY HEALTH AND WELLNESS.

According to participants throughout the tribal public health system, the definition and purpose of public health covered several broad concepts including prevention, educating and informing, providing safety net care, working together, and community health and wellness.

In terms of prevention, participants noted that the focus of public health is proactive in the sense that it seeks to stop illness and disease from ever occurring. Participants also spoke about public health as prevention by noting its focus on ensuring people live in environments where they can be healthy over the course of their life and reduce their needs to access medical care services. With regards to public health prevention topics, participants spoke about immunizations, healthy eating, active living, sanitation, and smoke-free campaigns. The most commonly noted prevention activities included on-site health screening tests, health fairs, community events, and media.

Participants also said public health is educating and informing people about health and relevant issues. Participants talked about raising awareness as a key goal of educating and informing activities. With regards to information and education topics, commonly mentioned topics were availability of health services and programs, health risks, lifestyle choices and their effects on health, and the importance of taking preventive measures such as getting immunized.

Providing safety net care was yet another purpose of public health discussed. Participants said that public health is ensuring health care for everyone, especially providing access to those who may be vulnerable or experience various barriers to care due to cost and other outside influences.

Participants described working in collaboration with others as an important aspect of the practice of public health. Participants specifically named the following agencies or groups as key players working together in public health: community collaborative bodies (such as Great Start Collaborative), tribal and local health departments, environmental health programs, schools, local government entities, local law enforcement, and hospitals.

“The purpose of public health is working together in a network to achieve one goal: improve the health of the community.”

Finally, participants discussed the purpose of public health as broadly promoting community health and wellness. The main idea underlying this concept was promoting health and wellbeing for whole communities as opposed to caring for individuals. Participants described the focus of community health and wellness as being holistic (spiritual, emotional, physical, mental) and multi-level (individual, family, community, societal). Specifically, participants mentioned public health’s focus on community health and wellness to be inclusive of other systems or programs, including education, environment, and housing.

Community focus group participants had very congruent ideas about health when compared key informants’ ideas about the purpose and goals of public health in the community. Overall, community members said health means staying active and exercising (e.g. by walking or gardening) and eating healthy food (e.g. fruits and vegetables). For many, good health meant being able to do what you want and being energetic. A few participants explained that taking care of your body is important for being healthy. Specifically, maintaining a good weight, getting plenty of rest, having good blood work results, keeping stress levels low, and staying busy and socializing were noted healthy behaviors.

While one participant said that being healthy meant keeping balance of physical, mental, emotional, and spiritual health, most participants did not specifically say that health is about balance or spirituality, although they may have described activities which to them were aspects of these concepts. At times, participants mentioned that cultural activities or events could themselves be a barrier to being healthy due to the food served (often fried, high in sugar and fat, too many high carbohydrate options). Participants most often stated their reason for being or staying healthy was for their families. To them, an important part of good health was being more involved with family and the community.

“And I want to stay healthy so I can be around my great grandchildren someday.”

PARTICIPANTS SHARED THE MISSION AND GOAL OF IMPROVING INDIVIDUAL AND COMMUNITY WELLBEING.

The common thread shared by key informant interview participants with respect to organizational missions was improving individual and community wellbeing. More specifically, participants talked about fulfilling their organizational mission and goals through providing quality services and ensuring access to services. With regards to health in particular, participants talked about three types of services relevant to their organizational missions: individual medical services (such as dental care, primary health care, diabetes management, traditional medicine); prevention services (including diabetes prevention programming, nutrition education, health education programs for youth and community members); and promotion of healthy lifestyles (encouraging active living and healthy eating through supportive policies and environments).

Participants believed improving individual health and wellbeing was also achieved through ensuring access to services. The main strategies mentioned most often to ensure people had access to services included providing transportation to services, providing services for elders to keep them independent and healthy, and extending medical services to reach people who live in more rural areas.

“I guess the global mission is to provide high quality, patient-centered, culturally sensitive care to the tribal membership, who are our patients, with high satisfaction, quality, and efficiency.”

Organizational goals varied depending on for whom the organizations were designed to primarily serve. Generally, if an agency was a tribal agency the goals were communicated as goals for the tribal community, although there were a few exceptions (i.e. tribal community health program and environmental program) where the stated goals were also inclusive of the broader (tribal and local) community. If an agency was not a tribal agency then the goals were most often communicated as goals for the community as a whole, usually with no specific goals identified for tribal members or Native Americans as a priority population. Participants from agencies throughout the tribal public health system described their main organizational and personal goals as falling into one or more of the following areas: health promotion, prevention, service provision, preservation of culture and traditions (tribal organizations only), and ensuring financial sustainability.

ORGANIZATIONS WITH HEALTH PROMOTION AS A GOAL WERE WORKING TO MAKE THE HEALTHY CHOICE THE EASY CHOICE.

With health promotion as a main goal, participants described their focus primarily with respect to specific health topics. Healthy eating was the most commonly mentioned health promotion topic, with an emphasis on encouraging community members to eat fresh and local foods. Active living was another common health promotion topic and participants described goals of increasing the amount of exercise community members participated in regularly. Reducing tobacco use was the third main health promotion topic discussed. Regardless of the topic, the concept of health promotion was largely discussed as being holistic, meaning all aspects of health and wellbeing (physical, spiritual, mental, social) were considered.

Described in concise terms, the major goal of health promotion for participants was “working to make the healthy choice the easy choice.” Health promotion goals were generally carried out through health fairs and health education focused programs and services. Participants also noted that health promotion goals were often accomplished through collaboration with other agencies and with financial support of various grant awards.

ORGANIZATIONS FOCUSED ON PREVENTION TYPICALLY FOCUSED ON CHRONIC DISEASE.

Prevention goals described by participants were mainly focused on preventing onset of chronic diseases, most commonly diabetes, heart disease, and cancer. Activities discussed in relationship to prevention included tracking and monitoring disease within the community, offering preventive health screening

tests, providing primary preventive health care, and offering health education to increase knowledge of health risks. Notably, health education was a major activity described for meeting goals under both health promotion and prevention. Many participants noted providing health education to youth in school based settings as part of reaching their goals.

MOST PARTICIPANTS IDENTIFIED PROVIDING INTEGRATED, COMMUNITY-BASED SERVICES AS A GOAL OF THEIR ORGANIZATION.

Providing direct services was mentioned as a goal by most participants. A wide array of services were described by public health system participants, but they mainly focused on providing services to meet community members' basic needs such as housing, health care, and food. One theme that emerged related to goals for service provision was the integration of services across programs, departments, or agencies. Specifically, people mentioned offering multiple services in one location and coordination with other provider agencies as being essential to their goals.

SOME PARTICIPANTS IDENTIFIED PRESERVATION OF CULTURE AND TRADITIONS AS A GOAL OF THEIR ORGANIZATION.

Some participants with tribal organizations specifically identified a main goal of their agency as working to preserve and promote the Tribe's culture and traditions within the community. Participants described activities to achieve this goal such as encouraging attendance at cultural events, educating people about language and traditions, and providing cultural teachings and stories. Participants from non-tribal organizations did not talk about goals of their agency with respect to preserving or promoting culture.

PUBLIC HEALTH SYSTEM PARTNERS ARE WORKING TOWARD A GOAL OF ENSURING FINANCIAL SUSTAINABILITY.

Another shared goal frequently mentioned by participants was working to ensure their agencies continued to receive funding. Accomplishment of this goal was a necessary function which enabled them to meet their primary organizational goals of health promotion, prevention, and service provision.

THE TRIBE'S RESPONSIBILITY FOR HEALTH IS DESCRIBED THROUGH FORMAL AGREEMENTS, SUCH AS ITS COMPACT WITH IHS AND TRIBAL CODES AND RESOLUTIONS.

As a sovereign nation, the Tribe has the legal authority to determine how to provide for the education, health, and wellbeing of tribal members. Moreover, the Tribe has formal and informal mandates related to its role in protecting and promoting tribal member health. Tribal responsibility for health are described here based upon formal agreements including the Tribe's Compact with Indian Health Service, Tribal Codes, and Board resolutions.

THE TRIBE'S COMPACT WITH IHS DESCRIBES THE TRIBE'S RESPONSIBILITIES FOR DELIVERING HEALTH PROGRAMS, SERVICES, FUNCTIONS, AND ACTIVITIES TO ITS MEMBERS.

The legal responsibility of the Tribe to provide for the health and wellbeing of the tribal membership was outlined in the Multi-Year Funding Agreement to Compact of Self Governance with Indian Health

Service. This three-year agreement between the IHS Director for the Secretary of the United States Department of Health and Human Services and the Tribe is pursuant to Title V of the Indian Self-Determination and Education Assistance Act Pub. L 93-638.

The Tribal Board adopted two resolutions which specifically authorize entering into an agreement with IHS through the funding agreement and clarify some of the terms and conditions within the agreement. These resolutions include the Authorizing Tribal Resolution and a tribal resolution describing services to non-beneficiaries provided by the tribal health system.

The agreement details the programs, services, functions and activities (PSFAs) and associated resources transferred from IHS to the Tribe for the funding period, identifies PSFAs retained by IHS, and lists terms and conditions for implementation of the agreement. The Tribe agreed to administer, provide, or otherwise be responsible for PSFAs which included: clinical and ancillary support services, dental services, community health services, maternal and child health, behavioral health, environmental health, health education, and special programs such as traditional medicine, audiology, nutrition, optometry, breast and cervical cancer screening, and diagnostic services.

Provision of direct patient care through operating health facilities and community service agencies with licensed and qualified providers was also detailed in the funding agreement. Direct patient care covers ambulatory care, specialty clinic support, optometry, services at primary health centers as well as health stations, traditional healers, behavioral health services, and telemedicine. The agreement also described a range of atypical health care services to be provided by the Health Division, such as a traditional medicine, dental services, a spectrum of alcohol and drug abuse services, and mental health services to address family, child, adolescent and community mental health problems. In addition, ancillary services such as laboratory, radiology, pharmacy, social services, and dietary services were to be provided by the Tribe.

The funding agreement also included a wide range of PSFAs generally considered to be public health services, including:

- Environmental health: identify, evaluate, and control the biological, chemical and physical factors in the environment that may have an adverse impact on health, including waste water treatment and disposal, site inspection and investigation and sanitation projects;
- Health education: PSFAs to inform, educate, and motivate residents to adopt healthy lifestyles including nutrition education and tobacco cessation education counseling;
- Community health services: community based PSFAs to determine health needs, improve health knowledge, and promote healthy lifestyles and practices; and provide advocacy and admin services;
- Maternal-child health program: prenatal care, family planning, and newborn patient education, assistance in risk screening, coordination of prenatal care, and coordination of labor and delivery services with local obstetric providers;
- Nutrition: community based nutrition PSFAs to clients and programs throughout service area;
- Wellness: physical therapy and fitness; and

- Statutorily-mandated diabetes grant program

The funding agreement stipulated that the Tribe will participate in purchased and referred care, whereby the Tribe will purchase services not otherwise available or accessible to eligible beneficiaries on a contractual or open-market basis for its membership. Finally, the funding agreement provided funds to cover support services, such as physical plant, personnel, health information and management, information systems, administrative and board support, materials, supplies, and financial and business office functions.

TRIBAL CODES AND RESOLUTIONS IMPACT THE HEALTH AND WELLBEING OF TRIBAL MEMBERS.

Several codes and resolutions adopted by the Tribe have specific impacts on or implications for health of tribal members. The Tribal Code is a set of chapters which expand upon the legal framework established in the Tribal Constitution. Out of the 56 total chapters of the Tribal Code that were reviewed, 11 chapters were identified that are generally considered within the realm of public health laws. An additional 15 were deemed relevant to public health either through the stated goal or purpose of the code, or by their relevance to programs, services, functions, or activities that were believed to have a health impact.

HEALTH CODES

There were 11 chapters relevant to public health within the Tribal Code. Following is a brief description of each code and the stated purpose or goals.

Workers Compensation Code: This code governed compensation for accidental injuries sustained by employees of the Tribe arising out of and in the course of their employment which require medical services or result in disability or death.

Limited Care Residential Facilities: This code adopted and incorporated as Tribal law all statutory and regulatory standards of the State applicable to the construction and operation of a limited care residential facility for the elderly. This chapter provided standards and protection for people living in assisted living facilities.

Permit for Drinking and Waste Water Systems: The purpose of this chapter was to provide a permitting the construction of waterworks systems within the exterior boundaries of the lands of the Tribe. This code included a specific clause named “Protection of Public Health” and stated, “When deemed necessary for the protection of public health, the [Tribal Environmental Protection Authority] shall approve or recommend changes in operation, to provide treatment, to make structural changes in existing systems, or to add additional capacity as necessary to produce and distribute an adequate quantity to meet the tribal drinking water and wastewater needs.”

Utility Authority Ordinance: This chapter established the purpose of the Authority to provide for sanitary community water and sewage systems, to operate, repair, and maintain the systems

and equipment to keep the systems in good operating condition, and to establish service charges sufficient to sustain the proper operation, maintenance and repair of the systems and to collect such charges.

Tribal Environmental Protection Authority: The purpose of this chapter was to protect and preserve the natural resource base of the Tribe and to promote the social and economic wellbeing of the Tribe and its members. This code included rules which influence access to healthy environments and protections for environmental health.

Fire Prevention Ordinance: This ordinance contained basic minimum provisions considered necessary for the safety of persons and the protection of their property from the hazards of fire. As stated in this chapter, compliance with this ordinance, proper precautions, and compliance with Tribal building and electrical codes shall result in conditions basically free from the hazards of fire. This code stipulated rules which may reasonably protect people from environmental health hazards.

Liquor Control Ordinance: The purpose of this ordinance was to regulate and control the possession and sale of liquor on Tribal land. This ordinance stated that it would “increase the ability of the Tribal government to control reservation liquor distribution and possession, and at the same time will provide an important source of revenue for the continued operation and strengthening of Tribal government and the delivery of Tribal governmental services.” This ordinance describes a unique relationship between the sale of alcohol and the funding of tribal programs. The rules within the ordinance prohibited sale of alcohol to anyone under the age of 21 or anyone purchasing on behalf of someone underage, and required proof of identification of age.

Adult Protection Act: This chapter established Tribal law to protect adults of the Tribe from abuse, neglect, self-neglect and exploitation. The purpose of the code stated: *“[Tribe] honors, respects, and protects its adult membership. They are the custodians of Tribal history, culture, and traditions which are vital to our Tribal culture and enhance and enrich the lives of the entire Tribe. The interests of the Tribe, now and in the future, are advanced when our adults can be confident that they are protected from abuse, neglect, self-neglect and exploitation.”*

Personal Protection Orders and Injunctions: The purpose of this chapter was to provide a mechanism to protect tribal members and other Indians from domestic violence on tribal lands. This code outlined processes and rules which may reasonably protect people from violence.

Animal Control: The purpose of this chapter was to provide regulations for the protection, control and maintenance of dogs and other animals within the jurisdiction of the Tribe. This code stipulated rules which may reasonably protect people from community health hazards.

Motor vehicle code: The purpose of this chapter was to govern the activities of all persons using motor vehicles owned or operated on tribal lands by incorporating and applying the laws of the State as tribal law to such activities, and to provide for tribal regulation of such activities. This code potentially protects tribal members from safety hazards and accidental injuries.

TRIBAL CODES THAT IMPACT HEALTH

There were 15 additional chapters identified within the Tribal Code that would likely impact public health either by addressing factors which influence access to health care or other resources which influence health (i.e. the social determinants of health), or by outlining rules and operations of the Tribe or tribal agencies which may have a health impact. Following is a brief description of the codes of this type and their stated goals or purpose.

Membership Ordinance: This chapter outlined rules for granting individual membership in the Tribe, which indirectly determines eligibility for some benefits and services provided by the Tribe.

Affirmative Action Plan: Federal law prohibits private employers from discriminating in employment practices based on color, race, religion, or national origin. However, Indian tribes are exempt and can hire an all Indian workforce and enterprises on or near Indian land (i.e. can give hiring preferences to Indians). This affirmative action hiring policy was established to ensure that a reasonable percentage of Indian people will be employed by each contractor and subcontractor on every Tribal project. The Tribe gave preference first to tribal members and then to Indians over non-Indians, which influences access to employment opportunities.

Treaty Fishing Rules and Regulations: This chapter outlined rules that govern fishing activity by members of the Tribe in the waters ceded in the Treaty, which influences access to food and economic resources.

Hunting and Inland Fishing: This code outlined regulations to provide an orderly system for tribal self-regulation regarding tribal members exercising their hunting and fishing rights and to ensure the wise use and conservation of the inland resources for future generations, which influences access to food and economic resources.

Child Welfare Code: This chapter constituted the law of the Tribe on matters related to the care, custody and control of minor members and children of members of the Tribe. The stated purpose of this code is to provide for the welfare, care and protection of the children and families within the jurisdiction of the Tribe; to preserve unity of the family, to take such actions that will best serve the spiritual, emotional, mental and physical welfare of the child and best interests of the Tribe to prevent the abuse, neglect and abandonment of children; to provide a continuum of services for children and their families from prevention to residential treatment, with emphasis whenever possible on prevention, early intervention and community based alternatives; and to recognize and acknowledge the tribal customs and traditions of the Tribe

regarding childrearing; to preserve and strengthen the child's cultural and ethnic identity whenever possible.

Juvenile Code: This code served to preserve and retain the unity of the family whenever possible and to “provide for the care, protection and wholesome mental and physical development of children.” This code specifically recognized alcohol and substance abuse as a disease which is both preventable and treatable and included rules prohibiting possession, use, or intoxication of alcohol, tobacco and other substances. Further, it prohibited anyone from providing, permitting, or failing to take action to prevent the use of substances, including prohibition of tobacco possession for minors under age 18. Language in this code describes the legal consequences of criminal behavior and the substitution of a program of supervision, care and rehabilitation consistent with the protection of the Tribal Community, to achieve the purposes of this Chapter in a family environment whenever possible, separating the child from the child's parents only when necessary for the child's welfare or in the interests of public safety; and to provide a continuum of services for children and their families.

Marriage Ordinance: The most recently revised version of this ordinance acknowledged a marriage between “any two people.” This ordinance may have implications for eligibility for benefits and services provided by the Tribe in the future, possibly including health care, insurance, and other benefits which were yet to be determined.

Guardianships: This chapter establishes rules through which the Tribal Court may appoint a guardian for an adult if (1) the person is alleged to be incapable of caring for him/herself and (2) such incapability is a significant impediment to his health and well-being, and such incapability is not a temporary condition.

Land Use Ordinance: The stated purpose of this ordinance was “to promote the public health, safety, morals and general welfare.” The provisions set forth in this ordinance were intended to: (1) encourage the use of lands and natural resources of the Tribe in accordance with their character and adaptability; (2) limit the improper use of Tribal land; (3) reduce hazards to life and property; (4) provide for the orderly development of the Tribe; (5) avoid overcrowding the population, to provide for adequate light, air and to lessen congestion on the public roads and streets; (6) protect and conserve natural recreational areas, agricultural areas, residential areas and other areas naturally suited to particular use to facilitate the establishment of an adequate and economic use of transportation, sewage disposal, safe water supply, education, recreation and other public requirements; and (7) conserve expenditure of funds for public improvements and services to conform with the most advantageous uses of land, resources and properties.

Barring Individuals from Tribal Lands: As stated in this code, the Tribe determined that it was “necessary to provide a means whereby the Tribe can protect itself, its members, and other persons living on Tribal Lands, from people whose presence on Tribal Lands is harmful to, or threatens harm to, the peace, health, safety, morals, general welfare or environmental quality

of life on Tribal Lands.” Such action is deemed necessary as a result of the Tribe’s interest in maintaining the aforementioned interests free from harm, to protect the cultural identity of the Tribe, and to protect those residents of Tribal Lands who may be imposed upon, harmed or otherwise disadvantaged.” The procedures outlined within this code were intended to provide procedural fairness to persons and to act immediately to remedy actual or threatened harm to tribal members. Specific types of reasons for barring individuals named in the code including but not limited to:

- Violations of the Tribal code;
- Violations of any provision of Federal or State law, or the law, rule or ordinance of any corresponding local unit of government, that threatens the peace, health, safety, morals, general welfare or environmental quality of life of Tribal Lands including, but not limited to violations of law committed by non-Indians which would be a violation of Tribal law if committed by an Indian on Tribal Lands;
- Domestic violence, stalking, harassment or domestic disturbances that breach the peace, or threatens the peace, health, safety, morals, general welfare or environmental quality of life of Tribal Lands;
- Doing or threatening to do any act upon Tribal Lands which seriously threatens the peace, health, safety, morals or general welfare of the Tribe, its members, or other persons living on Tribal Lands; or
- Doing or threatening to do any act upon Tribal Lands which seriously threatens the environment of the land, water, natural resources, air, or any other natural land on Tribal Lands or which would in any way threaten the environmental quality of life for the Tribe, its members, or other persons living on Tribal Lands;
- Breach of the peace or repeated public drunkenness.

Sex Offender Registration and Notification Code: The intent of this code is to implement the Federal Sex Offender Registration and Notification Act (Title I of Public Law 109-248, as amended). This code specifically recognizes a public health need in the community, as stated below:

Violent crime in Indian Country is more than twice the national average. On some reservations it is twenty times the national average. An astounding thirty percent of Indian and Alaska native women will be raped in their lifetimes. Tribal nations are disproportionately affected by violent crime and sex offenses in particular from both Indian and non-Indian perpetrators; consequently, the conduct and presence of convicted sex offenders in Indian country threaten the political integrity, economic security, health, and welfare of tribal nations, even to the point of imperiling the subsistence of tribal communities.

Gaming Ordinance: This chapter had specific tribal-state compact language stipulating state laws which apply on tribal gaming property. This chapter had a specific section about environment, health and safety which states that “all gaming under this Chapter shall be conducted in a manner which adequately protects the environment and the health and safety of the public.”

Further, this chapter describes the goals of the Tribe’s gaming enterprises more broadly and the integral connections of the gaming industry to the wellbeing of the Tribe, as illustrated with this language from the ordinance:

The Board of Directors hereby finds that the gaming industry is vitally important to the economy of the Tribe and the general welfare of its members. The continued growth and success of gaming is dependent upon public confidence and trust that gaming is conducted honestly, and that gaming is free from criminal and corruptive elements. Public confidence and trust can only be maintained by strict regulation of all persons, locations, practices, associations and activities related to the operation of licensed gaming establishments. Therefore, all establishments where gaming is conducted and where gaming devices are operated must be licensed, controlled and operated to protect public safety, morals, good order and general welfare, and to foster the stability and success of gaming.

Housing Authority Ordinance: This code establishes an Authority to be organized and operated for the purposes of: (1) remedying unsafe and unsanitary housing conditions that are injurious to the public health, safety and morals; (2) alleviating the acute shortage of decent, safe and sanitary dwellings for persons of low income; (3) providing employment opportunities through the construction, reconstruction, improvement, extension, alteration or repair and operation of low income dwellings; (4) providing real or personal property necessary, convenient or desirable for administrative, community, health, recreational and welfare purposes; (5) improving the quality of life in all Tribal communities. This ordinance specifically identifies the Housing Authority as having a public health purpose and recognizes its function to address public health needs:

...there exists within the Tribe’s seven county service area, unsanitary, unsafe and overcrowded dwelling accommodations available at rents or prices which persons of low income can afford; and that such shortage forces such persons to occupy unsanitary, unsafe and overcrowded dwelling accommodations; ...that these conditions cause an increase in and spread of disease and crime and constitute a menace to health, safety, moral and welfare; and that these conditions necessitate excessive and disproportionate expenditures of public funds for crime prevention and punishment, public health and safety protection, fire and accident prevention, and other public services and facilities.

Building Authority Charter: This chapter established an Authority with the purpose to acquire real and personal property, lease tribal land, and finance the construction and development of buildings and facilities “necessary, convenient or desirable for governmental, administrative, economic, community, health, recreational, cultural, ceremonial, and welfare purposes.”

Tribal Tax Code: The purpose of this chapter was to provide for the taxation of businesses located in Indian Country or Tribal and Trust Lands in order to provide revenues to fund Tribal Internal Services, operations, and programs promoting the health, education, and general welfare of the Tribe and its members and to implement the Tax Agreement. The Tax Code

included a food and beverage tax and cigarette taxes. Regarding cigarette taxes, there is an interesting connection between the taxes levied on the sale of cigarettes and the funding of tribal programs, including health programs. A tax was levied in the amount of 4 cents per pack or 40 cents per carton on the tribal sales venue for every sale of cigarettes, which the tribal sales venue cannot pass on to the customer. The code also levied a cigarette administrative tax equivalent to 25% of the state tax exemption for cigarettes upon the sale of cigarettes to Tribal Members at the tribal sales venues. The tribal sales venues collect this administrative tax from the Tribal Member who purchases the cigarettes. The code specifies how the Tax Commission remits all cigarette tax proceeds to the Tribe, and the Tribe transfers the tax proceeds into the general fund. However, the tribal sales venues retain part of the cigarette administrative tax proceeds provided by the State tax agreement as non-operating income. The remaining balance of the cigarette administrative tax proceeds to the Tribe are transferred to fund the smoking cessation program to the extent needed for the current year budget with any surplus to fund other health center programs as directed by the Tribe.

As described in the literature review, there were at least two examples of model tribal public health codes available from the Great Plains Tribal Chairmen's Health Board and the National Congress of American Indians. A thorough review of the Tribal Code revealed while there were many areas of a tribal public health code covered through the collection of existing chapters, there were gaps remaining. Specifically, the current set of codes adopted by the Tribe seemingly did not fully address these recommended areas: health data; public health infrastructure; health and cultural resource protection; health systems governance; emergency planning and management (including emergency aid and civil defense); alcohol, tobacco and other drug control; infectious disease management and environmental health (including sanitation and contagious disease, pollution and poisons, toxic substances, explosives, burial); and agriculture and food safety.

Many of the Tribe's other codes (e.g. land use, housing, and gaming), while not generally considered public health codes, include language that explicitly identifies a purpose or goals related to protecting and promoting health of tribal members. Further, the content of these codes have areas of overlap with topics covered by public health codes, such as protection and injury prevention, environmental health and safety, and agriculture.

HEALTH AUTHORITY

A review of the Tribal Codes publically available revealed there was no Tribal Code governing the Health Board or establishing public health authority within any tribal entity. However, there was a resolution adopted in 2009 by the Tribal Board that amended the Bylaws of the Health Board. According to the Bylaws, the overall purpose of the Health Board was to monitor the activities of the Health Division and provide advice to the Board of Directors to assist with strategic planning to address the health needs of the tribal membership. Further, the authority of the Health Board was described relevant to the following activities or roles:

- Monitor and provide advice regarding the activities of each of the following programs, with particular attention on the development of strategic plans and policies:
 - Contract Health Program
 - Direct Services Dental Program
 - Optical Program
 - Pharmacy Program
 - Direct Services Medical Program including all of the clinics
 - Community Urgent Care Clinic
 - Community and Rural Health Program including but not limited to the diabetes program and the cervical cancer programs
 - Community Health Technicians
 - Traditional Healers
 - Physical Therapy
 - All other programs supervised by the Health Director
- Provide regular updates to the Tribal Board of Directors on the implementation of the Health Programs listed above.
- Review each program including but not limited to patient eligibility, payment, and all other pertinent information specific to the successful operation of each program.
- Select Health Board members may provide advice regarding the retention and recruitment of Health Care providers.
- Hear all appeals relating to the Health Programs for approval or denial by Health Board pursuant to the appeal procedures.

The Tribe had adopted codes to establish and govern special commissions, committees, and authorities for other areas, such as the Conservation Committee, Tax Commission, Tribal Zoning Commission, Building Authority, Gaming Authority, and Tribal Environmental Protection Authority. The stated purpose of one of these codes, for example, was to “create an advisory committee that shall give regulatory and policy advice to the Board of Directors and administration so well informed decisions may be made regarding the Tribe’s responsibilities.”

Through such codes there was specific language describing how subordinate entities can function autonomously within their spheres of authority and several examples which illustrated how tribal entities could be granted powers and duties to act on behalf of the best interests of the Tribe within their area of expertise.

The Waiver of Tribal Immunity and Jurisdiction in Commercial Transactions chapter establishes and defines terms and conditions, such as "Tribal Entity," which means any entity created and owned by the Tribe for economic or governmental purposes and any entity which is controlled by the Board of Directors. For purposes of this chapter, an entity is deemed to be controlled by the Board of Directors if a majority of the persons serving on the body which governs the entity are chosen by the Board of Directors or are required to be members of the Board of Directors. Such entities governed by this chapter include, but are not limited to, the Housing Authority, the Gaming Authority, the Economic Development Commission, and other organizations entitled or denominated 'authority,' 'enterprise,' 'corporation,' 'agency,' 'commission,' or similar terms.

There are also examples of codes which describe specific powers and duties of tribal entities and key actors who serve to enforce Tribal codes and policies and interact with other entities to fulfill their duties. A few of these codes include:

The motor vehicle code specifically grants authority to the Director of the Tribal Public Safety Department to issue emergency orders, and set rules and regulations pursuant to traffic law. This code also identifies and addresses jurisdictional issues between local and state law enforcement agencies and the tribal public safety department.

The Housing Authority Ordinance specifically describes the relationship between the Tribe and this tribal entity and the nature of the authority being a subordinate organization of the Board of Directors of the Tribe established pursuant to the Tribal Constitution.

The Building Authority Charter states that the Tribe benefits from the creation of a separate entity which can participate in interactions such as leasing tribal trust land, encumbering fee owned land, obligating leasehold interests, and entering into financial transactions connected with such construction.

Therefore, it was concluded that while a Health Board existed, it functioned primarily in an advisory capacity and public health authority was not codified by the Tribal government. Further, while other types of subordinate organizations were in place to set rules and regulations, act with authority on behalf of the Tribe within their areas of expertise, and participate in interactions to benefit the Tribe, there was not such an entity designated with authority for public health.

BOARD RESOLUTIONS

Resolutions are policies passed by the Tribal Board. Of the 630 resolutions reviewed from 2013 to 2015, 65 had relevance to the tribal public health system. The type and nature of resolutions passed reveals information about the role and responsibilities of the Tribal Board in the tribal public health system.

The vast majority of these resolutions (40 out of 65) were related to financing of the Health Division, and involved review and approval of budgets and budget modifications for health programs.

The next most frequent type of activity was resolutions to review and accept grants or their terms, including permission for the Health Division to apply for funding, permission for the Health Division to accept grant funding, and permission for tribal departments to carry out specific activities of grant programs (e.g. establish new program, participate in research). This type included 11 of the 65 resolutions.

Five of the 65 resolutions reviewed involved review of and permission for tribal departments to enter into formal agreements with other entities as partners to carry out specific activities. The different types of agreements included: agreements to provide services such as infrastructure updates and additions, the sharing of data/survey results, and collaboration agreements with partner agencies.

Two of the 65 resolutions pertained to a change in role, organization, or structure of entities working within the tribal public health system. The first of these resolutions changed the Tribe's organizational structure to align the Health Administration to report directly to the Tribe's Executive Director. The second of the resolutions of this type created an ad hoc Health Access Exploratory Group to "analyze, determine feasibility, and recommend opportunities for health access revitalization and/or expansion in [the outlying geographic areas]" and after hour clinic access in partnerships in [existing city centers] and additional areas to be identified." The resolution identifies specific individuals to serve on this ad hoc group, including the Tribe's Executive Director, members of the Tribe's governing board, and employees from the Health Division. Finally, this group was also charged with the task to "evaluate and bring back a recommendation for the creation of an autonomous Tribally Designated Health Entity patterned after the Tribal Housing Commission."

Four of the 65 resolutions addressed changes in policies regarding the services which impact health. Three of these policies covered Health Division rules and procedures for eligibility for services, patient dismissal from care, and the service delivery model. The fourth policy established a plan for the handling of waste management by the natural resources environmental department.

Finally, three of the 65 resolutions were proclamations of support from the Tribal Board for specific health observances, including National Native Sexual Assault Awareness Day, Men's Health Week, and Support for the Permanent Reauthorization of the Special Diabetes Program for Indians.

PARTICIPANTS FELT THE TRIBE'S RESPONSIBILITIES FOR PROTECTING AND PROMOTING HEALTH INCLUDED SELF-GOVERNANCE, SERVICE PROVISION, ENSURING CULTURAL PRESERVATION, PRIORITIZING HEALTH, AND SUPPORTING HEALTH PROMOTION AND EDUCATION.

Public health system participants described what they felt was the responsibility of the Tribe for protecting and promoting the health of tribal members. Notably, most participants who commented on tribal responsibility for health were affiliated with tribal agencies, while only two non-tribal agency participants made any substantial comments about the responsibility of the Tribe. Participants described tribal responsibilities with respect to self-governance, service provision, ensuring cultural preservation, making health a top priority, and supporting health promotion and education.

PARTICIPANTS IDENTIFIED PROTECTING AND PROMOTING HEALTH AS A COMPONENT OF EFFECTIVE SELF-GOVERNANCE.

Several participants felt the Tribe's responsibility for protecting and promoting health was evident in the tribal government's ability to establish and ensure policies and codes that could promote healthy communities and healthy environments. Types of policies mentioned as examples included environmental protection, cultural leave, and smoke-free air policies. Additionally, participants felt that tribal leaders should be knowledgeable about health and public health practice in order to establish effective public health laws and policies.

PROVIDING EQUITABLE ACCESS TO SERVICES WAS DESCRIBED AS A RESPONSIBILITY OF THE TRIBE.

Several participants felt that it was the Tribe's responsibility to provide access to services, especially in the more rural areas, and regardless of income. Providing *equitable* access to services was a significant theme among tribal agency participants.

Several participants recognized that the Tribe does provide many services but felt that the Tribe needed to be more responsible for providing information and actively communicating with tribal members about the services available to them because services are underutilized. Participants felt it should be the Tribe's responsibility to encourage outreach and collaboration with other agencies to address gaps in services. Additionally, participants said it was the Tribe's responsibility to ensure there is funding to continue providing services and programs that promote health and to help tribal members pay for services accessed outside of the Tribe.

PARTICIPANTS DESCRIBED ENSURING CULTURE AND TRADITIONAL PRACTICE FOR MEMBERS AND FAMILIES AS A RESPONSIBILITY OF THE TRIBE.

Several participants believed it is the Tribe's responsibility to continue practicing and teaching Sault Tribe culture. This should be done through increased cultural education to the members as well as to the larger community. Additionally, participants felt that Sault Tribe culture and traditional lifestyles should be continued to promote environmental sustainability.

PARTICIPANTS FELT THAT LEADERSHIP SHOULD MAKE HEALTH A TOP PRIORITY FOR THE TRIBE.

Many participants noted that health was, and should be, an increasingly significant priority for the Tribe. Some participants felt health was clearly a priority for the Tribe as evidenced by the expansion of health services and programs over the past several years. Others felt there was still a need to make health a top priority for the Tribe, and they discussed actions or behaviors that exemplify this need. For example, some felt that instead of trying to increase tobacco sales, the Tribal Board needed to have a greater consideration of the negative impact of commercial tobacco on the health of members. Participants also argued that tribal leaders and tribal employees needed to set a better example (be a role model) for others to live a healthy lifestyle. Some noted the need for more mental health and dental care services as evidence of the need to make health a top priority. Additionally, some tribal agency participants said the Tribe should be more responsible or play a larger role in collecting and sharing information about community needs in order to more adequately address the health needs of the Tribe.

THE TRIBE HAS RESPONSIBILITY FOR HEALTH PROMOTION AND EDUCATION.

Many participants felt it was the Tribe's responsibility to protect and promote health through different methods of health education. Because of the high prevalence of chronic disease among tribal members, participants said it was important to focus on educating tribal members first and foremost about behaviors to prevent disease, and secondly, on how to recognize symptoms for early diagnosis and treatment. A common sentiment expressed by participants was about educating children about healthy

eating and physical activity with the intent of impacting their lifelong behaviors and their parents' behaviors.

In addition to health education, participants felt it was the responsibility of the Tribe to promote health by encouraging a holistic lifestyle that includes active living and healthy eating as well as attending to mental, social, and spiritual wellness. Other tribal responsibilities for health promotion mentioned included increasing health literacy among tribal members, and ensuring social and environmental support for good health, such as increasing sidewalks and providing free access to fitness facilities.

COMMUNITY MEMBERS FELT THE RESPONSIBILITIES OF THE TRIBE INCLUDED LISTENING TO THE WISDOM OF THE ELDERS, IMPROVING CURRENT PROGRAMS, ENGAGING YOUNG PEOPLE, AND SUPPORTING INDIVIDUALS TO MAKE HEALTHY CHOICES.

Community member focus group participants expressed opinions about the health of tribal members, suggestions for improving the health of the tribal community which related to the purpose of public health, and the Tribe's responsibilities with regards to protecting and promoting health of members.

COMMUNITY MEMBERS FELT THE TRIBE HAD RESPONSIBILITY FOR LISTENING TO THE WISDOM OF THE ELDERS.

The elder focus group participants conveyed a strong desire to be heard. They wanted the advice of elders to be incorporated into programs and services so their guidance could be provided to those in need. There were many suggestions made about improving specific programs within the community which could impact health. Elders talked specifically about making changes to the elder program to provide healthier options. For example, they wanted activities other than 'just going to the casino,' such as instead taking them to powwows. They also wanted the Tribe to develop a program that would provide elders with fresh fruit and vegetables on a monthly basis.

COMMUNITY MEMBERS FELT THE TRIBE HAD RESPONSIBILITY FOR IMPROVING CURRENT PROGRAMS

Participants across all the focus groups discussed several areas that could benefit from improvement. Community focus group participants acknowledged that there were many different classes available, but many of them go on during the same time making them have to choose between them. This discouraged them from attending at all. Also, they would like to see better communication and encouragement of activities with tribal members. They want to keep the existing programs but also bring back some programs that were canceled that they really enjoyed, such as the traditional foods cooking and canning classes. Other programs they wanted to keep or bring back would teach healthy traditional lifestyles and chronic disease prevention classes. For all education classes, participants preferred to be shown how to do activities through active participation, and not just sitting and listening.

All focus groups discussed the need to have more transportation options, or improving the existing transportation services, as factors which would improve health. In general, they want the Tribe to figure out how to get people better access to services and provide services which meet basic needs such as

transportation and housing. Overall, it was suggested by community focus group participants that the Tribe look at what other tribal communities are doing to see what worked for them and if it could be translated into this community.

COMMUNITY MEMBERS FELT THE TRIBE HAD RESPONSIBILITY FOR ENGAGING YOUNG PEOPLE

Community focus group participants suggested having more programs for young children as early prevention for unhealthy behaviors. For example, educating younger children about drug use and the negative impacts it can have was deemed very important. Specifically, having outside speakers come in with experience with drug use some believed could be more effective because children are getting first-hand experience as to the effects of drug use.

Youth focus group participants wanted to see more education about health starting at a younger age. Similarly, many of the focus group participants across different groups believed the Tribe needed to focus more on teaching young people how to be healthy, particularly in school settings, because some youth may not have positive role models for good health at home.

Youth participants discussed different programs and services they believed would benefit their health. Some of the programs and services they discussed included more physical activity programs in schools, more cultural programs related to traditions, and traditional teaching classes that are run or taught by elders. Youth deemed it important to sustain traditional teachings. Youth also thought it would be beneficial to them to bring classes that teach basic life skills which had been cut due to lack of funding. They wanted to learn basic skills to take care of themselves.

Youth focus groups discussed the desire for more programs which encourage getting an education and provide funds for attending college. The youth would like to see more grants available offering paid incentives for them to go to college or achieve academically based on their behavior. For example, one school received a grant for youth volunteering which paid the students with the most volunteer hours. Another grant a school received promoted education by providing monetary incentives to students who received the most points for reading books and reporting on them.

Finally, youth participants were especially concerned about the availability of mental health providers in schools. They said their schools share a single mental health provider and the provider is not always available when they need help. They believed having more mental health providers and other mental health supports available in schools would provide more support to them as students.

COMMUNITY MEMBERS FELT THE TRIBE HAD RESPONSIBILITY FOR SUPPORTING INDIVIDUAL AND COLLECTIVE RESPONSIBILITY FOR HEALTH.

Focus group participants expressed the belief that the reason some people are unhealthy is because they are lazy. Participants recognized the abundance of services provided by the Tribe and felt that people who did not access services available to help them or try to make themselves healthier, just 'didn't bother to read the newspaper' or they were not motivated to exercise, eat healthy, or get

involved. In particular, youth participants believed that personal motivation was a key to leading a healthy life.

Other participants felt that some people in the community may not be fully aware of their own 'situation' with regards to health. Participants suggested these people really need help to be healthier, but might not recognize their need for resources or may be reluctant to open up about their issues in order to get help from others with addressing them.

The themes of individual and collective responsibility also emerged from interviews with key informants. Participants spoke about the individual and collective responsibility of community and tribal members in influencing their own health. Participants felt as though individuals have a responsibility for making their own healthy choices with regards to diet, exercise, and environmental consciousness. Participants from tribal organizations in particular noted a value within the Tribe of caring for and supporting all members of the Tribe and helping each member discover their own tribal identity in order to live life in optimal health.

CHAPTER 7: INFRASTRUCTURE IN PLACE TO PROTECT AND PROMOTE HEALTH

OVERVIEW

There were several aspects of infrastructure in place within the Tribe and the tribal public health system to protect and promote health. The tribal public health system was comprised of tribal and non-tribal organizations from 20 different organizational sectors. Partnering between the Tribe and non-tribal organizations was vital to the provision of public health services. There were also many departments within the Tribe that partnered around community health. In particular, public health and health care services were highly integrated within the Tribe.

The Health Division is funded through IHS, third party revenue, and federal, state, and private grants. Many organizations within the tribal public health system, including the Health Division, discussed how their funding is not sufficient for meeting the public health needs of the community. Also, the fact that grants were a key source of funding for public health resulted in grant funding driving many of the public health activities within the system.

Organizations within the public health system were supportive of the professional development of staff, although not all sectors had the same resources to devote to professional development. Many participants discussed difficulties with staffing shortages and turnover, which impacted the availability of services and the ability to collaborate with other organizations.

THE STRUCTURE OF THE TRIBAL PUBLIC HEALTH SYSTEM

The tribal public health system had jurisdiction covering seven counties which was divided into five service units for tribal governance. The Tribal Board of Directors had governing authority for public health services and laws in the jurisdictional service area. The tribal public health system included tribal and non-tribal organizations from 20 different organizational sectors. The Tribal Health Division had connections to organizations in all sectors of the public health system.

THE TRIBAL HEALTH DIVISION SERVED A POPULATION OF APPROXIMATELY 15,600 PEOPLE IN THE SERVICE AREA.

Funding to the Health Division through the Tribe's Multi-Year Funding Agreement with IHS is based on, among other factors, the Tribe's active user population as defined by IHS. According to this agreement, the Tribal Health Division served a population of approximately 15,600 people in the service area. Regarding personal health services, according to their eligibility policies, the Tribe's health centers were able to serve anyone who had the regional Medicaid health plan, regardless of tribal membership. Notably, the number of people served by the tribal public health system was actually much larger when taking into account community health program activities. Interview participants from tribal organizations often stated that their programs served the whole community because they were provided in a community setting such as schools or community health fairs. Also, grant funded community health projects, such as those funded through Centers for Disease Control and Prevention, often have a much larger population reach because the strategies being implemented through the grant work plans are addressing community level factors.

THE TRIBAL HEALTH DIVISION WAS GOVERNED BY THE TRIBAL BOARD OF DIRECTORS.

The Tribe's organizational chart shows decision-making authority for Tribal Health Division activities is held by the Health Director who reports directly to the Tribe's Executive Director. However, as revealed through Board resolutions, the Tribal Board is responsible for oversight of many Health Division operations including review and approval of budgets, approval of staff hiring, employee benefits, acceptance of grants, and participation in research. The Tribal Board also holds the authority to adopt and enforce public health policies, as evidenced by the Tribal Constitution and Tribal Code.

According to the capacity assessment, the Tribal Health Division has a Health Board, consisting of appointed community members. The health board members serve in an advisory role and lead and/or engage in policy planning and development. The health board reports to the Tribal Board.

THE TRIBAL PUBLIC HEALTH SYSTEM CONNECTED A VARIETY OF ORGANIZATIONS WITHIN ONE NETWORK.

Once the eco-maps were combined into one network, the network included a total of 319 individuals. The network was one connected component, which means that every person was reachable by every other person in the network and there were no isolated groups. The average geodesic distance was 3.35, meaning each person could get to any other person by going through three other people, on average. The maximum number of people one would have to go through was six. Analysis of the key informant eco-map data found that there were 20 different organizational sectors in the Tribal public health network. They included the Tribal Health Division (tribal health department), governmental public health, health care providers, mental health providers, public safety, human service, environmental organizations, education or youth development, economic planning and development, court and criminal justice, media, recreation or arts-related organizations, other tribal organizations, private employers/businesses, non-profits or charities, community groups, governing authorities, governmental administration, state agencies, and federal agencies.

Figure 2 presents the network graph of all of the eco-maps combined, representing the tribal public health system. In this graph, individuals have been collapsed into their organizational sector. The lines, or edges, present in the graph represent relationships between individuals in those sectors. If there is not an edge between vertices/sectors (e.g., Mental health provider and Media), there were no reported relationships between individuals in those two sectors. Vertices with more edges are located more centrally within the graph. The shape of the vertex represents the tribal affiliation of the majority of organizations in that sector: square is non-tribal and round is tribal. So, for example, public safety included mostly non-tribal organizations. The size of the vertex is relative to the number of individuals in that sector.

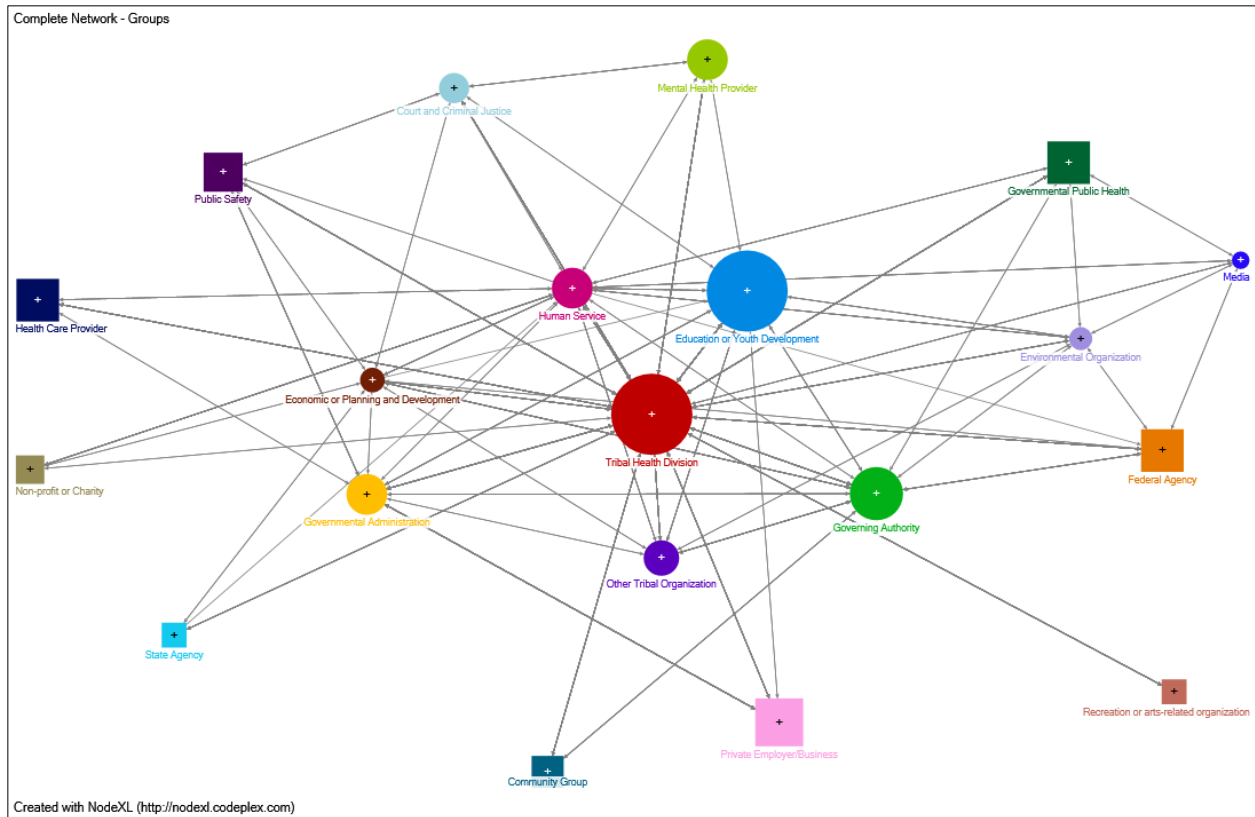


Figure 2. Complete Tribal Public Health System Network Graph by Sector Groups

THE TRIBAL PUBLIC HEALTH SYSTEM INCLUDED BOTH TRIBAL AND NON-TRIBAL ORGANIZATIONS.

The Tribal Health Division had connections to all other sectors in the public health system, including both tribal and non-tribal organizations. This can be seen in Figure 2, where the Tribal Health Division is in the center of the graph and edges exist between it and every other vertex. While there were some limitations to the measure of density in the eco-map network (see Limitations section for a full description), when the network was restricted to only individuals representing tribal organizations, it had a higher density than the complete network (tribal=0.019; system=0.009), indicating a higher degree of collaboration within the tribal system than within the system as a whole. Also, looking at the graph in Figure 2, one can see that many of the organizational sectors (vertices) in the center of the graph are primarily tribal and the primarily non-tribal sectors are often in the periphery. However, there was still a good amount of partnering between the Tribe and non-tribal organizations within the Tribe’s public health system. Of the 319 individuals in the network, 56.7% were from tribal organizations and 43.3% were from non-tribal organizations. Relationships with non-tribal organizations existed in the following sectors: education or youth development, governing authorities, private employers/businesses, health care providers, federal agencies, governmental public health, mental health providers, public safety, community groups, non-profits/charities, economic planning and development, state agencies, recreation or arts-related organizations, and environmental organizations. Furthermore, when we measured the centrality of organizational sectors, the Health Division had the highest degree centrality

and betweenness centrality. This means the Health Division had the most connections to other organizational sectors in the network and also was on the shortest path between organizational sectors most often.

PARTNERING ACROSS THE TRIBAL SYSTEM TO PROTECT AND PROMOTE HEALTH

Partnering between organizations benefited both tribal and non-tribal organizations and was highly important to the provision of public health services. However, it was not always easy to negotiate partnerships, particularly when it came to determining when and what services for the tribal community should be provided through collaboration between tribal and non-tribal organizations.

PARTNERSHIPS WERE KEY TO THE PROVISION OF PUBLIC HEALTH SERVICES.

Overall, partnerships played an important role in the provision of public health services in the Tribal public health system. The IOM's (1988) report *The Future of Public Health*, outlined the three core functions of public health: Assurance, Assessment, and Policy Development. We restricted the eco-map data to examine each of these three core functions individually. We found that all three of the core functions included individuals from most, if not all, organizational sectors. All sectors were present in the networks for assurance and policy development, and only recreation or arts-related organizations were missing from the assessment network. Also, when we measured the network density among organizational sectors, all three core functions had similar values. The densest was Policy development (.326), followed by Assurance (.276), and Assessment (.275). Furthermore, each core function included the participation of tribal and non-tribal organizations.

Figures 3, 4, and 5 present the network graphs for Assurance, Assessment, and Policy Development. Similar to the graph of the complete network in Figure 2, primarily tribal sectors are located more often in the center of the graph, and primarily non-tribal sectors are more often on the periphery. Comparing Figures 3, 4, and 5 to Figure 2 also illustrates differences in the number of individuals from each sector who were involved in the core functions. For example, in the complete network graph in Figure 2, Education or Youth Development is similar in size to the Tribal Health Division. This is the case for the Policy Development graph, but Education or Youth Development is much smaller in Assessment and Assurance. This means that organization staff in that sector were more heavily involved in policy work than in the other core functions.

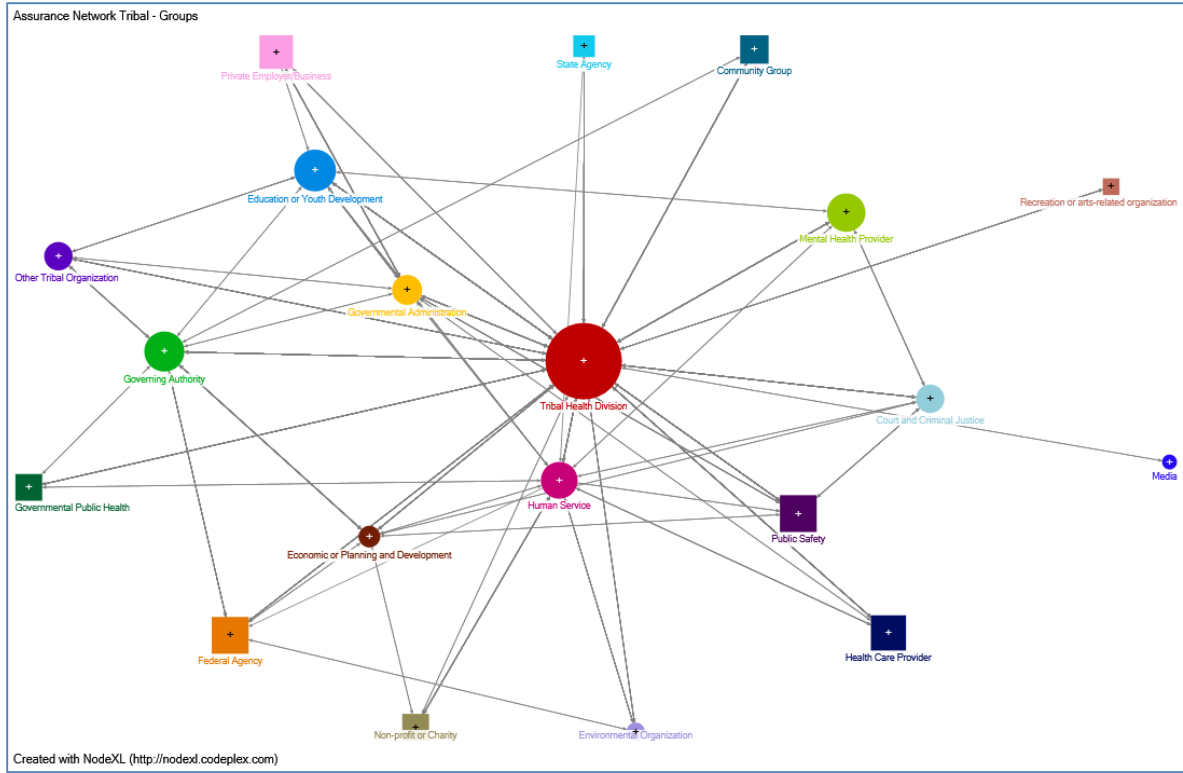


Figure 3. Network graph: Assurance

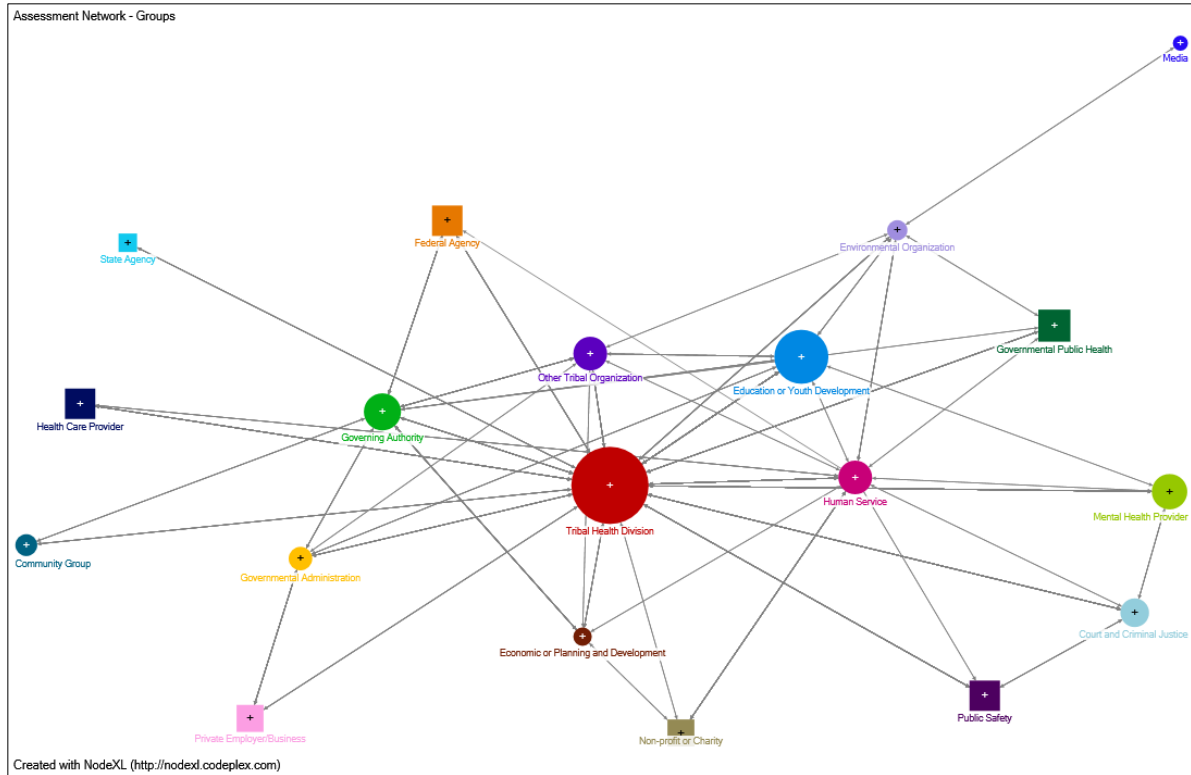


Figure 4. Network graph: Assessment

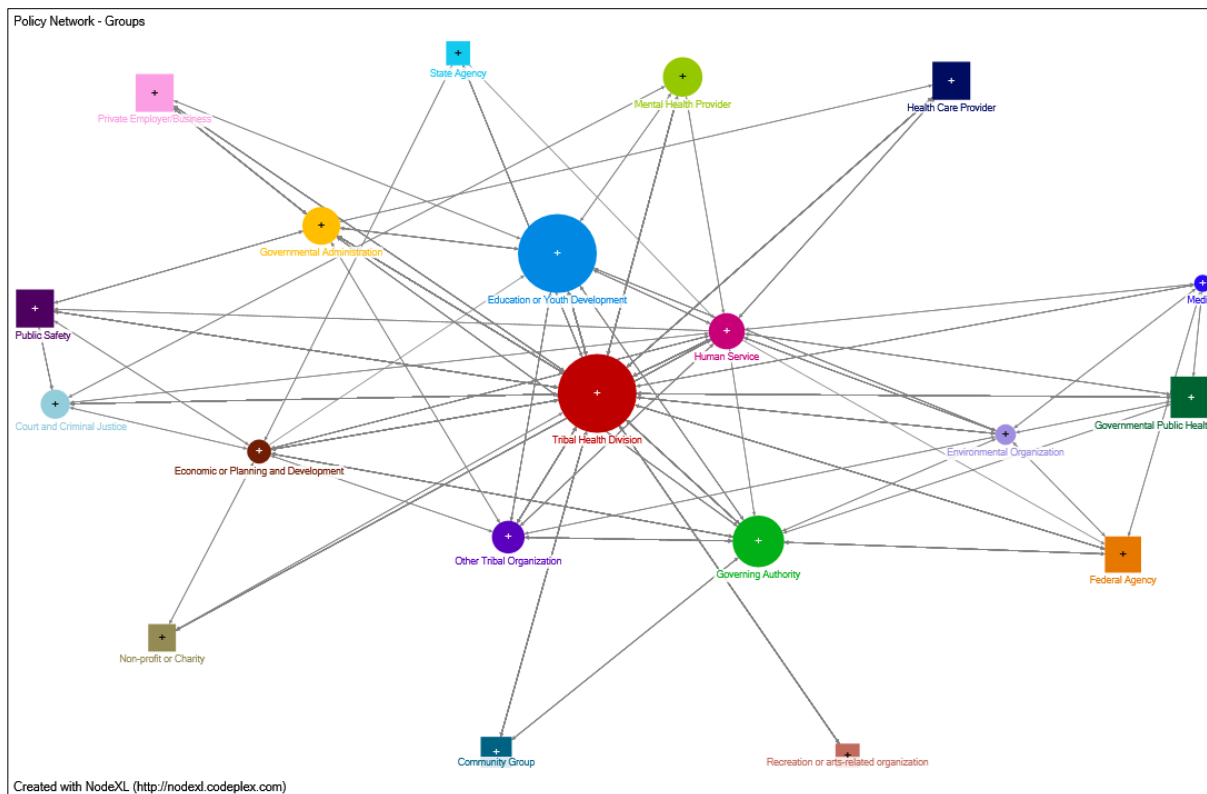


Figure 3. Network graph: Policy Development

Key informants provided additional information about partnering across the tribal public health system to provide services. Participants mentioned several examples of successful projects that involved collaboration between different agencies in the public health system, including: tobacco free policies for campuses, restaurants, and parks; walkability on tribal lands and improvements to the built environment, such as sidewalks; farmers markets; free bicycle borrowing programs; summer breakfast programs; improvements in schools (e.g., wellness policies); construction of an indoor playground and early childhood play space; and community events (e.g., walks, health activity days).

PARTNERING BETWEEN TRIBAL AND NON-TRIBAL ORGANIZATIONS TAKES WORK.

Participants also discussed the difficulty in determining when services should be coordinated between organizations and when they should be provided separately, particularly between tribal and non-tribal organizations. In some cases, non-tribal organization participants thought tribal agencies were best positioned to provide services, because they can be focused solely on tribal members or the tribal community, allowing them to best address the specific needs of the Tribe. One tribal organization participant echoed this perspective by explaining that it is sometimes easier to work with other tribal agencies because they can focus on tribal members, whereas non-tribal agencies have to focus on the whole community. Several non-tribal organization participants talked about not wanting to step on the

Tribe's toes or being careful to not come in and take over services. Instead, they worked to incorporate the Tribe into efforts.

"I don't think any of my coworkers in my region would ever just say, 'I'm going to do a program for the tribe' and put it on and put it in the tribal newspaper without ever talking to any of my tribal partners and saying, 'This is what we're looking at doing' or, 'This is what's available. Is there an interest?' You know, 'Is there things we should be considering?' You know, 'How do we—what do you suggest for promoting it?' I mean so, you know, (pauses) I guess I always do everything with partners and not to partners (laughs)."

However, the Tribe was also seen by some non-tribal organization participants as preferring to provide services to their members and being less open to having other agencies provide services or working with other agencies to coordinate services. Some non-tribal organization participants felt that there are services they provide from which tribal members could benefit, but they are underutilized, tribal members do not know they exist, or some tribal members are wary or hesitant to use non-tribal services offered to them. These factors can create difficulty in partnering around public health services and can lead to a fracturing of services for tribal members.

PARTNERING WITHIN THE TRIBE TO PROTECT AND PROMOTE HEALTH

Many different departments within the Tribe partnered to provide public health services and to protect and promote the health of tribal members and their families. In particular, there was a high degree of integration between public health and health care services within the Tribe, which was facilitated by their co-location.

MANY DEPARTMENTS WITHIN THE TRIBE PARTNER AROUND PUBLIC HEALTH.

There were many departments and programs within the Tribe that partnered to protect and promote the health of tribal members. For example, the Dental Program provided on-site screening of children at the Early Childhood Center and center staff were certified to apply fluoride varnish to children three times per school year. Also, physicians and nurses in the medical clinic referred patients to the environmental program if they felt the patient could benefit from a home inspection, like in cases of respiratory issues.

"What happens is basically a doctor will say, 'Here, get in touch with the environmental program,' and they will write it on their prescription pad even and they will call us, because the person will call from home and say, 'Doctor so and so said I need to get in touch with you.'"

One of the more pronounced partnerships within the Tribe's public health services was the Traditional Medicine Program. Traditional Medicine was originally funded through a grant, but has now been fully incorporated into the funding stream for the medical clinic. Traditional Medicine provided traditional

medicines and spiritual and cultural services (e.g., sweat lodges, fasting ceremonies), while also referring to and receiving referrals from providers in the medical clinic. Key informants from other departments within the Tribe, such as Community Health, Behavioral Health, and Elder Service Division also reported referring to Traditional Medicine.

PUBLIC HEALTH AND HEALTH CARE WERE HIGHLY INTEGRATED WITHIN THE TRIBE.

Within the Tribe, public health and health care were highly integrated. While the Community Health Program provided specific public health programs (e.g., tobacco cessation, immunization clinics, diabetic care), public health activities, such as outreach and education, were incorporated throughout the Health Division. The integration of public health and health care was largely facilitated by the co-location of services within one facility. This supported collaboration of providers from different departments and made it easier to link patients to needed medical and public health services. For example, health care providers could refer patients to the smoking cessation program in Community Health and the Community Health diabetes program could communicate closely with health care providers about patients' needs, such as prescriptions, screenings, and examinations.

“We give the people every resource they need, every single one of them. I mean, how many places can you go where in the same day go see your doc, the eye doctor, your dietician and walk out and you know you’re not going to see a bill, right? I mean, we don’t make it a jump through any hoops to come do these things, to see we advocate for it.”

In fact, public health and health care were so well integrated within the Tribe that key informants from the medical clinic and from Community Health did not tend to identify one another as “partners” when asked about how they mobilize community partnerships to identify and solve health problems. Rather, they considered one another to be part of one agency – the Health Division. This aligns with the IOM’s (2012b) characterization of “partnership” as a degree of integration, where public health and health care work so closely together that from the individual’s perspective, there is no separation (p. 30).

Key informants discussed several drivers of the integration of public health and health care within the Tribe. Much of the Tribal community has co-occurring disorders, which are best addressed through an integration of health care and public health. IHS’s efforts to demonstrate Meaningful Use in the Resource and Patient Management System (RPMS) emphasized the integration of health care and public health through the public health objectives in the Meaningful Use rule. Also, coalition work and collaborative plans created opportunities to coordinate action across departments on priority issues, such as diabetic foot care and suicide prevention.

KEY ACTORS WITHIN THE TRIBAL PUBLIC HEALTH SYSTEM

Participants identified a variety of key actors within the public health system. Those mentioned most often included local health departments, the Tribe’s Community Health Program, local hospitals, and the Tribe. Participants also mentioned specific people or groups of people they saw as key actors. Overall, participants from non-tribal organizations focused more on the role of local agencies, while participants

from tribal organizations spent more time discussing the responsibility of the Tribe to protect and promote the health of tribal members.

KEY ACTORS INCLUDED LOCAL HEALTH DEPARTMENTS, THE TRIBAL COMMUNITY HEALTH PROGRAM, LOCAL HOSPITALS, THE TRIBE, AND INDIVIDUALS.

Key actors that were mentioned during the key informant interviews included agencies and specific people. The agencies that were mentioned most often were the local health departments, the tribal Community Health Program, and local hospitals. State and federal agencies were mentioned less often, with the exception of the importance of funding from federal agencies. Participants also talked about the importance of specific people, such as a program coordinator in the tribal Community Health Program, and groups of people, such as front-line medical staff, who were seen as making an impact on the health of the tribal community. Participants also discussed the role of the Tribe as a key actor, including references to the Tribe as a whole and to the tribal board in particular. There were some differences between participants from tribal and non-tribal organizations, regarding perceptions of key actors in the tribal public health system. Participants from non-tribal organizations most often mentioned local agencies when asked about key actors and were less likely to mention tribal programs. Also, while participants from both tribal and non-tribal organizations listed the Tribe as a key actor, participants from tribal organizations had more to say about the specifics of the Tribe's responsibility to protect and promote the health of the Tribe. As one participant explained,

"You know, the board is very, very important. Everything goes through the board. All the grants go through the board. They have to be supportive for health or, you know, we won't get the grant—do you know what I mean?—we just won't have the support. If we don't have the support from the board and from admin, then we don't really have anything."

Analysis of the eco-maps also provided information about key actors. We calculated the betweenness centrality for each person in the network, which measures how often a person is on the shortest path between two people. In other words, how often a person serves as a bridge connecting people in the network. We rank ordered people by their betweenness centrality values, and found that the program coordinator in the tribal Community Health Program that was mentioned by several key informants as a key actor had the highest betweenness centrality in the network. Aside from this individual, the highest betweenness centrality scores were found for front line medical staff, administrators, and a board member.

FINANCING THE TRIBAL PUBLIC HEALTH SYSTEM

The tribal health division operated on an annual budget of approximately \$32 million, received through IHS, third party revenue, and federal, state, and private grants. The most common sources of funding mentioned by participants from across the tribal public health system were grants, federal funding, state funding, tribal funds, and private/donations. Many participants discussed how their funding is not sufficient for meeting the public health needs of the community. Also, the fact that grants were a key

source of funding for public health led to many activities being driven by grant awards and requirements.

THE TRIBAL HEALTH DIVISION HAD A TOTAL BUDGET OF \$32 MILLION.

According to the capacity assessment, the Tribal Health Division operated on an annual budget of approximately \$32 million. The agency received its funding through IHS (59%), third party revenue (25%), federal grants (15%), and other small state or private grants (<1%). This funding included financing for a comprehensive spectrum of personal health services *and* public health activities, making it difficult to compare to non-tribal health departments. In fact, the two categories of services were integrated so thoroughly, that parsing out the funding sources to determine the amounts of funding allocated to each would have been too cumbersome to reasonably expect to be completed for this study. For the IHS funds in particular the PSFAs provided through the funds exist on a continuum of clinical personal health services and public health services with staff crossing between the two types of services from one activity to the next. What could be deduced from information about the agency's funding was that the larger proportion of IHS funding and third party revenue was allocated to clinical personal health services and the vast majority of grant funds were used for public health activities.

THE MOST COMMON SOURCES OF FUNDING REPORTED BY KEY INFORMANTS WERE GRANTS, FEDERAL AND STATE FUNDING, TRIBAL FUNDS, AND PRIVATE DONATIONS.

When we asked key informants what types of funding support their organization, the vast majority of participants reported having multiple types of funding. The main types of funding that were reported were from grants (e.g., CDC, IHS, Safe Routes to Schools), federal funding (e.g., IHS, Bureau of Indian Affairs, Housing and Urban Development), state funding (e.g., State Health and Human Services, state funded loans), tribal funds (e.g., gaming proceeds), and private/donations (e.g., Lions Club). Health care and mental health providers also mentioned third party billing as a funding source and participants from some non-tribal organizations reported receiving local funding (e.g., millage). The most commonly cited source of funding for tribal organizations was grants, followed by federal funding and tribal funds. Importantly, however, the Health Division was not financed by tribal (general) funds. For non-tribal organizations, the most commonly cited source of funding was also grants, but this was followed by local funding and federal funding. There were several participants from non-tribal organizations who reported receiving funds from the Tribe in the form of casino revenue that is awarded to local communities and organizations, as well as grant funding to pay for specific activities and physical resources (e.g., vegetable bars and water bottle filling stations in schools).

FUNDING WAS NOT SUFFICIENT TO MEET THE NEEDS OF THE COMMUNITY

Many participants reported that their organization's funding was inadequate, citing high level of unmet need, limitations in funding for prevention, funding limitations to staffing, and difficulty funding necessary maintenance and upgrades for facilities. Reports of inadequate funding were highest among participants from tribal organizations, with descriptions of unmet medical needs ranging from 40-50%. These participants explained that what the Tribe receives by way of treaties through IHS is not sufficient

to meet the level of need. Furthermore, most of this funding is not allocated to preventive services, meaning funding for many public health activities has to come from other sources.

“That whole component of prevention services has to be made up somewhere else with the limited funding we have because we don’t receive a lot of Indian Health Service funding. You would receive a little bit for prevention.”

Also, competing demands for limited funding can create situations where the cost of needed equipment and the upkeep of infrastructure can take away from funding available to provide services or create situations where funds are directed to more urgent needs like life-saving treatments, as opposed to prevention.

Many participants also discussed how the funding available for their organizations was impacted by the economy. For example, there was not as much funding available as there was prior to the recession that began in 2007. For tribal organizations, this was also discussed in reference to the casino and how the casinos were not as profitable as they once were, which affected funding for tribal programs. When asked what they would do with additional funding, participants reported that they would extend existing medical and non-medical services to serve more people, provide additional services not currently provided (e.g., specialist care), hire additional staff, increase the pay of current staff, and provide more staff training.

MANY ACTIVITIES OF THE TRIBAL PUBLIC HEALTH SYSTEM WERE DRIVEN BY GRANTS.

One very strong theme in the key informant interviews was that grant funding drove many activities of the public health system. Grant funding drove collaboration by requiring partnerships or formal agreements with partners (e.g., MOAs). Assessment activities and processes were often driven by grant funding, because they were required as part of the grant. One negative consequence of this was that, when a grant was awarded to one program, and that program conducted an assessment for the grant, other departments sometimes did not know about the data. This created a segmenting of data on the health of the Tribe, which limited its utilization. Grant funding also drove the development of plans, such as community action plans. This sometimes created tension in the planning process between being responsive to community needs and meeting funding requirements. Also, similar to assessment activities, this resulted in smaller health improvement plans that focused on specific areas and limited the creation of a comprehensive community health improvement plan for the Tribe.

Grant funding also limited the focus and strategies for community health activities and services. Tobacco, nutrition, and physical activity were the focus of many grants received by the tribal Community Health Program. While these are important to focus on for the Tribe, being driven by funding sometimes felt in conflict with the desire to be driven by community needs or professional expertise. Also, when grant funding ended, oftentimes that meant the service supported by that grant ended, as well.

“It seems like with every grant there’s a new focus. Or not always new, you know, but maybe it’s the same but it’s done in a different way. So you start these programs, you

know, and things are to be done a certain way. And then when that grant's finished it's kind of like everything just stops and the focus is lost and it seems like to me, you know, a lot of times you feel like you're leaving people in the dust, you know, because they don't know—like you don't even know when there's an end to something.”

Interview participants felt that there was no conclusion to the programs when funding ended and worried that the clients felt like they had been abandoned. Some organizations were able to secure funds to keep the program going after grants ended, but the amount was lower than that of the grant so they were not able to serve as many people as they could before. Also, when grants ended and services were ended or changed, this sometimes resulted in staff losing their jobs.

Focus group participants also talked about the issue of how many programs and services were grant funded, and when grants ended, the programs ended, sometimes without any warning or conclusion. Some elder participants had concerns about how grant funded programs were managed. For example, participants recognized that grants were time-limited funds but felt that because of how short grants were, and what was required by federal grants in particular, staff were unable to implement programs in a way that honored the tribe's culture. Others realized the necessity of grant funding to have programs but felt like there were too many grants, and therefore maybe too many requirements that pull the programs in different directions, rather than focusing on one area or having a cohesive program.

THE TRIBAL PUBLIC HEALTH SYSTEM WORKFORCE

The Tribal health division had a staff of 241 people working in a wide variety of occupational categories. Key informants described a variety of ways in which their organizations support the professional development of staff, most often through trainings that maintain or build competency. Participants also discussed staffing difficulties, particularly around staffing shortages and turnover. These difficulties were mentioned more often by participants who worked for tribal organizations.

THE TRIBAL HEALTH DIVISION EMPLOYED APPROXIMATELY 237 STAFF.

According to the capacity assessment, the Tribal Health Division employed 237 staff (of which 60% were tribal members), 4% were other Native American (not tribal members). The Tribal Health Division employed the following occupational categories: nurse, midlevel provider (nurse practitioner, physician assistant), physician, community health representative, health educator, nutritionist/dietitian, dentist, traditional healer, information systems specialist, behavioral health professional, emergency preparedness, and administrative or clerical. Additionally, the Tribe had an agreement for epidemiologist/statistician services with the Tribal Epidemiology Center.

The Tribe's IHS Funding Agreement states that the Health Division will provide services by licensed physicians, dentists, optometrists; licensed mid-level practitioners (nurse practitioners, physicians assistants); nursing staff; students and residents from accredited institutions; licensed clinical social workers, behavioral health counselors and psychologists. In addition to these and the additional occupations reported in the capacity assessment, the Tribe also employs laboratorians and dental assistants.

ORGANIZATIONS WITHIN THE TRIBAL PUBLIC HEALTH SYSTEM ENGAGED IN A VARIETY OF METHODS TO PROMOTE STAFF PROFESSIONAL DEVELOPMENT.

Key informants discussed several ways in which their organizations supported staff professional development, including sending out information about online trainings, webinars or links to web-based informational sources, sending staff to non-local trainings, and hosting trainings which staff attended. While most participants stated that their organizations were supportive of professional development, not all of them provided financial support for trainings or education. Participants working in the tribal Health Division explained that clinical staff and behavioral health staff are given annual allowances for continuing education units. However, outside of these clinical positions, funding for professional development was usually reliant on grant funding.

“Well (laughs), if there’s funding in the grants you know I’m very big on having people go to trainings and attend conferences and stuff.”

The types of training that participants attended fell into two main categories: trainings to maintain competency and trainings to build competency. In terms of maintaining competency, participants noted attending trainings or courses to stay up-to-date in their field or for CEUs required for professional licensures. In terms of building competency, participants noted attending trainings to gain particular knowledge and skills to address identified community issues (e.g., certified diabetes educator, breastfeeding counselor). Participants also discussed receiving training in particular models or approaches (e.g., Yellow Ribbon suicide prevention).

ORGANIZATIONS WITHIN THE TRIBAL PUBLIC HEALTH SYSTEM EXPERIENCED DIFFICULTIES WITH STAFFING SHORTAGES AND TURNOVER.

Key informants discussed several difficulties related to staffing. The majority of participants reported that their organization had a staffing shortage. This was more common for participants from tribal organizations. Several discussed how the number of staff decreased throughout the years as the budget decreased. Also, being a rural location sometimes made it difficult to attract and retain talent. The impact of inadequate staff could be seen in the availability of services. For example, some participants mentioned a need for staff to provide services during extended hours (i.e., nights and weekends). Participants also discussed how it was difficult to meet the needs of the community when staff was spread too thin. Additionally, when organizations lacked adequate staffing, it made it difficult to carry out tasks like evaluation. For the Tribe, in particular, participants explained that having more staff who are knowledgeable about regulations (e.g., environmental) would contribute to the Tribe’s self-determination.

Participants discussed difficulties with staff turnover. This also was discussed more often by participants from tribal organizations. Reasons for turnover included grants ending and staff no longer being funded, obtaining higher paying jobs, and the overall difficulty of recruiting and retaining providers and staff in the Tribe’s region of the state. When staff left their positions, organizations found it difficult to replace them and often the positions lay vacant for a long time. Staff turnover had a significant impact on

organizations, including consequences such as the loss of organizational relationships, lost continuity of care for patients, and the spread of responsibilities to staff that are still with the organization. This was described as a trickle-down effect; when someone leaves, their duties and responsibilities trickle down to those staff remaining by expanding their roles. The practice of filling multiple roles was a very common theme throughout the key informant interviews, across tribal and non-tribal organizations. Participants reported that many staff are cross-trained so they can fill in when needed. Overall, being understaffed and holding multiple roles inhibited staff availability to collaborate, because of the time-intensive nature of establishing cross-organizational relationships. As one participant explained,

“We haven’t really worked at all in [County] because we just don’t have the staffing resources and we don’t have relationships there, so we haven’t even had time to go out and try to forge relationships in that county.”

Partnering around policy development: Creating a tobacco-free campus

“[Program coordinator] has been just wonderful with, you know, helping us and when I say us I am involved with the effort, well I was very involved with the effort to ban tobacco on campus and then now we are looking at the possibilities of some local, like a local park, and you know she had experience with that and gave us, you know, excellent information to use. Very helpful.”

Sandra works for a local university and is involved in many health promotion activities around the campus and the surrounding community. One effort with which she was recently heavily involved is the effort to get her campus to go tobacco-free. The process of creating a tobacco-free policy at the university began with a task force, who sought out information from other colleges and universities who had gone smoke-free. They gathered representatives from across campus, including students, and worked to address every issue they could anticipate before submitting a proposal to the Board of Trustees. In the end, the proposal was voted in and the campus is working through implementation of the new policy. As part of this effort, Sandra received help from Teresa, a program coordinator from the Tribe’s Community Health Program, who was part of a community health coalition to which Sandra also belonged. Teresa had experience developing and implementing tobacco-free policies and Sandra explains that her experience and information was very helpful to the process.

CHAPTER 8: SERVICES DELIVERED BY THE TRIBE TO PROTECT AND PROMOTE HEALTH

OVERVIEW

The tribe's public health system was described as delivering services to protect and promote health that were community driven, culturally tailored, informed by data and best practices, and both supported and constrained by funding. Interview data were collected using the 10 EPHS as a framework; however, the 10 EPHS did not accurately capture the core services described by members of this tribal public health system. This chapter presents eight core services delivered by the tribe and describes gaps in services as defined by study participants. Findings focus on interview data collected from public health system partners and focus group data collected from community members. The legal responsibility of the tribe to provide for the health and wellbeing of its members is described in Chapter 5.

SERVICE 1: ASSURE PERSONAL HEALTH SERVICES ARE PERSON-CENTERED, HOLISTIC, CULTURALLY TAILORED, INTEGRATED, AND AVAILABLE TO ALL COMMUNITY MEMBERS.

Participants described assuring that all community members have access to the personal health services they need as a core function of the tribe's public health system. They described the tribe's personal health and public health services as integrated within the health division, and they described the tribe's health system as connected with a larger network of tribal and non-tribal health service providers. The health division was described as having the features of a medical home that was responsible for meeting the needs of all community members, and they described the health division more broadly as responsible for meeting the needs of the whole person across the life course.

THE TRIBE'S HEALTH DIVISION OFFERED PERSONAL HEALTH SERVICES, COMMUNITY HEALTH SERVICES, AND LINKAGES TO SERVICES NOT PROVIDED BY THE HEALTH DIVISION.

The health division was described as integrating primary care and public health functions, operating four health centers and a community health program that operated out of the health centers and four additional, rural sites. In addition to primary care, the personal health services offered through the health division, as described by interview participants, included pharmacy, laboratory, radiology, physical therapy, acupuncture, osteopathic adjustments, vision, hearing, dental, behavioral health, and traditional medicine. Additionally, the health division offered a diabetes clinic and HIV services. The health centers differed in the specific services they offered.

Community health services were offered at each of the health centers as well as out of additional rural locations; however, not all locations offered each service. Community health services offered to individual clients by the health division included tobacco cessation, community health nursing, case management to support navigation and linkage, hypertension case management, nutrition counseling, diabetes education, weight assessment and management, and chronic disease management.

"We're lucky because we can do both. We can provide both basic care and a sense of looking out for the community as well."

Participants described the health division’s traditional medicine program as important to both personal health care and community health programs. The traditional medicine program was described as offering services that aligned with the tribe’s spiritual and cultural beliefs and traditions. The program was described as meeting the needs of the whole person, and offering a healthcare option for community members who distrust western medicine or wish to connect with their culture. In addition to one-on-one care, the traditional medicine program provided traditional ceremonies such as sweat lodges, naming ceremonies, doctoring ceremonies, and fasting ceremonies. Participants also identified the traditional medicine program as a partner in community health programs, such as camps for youth and the drug court.

“I just think the Traditional Medicine Program offers a lot of culturally based experiences for clients if they choose to participate, and it really gives them a sense of identity and a sense of belonging, which I think is extremely important.”

Participants indicated that the health division played a key role in linking clients to the services that they needed that were not available through the health division and played an active role in coordinating services so that clients did not fall through the cracks. According to participants, the tribe developed formal agreements with other health care agencies to provide care to members. For example, one of the local health departments in the tribe’s service area partnered with the tribe to coordinate the Breast and Cervical Cancer Control Program (BCCCP) for tribal members. Additionally, the tribe partnered with area hospitals to provide services such as in-patient care, urgent care, post-surgical rehabilitation, specialized tests, oncology and other specialized care. In order to support clients in accessing care, the health division helped clients get covered for eligible services. A medical social worker was available to link clients to services, and each health center had a trained staff person who helped patients enroll for health insurance through Medicaid or the health insurance exchange.

THE HEALTH DIVISION OPERATED LIKE A MEDICAL HOME THAT WAS AVAILABLE TO THE WHOLE COMMUNITY.

Primary care provided through the health centers ran by the health division was described as having the features of a medical home. The Agency for Healthcare Research and Quality defines a medical home as encompassing five characteristics: patient-centered, comprehensive care, coordinated, accessible services, and quality and safety. Care was described as *patient-centered* in that providers routinely went beyond the purpose of the visit to identify health care and other needs patients might have. The health division’s electronic health record supported this capability. Participants described care as *comprehensive* and *coordinated*, with personal health, traditional medicine, and community health providing a wide spectrum of services and working together to connect individual clients with the services they needed. Beyond providing a referral, participants described how staff played an active role in getting people connected to services.

“Let’s say we go to a home and not only do we look at that person but the whole family. A lot of times they don’t know what they can get here for services so that nurse

provides the education, or do they need housing then we would provide that referral to housing and how can we get them housing... Our nurses and RDs are kind of the gatekeepers. They are almost like case managers when they go into these homes they are not just looking at checking their blood pressure and vital signs and then leave. They look at the person as a whole and everything that affects them."

The health division was also described as committed to the *quality and safety* of its services, and participants highlighted quality improvement methods used on a routine basis to improve care. Additionally, using clinic data, the health division identified at-risk patient groups and engaged in special projects to improve the quality and effectiveness of care provided to these patients. For example, the health division established a case management group for hypertension, which involved providing case management to patients with elevated blood pressure to help them understand their condition, making a plan for lowering their blood pressure, and supporting them in following up with their doctor. The health division also had a Healthy Heart project and a Special Diabetes Program for Indians (SDPI) grant to improve care for patients with diabetes.

The health division was described as responsible for making sure care was available to all members of the community. They played a key role in identifying what services are necessary, where they should be located, how they should be staffed, and how they should be funded. Participants noted that one of the components of quality, accessible care for the tribe was assuring services were culturally tailored and traditional medicine was available.

"The health centers are very visible and looked to for leadership. These health centers are much more than clinics. They do so much more traditional foods, traditional medicines, and public health promotion, tobacco free awareness and active and promoting walking and they do contests where you get online and post the number of miles or number of steps for a period of weeks and does your workplace outdo another workplace. They do a lot of that and the health fairs where you can have your blood pressure checked and your oxygen content and your blood checked and read out your lung capacity and all of those things and be aware of what your personal health status is beyond your annual trip to the doctor to pee in a cup. They do a lot here it is a great source for the community, great pride for the community too because it is way more than a hospital or clinic or a doctor's office."

THE HEALTH DIVISION OPERATED WITHIN A NETWORK OF HUMAN SERVICE PROVIDERS TO MEET THE NEEDS OF THE WHOLE PERSON ACROSS THE LIFECOURSE.

Overall, participants from tribal departments and divisions expressed a strong sense of responsibility for connecting individuals with all available resources to get their needs met, both as part of their professional role and as a personal value or commitment to their community. Participants described a variety of organizations and services that work with the health division to protect and promote health. For example, the health division worked with services for elders, early childhood programs, local

recreation centers, domestic violence programs, youth education services, the cultural department, human services, the environmental program, the court system, university extension programs, and other tribal and non-tribal organizations.

Relationships between these organizations were often described as bi-directional and focused on meeting the needs of the whole person. For example, the health division worked with the early childhood program to provide hearing, vision, and dental screenings on-site at child care centers. Additionally, the early childhood program linked people with the health division to get screenings, well-child checks, and dental care.

“I think we try to address all of the four, what we call four main health issues which is again, spiritual, emotional, mental and physical and so we do that through various departments. We have our Behavioral Health, we have the Advocacy Centers for abuse or violence, you know, where people we try to identify people that are under those kind of stressors in regards to that part of their health.”

Participants discussed the importance of social determinants and the role of this network of providers in addressing the basic needs of community members. Some of the health centers had a tribal department or human services staff person on site to support clients in applying for assistance. Additionally, the health division offered community health techs who served as liaisons between community members and other service providers.

SERVICE 2: DESIGN AND ADMINISTER CULTURALLY TAILORED COMMUNITY HEALTH PROGRAMS TO IMPROVE POPULATION HEALTH

In addition to providing services designed to improve individual health, participants described programs and services designed to improve the health of the whole population. The tribe’s population-based community health efforts were described as a collection of programs and services delivered through the health division or in collaboration with community partners.

PUBLIC HEALTH SYSTEM PARTNERS OFFERED PROGRAMS AND SERVICES TO PREVENT CHRONIC DISEASE, CONTROL COMMUNICABLE DISEASE, AND IMPROVE MATERNAL CHILD HEALTH.

The health division and their partners described a variety of programs and services provided by the tribe. Diabetes and cardiovascular disease were particularly important health issues, and the health division works with partners to administer a variety of programs to increase physical activity and improve healthy eating. For example, one of the coalitions supported by community health staff started a bike program to encourage people to bike instead of using their cars. Other chronic disease prevention programs supported by community health staff included community gardening, traditional foods, farmers markets and farm-to-table, fitness pledge and fitness events, Safe Routes to School, smoke free air, and tobacco cessation. In order to control communicable disease, the health division offered immunizations as well as special events and services such as flu clinics. Maternal and child health was

supported by a variety of programs, including Family Spirit home visiting, a breast pump program, and a community baby shower.

“I work with communities and community partners to try to create healthy environments for Tribal members, as well as people across our whole service area and the focus is on increasing access to healthy foods and beverages. We do some tobacco use and exposure to second-hand smoke and increasing opportunities for physical activity.”

THE HEALTH DIVISION AND THEIR PARTNERS IN OTHER TRIBAL DIVISIONS CULTURALLY TAILOR THEIR PROGRAMS AND SERVICES, ALIGNING THEM WITH THE EXPERIENCE AND CULTURE OF MEMBERS OF THE TRIBE.

Participants indicated that the community health programs administered by the tribe are culturally tailored. This tailoring was described in two ways. In some cases, traditional teachings and ways were the foundation of the program. In other cases services were adapted to include traditional elements, such as prayers, drum circles, smudging, traditional foods, and incorporating traditional teachings. Some community health programs administered by non-tribal organizations that serve tribal members were described as culturally tailored in that they incorporated elements of the tribe’s traditions.

“[Culture, value, and traditions] are honored in that we are trying to bring them back, bring back that which was lost. For various reasons why they were lost a lot of times people were not allowed to speak the language from what were taught from our elders to have sweat lodges. There has been a lot of problems in history that have set us all off course so to speak and I think we are trying our best to give back our ways, our teachings in a good way, keeping in mind that it may not be the exact same that it used to be, but everyone is trying their best to honor our past, honor our traditions and honor those teachings. We work for peace and we work for our tribe. We give back some of the culture that is lacking in a lot of things and I know it is not the tribe’s fault, in fact, this I look at as a way to try to fix that.”

SERVICE 3: OFFER EDUCATION AND INFORMATION TO COMMUNITY MEMBERS TO ENGAGE THEM IN HEALTH IMPROVEMENT; SHIFT KNOWLEDGE, BELIEFS, BEHAVIORS, AND NORMS; AND HONOR TRADITIONS AND VALUES.

Health education was a public health activity described by many participants as a widely used strategy that is designed to achieve a variety of outcomes. Participants described health education efforts focused on topics from chronic disease to environmental health, and they described a wide variety of modes of delivering health education. Although participants had different perspectives on what mode of health education was most effective, they agreed that it is important to tailor the message to the audience.

HEALTH EDUCATION WAS PROVIDED ON A VARIETY OF TOPICS AND DELIVERED THROUGH A VARIETY OF MODES.

Health education was provided on topics related to chronic disease; maternal, infant, and child health; traditional medicine and principles of health; safety and violence; behavioral health; and environmental health. Chronic disease prevention was described as a major focus of health education efforts. Topics included chronic diseases and conditions such as diabetes, heart disease, hypertension, and COPD. Topics also included healthy eating, physical activity, commercial tobacco use, and second hand smoke. Health education efforts targeting parents were also described. These efforts focused on topics of concern to children such as immunizations, hearing and vision screening, well and sick child care, parenting, and breastfeeding. Participants from tribal organizations spoke of offering health education related to traditional ways of life. These health education efforts reflected a holistic way of viewing health and wellness and included topics such as the medicine wheel, the seven grandfather teachings, sacred tobacco, traditional foods, and name meanings.

Four primary modes for delivering and receiving health information were described by interview and focus group participants: in-person, community events, written material, and media. In-person methods were delivered to individuals or small groups through classes, workshops or meetings. Community events, such as health fairs, were described as reaching larger groups of people, and sometimes aligned with months, weeks, or days set aside for observing a particular disease or condition, such as cancer awareness month. Health education was also delivered through written material, such as flyers, newsletters, websites, brochures, reports, mailings, and e-mail. Media strategies described by participants included newspaper, billboards, radio, and public service announcements.

THE EDUCATION STRATEGY CONSIDERED MOST EFFECTIVE VARIED DEPENDING ON THE GOAL.

Participants indicated that health education was used to promote general awareness of health issues or services, share knowledge, change beliefs, and influence behavior. More broadly, health education was used to shift community norms and to engage the community in efforts to protect and promote health.

Participants varied widely in which methods they felt were most effective, particularly because they felt that the most effective method was different depending on the goal. For example, participants indicated that community-wide messaging is an effective strategy for building awareness, but that such strategies alone will not produce changes in behavior. They described the value of one-on-one and other in-person strategies for changing knowledge, attitudes, and behavior, but noted challenges related to the number of people that they can reach through these strategies. Participants reported that they often use existing community events, such as tribal gatherings, as a venue for health education in order to reach a broad audience and have the opportunity to connect with community members one-on-one.

“You can’t fix all of their problems at a health fair, but it is the awareness that these services are here. That is why we try to get out and market as much as we can that these services are here. Even if they don’t accept it or need it maybe they will take that

pamphlet and that information to their neighbor, and a lot of times it is word of mouth – ‘I was able to get this service at community health.’”

Focus group participants explained how written materials can be less effective than other methods of receiving health information. For example, newsletters may not provide information about upcoming health events in a timely manner to allow community members to plan to attend. Also, at community events, attendees are sometimes inundated with pamphlets, and may not see important information.

Some participants noted that the most effective way to deliver health education was through a variety of methods designed to blanket the community with a set of messages designed to achieve a particular health outcome. Campaigns were described as the most effective and most expensive health education strategy.

HEALTH EDUCATION MESSAGES WERE MOST EFFECTIVE WHEN THEY RESONATED WITH THEIR INTENDED AUDIENCE.

Health education efforts were designed to reach a variety of audiences, from a broad audience of community members or members of the tribe to specific targeted audiences such as the tribe’s employees or health center patients. Participants agreed that health education must be delivered in an interesting, interactive, and relatable way to its intended audience. They noted that it is important to use relevant examples, attend to reading level, and individualize message and mode based on the audience when possible. For example, participants noted generational differences in preference for receiving health information, with younger community members finding online methods more relatable than older community members.

“The kids in this community get their information from their phones. Their parents and grandparents don’t yet. They are not there.”

Participants generally felt that culturally tailored messages were more likely to resonate with their audience. Ways of tailoring health information described by participants included featuring Native American people and symbols on written materials, and incorporating traditional teachings into material and presentations. Participants discussed tailoring strategies such as serving traditional foods, highlighting the health benefits of traditional ways of life, using the medicine wheel or the four directions in written materials, incorporating traditional names and the tribe’s language into education efforts, and distinguishing between commercial and traditional or ceremonial tobacco uses in their health education efforts. Participants also discussed the benefits of native people delivering educational messages, as well as delivering messages in a way that was consistent with the tribe’s culture. Although all health education efforts from tribal organizations were described as culturally tailored, not all health education from non-tribal organizations was described as such.

“We’re not real strict. Our ways of life are very gentle and respectful, and of course after meeting the people that come in we kind of know where they are. Maybe they know a little, maybe they had some teachings. Maybe they didn’t have any. So, really with us, we inform them and we educate them, but most of all we empower them with those teachings so they can go from here and move forward and do the best that they can.”

SERVICE 4: BUILD NETWORKS AND ENGAGE WITH PARTNERS ACROSS SYSTEMS TO IMPACT PRIORITY HEALTH ISSUES.

Participants described partners from all key sectors involved in delivering public health services, including tribal and non-tribal organizations. Frequently mentioned partners of the health division’s personal health and community health programs included tribal housing, tribal early childhood, tribal community and family services, the tribal Extension program, the tribal drug court, the tribe’s program for domestic violence, local health departments, local government, local hospitals, university Extension, local schools, and Indian Health Service. These partnerships, and the coalitions that brought them together, were described as a powerful mechanism for addressing gaps in health services and improving the health of the population. The partnership network is also described in Chapter 6 as a component of the tribe’s infrastructure.

THE HEALTH DIVISION HAD PARTNERS FROM ALL THE KEY SECTORS INVOLVED IN DELIVERING PUBLIC HEALTH SERVICES.

Interview participants described partnership as critical to delivering public health services. As they identified partners across the public health system, they named individuals and organizations that crossed all of the key sectors that influence health in the region including: the health division, governmental public health, health care providers, mental health providers, public safety, human service, environmental organizations, education or youth development, economic planning and development, court and criminal justice, media, recreation or arts-related organizations, other tribal organizations, private employers/businesses, non-profits or charities, community groups, governing authorities, governmental administration, state agencies, and federal agencies.

Participants described several mechanisms through which relationships between organizations are formalized, including contracts, interagency agreements, MOAs, aid agreements, and collaborative plans. Often these agreements started with relationships between key people. They were described as having a variety of purposes such as expanding access to medical care, creating referral networks, assuring emergency preparedness, protecting water safety, infection control, and sharing medical resources. Additionally, formal agreements were sometimes created as a result of grant requirements, responses to specific crises or incidents, and by identifying gaps in the community’s system of care. Formal relationships were described between tribal agencies, as well as between tribal and non-tribal agencies. Formal relationships with non-tribal agencies were formed to give tribal members access to services not offered through the tribe.

PARTNERSHIPS WERE CRITICAL TO DELIVERING PUBLIC HEALTH SERVICES DUE TO THE LEVEL OF FUNDING, THE RURAL SETTING, AND THE NEED TO ASSURE THAT SERVICES REFLECT THE CULTURE OF THE TRIBE.

Partnerships were often formed because agencies recognized that they did not have the capacity to meet community needs on their own. The health division and their public health system partners described gaps in resources and the importance of working together to make the most of what they had.

“Really everything we do is in partnership with other groups. We don’t work by ourselves at all... The collaboratives are designed to be community connectors. If we’re working by ourselves, we’re not getting anything done.”

Participants identified several factors that facilitated their ability to form strong, lasting partnerships. Participants noted that, while the service area was large, the professional public health community was small, making it possible to reach a critical mass of people invested in an issue. Additionally, participants noted that strong partnerships were formed when agencies shared goals and benefits, and had financially neutral relationships. Participants also noted that open communication networks and strong relationships between individual people facilitated effective partnerships.

PARTNERSHIPS CREATED BENEFITS FOR TRIBAL AND NON-TRIBAL ORGANIZATIONS.

Participants from non-tribal organizations indicated that the tribe had a large competent staff and organizational capacity which benefited the broader community. They viewed the tribe as an important partner that moved the work ahead in the region. Non-tribal partners described the tribe as a partner with resources, including both grant funding and expertise, which expanded the whole community’s public health capacity. Similarly, participants described local governments as generally supportive of the tribe’s initiatives, which were seen as having benefits for the whole community. In fact, non-tribal agencies often described partnering with the tribe as a ‘given.’

“I would go with the tribe, just because they are very visible and they’re very proactive and they’re very up-to-date and they keep me on track. The people that I work with in the Tribe, I think they’re very forward... I think without them, I don’t know how many initiatives would actually be occurring at the rate they are occurring.”

COALITION WORK PLAYED A KEY ROLE IN HOW THE TRIBE BUILDS AND MOBILIZES THEIR PARTNERSHIPS.

Participants described more than 60 committees and coalitions that played a role in protecting and promoting the health of the tribe. Many of these coalitions were built around specific projects, and many lasting partnerships began with coalition work.

Community health staff were described as playing a key role in engaging partners across sectors and throughout the service area. Some of the grants supporting community health programs required partnerships or formal agreements. These funding expectations were the beginning of coalitions that ended up creating strong and effective partnerships across sectors. Participants described how important it was to have a coalition coordinator from the health division who was dynamic and good at outreach and networking.

“These folks, almost all women in this case, are known in the community as being the – these kind of gnats that don’t go away, but they’ve made such progress. It kind of warms your heart to see how many changes have occurred in the community and policy because they work cooperatively. And we still have some unfished business.”

PARTNERSHIPS HAVE ACHIEVED IMPORTANT PUBLIC HEALTH OUTCOMES FOR THE TRIBE.

Participants highlighted the benefits of partnership across the public health system for both tribal and non-tribal organizations. The tribe developed the ability to fill unmet needs and deliver services through their partnerships that would not otherwise be feasible. For example, participants described a partnership between the tribe and a hospital which provides tribal members access to afterhours care at a community clinic.

Policy, systems, and environmental changes that promoted health were described as the result of partnering and coalition building. Participants described working with local agencies and through coalitions to develop and pass tobacco free polices for campuses, restaurants, and recreation areas. They also described how, through coalitions, they have been able to improve walkability and bikeability, and establish access to healthy foods through farmers markets and community gardens. Participants also described how partnering with schools resulted in wellness policies, Safe Routes to Schools programs, and other activities to increase physical activity and access to healthy food among youth.

“Some of our plans that we have had to increase the walkability of our communities and just getting sidewalks put in and things like that... those also involve the tribal board and other divisions who work on transportation and who also could access some funding... So a lot of coordinating efforts done to improve the health on the larger scale... It’s a lot of slower work sometimes, but when you get to the end and it’s done, it’s kind of very neat because it’s made a big change to the community.”

In addition to policy, systems, and environmental changes that resulted from partnerships, participants described how partnerships have changed the way agencies ‘do business.’ For example, participants noted how collaboration between the tribal health division and youth programs has encouraged youth programs to offer healthy foods and incorporate physical activity into their programming. Additionally, partnering with the schools has leveraged more funds for the school, while also engaging the school as an important setting for promoting children’s health.

“We almost didn’t write the Safe Routes to School grant, which would have lost the city out on over \$100,000 worth of infrastructure changes and improvements. Um, and thank God we had someone here who was working at the tribe that was very adamant that we were just going to go ahead and do that. You know. But I would have been like, ‘You know what? I am—that’s beyond, you know, I am not playing these games.’ I, you know.”

“When I first started (laughs), you know, the school was very like, ‘Well, who is this person? What does she think she’s going to tell us what to do? You know, we’re going to only do this and that’.” And, um, a lot of the things that I told them were coming have come true. And, um, you know, they have seen the benefit of the changes that we’re making. And, you know, not that they do everything that I want them to do or feel that should be done to improve the health of, um, the school. But it—it is definitely, um, trending in the right direction. You’ve just got—you’ve just got to keep you’re consistent with your message and, you know, just keep pounding at it.”

SERVICE 5: MONITOR THREATS TO HEALTH, AND PLAN FOR AND RESPOND TO EMERGENCIES ON TRIBAL LANDS AND ACROSS JURISDICTIONAL BOUNDARIES THROUGHOUT THE SERVICE AREA

Identifying and responding to threats to health were key responsibilities of the public health system described by participants. Participants described partnering with tribal and non-tribal organizations to monitor threats to health, highlighting the role of local and state public health agencies in disease surveillance and investigation. They also described multiple methods for communicating across agencies and with community members about threats to health. Emergency preparedness was described as a function of the tribal public health system that required navigating complex jurisdictional issues and engaging in significant cross sector planning.

THE TRIBE WORKED WITH LOCAL AND STATE PUBLIC HEALTH TO MONITOR THREATS TO HEALTH

According to participants, the tribe’s environmental program played a key role in monitoring environmental health, in coordination with local health departments, the state health department, and the tribe’s bordering country. They conducted environmental site assessments prior to the tribe acquiring property. They investigated housing concerns, such as testing water, waste systems, and radon. Additionally, they were described as responsible for responding to spills, monitoring dump sites, and monitoring outdoor air quality.

Environmental health was also monitored by the tribe through a contracted sanitarian. The sanitarian was responsible for conducting food safety audits and indoor air quality monitoring. Additionally, participants noted that the sanitarian coordinates environmental health surveys for tribal facilities in order to identify health threats.

According to participants, the local health departments were the gatekeeper for communicable disease tracking. When the health division, or another tribal department such as early childhood, identified a reportable disease, they reported it to the state through their local health department.

INVESTIGATING THREATS TO HEALTH TENDS TO BE VERY ISSUE SPECIFIC, REQUIRES A FEW KEY PEOPLE, AND INVOLVES WORKING THROUGH COMPLICATED RELATIONSHIPS ACROSS JURISDICTIONS

In addition to monitoring, participants indicated that the environmental department investigated environmental concerns as they were identified. For example, participants described calls received by the environmental department from housing residents with respiratory issues, which resulted in the program investigating housing facilities for toxic exposures or other environmental factors that threaten health.

According to participants, the state and local health departments played a key role in investigating threats to health related to communicable disease. The tribe reports into the state's disease surveillance system and relies on state and local public health to monitor trends, conduct investigations, and communicate with providers.

In many cases, however, investigating threats to health was described as specific to the issue. One specific example was offered by multiple participants that involved investigating a threat on tribal land that required the involvement of tribal law enforcement, the tribal board, and tribal health, in addition to multiple county departments. The Tribe did not have all of the specific functions required to address the situation or codes in place to guide their decisions, and the situation involved both members of the tribe and people who were not members. Successfully addressing this situation required collaboration and coordination to work through the complex jurisdictional issues and determine who would be responsible for what.

VARIOUS METHODS AND SYSTEMS FOR COMMUNICATING THREATS TO HEALTH ARE USED DEPENDING ON THE SOURCE OF THE INFORMATION, THE TYPE OF THREAT, AND THE INTENDED AUDIENCE

Methods for notifying programs and health care providers of threats to health included the tribe's email system and intranet and the Tribe's electronic health record (EHR). Regular meetings between the health division and local health departments, as well as within the health division, also offered a venue for communicating emergent threats.

Participants noted that non-health agencies, such as early childhood centers and schools, played an important role in communicating threats to health. They received information from the health division or health department about the threat our outbreak, as well as information about how to manage the threat (for example, hand washing, sanitization procedures, and building closures). They also received guidance on what to tell their clients.

“If there is an outbreak of anything the tribe has a communication system through email. We have an intranet and we have an emergency broadcast system. But the tribe doesn’t do it alone either. They are a partnership with all these outside agencies that they communicate with the health centers and the health departments if there’s an epidemic of flu going on we’re notified... The health center provides us with things to look at how to prevent this...”

Participants indicated that community members are alerted to threats through a variety of mechanisms, such as the tribe’s emergency broadcast system, newspaper articles, newsletters, letters, public service announcements, brochures, and emails or text messages. These communications typically alert community members to the threat and provide guidance on how to prevent or reduce exposure.

THE TRIBE HAS AN EMERGENCY PREPAREDNESS TEAM THAT COORDINATES THE TRIBE’S RESPONSE TO EMERGENCY SITUATIONS THAT THREATEN HEALTH

In general, the tribe’s response to most threats required partnership with outside agencies, communication with health care providers, and coordination with the state and local health departments. They described using information about the threat to make decisions about who should be involved, what resources would be required, and what steps should be taken. For example, when Ebola was identified as a potential threat, the health division determined they should have a protocol for phone triage, link staff to online training, and incorporate conversation about the disease into their infection control meetings.

Participants indicated that the tribe is guided by an emergency preparedness plan and they have an emergency preparedness team in place. They coordinate with the broader emergency preparedness system in the region, they offer an annual educational program for emergency preparedness, and they have conducted practice drills through immunization program events. Non-tribal agencies indicated that the tribe’s workforce and surge capacity were important for preparedness in the region, and tribal agencies indicated that they benefit from the infrastructure available throughout the region. However, not all participants indicated that they understood the steps in an emergency response, although they were confident that key staff were appropriately knowledgeable about emergency response plans.

“So under emergency preparedness, you have law enforcement involved, you have your public health involved, you have fire, you have, you know, so you have a lot of the players there that are used to working together to solve a problem... so it’s a lot of that infrastructure was already there. It was just a matter of the tribe hooking in. And it was easily done when you had a key staff member who had the ability to network and get in there.”

Non-emergency threats varied in the degree to which the steps of the response were described as planned or roles were clear. However, participants indicated that tribal agencies are committed to working together to make sure the community stays safe. Similarly, while participants were not aware of

clear protocols for coordinating their response with non-tribal agencies, non-tribal agencies indicated that they look to tribal leaders to determine the most appropriate response when a health threat was identified that was not considered an emergency.

SERVICE 6: ADVOCATE FOR POLICY, FUNDING, PROGRAMS, AND SERVICES THAT WOULD IMPROVE THE COMMUNITY'S HEALTH

Although the tribe did not have an overarching legal framework for public health, the health division was described as playing a key role in informing the health-related policy decisions of the tribal board. In addition, community health staff worked with community partners to support policy initiatives that would improve the health of tribal and non-tribal members.

THE HEALTH DIVISION PLAYED A KEY ROLE IN BRINGING INFORMATION TO THE TRIBAL BOARD TO INFORM POLICY DECISIONS.

The role of the health division in policy development and implementation emphasized educating community members, and especially board members, about health risks facing tribal members and policy options that could reduce those risks. Participants noted that the impetus for policy development comes from a variety of sources. Sometimes policies are considered in response to a specific crisis or tragedy, as part of community health initiative supported by grant funds, to align with best practices in community health, to respond to community health needs, or based on data. Participants indicated that the policy process often started with gathering information and examples and convening partners to draft both information to share and policy language. In order to move a policy forward, participants noted that it was important to engage health division leadership, and then to provide the tribal board with the information necessary to make an informed decision. The board process was described as involving committee review, work shopping the policy, debate and discussion, voting and adoption. Participants also noted that the tribal board faces competing demands and health isn't always the top priority.

Several participants discussed the success of the health division in the area of policy related to commercial tobacco. For example, the health division worked with the board to pass smoke-free air policies impacting settings such as tribal buildings, housing, casino restaurants, and recreational facilities. The health division also described success educating the board and other divisions about policies that support healthy eating and physical activity promotion.

"One of the things that was really identified as an issue especially for our casino employees was the smoking environment that they work in, so working to try to come up with some policies to make our work site smoke free. We actually put a policy in place to have smoke-free campuses for all our health centers and we're hopefully working towards getting our casinos to be smoke free so that's a long road to home."

Participants also described topics that they would like to work with the board on in the future. They discussed the success of workplace wellness programs, and they would like to pursue a workplace

wellness policy. They would also like to work on breastfeeding policy, sustainable building codes, and expanding smoke-free air policies.

COMMUNITY HEALTH STAFF SUPPORTED PARTNERS (TRIBAL AND NON-TRIBAL) IN THEIR EFFORTS TO ADVOCATE FOR POLICY DECISIONS THAT SUPPORT HEALTH.

Community health has played an important role in supporting their tribal and non-tribal partners' policy change efforts. Participants indicated that community health staff offer expertise in active living, healthy eating, and smoke-free policies, and the tribe's engagement in these issues has had an impact on the policy environment across the region. For example, community health staff worked with a local university to pass a tobacco-free campus policy, offering expertise and bringing the perspective of the tribe to the conversation. Additionally, community health staff worked with local schools on their school health policies, improving menus and vending options. Another effort completed in partnership with community health mentioned by participants was the passage of a non-motorized transportation plan, which created a framework for improving the walk- and bike-ability over time. Participants noted that the health division and community health staff look for opportunities to improve health for tribal members in all places that they live, work, go to school, and play. Since the health of tribal members is impacted by the broader environment of the communities in which they live, the tribal health division has formed partnerships that have the capacity to impact this broader environment.

“For tobacco-free living really our role is to educate and really provide the information on the benefits of tobacco-free parks to townships or jurisdictions and if they choose to move forward with the policy it’s their choice. We just really like to educate on that.”

THE TRIBE LACKED A PUBLIC HEALTH CODE OR AN OVERARCHING LEGAL FRAMEWORK THAT LAID THE GROUNDWORK FOR HEALTH POLICY

Participants noted that the health division and its partners complied with the laws, policies, and regulations that apply to them; however, it was not always clear which laws, policies, and regulations were applicable. For example, participants reported following the policies that guide the implementation of programs such as Head Start and WIC. They also described federal laws that they comply with, such as HIPAA. However, participants were less familiar with which aspect of the state's public health code the tribe followed, and they noted that the tribe does not have a public health code to provide a legal framework for the tribe's public health enforcement power or responsibilities.

SERVICE 7: ASSESS HEALTH STATUS AROUND SPECIFIC ISSUES AND DEVELOP PLANS TO ADDRESS COMMUNITY HEALTH CONCERNS

Participants generally described assessment and planning as one process. Assessment data were typically collected for a specific purpose, and they were used to guide planning and decision making. The assessment and planning process was usually described around a specific health issue, such as substance abuse or chronic disease, and assessments and plans were developed in collaboration with community partners.

ASSESSMENT DATA WERE COLLECTED AND ANALYZED IN ORDER TO UNDERSTAND NEEDS, MONITOR PROGRESS, MAKE DECISIONS, AND PLAN FOR IMPROVEMENTS

In 2000, the tribe completed a tribal health assessment to inform their strategic planning process. The assessment identified diabetes, cancer, and heart disease as leading health issues, and they prioritized improving access to care and traditional medicine. Participants noted that planning process and the priorities it identified have been an important factor in driving the work of the health division since 2000. The health division did not describe routinely completing a broad health assessment, improvement plan, or strategic plan after 2000. Rather, participants described a variety of assessments and plans focusing on specific health issues (such as substance abuse or diabetes) or populations (such as young children or elders).

Participants used data on a variety of health issues to inform planning processes. They described data focusing on physical health, such as chronic disease, nutrition, tobacco, weight status, clinical care utilization, dental care, immunizations, and communicable disease. They also described behavioral health data, such as substance use, alcohol use, suicide, and mental health. Environmental data were also mentioned by participants, such as data on air and water quality, food safety, lead, walkability, the school environment, worksites, and access to healthy food. Social determinants and priority populations were also important topics referenced by participants.

Participants described a wide variety of data sources used to identify health concerns and priorities. These included both data collected and maintained by the tribe and secondary data sources. The health division described a variety of data sources they have used to identify health concerns. They have conducted tribal employee health surveys, a tribal health survey, a meal time survey, a VIP survey, a tobacco survey, a housing survey, and a tribal census. Additionally, they described collecting qualitative data through focus groups, talking circles, and interviews. EHR data were also identified as a source of information about population health. Participants also described collecting data from a variety of sources. Early childhood collects information about well child exams, dental exams, nutrition, hearing and vision screening, lead, hematocrit, and immunizations from providers. Additionally, they track BMI and complete behavioral assessments. Most of the data sources described focused on health status, but a few described the community environment and social determinants. For example, the health division and its partners completed community assessments using the CHANGE tool, walkability assessments, and air quality assessments.

In addition, participants described a variety of secondary data sources. They described using Kids Count and other reports that summarize information about children's health. They also described a variety of data sources maintained through the state. They described data sources available through the state's health department, such as vital records, registries for immunizations and cancer, and the Behavioral Risk Factor Surveillance Survey. They also described using the state's department of labor data, and data available through the department of education, such as a behavioral risk factor survey conducted through schools. Federal data sources described by participants included the CDC, the Census, and USDA. Importantly, participants noted substantial gaps in these data sources related to Native

Americans generally and members of the tribe specifically, which limited their utility beyond offering an approximate point of comparison.

Participants described a variety of plans that were developed based on various assessment activities. In addition to the health division's strategic plan, participants described strategic plans that relate to health developed by other tribal programs, such as an early childhood strategic plan. Participants described coalition developed community action plans that focused on tobacco, physical activity, and nutrition. Additionally, they described an assessment and planning process to address substance abuse, which involved broad participation and cross-department collaboration. More specific plans were noted as well, such as the tribe's emergency preparedness plan, the health division's quality improvement plan, and a non-motorized transportation plan.

ASSESSMENT AND PLANNING WERE GUIDED BY EMERGING ISSUES, PROGRAM PRIORITIES, AND FUNDING REQUIREMENTS

Participants noted that the Tribe's ability to collect and analyze data about its members has allowed the tribe to develop plans that reflect the community's needs and priorities. Participants described using data to identify emerging health concerns and to inform the development of new programs and policies. For example, the health division described using data indicating tribal members are at a high risk of developing diabetes and heart disease to develop both clinical and community interventions to prevent and better manage these conditions.

"If we identify a community need then we will pursue funding to make a change."

They also noted that the health division has sought funding to address health concerns identified based on the Tribe's data and had success bringing in funding to support community health goals. In fact, many of the assessment and planning activities described by participants reflected grant expectations. While participants noted that the Tribe perused specific grant opportunities to address community health issues and fill unmet needs, they also described tension between grant requirements and community needs.

THE ASSESSMENT AND PLANNING PROCESS OFTEN INVOLVED WORKING IN COLLABORATION WITH PARTNERS

Participants described the assessment planning process as highly collaborative, but also requiring committed staff time and expertise. Community health staff were described as a key partner in many of the assessment and planning processes completed by the tribe, and interdepartmental collaboration was common. Participants described the formation of specific topic committees, searching the literature, and identifying experts as strategies to make sure plans reflect best practices. Participants also described the importance of engaging the community and system partners in the planning process in order to make sure plans were relevant, to increase ownership, and to increase the likelihood the plan would be implemented.

HEALTH DIVISION STAFF VALUED STRATEGIC PLANNING AND THEY'VE WORKED TOWARD ACHIEVING THE GOALS ARTICULATED IN A STRATEGIC PLAN THAT IS NOW READY TO BE UPDATED

Although the health division had not completed a strategic plan since 2000, participants noted that all divisions contributed to a tribal level strategic plan in 2010. That plan was not finalized. Participants noted that, while strategic planning can be a painful process, they felt that it would be beneficial to have a new strategic plan in place. They described strategic planning as valuable for having a clear, well-organized path toward improving health for tribal members. Participants noted that they currently have a gap in having a common direction and measurement strategy.

SERVICE 8: USE DATA AND BEST PRACTICES TO IMPROVE SERVICES, BOTH FOR THE TRIBE AND THROUGH SHARING LESSONS LEARNED

When asked to discuss evaluation, quality assurance and improvement, and research activities, participants focused on how public health programs use data to improve services. Evaluation, quality improvement, and quality assurance were described as strategies for improving programs and making them more responsive to clients and the community. Research was described as a source of information regarding evidence-based practices; however, participants emphasized that research rarely involves testing interventions with a Native American population.

HEALTH DIVISION STAFF AND THEIR PARTNERS VALUED THE USE OF BEST PRACTICES, BUT RECOGNIZED THE IMPORTANCE OF ADAPTING BEST PRACTICES TO FIT THE CULTURE AND COMMUNITY

Participants from across the public health system discussed using evidence based practices to guide their work. They identified professional networks, professional organizations, universities, experts, colleagues, and websites as key sources of information about evidence based practices. Participants from tribal organizations described adapting evidence based practices to fit the context of their community or their individual clients, and they noted that most evidence-based practices were not validated with a Native American population. Participants noted that evidence-based strategies need to make sense in a rural setting with barriers related to distance, transportation, and technology. They also highlighted that practices that work in one part of the service area may not work in another for a variety of reasons. For example, the degree of rurality impacted the feasibility of pursuing walkability policies. Participants indicated that advisory boards played a role in adapting evidence-based practice, as did direct feedback from clients.

"I think one of the things we certainly do is we look at best practices. Um, you know, uh, as far as us personally doing direct research, we don't have the time. We're way too understaffed. But—but we're linked in to, um, both our grantors, uh, our communities, um, you know, our governments, and we hear the latest stuff. And—and we—we attempt to use those things that we believe will work and are culturally appropriate, or we adapt them to be culturally appropriate for our own, uh, for our own programming."

Participants also identified grants as an important way of learning about evidence based practices; however, they noted that funding requirements sometimes feel in conflict with the desire to be driven by community needs or professional expertise. They indicated that, while the overarching purpose of their grants aligned with their community needs, they were sometimes required to select evidence based strategies that were not developed or tested in a Native American community. For example, community members who participated in focus groups expressed frustration that one of the grants would not support teaching youth to hunt and clean venison, a traditional food and practice.

EVALUATION WAS USED TO LEARN ABOUT PROGRAM IMPLEMENTATION AND OUTCOMES IN ORDER TO MAKE IMPROVEMENTS

Participants varied widely in types of evaluation activities they described, and some participants indicated that evaluation was not a routine part of delivering services through their program. The most frequently described evaluation activity was gathering feedback, formally or informally, from clients. Participants described program feedback forms, customer satisfaction surveys, and patient satisfaction surveys as formal strategies for gathering feedback. They also described the importance of informal feedback through word of mouth, Facebook, personal conversations, emails, phone calls, and suggestion boxes. The degree to which clients were satisfied with programs and services was considered an important measure of success, and customer feedback was described as a driver for making changes to program administration and service delivery.

“So certainly we ensure an evaluation process for all our programs because we want to continue receiving funding and continue programming and be sure that we’re providing what’s needed. But also in a lot of way...we hear from the people we work with. We’re in a community-serving organization and a community-serving agency and, you know, the people you’re serving tell you point blank. So that’s the informal part of it.”

Additionally, several participants indicated that programs used indicators of service delivery as the basis of their evaluation activities. Participants described tracking measures such as the number of clients seen, no-show rates, the number of participants in a program, and the number of services of a particular type that were delivered. In addition to these process measures, some participants indicated that they use clinical or survey data to measure program outcomes.

Participants described a few examples of comprehensive program evaluation. These evaluation activities used multiple modes to answer a series of evaluation questions and were guided by an evaluation design. Additionally, these evaluation activities involved contracting with an outside evaluator, and they were described as a grant requirement.

PERFORMANCE MANAGEMENT AND QUALITY IMPROVEMENT WERE INTEGRATED INTO THE PERSONAL HEALTH SERVICES PROVIDED BY THE HEALTH DIVISION

Participants indicated that the personal health services offered through the health division routinely use performance measures and quality improvement methods to guide improvement activities.

Administrative, quality of care, and health outcome measures related to clinical services were compared to benchmarks and trends were reviewed on a semi-annual basis to identify performance improvement opportunities. Tracking was particularly robust in the areas of focus identified in the tribe's strategic plan – diabetes, cancer, and cardiovascular health. Participants indicated that the health division has a quality improvement committee that used clinical data to identify quality improvement projects, develop quality improvement plans, and track data over time.

While many of the projects described were clinical in nature, the integration between personal and community health services led to projects with public health benefits. Example projects of this nature included a dental sealant and fluoride treatment effort to improve the number treatments completed in the health centers and in the community; an immunization project to improve entry of immunizations into the immunization registry; and a BCCCP project to increase enrolment.

While the community health program had fewer examples of performance management and quality improvement activities, they did describe how data were used to guide informal improvement activities. For example, data were used to state the case for establishing new initiatives through the grant process, develop strategies to improve access to care for specific populations or health issues, inform policy development, inform program improvement, raise community awareness of health concerns, and develop health education materials.

HEALTH DIVISION STAFF SHARE WHAT THEY'VE LEARNED IN A VARIETY OF INFORMAL AND FORMAL WAYS

Participants identified formal and informal ways that they share lessons learned with colleagues. Participants discussed attending and presenting at conferences, including local conferences organized by the tribe. They also discussed developing materials or toolkits that are available online, making presentations to interested groups, holding trainings, and including information in newsletters. Participants described sharing lessons learned with federal partners through grant reporting and site visits. More informal methods of sharing lessons learned identified by participants included posting information on professional listservs, participating in advisory groups, and through conversations with colleagues.

GAPS IN SERVICES

Participants in both the key informant interviews and focus groups identified gaps in the services provided by the health division and its public health system partners.

Participants recognized that there were gaps in equitable access to **personal health services**. They highlighted barriers such as transportation (although there is a transportation program available to elders), limited locations, limited hours, and limited staff. They also noted that there was a lack of available psychiatric and substance abuse care, as well as too few providers outside the Tribe that

accept Medicaid. Participants indicated that community members and providers lack knowledge of all the services that are available, which limits service utilization.

There were gaps in **community health services** identified by participants, and participants linked these gaps to the grants providing an important source of community health funding. Participants noted that grants restrict what they can do and the degree to which they can adapt programs to meet the needs of the community. They also noted the instability in community health initiatives over time created by relying on time-limited grants.

Although participants described robust **health education services** provided by the Tribe, they also noted gaps. In particular, they identified the lack of funding for comprehensive health education campaigns, which they felt would be more effective than the more piecemeal approach that most projects can afford. Participants also noted challenges in engaging community members in in-person health education opportunities.

Through interviews, eco-maps, and network maps, participants identified robust **partnerships** across the public health system. However, they also noted gaps in partnerships, indicating that partnerships with parents, religious groups, businesses, the state and some local health departments, law enforcement and certain courts, behavioral health and community mental health, county human services, some hospitals, and institutions of higher education could be stronger. Additionally, participants noted that the time it takes to serve on or coordinate coalitions is rarely adequately accounted for and stretches staff thin. Finally, participants noted gaps in formal agreements between agencies that left them unsure about their roles and the proper steps or decisions necessary to protect and promote health, particularly in unique or unlikely situations.

Participants noted that shortages in staff and funding and the need for people to serve in multiple roles limited their confidence in the community's ability to **monitor, investigate, and respond to health threats**. Tribal participants also expressed concern about their reliance on state and local government as a result of experiences where the tribe has been overlooked in emergency situations.

Gaps in data useful for **assessment and planning** were highlighted by participants as well. They noted that secondary data often do not provide information about Native Americans or tribal members. They also described limitations of the data collected by the tribe that constrain how they can be used. For example, they described surveys that have been collected by programs with a small and non-representative sample of community members. Participants noted that they would like data on a variety of topics where currently no data exists, and they indicated that they are not fully aware of data collected by other departments or programs.

Additionally, participants indicated that their ability to **improve services** is limited by the lack of evidence-based practices that were validated with a Native American population. They also questioned the adequacy of their evaluation processes, indicating that there were few programs that had an outside evaluator or a comprehensive evaluation design. Finally, while the health division has a well-established system for monitoring and improving performance in the area of clinical services, a similar system for community health services was not developed.

The complexity of tribal jurisdiction: A monkey story

“...I mean those have been—those are still areas that we need some work. But we have broken down the barriers because we have precedent and we have done that now. And so I think that there are success stories in that—in that perspective.”

Louis works for the tribal Health Division. One day he receives a phone call from one of the local health officers, who tells him “I have got a monkey problem.” He proceeds to explain to Louis that a tribal member living on the reservation owns a rhesus monkey and the monkey has bitten and scratched some children who were visiting the home. The incident was reported to the county health department, but because it occurred on tribal land, the health department did not have jurisdiction, so they reached out to the Tribe’s Health Division. Louis decides that he needs to bring together the key parties, so he calls tribal law enforcement, the Tribal Board, and the health director. The health director decides to call the state lab to get more information on the health threat of a rhesus monkey, and finds out that they can carry diseases that can be spread to humans. Also, during the course of the investigation, they find out that the monkey was brought across state lines illegally. So, along with law enforcement, Louis addresses the monkey’s owners, telling them that they had violated several laws and that they needed to take the monkey off the reservation. So, the monkey was quarantined by county animal control while the Tribe worked on a plan for dealing with the monkey. They looked into several options which proved to not be viable options. Meanwhile, the monkey’s owners had begun a campaign to save the monkey, posting flyers all over town. In the end, they found a nature preserve in another state that was able to take the monkey, where he could live the rest of his life. This situation made a lot of progress in breaking down barriers between the Tribe and the local public health department, as they worked together to resolve the issue with mutual satisfaction. It also highlighted for the Tribe that fact that they did not have any tribal codes that addressed many issues that arose in this type of situation, and they were able to begin addressing those gaps.

DISCUSSION

This case study provides a starting point for building a research base for understanding tribal public health services and systems. The study addressed, in the context of one tribal public health system, the following research questions:

1. How are tribal public health systems conceptualized and organized by tribes, and why?
2. Who are the key actors and decision-makers within a tribal public health system, and why?
3. In what ways are tribal public health system partners monitoring system performance and tracking health outcomes?
4. How do the environment and infrastructure (organizational, financial, workforce) within a tribal public health system influence public health approaches, especially those addressing health disparities?
5. What influence do the environment, infrastructure, and inter-organizational relationships and interactions within a tribal public health system have on its ability to impact health disparities?

The answers to these questions were complex and interrelated, and, in many ways, aligned well with the conceptual framework that guided the study. This discussion uses the conceptual model as a framework for describing the study's core findings, and based on the findings, the conceptual model was modified as displayed in Figure 6 (p.105).

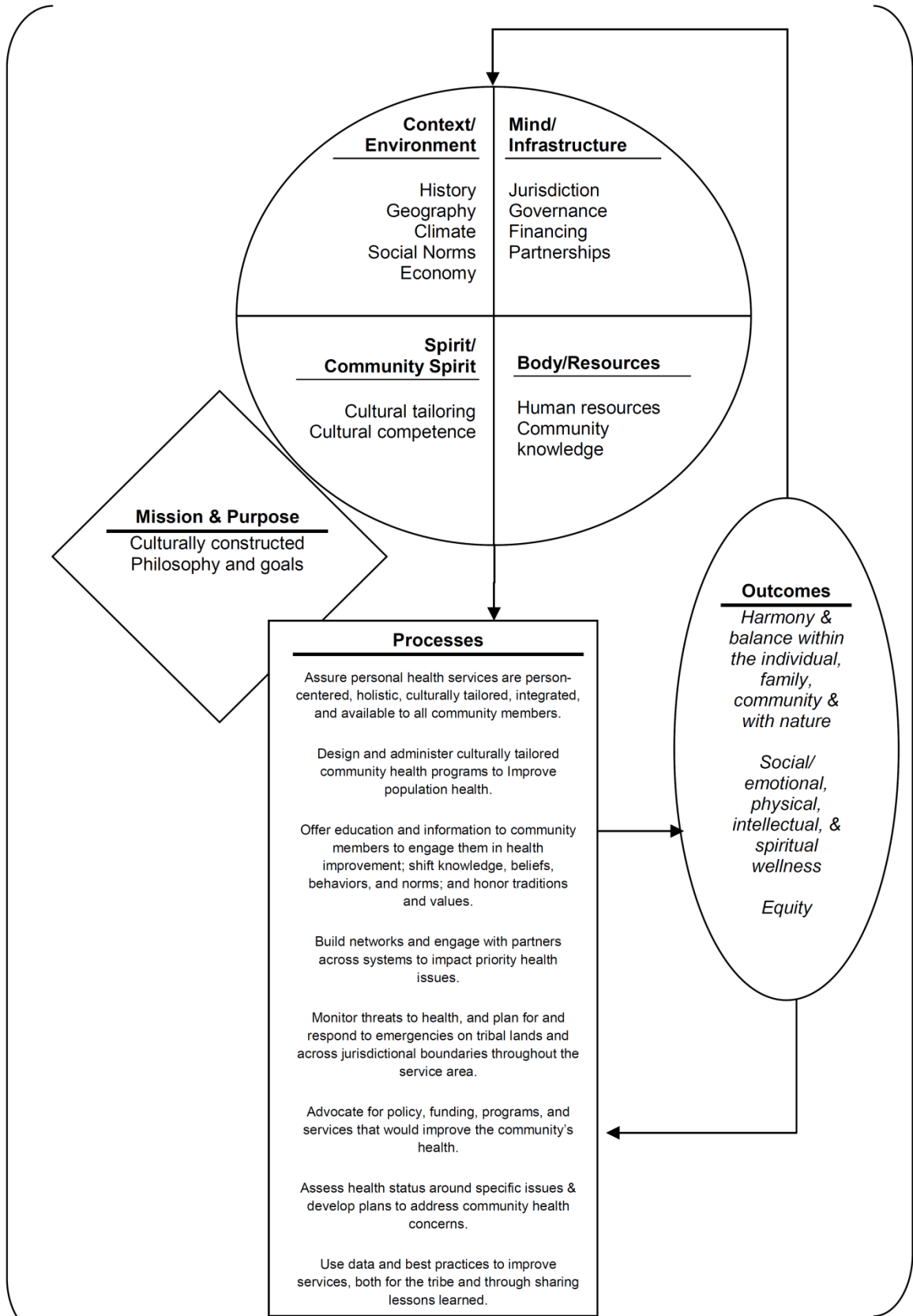


Figure 4. Tribal Public Health System Framework

PURPOSE, GOALS AND MISSION

The definition and purpose of public health, as conceptualized by participants, was mostly consistent with the CDC Foundation's and World Health Organization's definitions of public health, which describe public health as focused on protecting and promoting the health of entire populations through a broad array of organized strategies which create conditions in which people can be healthy and supporting healthy practices and behaviors through assessment, policies, and assurance of access to health care (CDC Foundation, 2015; World Health Organization, 2015). However, there were a few differences. The definitions were similar in their focus on prevention and on a broad spectrum of activities that creates conditions in which all people can be healthy. The most notable differences were that participants from tribal organizations identified preservation of culture as a major goal of public health, and working together was deemed an important aspect of defining the purpose of public health. The inclusion of concepts like cultural preservation, collectivism, and collaboration described by participants reinforced the idea that the purpose, mission, and goals of the tribal public health system were culturally constructed by system participants.

Traditional practices among tribal communities are an integral to cultural identity, indigenous knowledge, and community wellbeing. Traditions are an important aspect of culture and often serve as the foundation for disease prevention and health promotion for many Tribal health agencies (NIHB, 2012b). Traditional Medicine was an essential component of public health services and health care delivery within the tribal public health system. Traditional practices are intrinsically holistic in nature, in that they include cultural practices and beliefs which focus on the whole person and their overall wellbeing. As Isaacs and colleagues describe (2005), the core of all traditional practices "is the use of cultural belief system and traditions as tools to restore and strengthen the cultural self and positive place in the collective community" (p. 16). The significant role of the Traditional Medicine program within the tribal public health system communicated the importance of balancing Western medical models with traditional healing and created a system that honored cultural wisdom in public health practice. Moreover, the way in which tribal departments partnered with the Traditional Medicine program to deliver services illustrated the commitment to the shared goals or providing integrated, community-based services, preserving culture, and mission to improve individual health and community wellbeing.

STRUCTURAL AND SOCIOCULTURAL CONTEXT

Within the conceptual framework for the study, the structural components of the system, along with the sociocultural context, are depicted as a medicine wheel in order to emphasize the relationships between these factors. This emphasizes the interrelated nature of the public health system's structural capacity and the broader social and cultural context within which the system exists. Each of these elements was found to play an important role in the structure, organization, and performance of the tribal public health system.

MIND/INFRASTRUCTURE

The study findings highlight several aspects of infrastructure that are important for understanding how the tribal public health system operates, including tribal sovereignty and self-determination; the lasting influence of IHS and the reliance on grant funding for public health activities; and the importance of partnerships and relationships in public health activities.

SOVEREIGNTY

Providing for health of the tribal membership is a pillar of sovereignty and exercising self-determination for tribal governments. The identities of tribes as sovereign nations rely upon their abilities to effectively self-govern, to make effective decisions about their health system infrastructure and to protect the wellbeing of members through policies and practices. As a self-governance Tribe, it was the Tribe's responsibility to provide public health programs, services, activities and functions directly for the wellbeing of the tribal community. The Tribal Board was responsible for establishing public health laws and determining when the tribal community will be subjected to state public health laws, because of tribal sovereignty. Elected tribal leaders were actively and directly involved in oversight and management of public health programs. This degree of involvement in the "everyday" activities which constitute delivery of essential public health services is not common in local and state public health systems (Hyde & Shortell, 2012).

The importance of adoption and enforcement of public health laws and establishment of public health authority in matters which threaten the health of the public cannot be overstated. For the Tribe, as has been described in the literature, jurisdictional authorities in matters of public health significance were complex because public health services were spread across tribal, county, state, and federal public health systems. This created the potential for an overwhelming number of agreements to be established, particularly around emergency preparedness. Development of policies and adoption of resolutions by the Tribal Board to address gaps identified in jurisdictional authority was commonly done in response to a new emerging threat. Further, consistent enforcement of tribal policies was raised as a concern by participants, such as enforcement of smoke-free worksite policies, suggesting that authority for enforcement of some public health policies may be undetermined or unclear.

These findings are consistent with a review of tribal legal codes done by Bryan and colleagues (2009) that found that less than 10% included legal provisions for the establishment of tribal health boards or health divisions, and none of those clearly articulated the public health authority of those entities. The Tribe did not have a legal provision establishing public health authority, nor a legal framework that outlined the powers and duties of the Board, Health Board, or Health Division, with respect to key services of public health. However, participants commonly recognized the Tribal Board as having these responsibilities, by default of being the governmental authority for the Tribe.

Notably, the Tribe appeared to carry out policy development in ways which were closely aligned with elements of a Health in All Policies approach. HiAP is a collaborative approach that emphasizes the incorporation of health considerations into decision making across various sectors and policy arenas (Rudolph et al., 2013). Germane to this approach is the explicit recognition of the social determinants of health and the role of the social, physical and economic environments. A substantial number of tribal codes (including non-health sectors) specifically included goals and provisions for the protection and

promotion of health, including the child welfare, juvenile code, land use ordinance, barring individuals from tribal lands, gaming ordinance, housing authority ordinance, and building authority ordinance. Additionally, staff in the Tribe's community health program supported their tribal and non-tribal partners' policy change efforts, such as smoke-free campus policies. A more in-depth understanding of the policy making process and the degree to which there was collaboration across diverse sectors and a focus on informing decision makers about the potential health consequences of these policies would be needed to determine if the approach truly exemplified an HiAP model.

THE TRIBAL PUBLIC HEALTH SYSTEM IS SHAPED BY THE HISTORICAL ROLE OF IHS AND CURRENT RELIANCE ON GRANT FUNDING FOR PUBLIC HEALTH ACTIVITIES.

The historical role of the IHS in the provision of health services to tribes has shaped the infrastructure of the tribal public health system. Because the IHS provided health care services directly to American Indians and Alaska Natives until the mid-1970s, when the Indian Self-Determination and Education Assistance Act (P.L. 93-638) provided tribes with the authority to administer health programs in their own communities by entering into contracts and compacts with IHS, it has had a strong and lasting impact on the organization of health care and public health services within tribes. This could be seen in the case study site in terms of the influence of IHS on the Tribe's legal codes, service delivery model, and financing.

The tribal Health Division received 59% of its funding from IHS and the funding agreement with IHS included provisions for direct patient care and public health services. However, funding from IHS did not meet the community's need, leaving an unmet need for *medical services* of around 50%. This level of unmet need resulted in the Tribe allocating much of its IHS funding to health care services and funding much of the work around prevention and public health with grants.

The fact that public health was funded largely through grants had several impacts on the public health system, both positive and negative. One positive impact of the centrality of grant funding in public health activities was that the writing of grants helped to forge partnerships within the tribal public health system. Another positive result of grants was that grant requirements were a driving force behind many of the health assessment and planning activities described by participants. However, both of these positive impacts can be accomplished without having to rely on grant funding and, in many ways, the fact that grants drove activities of the public health system was problematic. Participants felt a sense of instability in public health programs and services, because they had come and gone. This was particularly difficult when programs were a good match for the community and provided a needed service. Additionally, grant requirements sometimes made it difficult to tailor programs to the cultural context and needs of the community, which some felt made them less effective.

THE TRIBAL HEALTH DIVISION IS EMBEDDED WITHIN A NETWORK OF DIVERSE PUBLIC HEALTH PARTNERS.

Data from the eco-maps presented a public health system that is comprised of organizations from a wide variety of sectors. In all, the system included 20 sectors, specifically the Tribal Health Division (tribal health department), governmental public health, health care providers, mental health providers,

public safety, human service, environmental organizations, education or youth development, economic planning and development, court and criminal justice, media, recreation or arts-related organizations, other tribal organizations, private employers/businesses, non-profits or charities, community groups, governing authorities, governmental administration, state agencies, and federal agencies. Within this network, the Tribal Health Division had connections to organizations in all of the 19 other sectors. Furthermore, the Health Division had the highest degree centrality and betweenness centrality in the network.

These findings illustrate the breadth of partnerships that the Health Division has developed to protect and promote the health of tribal members across the Tribe's service area, from the court system, to elder services, to recreation centers. They also illustrate the importance of the Health Division within that system. No other sector had connections to all others, and staff of the Health Division often served as a bridge between different sectors of the public health system.

PERSONAL AND PROFESSIONAL RELATIONSHIPS ARE FUNDAMENTAL TO THE FUNCTIONING OF THE TRIBAL PUBLIC HEALTH SYSTEM.

Just as relationships are an important aspect of the relational worldview model (Cross, 1997), they were also an important aspect of the tribal public health system. Moreover, just as the CIRCLE community capacity building process developed by Chino and DeBruyn (2006) emphasizes moving beyond mainstream capacity building strategies and spending more time to build relationships and skills in order to create a positive collective identity, so too did the tribal public health system experience success by embodying the elements of this model intrinsically.

Partnerships were identified as a critical component of delivering public health services and many public health achievements were the result of partnering across organizations. These organizational relationships, however, were facilitated by strong relationships between individuals. Many of the formal organizational relationships within the public health system began with relationships between key people. The downside to the importance of personal and professional relationships, however, is that when relationships are lost, such as through staff turnover, it can affect organizational partnerships and the work being done through those partnerships.

BODY/RESOURCES

Public health systems require a variety of resources in order to deliver public health services, such as informational resources, organizational resources, physical resources, human resources, and fiscal resources (Handler et al., 2001). While all of these resources were important to the tribal public health system, the case study found that human resources, or the lack thereof, had a very large impact on the functioning of the system. Furthermore, findings suggested an additional resource that is missing from Handler et al.'s (2001) model: Community knowledge.

COMMUNITY HEALTH STAFF HAVE BEEN A DRIVING FORCE IN THE COMMUNITY, LEADING POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGE.

Community health staff were described as playing a key role in moving public health work forward in the community. They developed partnerships throughout the service area, coordinated coalitions, helped bring in grant funding, and assisted community partners with policy change efforts. These activities resulted in tangible changes in the community, such as bike programs, community gardening, farmers markets, Safe Routes to School, and smoke-free policies. Interview participants identified community health staff as key actors who were influential in protecting and promoting the health of the community. This was reflected in the eco-map analysis, which identified a program coordinator in the community health program as having the highest individual betweenness centrality in the network, meaning this person often served as a bridge between others in their public health work.

THE TRIBE'S COMPREHENSIVE STRATEGY FOR DEVELOPING THE HEALTH CARE WORKFORCE WAS NOT EXTENDED TO THE PUBLIC HEALTH WORKFORCE.

Assuring a competent public health workforce is a standard for public health performance according to the 10 EPHS and the PHAB Standards and Measures. The tribal Health Division has in place a system to attract talented and qualified health care providers to the area and to support the professional development of their health care staff. This includes financial support for trainings and education, such as an annual allowance for continuing education units (CEUs). This system helps to ensure a competent health care workforce for tribal members and their families. However, there was not such a system in place for public health staff. Oftentimes, training for public health staff was reliant on the availability of funds for training within grants, meaning it was not widely and equitably available.

THE TRIBE'S APPROACH TO EVALUATING PUBLIC HEALTH PROGRAMS ALIGNS WITH A PRACTICE BASED EVIDENCE APPROACH BY VALUING COMMUNITY KNOWLEDGE AS A RESOURCE.

Evidence Based Practices (EBPs) are often based on research that does not include diverse participants and can be inconsistent with the culture of Native communities (Kagawa et al., 2015; Kaur Legha et al., 2012; NIHB, 2012b). Practice Based Evidence (PBE) provides an alternative that values cultural attributes, belief systems, and traditions (Isaacs et al., 2005). One key element of PBE is that they are tailored to community knowledge of what works, and PBEs are accepted as effective by the local community through community consensus.

The concept of PBE aligns well with how the Health Division and their partners approached the provision of public health programs and services. Participants from tribal organizations discussed the problem of implementing EBPs in a community where they had not been validated, and explained how they adapted EBPs to better fit the tribal community when possible. Furthermore, one of the main ways the Tribe evaluated public health programs and services was to solicit feedback from clients, either formally or informally, through such means as feedback forms, satisfaction surveys, personal conversations, and suggestion boxes. This approach to evaluation represents a valuing of community knowledge and fits with the principle of PBE that effectiveness is measured through community consensus. Such an approach assists the Tribe in ascertaining how well programs are working in their particular cultural context.

SPIRIT/COMMUNITY SPIRIT

Although individual tribal members varied in the extent to which culture was central to their understanding of health, the study found that, overwhelmingly, culture was a highly integral part of the structure, organization, and performance of the tribal public health system. In terms of the impact of culture on the system, the study found that tribal agencies valued a culturally-sensitive approach to public health and tailored their services to the tribal community. However, most non-tribal participants did not have a thorough understanding of the Tribe's culture and struggled to understand how and when to culturally tailor their services to tribal members.

PUBLIC HEALTH SERVICES DELIVERED BY TRIBAL AGENCIES WERE CULTURALLY SENSITIVE AND TAILORED TO INDIVIDUALS AND THE COMMUNITY.

Tribal public health agencies demonstrated the use of cultural sensitivity consistent with the two levels of the Resnicow and colleagues (2000) model, which are surface structure and deep structure. At the surface structure level, there were many examples of incorporating language, symbols, and food commonly associated with the tribal culture into public health activities, events, and materials. However, some tribal agencies talked about approaches to public health services which demonstrated cultural sensitivity at the deep structure level, such as acknowledging the role of historical trauma, consideration for the importance of familial relationships in working with people, and providers encouraging individuals to seek traditional healers and practice ceremonies to address health concerns.

NON-TRIBAL PARTICIPANTS OFTEN FELT THEY LACKED THE KNOWLEDGE OR CAPACITY TO APPROPRIATELY CULTURALLY TAILOR THEIR SERVICES TO TRIBAL MEMBERS.

When compared with the Tribe's approach to service delivery, non-tribal participants often viewed tribal members as only part of the broader community, which overlooked their unique strengths and needs. This may have created a barrier to engaging tribal members in services offered by non-tribal agencies and reduced the capacity of the broader public health system to adequately address health disparities. Further, examples of cultural tailoring by non-tribal agencies were limited and surface level. Non-tribal agencies placed responsibility for culturally tailoring services on the Tribe and used this as their explanation for why the Tribe may be best suited to serve tribal members. However, as others have documented (Isaccs et al., 2005; Kagawa et al., 2015; Resnicow et al., 2000), there is diversity within the Tribe's membership with respect to cultural identity and practices, and employing culturally sensitive approaches may be a valuable way for non-tribal agencies to expand the capacity of the Tribe to address health disparities.

CONTEXT/ENVIRONMENT

The tribal public health system was heavily influenced by a number of factors related to the broader context within which it was situated. In particular, the economic context and the rural setting of the Tribe's jurisdiction influenced the ability of public health system partners to protect and promote the health of the community.

PUBLIC HEALTH SYSTEM ACTIVITIES WERE INFLUENCED BY THE BROADER ECONOMIC CONTEXT.

The regional economy within the jurisdiction of the tribal public health system had been hit hard by the national recession. This had an impact on the funding of public health programs and services, adding to the already insufficient financial resources. Additionally, the socioeconomic status of the population impacted the reach of public health services, especially regarding access and transportation. The high level of poverty in the area, and among tribal members in particular, created barriers to health, such as a lack of ability to afford healthy foods. While public health system partners worked hard to assure health services and administer community health programs to protect and promote the health of tribal members, these economic conditions created difficulties in their ability to do so.

CHARACTERISTICS OF THE RURAL SETTING HEAVILY INFLUENCED SYSTEM ORGANIZATION AND PERFORMANCE.

The rural setting was a major factor in the organization of the tribal public health system and influenced community health status. In particular, the rural setting impacted individual access to services. Despite the Tribe's efforts to create equitable access to services across the service area through enhancing infrastructure, allocating resources to expanding locations, and using a wide variety of service delivery strategies, certain barriers persisted for people living in the more rural areas, such as lack of access to transportation and inclement weather. This finding is consistent with the results of the NIHB Tribal Public Health Profile (2010) which found Native communities often face a number of barriers in accessing health care, and assuring access to care was found to be an important function of tribal health organizations.

The rural setting impacted the functioning of the system in other ways as well. The challenges of the rural setting created an even greater need for partnering to deliver essential services. Put simply, the rural setting has fewer people, organizations, and resources. Staffing shortages, turnover, individuals fulfilling multiple roles, and limitations in organizational resources were related to a strong desire and need to partner with other agencies on shared goals. The Tribe was viewed as a major organizational resource for the region, in terms of the staff capacity and financial resources it was able to acquire and put towards collaborative, community-based efforts.

PROCESSES OR SERVICES

One of the central questions explored by this study was the degree to which the 10 EPHS (Harrell & Baker, 1994) and PHAB's translation of these services into a set of domains, standards, and measures for public health accreditation (PHAB, 2013) aligned with and accurately described the services delivered by the Tribe. While there was substantial overlap between the services delivered by the Tribe and the 10 EPHS, there were also key differences.

The 10 EPHS include:

1. **Monitor** health status to identify and solve community health problems.
2. **Diagnose and investigate** health problems and health hazards in the community.
3. **Inform, educate, and empower** people about health issues.

4. **Mobilize** community partnerships and action to identify and solve health problems.
5. **Develop policies and plans** that support individual and community health efforts.
6. **Enforce** laws and regulations that protect health and ensure safety.
7. **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. **Assure** competent public and personal health care workforce.
9. **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services.
10. **Research** for new insights and innovative solutions to health problems.

PHAB's Standards and Measures include:

1. Conduct and disseminate **assessments** focused on population health status and public health issues facing the community.
2. **Investigate** health problems and environmental public health hazards to protect the community
3. **Inform and educate** about public health issues and functions.
4. **Engage with the community** to identify and address health problems.
5. Develop public health **policies and plans**.
6. Enforce **public health laws**.
7. Promote strategies to improve **access to health care**.
8. Maintain a competent public health **workforce**.
9. Evaluate and **continuously improve** processes, programs, and interventions.
10. Contribute to and apply the **evidence base** of public health.
11. Maintain **administrative and management** capacity.
12. Maintain capacity to engage the public health **governing entity**.

The services delivered by the Tribe's public health system included:

- Assure personal health services are person-centered, holistic, culturally tailored, integrated, and available to all community members.
- Design and administer culturally tailored community health programs to Improve population health.
- Offer education and information to community members to engage them in health improvement; shift knowledge, beliefs, behaviors, and norms; and honor traditions and values.
- Build networks and engage with partners across systems to impact priority health issues.
- Monitor threats to health, and plan for and respond to emergencies on tribal lands and across jurisdictional boundaries throughout the service area.
- Advocate for policy, funding, programs, and services that would improve the community's health.
- Assess health status around specific issues and develop plans to address community health concerns.
- Use data and best practices to improve services, both for the tribe and through sharing lessons learned.

THE 10 EPHS AND PHAB'S DOMAINS ALIGN WELL WILL HOW THE TRIBAL PUBLIC HEALTH SYSTEM EDUCATES PEOPLE ABOUT HEALTH ISSUES; DIAGNOSES AND INVESTIGATES HEALTH PROBLEMS; MOBILIZES COMMUNITY PARTNERSHIPS; ENGAGES WITH THE POLICY MAKING PROCESS; AND USES RESEARCH FOR NEW INSIGHTS AND INNOVATIVE SOLUTIONS.

The 10 EPHS and PHAB's Domains accurately aligned with several public health services delivered by the Tribe. The third EPHS is *'Inform, educate, and empower people about health issues,'* and PHAB Domain three is *'Inform and educate about public health issues and functions.'* This aligned closely with how participants described the work of the Tribe's public health system to *'Offer education and information to community members to engage them in health improvement; shift knowledge, beliefs, behaviors, and norms; and honor traditions and values.'* Participants described using a range of health education strategies to reach different audiences to achieve various goals. Additionally, they emphasized adapting health education messages and strategies to the community's sociocultural context.

The second EPHS is *'Diagnose and investigate health problems and health hazards in the community,'* and second PHAB Domain two is *'Investigate health problems and environmental public health hazards to protect the community.'* This aligned with the Tribe's efforts to *'Monitor threats to health, and plan for and respond to emergencies on tribal lands and across jurisdictional boundaries throughout the service area.'* Participants described how the Tribe identified and investigated threats, as well as how they communicated threats and responded to emergencies. In order to deliver this service, the Tribal Health Division worked in partnership with local and state public health and other tribal and non-tribal system partners. Participants pointed to many examples of successful partnership and collaboration, particularly with local agencies, and they identified challenges as well.

The fourth EPHS is *'Mobilize community partnerships and action to identify and solve health problems,'* and PHAB Domain four is *'Engage with the community to identify and address health problems.'* One of the most pervasive and complex activities described by participants was the tribal public health system's efforts to *'Build networks and engage with partners across systems to impact priority health issues.'* The Tribe had partnerships across sectors and identified concrete and specific strategies implemented through these partnerships to protect and promote health. Partnership was central to each public health service delivered by the Tribe. It was described as a core component of the Tribe's capacity to deliver services in a rural context where need far outstripped resources dedicated to public health.

The sixth EPHS is *'Develop policies and plans that support individual and community health efforts,'* and PHAB Domain six is *'Enforce public health laws.'* While participants described planning as a service that was more closely connected with monitoring and assessment than policy, they did identify policy development as a public health service. Participants indicated that community health staff *'Advocate for policy, funding, programs, and services that would improve the community's health.'* Community health staff and their public health system partners played an important role in educating the Tribal Board and other tribal and non-tribal stakeholders about policy options to improve community health. Participants pointed to multiple examples of successful policy efforts, as well as areas of policy development they would like to continue to pursue.

The tenth EPHS is *'Research for new insights and innovative solutions to health problems,'* and PHAB Domain ten is *'Contribute to and apply the evidence base of public health.'* While participants did not describe the tribal public health system as routinely engaging in research they did describe how they *'Use data and best practices to improve services, both for the tribe and through sharing lessons learned.'* A critical component of this EPHS is putting research into practice, and participants described the many ways they use and, importantly, adapt evidence-based practices in order to provide the most effective services they can for the Tribe.

WHEN COMPARED WITH THE 10 EPHS AND PHAB'S DOMAINS, THE TRIBE HAD GAPS IN SERVICES AROUND ENFORCING LAWS AND REGULATIONS THAT PROTECT HEALTH AND ENSURE SAFETY; AND ASSURING A COMPETENT PUBLIC HEALTH WORKFORCE.

There were two components of the 10 EPHS that were not described as part of the Tribe's public health system. The sixth EPHS is *'Enforce laws and regulations that protect health and ensure safety,'* and PHAB Domain six is *'Enforce public health laws.'* This service reflects the authority and responsibility of public health to enforce public health laws such as sanitary codes, infectious disease tracing, clean air standards, immunization requirements, isolation and quarantine decisions, and so forth. Health Division staff did not see themselves as having the authority to enforce public health laws, and, indeed, the Tribal Code did not grant public health authority to any entity. As such, by default rather than by rule, the Tribal Board was seen as responsible for enforcing public health laws and regulations.

The second component of the 10 EPHS that were not described as part of the Tribe's public health system was EPHS eight *'Assure competent public and personal health care workforce'* or PHAB Domain eight *'Maintain a competent public health workforce.'* While the Tribe described clear systems for tracking and assuring personal health care providers receive required ongoing professional development, they did not describe systems or processes for assessing the needs of the public health workforce, assuring public health workforce development, or providing public health system partners with professional development opportunities that align with their needs.

THE TRIBE DESIGNS AND ADMINISTERS COMMUNITY HEALTH PROGRAMS.

The Tribe described several services they provided in a way that was substantively different from the 10 EPHS or PHAB's Domains. One of the services provided by the Tribe's public health system partners that is not reflected in the 10 EPHS or PHAB was *'Design and administer culturally tailored community health programs to improve population health.'* The Tribal public health system commits resources to addressing community health needs by identifying and writing grants, designing and tailoring programs, and implementing and improving those programs. These activities require content expertise and administrative capacity. While this type of activity is not reflected in the 10 EPHS, it is more clearly recognized in other frameworks such as the Minimum Package of Public Health Services.

THE TRIBE'S APPROACH TO ASSESSMENT AND PLANNING IS DYNAMIC AND IMPACTFUL BUT NOT ROUTINIZED.

Two of the 10 EPHS and PHAB's Domains relate to assessment and planning activities, specifically the first EPHS *'Monitor health status to identify and solve community health problems,'* the fifth EPHS described above, PHAB Domain 1 *'Conduct and disseminate assessments focused on population health status and public health issues facing the community,'* and PHAB Domain 5 described above. Assessment and planning were described as one process for the tribal public health system, and the service provided by the tribe was described as *'Assess health status around specific issues and develop plans to address community health concerns.'* However, the way these services are framed and operationalized through the EPHS and by PHAB differs from the way participants described delivering them within the Tribal public health system. Based on both interview findings and document review, assessment and strategic planning have played a powerful role in shaping health priorities for the Tribe over the past 15 years. They identified key health issues and disparities, and they pursued evidence-based, multi-level strategies to address these disparities at the population level. Additionally, over time, a series of community driven, collaborative plans have been developed to guide community health improvement goals related to a variety of health outcomes.

The EPHS and PHAB describe a broad, iterative, and collaborative assessment and planning process that result in a health assessment linked to a health improvement plan that is linked to an organizational strategic plan. PHAB specifically expects that a broad assessment and planning process will be ongoing with a formal assessment and plan published every five years at a minimum. While the Tribe has effectively used collaborative assessment and planning processes to improve community health outcomes, their approach was described as more dynamic, more focused on specific health issues, and less routine.

THE TRIBE'S APPROACH TO EVALUATION AND QUALITY IMPROVEMENT EMPHASIZES THE NEEDS OF THE CUSTOMER.

The ninth EPHS is to *'Evaluate effectiveness, accessibility, and quality of personal and population-based services,'* and PHAB Domain nine is *'Evaluate and continuously improve processes, programs, and interventions.'* PHAB's related Standards and Measures focus on establishing a performance management and quality improvement system for the public health agency. The Tribal public health system *'Uses data and best practices to improve services, both for the tribe and through sharing lessons learned,'* but its approach centers on improving programs based on the needs and the concerns of the customer. Evaluation activities tend to prioritize customer feedback, and when asked about program outcomes, participants raised concerns about data availability and quality. In some cases, participants describe comprehensive evaluation activities that were put in place to meet funding requirements, but smaller scale evaluation activities were more common. Finally, while the Tribe had performance management and quality improvement systems in place for its personal health services, its public health system broadly did not have such systems in place.

THE TRIBE'S PROVISION OF COMMUNITY AND CLINICAL SERVICES PROVIDES A MODEL FOR WHAT INTEGRATION LOOKS LIKE IN PRACTICE.

The Tribe's provision of personal health services went well beyond the seventh EPHS *'Link people to needed personal health services and assure competent public and personal healthcare workforce'* and

PHAB's Domain seven *'Promote strategies to improve access to care.'* The service provided by the tribe could be more accurately described as *'Assure personal health services are person-centered, holistic, culturally tailored, integrated, and available to all community members.'* Assuring the provision of personal health services and health care was at the core of the Tribe's public health system. The Tribe decided how and where services will be provided, by whom, and at what cost. They were responsible for assuring that all community members had access to care, although there were barriers to fully realizing this goal, and that the care provided was of high quality. They also made sure care was integrated to meet the needs of the whole person within the context of their family and community and over the life course. For example, participants described the warm connections they made for clients between clinical and community services and with their well-integrated traditional medicine.

While what the Tribe provided went well beyond what 10 EPHS or PHAB suggests is the role of public health, their approach reflects the Tribe's history, policy, pursuit of self-determination, compact with HIS, and other forces. Their approach assures that health care plays a meaningful role in improving population health outcomes. This service was structured to meet that goal.

THE SERVICES PROVIDED BY THE TRIBE ARE DESIGNED TO FIT THE TRIBE'S SOCIOCULTURAL CONTEXT.

Making sure that the services they deliver align with their culture was at the heart of how participants described the Tribe's service delivery model. Across all services – from education to policy development to evaluation to health care – integrating culture and adapting to the social context were described as primary strategies for making sure what they do works to improve the health of the community. Adapting services to the sociocultural context is not part of the 10 EPHS, but is critical to the work of this Tribe.

OUTCOMES

The majority of health outcomes, such as preventable chronic disease, are the result of complex interactions between individual, community/cultural and environmental factors. The effect of context is an important part of understanding and addressing these public health issues. While the Western approach places high value on observations and measurements, Indigenous ways of knowing are based on relationships, interconnections, and remembering (Isaacs et al., 2005; NIHB, 2012b). Consistent with indigenous ways of knowing, the outcomes of the tribal public health system are discussed with respect to consistency in culturally constructed definitions of health among community members and health priorities for public health system partners. Further, holistic health was identified as a primary outcome of a well-functioning tribal public health system (rather than the elimination of disparities).

CULTURAL CONSTRUCTION OF HEALTH OUTCOMES AND IDENTIFICATION OF PRIORITY HEALTH CONCERNS WERE CONSISTENT BETWEEN COMMUNITY MEMBERS AND PUBLIC HEALTH SYSTEM PARTNERS WITHIN THE TRIBE

Community members who participated in focus groups defined health in a manner that encompassed physical, mental and social well-being, and not just the absence of disease. However, tribal community members' conceptualization of health also went beyond the health status of the individual and described aspects involving the way in which people live and the contextual or environmental factors that also influence health.

Although the degree to which community members ascribed to traditional cultural teachings and practices varied widely, there was still a sense that cultural preservation was important to individual and community wellbeing. The belief that passing down traditional ways of life will help keep children healthy was expressed, as was acknowledgement that participation in cultural events where you learn about traditions and history are beneficial for health because these experiences improve spiritual wellbeing.

Woven into community members definitions of health and wellbeing, were also connections to the physical or natural world. For example, youth participants talked about learning how to garden as a positive activity to not only be healthy but also as a good way to learn some of the cultural practices of gardening and traditional medicines. Many of the elders in particular tied their definition of good health to being able to be to do things outside like walking and gardening. This belief that the natural world is connected to the health of individuals fits with the importance that key informant interview participants placed on creating healthy environments and environmental protection more broadly.

Community member opinions about the priority health issues affecting their community were consistent with what data identified as health disparities. This suggests that community members possessed inherent wisdom about what issues were of greatest priority for the public health system to address. Notably, community members had concerns about other health issues for which there was no population data measuring the specific health outcome, such as substance abuse. These gaps in data could create some challenges for public health system partners in planning and implementing strategies to bring about measurable population level improvements.

HOLISTIC WELLBEING WAS A PRIORITY HEALTH OUTCOME RATHER THAN ELIMINATION OF HEALTH DISPARITIES

The tribal population experienced a substantial burden of chronic disease, mental health, and substance abuse issues. There were measurable differences in the rates of these health outcomes between the tribal adult population and the general state population, as well as within the tribal adult population according to various measures of socioeconomic status. Generally, tribal adults had rates that were disproportionately higher than the state rates, with the exceptions of access to care and use of preventive health care services. Further, tribal adults with lower levels of household income and lower levels of educational attainment suffered a greater burden of poor health outcomes.

Given the disparities which existed in the community, and the emphasis on reducing health disparities and promoting health equity as major goals within the broader US public health system (CDC, 2009), one might anticipate that this goal would be explicitly communicated within this community as well. However, interview participants did not emphasize eliminating disparities as they discussed their goals

for community health. Rather, participants from tribal organizations focused on promoting the most optimal level of health possible for everyone, with particular emphasis given to addressing tribal member health holistically (social, physical, intellectual, spiritual) and promoting wellbeing relationally. At an individual level, this involved addressing all aspects of a person's familial and community relationships relative to their own health across the lifespan, and at the community level, this involved working through personal and professional relationships across programs, departments, and sectors to accomplish shared, holistic community health goals.

This way of conceptualizing health outcomes is consistent with the relational worldview which accepts complex relationships between many interrelated factors in one's circle of life (Chino & DeBruyn, 2006; Hodge et al., 2009; Kaur Legha & Novins, 2012). This finding suggests that a systematic approach to studying any cause and effect relationship between public health system performance and any single health outcome in this tribal community would not adequately assess how well the system is doing with respect to accomplishing outcomes consistent with the culturally constructed goals. The tendency for public health evaluation and research to use a set of health indicators, such as the Community Health Status Indicators, to measure outcomes with respect to performance may have even deeper limitations within a tribal community context where there could be a misalignment of performance goals and outcome measures that exist inherently within the system.

FUTURE DIRECTIONS

This section includes a set of ideas that we believe warrant further attention based on study findings. These ideas were derived inductively based on emergent themes of this study. These ideas should be fully vetted by tribal stakeholders, and they are not intended to be interpreted as recommendations that represent the diverse needs and priorities across Indian Country. However, we have found that these ideas echo the ideas of many researchers, practitioners, tribal leaders, advisory groups and committees that walked this road long before our study began. In fact, our ideas aligned well with the wisdom and experience harvested through processes led by National Indian Health Board, Red Star Innovations, and numerous tribal organizations in the field. We honor their experience and wisdom here, and we seek to describe how our research provides further nuance and descriptive information using one case study as an example.

BUILD RESOURCES TO SUPPORT DEVELOPMENT OF TRIBAL PUBLIC HEALTH CODES, ORDINANCES, AND LAWS TO CLARIFY PUBLIC HEALTH AUTHORITY, RESOLVE JURISDICTIONAL ISSUES, AND REINFORCE TRIBAL SOVEREIGNTY.

This case study highlighted the importance and potential pitfalls of not having a comprehensive public health code, and in particular, provisions clarifying public health authority within tribes. While tribes are inherently public health authorities by the nature of their sovereignty, delegating public health authority to entities within the Tribe to act on the behalf of the Tribal Board can help clarify who is responsible for carrying out public health duties and functions. Such a provision can also provide the authority to adopt regulations necessary or appropriate to implement or carry out those duties and functions. Both of these elements help place tribes in the best position to exercise sovereignty in the realm of public health.

Tribal public health codes and authority are particularly important in situations of public health emergencies, such as disease outbreaks and natural disasters. Emergencies that cross jurisdictional boundaries onto tribal lands raise questions about which governmental entity (local, state, federal or tribal) will respond and in what manner. Public health laws, codes, and ordinances clarify these roles and actions prior to an event, and are opportunities to reinforce tribal sovereignty by explicitly outlining the government-to-government relations in these types of situations. Further, clearly establishing public health authority for emergencies helps ensure tribes with gaps in response capacity have access to the necessary resources through cross-jurisdictional sharing. In fact, the tribal public health agenda that culminated from a comprehensive tribal stakeholder engagement process, and was laid out by Redstar Innovations in the Blueprint report, identifies one of the key goals as strengthening public health authority as a function of sovereignty (Hernandez et al., 2015).

Organizations like the National Congress of American Indians (2015) and Great Plains Tribal Chairmen's Health Board (2005) have already published resources related to tribal laws, ordinances, and codes to protect public health and establish public health authority. Such resources should continue to be developed and distributed widely to tribes.

EXPLORE FINANCING OPTIONS FOR TRIBAL PUBLIC HEALTH THAT DECREASE RELIANCE ON GRANT FUNDS AND FUNDS ADMINISTERED THROUGH STATE HEALTH DEPARTMENTS.

Investing in public health infrastructure creates a necessary foundation for consistent, high quality public health services. Investments in tribal public health infrastructure are inadequate. Currently, the major funding sources for public health services available to Tribes are limited, and they often come with strings attached which impose upon tribal sovereignty. Workforce development, for example, requires longer term, sustainable investments in order to build true capacity in public health core competencies.

In this study, we observed how grant funding as a major source of financial support for tribal public health services both help and hinder infrastructure, capacity, and performance. Given the routine and severe underfunding of IHS, and difficulty moving toward equitable distribution of federal grant funding to tribes, existing financial means for supporting tribal public health are inadequate. Furthermore, tribes with public health infrastructure that is less developed than the case study site likely experience difficulty obtaining grant funds, placing them in an even more limited position when trying to provide public health services to their communities.

Our case study illuminated how a robust tribal public health system could encounter major barriers to delivering public health services if it relies upon funding sources with restrictions and struggles to maintain effective communication with the state health department. The strategy suggested in the Blueprint report (Hernandez, et al., 2015), which includes advocating for federal block grants to be distributed directly to tribes, fills a major gap in the existing system for financing tribal public health. Consistent and reliable funding for public health activities at the tribal level would help to elevate the role that tribes play in public health within their communities, to create consistent and culturally tailored programming, allow for continuous staffing and staff development, and increase trust and rapport with the community.

CONSIDER THE VALUE OF A PRACTICE BASED EVIDENCE APPROACH TO PUBLIC HEALTH PROGRAMS AND SERVICES THAT VALUES COMMUNITY KNOWLEDGE OF WHAT WORKS.

The PHAB Tribal Standards Workgroup highlighted the importance of incorporating traditional practices, culturally-based interventions, and indigenous methodologies for gathering data into the PHAB standards (NIHB, 2012b). The workgroup determined that this was particularly relevant to the domains that focus on assessment (Domain 1), health education (Domain 3), and research (Domain 10). As part of their recommendations, they suggested that Practice Based Evidence (PBE)—an approach that is derived from, and supportive of, culture and traditions (Isaacs et al., 2005) — be incorporated into the glossary and guidance for the standards and measures. The Tribal Public Health Institute (TPHI) Advisory Board echoed this recommendation, suggesting that the field “redefine the criteria for ‘evidence-based’ to include indigenous methods of gathering, analyzing, and reporting data (e.g., practice based evidence)” (Hernandez et al., 2015, p. 10).

This research supports the value of a PBE approach for public health. Study participants voiced concerns about implementing Evidence Based Practices (EBP) that had not been validated with tribal communities. They also emphasized the importance of gathering community input on programs and services to ensure that they were meeting the needs of the community. Providing services that are responsive to local definitions of health and wellness is at the heart of PBE. Therefore, it provides an excellent model for the provision of public health services in tribal communities and beyond. It also provides a model for building the evidence base around traditional and culturally competent practices that are respectful of indigenous ways of knowing and traditions. It is important to document the use of culturally-appropriate, tribally-developed, and/or traditional models, using indigenous methodologies. Furthermore, PBE should be incorporated into the broader understanding of what works in public health, as well as standards for public health performance and accreditation to ensure that they recognize cultural strengths.

IDENTIFY FACTORS THAT MAKE ASSESSMENT AND PLANNING, AS WELL AS EVALUATION AND QUALITY IMPROVEMENT, IMPACTFUL AT A COMMUNITY LEVEL.

Systematic, iterative community assessment and planning processes are important for aligning public health services with community assets and needs. However, it's also important that assessment and planning are utilization-focused. These processes should be conducted in ways that lead to actions which have the potential to impact key health issues and disparities. Furthermore, it is important for these actions to be community-driven and collaborative. In tribal contexts, such an approach would incorporate indigenous worldviews and honor cultural beliefs and practices. As was observed in this community, it is possible for public health agencies to carry out the public health function of assessment and planning in a variety of ways, and oftentimes, more emphasis was placed on how the results of such processes would be utilized rather than on routinizing them. One approach may not be superior to the other, but rather, complementary to each other. That is, routinization and utilization are both important aspects of assessment, planning, evaluation, and quality improvement. Future research should focus on the factors that support assessment and planning processes that lead to meaningful collective impact.

LOOK TO TRIBES TO LEARN ABOUT THE BENEFITS AND LIMITATIONS OF AN INTEGRATED APPROACH TO PUBLIC HEALTH AND HEALTH CARE SERVICE DELIVERY.

Recently, there has been a growing emphasis on the importance of integrating public health and health care. As explained in the IOM's (2012b) report, *Primary Care and Public Health*, these two fields share the goal of improving health outcomes, yet they have often remained siloed. Hester et al. (2015) further emphasized the importance of integration, pointing out that this is a time of major transition in the healthcare system from a focus on clinical care to population health. Public health agency leaders need to keep up with the pace of change by forming relationships with clinical providers and getting a seat at the table with health care system leaders.

This research illustrates that tribes can provide an important glimpse into the benefits and limitations of integration. The case study site matches the IOM's description of "partnership" as a degree of

integration, where public health and health care work so closely together that, from the individual's perspective, there is no separation. Furthermore, integration within the Tribe went beyond collaboration of public health and health care. There were many departments and programs from across the Tribe that partnered around public health. This type of integration infuses consideration of health across diverse sectors that have the ability to address the social, cultural, and environmental factors that impact health outcomes, similar to a Health in All Policies approach. However, there are also potential limitations to a "partnership" degree of integration, such as confusion about the difference between public health and primary care functions and a lack of priority given to public health. Future research in this area would benefit from a focus on tribes with different funding relationships with IHS.

EXPLORE STRATEGIES FOR ADJUSTING PUBLIC HEALTH PERFORMANCE MODELS TO REFLECT THE EXTENT TO WHICH PROGRAMS AND SERVICES MEET THE NEEDS OF THE COMMUNITY AND ADDRESS THE COMMUNITY'S SOCIOCULTURAL REALITY.

Performance standards, such as the three core functions of public health (IOM, 1988), the 10 EPHS (Harrell & Baker, 1994), and PHAB's Standards and Measures (PHAB, 2013), offer a useful overview of the core functions of public health and provide guidance to public health agencies on how to protect and promote health in their communities. However, one element that is lacking across these standards is a measure of the extent to which public health services are addressing the sociocultural reality of the community. This is not included in the three core functions or the 10 EPHS and is given limited attention in PHAB's standards for community health assessment and operational infrastructure.

The case study site recognized that meeting the needs of their community required attention to both the structural and the sociocultural factors that impact health, including the meanings that people construct to understand and interpret health and wellness. Some examples of factors that the Tribe recognized and incorporated into programs and services include economic conditions, the rural context, the importance of community knowledge as a resource, the importance of personal and familial relationships, historical trauma, the reclaiming of cultural identity, traditional medicine, and traditional ceremonies. The Tribe addressed the structural and sociocultural context of their community in nearly everything they did. It was not just a question on a needs assessment or an organizational policy. It was at the core of how they functioned.

Inadequate attention to sociocultural factors in public health performance standards is particularly problematic when these standards are used to accredit public health agencies (as in the case of PHAB) and to evaluate public health performance and capacity, and inform our understanding of how performance impacts community health outcomes (as the core functions and 10 EPHS often are). A public health agency should not be considered to be performing well if it is not meeting the needs of community members, regardless of how many services it is providing. In order to facilitate the adjustment of public health performance standards to incorporate sociocultural factors, we need more research on the role of culture in health outcomes and community-driven strategies for promoting health.

FOCUS FUTURE RESEARCH ON THE DEGREE TO WHICH THE TEN ESSENTIAL PUBLIC HEALTH SERVICES ALIGN WITH WHAT PUBLIC HEALTH SYSTEMS LOOK LIKE IN PRACTICE.

Assessments of public health capacity and performance are often built around the 10 EPHS, assessing the degree to which public health agencies meet these standards. However, it is also important to ask questions about how well the standards align with what public health systems look like “in the trenches.” This is particularly important given the prominence of the 10 EPHS in the public health accreditation standards.

For tribal public health systems in particular, it seems there may be some misalignment or shortcomings of the 10 EPHS to fully describe what the systems do and how well they do them. Consistent with gaps identified by a Tribal Advisory Board more than seven years ago (NIHB, 2009), our study suggests that the 10 EPHS do not adequately cover cultural competency, too rigidly divides public health and health care services as completely separate efforts, exclude key elements of holistic community health and wellness such as mental health and traditional healing, and lacks space for valuing indigenous ways of knowing and generating evidence for what works.

DEVELOP A RESEARCH AGENDA BY AND FOR TRIBAL PUBLIC HEALTH SERVICES AND SYSTEMS.

In 2012, the National Coordinating Center for PHSSR worked with the Robert Wood Johnson Foundation, Altarum Institute, and the CDC to develop a research agenda to guide the field. Based upon the findings, the unique nature of tribal public health systems suggests a need for a *tribal* public health services and systems research agenda that includes questions tailored to the reality of tribal public health system capacity and phase of development. A tribal-specific PHSSR research agenda would facilitate investigation of factors such as tribal sovereignty, governance, and public health authority; cultural competence and cultural tailoring; and integration of public health with health care, traditional medicine, and other tribal departments.

There are currently 567 federally recognized tribes, and each is unique in its capacity, infrastructure, and readiness to deliver essential public health services. Our case study is just one representation or model. The case study community is a self-governance Tribe, mid-size in terms of service population, and fairly robust in terms of infrastructure. It would be worthwhile to explore other “types” or “models” of tribal public health systems that operate under different structures in terms of their relationships with IHS, population size, and existing infrastructure.

LIMITATIONS

This study had several limitations. The first limitation relates to the overall study design. The case study design of this research provided an in-depth examination of a tribal public health system, which allowed us to fully consider the structure, organization, and functioning of that system. However, because this research examines only one case, caution should be used in generalizing from these findings to other tribal health departments. Furthermore, the case study site was selected, in part, because they have already made progress in developing a strong public health infrastructure, and some of the findings may not generalize to tribes who are earlier in this course. Future research should continue to investigate public health systems in a variety of tribal communities. We outlined some questions to guide this research in the Future Directions section of this report.

There are also limitations of note regarding some of the sources of data for the study. The eco-maps that were completed with key informant interview participants, while they provided rich information on the professional networks of those working within the tribal public health system and gave an overview of the overall structure of the system and the relationships between people and organizations within that system, was a novel method that, to our knowledge, has not been used in public health services and systems research before. There is very little research on public health systems that uses network analysis and this particular method of constructing eco-maps with respondents. The information it provided was invaluable to our understanding of the tribal public health system. However, given the size and breadth of the public health system of focus, it was not possible to collect eco-maps from every key player in the network. In network analysis, missing data can result in different network structures, depending on which individuals and organizations are missing. These differences in structure in turn affect network metrics, such as density and centrality. Despite the fact that there are likely some key individuals missing from the eco-map data, the network graph did include individuals from 20 different organizational sectors. Given the case study design and exploratory nature of the study, the results of the network analysis provide valuable information for understanding the structure and organization of the system.

There are also some limitations in the secondary data used from the Tribal Health Survey. This data source is the only source of population health data for tribal members, but it does not include information in some key health areas of interest such as maternal-child health, immunizations, communicable disease, alcohol and drug use, cancer, STIs, etc. Finally, the information gathered from the Tribe's website (Tribal Constitution, Tribal Codes, and Board Resolutions) may not represent the most updated versions of these materials.

The study addressed these limitations through triangulation and member checking. Methodological triangulation involves employing multiple data collection strategies and data sources to examine research questions (Daly, 2007). The use of data triangulation ensured that multiple voices within the tribal public health system were represented in the data and that the findings from each data source were checked against the other data sources. Member checking focuses on respondent validation. The member checking approach provided research participants the opportunity to critically analyze the

study findings to ensure they reflect their experiences (Richards, 2015). It also allowed members of the Advisory Group and additional stakeholders the opportunity to assess the extent to which the findings from this one tribal public health system resonated and were reflective of the experiences of members within other tribal public health systems. While this alone does not make the result generalizable, it was the view of many stakeholders that the findings represented the experiences of other tribes.

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