By Cherokee for all. People living happy and healthy for this and future generations.
Cherokee Nation Public Health is pleased to release the Cherokee Nation Tribal Health Assessment, Cherokee Nation 2013-2017 Tribal Health Improvement Plan and Cherokee Nation 2013-2017 Tribal Health Strategic Plan. These three documents collectively make up the State of the Cherokee Nation Health Report & Plan. These documents were created through internal and external collaboration among many people and various groups. Cherokee Nation’s foresight about the value of public health and our understanding of how public health impacts the longevity and quality of life for people was motivating factors that initiated this process. This publication represents an inaugural step in a journey that we hope everyone will join to assure CN’s public health system is one that is efficient, effective and self-sufficient which in turn will lead us all to improved health & well-being in Cherokee Nation.

It is well documented that obesity, poverty, tobacco use, alcohol & substance abuse, violence, and mental health issues are all contributing factors that increase health disparities and reduce quality of life. Cherokee Nation recognizes health outcomes are related to the conditions that Cherokee Nation residents live with every day, such as where we work, go to school, reside, or play. Cherokee Nation understands that lack of access to public health services, primary care services, educational attainment, affordable nutritious foods, affordable safe housing and safe environments that promote an active lifestyle impact our abilities to become and remain healthy. Cherokee Nation’s Tribal Health Assessment has identified various key health status indicators that need our immediate attention and effort to improve. It is imperative for all of us to work together across various sectors and across various jurisdictions to lead a strategic approach that results in the improvement in the well-being of the people residing within Cherokee Nation for this generation and generations to come.

All parties interested in public health who want to see an improvement in the health & well-being of our family, friends and communities are encouraged to review this document to determine your role in the future of moving public health forward in Cherokee Nation.

We are deeply honored to be in a position of leadership at Cherokee Nation during this era of vitalization of public health as this lends us the ability to provide support for the continued strengthening of our public health infrastructure at Cherokee Nation. This administration is optimistic that investment into public health for the betterment of Cherokee Nation will establish a lasting legacy where public health is a priority, where prevention efforts are integrated into our tribal health care delivery system, and where our environment is transformed to one where the healthy options are the most accessible and most convenient.

Sincerely,

Bill John Baker, Principal Chief
Connie Davis, Executive Director
Health Services

Dear Public Health Partners:

It has been our privilege and honor to lead the public health efforts that has resulted in the development of the Cherokee Nation Tribal Health Assessment, Cherokee Nation 2013-2017 Tribal Health Improvement Plan and Cherokee Nation 2013-2017 Tribal Health Strategic Plan. These three documents collectively make up the State of the Cherokee Nation Health Report & Plan. Cherokee Nation’s desire to advance our delivery and utilization of public health practice led way for CN Public Health (CNPH) to undertake the transforming process of public health accreditation. The development of these informative documents was a direct result of Cherokee Nation taking this uncharted journey of public health accreditation. Public health accreditation is currently taking America by storm and looks to be the way of the future in terms of identifying public health agencies that are meeting the gold standard of delivering high quality public health services as defined by the Public Health Accreditation Board (PHAB). We invite you to learn more by visiting PHAB’s website at phabboard.org.

By becoming accredited, CNPH demonstrates our commitment to continuously strive to improve and protect the public’s health. The accreditation process has stimulated CNPH programs to function more efficiently and effectively while solidifying an infrastructure that provides CNPH the ability to be more accountable and transparent to you - our stakeholders and the people we serve.

We are honored to work with a dedicated and talented group of people from various departments/programs throughout Cherokee Nation. We are also very grateful to the contribution and commitment of CN’s Public Health Committee to assuring the advancement of public health in Cherokee Nation. We would like to acknowledge the numerous tribal and non-tribal people from various groups such as health care, academics, nonprofit public health organizations, state, local & tribal public health departments and community members representing various community based organizations that graciously partnered with us to assist with the completion of our procedural tribal public health endeavors.

This has been a long time in the making and therefore we are very excited to formally present the State of the Cherokee Nation Health Report & Plan. This plan was created for everyone interested in improving the health and well-being of our friends, family and our communities that comprise our great tribe the Cherokee Nation.

The State of the Cherokee Nation Health Report & Plan provides a map shot of where we currently are as well as provides us a roadmap of how to get to where we need to be to achieve optimal mental, physical, environmental, and social well-being for all Cherokee Nation. These documents focus on several key health priorities, as well as several key performance indicators that, when achieved, will significantly impact the health and well-being of Cherokee Nation leading to a healthier, more productive, more vibrant and more prosperous Tribe.

It is the hope and intent of Cherokee Nation Public Health that each and every tribal public health system partner identifies the role you want to play and the contribution you want to make toward achieving the plan outlined in these documents. No single organization or entity has the capacity or depth of resources needed to improve health and well-being to an optimal level alone — it takes all of us coming together working as one to achieve this goal. The State of the Cherokee Nation Health Report & Plan is focused on the premise that together, Cherokee Nation Public Health and our Tribal Public Health System partners can come together and achieve success for the betterment of this generation and all future generations. Wada! 

Lias Fivett, MS
Senior Director of Public Health

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Cherokee Nation Public Health
Prevent, Promote, Protect.
Cherokee Nation's Journey Toward Public Health Accreditation

EXECUTIVE SUMMARY

The Cherokee Nation public health system encompasses a wide array of tribal, public, private, and community organizations that work in partnership to promote and ensure conditions in which people can be healthy. With more than 300,000 citizens, Cherokee Nation’s public health system and health care service delivery span the nation’s jurisdiction, covering fourteen counties in northeast Oklahoma. Cherokee Nation’s public health services are multifaceted and use a socio-ecological approach to facilitate policy, system, and environmental change. They administer a broad array of services, such as school and community-based health education and prevention programs, youth and elder care, violence prevention, public safety, chronic disease surveillance and reporting, behavioral health, and access to clinical care. Cherokee Nation Public Health’s philosophy is based on being dedicated to implementing Performance Management in all Public Health efforts in order to maintain an environment of continuous quality improvement. This priority to public health performance management assures its ability to be accountable and transparent to the people we serve. Managing the largest triply-operated health care system in the United States, Cherokee Nation is dedicated to promoting and improving health in order to ensure healthy communities for this and future generations.

For nearly a decade, we, the Cherokee Nation, have pursued opportunities to strengthen its public health capacity and performance in order to address the health and wellness of our citizens. One such opportunity was to learn and participate in public health accreditation, a new national initiative to advance quality and performance within tribal, state, and local public health departments. Accreditation offers national recognition to organizations that meet a set of national standards as established by the Public Health Accreditation Board. In 2010, Cherokee Nation was one of three Tribes selected to participate in the beta test of the public health accreditation standards and measures. Since its involvement in public health accreditation, Cherokee Nation has been working diligently to elevate the status of Cherokee Nation’s public health system.

A critical public health function is the implementation of a community-driven and strategic improvement planning process. In 2011, Cherokee Nation Public Health Programs engaged a number of partners and key stakeholders in such a process using a national model called Mobilizing for Action through Planning and Partnerships (MAPP). Using MAPP as a guide, Cherokee Nation convened a Public Health Committee comprised of Clinical Care staff and Public Health Programs staff, both of the sectors that make up Cherokee Nation Health Services. The committee also included Cherokee Nation staff who were not traditionally considered public health but whose jobs impact the health of well-being of people. Involvement from community representatives was an integral part of the improvement planning. Cherokee Nation’s Public Health Committee engaged the community to guide the improvement planning process and address the three public health accreditation prerequisites: 1) a Tribal Health Assessment; 2) a Tribal Health Improvement Plan; and 3) a Tribal Public Health Organizational Strategic Plan. Together, these three documents describe the health status of Cherokee Nation, identify health improvement priorities and strategies, and describe strategic goals to strengthen the public health infrastructure.

The Cherokee Nation five-year Tribal Health Improvement Plan serves as a roadmap to promote health and quality of life among our communities and families through culture, collaboration, community engagement and empowerment. Multiple meetings were held in Tahlequah and Tulsa, Oklahoma with broad representation, including tribal members, community organizations, Cherokee Nation programs and/or departments, and schools from across the Tri-Borough Service Area. Using a consistent approach and consensus-building techniques, participants identified the following health priorities:

- Reducing Cancer Rates
- Preventing and Reducing Obesity and Related Diseases
- Promoting Safe Communities
- Reducing and Preventing Commercial Tobacco and Alcohol Use
- Preventing Sexual Risk Behaviors among Adolescents and Young Adults

Cherokee Nation Public Health Programs and its partners are committed to the implementation of this plan and will monitor progress along the way. We are committed to the following vision of the health and wellness: By Cherokee for All. People living happy and healthy for this and future generations.
Cherokees have long demonstrated their ability to face adversity, survive, adapt, prosper and excel. Long before initial European contact, Cherokee people maintained a complex system of governance, society and culture in the southeastern part of what is now the United States. As Europeans settled in the area, Cherokee people continued to develop, progress and embrace cultural elements of the new settlers. In fact, Cherokees shaped a government and society matching most cultures of the day.

Gold was discovered in the 1830’s and outsiders coveted Cherokee homelands. During the time of forced removal by the federal government, Cherokee people were forced to walk nearly 1,000 miles to “Indian Territory”, which is now the state of Oklahoma. The journey was difficult. Thousands perished, some in internment camps along the way and others upon arrival to Indian Territory. This journey became a cultural memory known as the “trail where they cried”, and today it is widely known as the Trail of Tears. The Cherokee soon re-established themselves in their new home, settling communities, churches, schools and businesses. The town of Tahlequah, Oklahoma became the hub of business and cultural activity and is now the capitol and seat of the Cherokee Nation’s tripartite government. In 1821, Sequoyah developed the Cherokee syllabary, leading to the creation of the first newspaper in Indian Territory, and the first-ever published in a Native American language.

Today, the Cherokee Nation is the federally-recognized government of the Cherokee people, with inherent sovereignty further established by numerous treaties and federal law. With more than 300,000 citizens, the Cherokee Nation jurisdiction is approximately 7,000 square miles, spanning fourteen counties in northeast Oklahoma. Cherokee identity, kinship, culture and society continue to be structured around seven clans: Wolf, Blue (or Brat), Longhair (or Twister or Wind), Paint, Bird, Deer and Wild Potato (or Holly or Blind Savannah). For generations, this system of clanship has allowed the Cherokees to face adversities from a position of social and political strength.

Cherokee Nation is proud to manage the largest tribally-operated health care system in the United States. Health care delivery is strategically planned and covers a broad array of services, including clinical inpatient and ambulatory care, community (public) health, youth and elder care, behavioral health and emergency medical services. Cherokee Nation is dedicated to promoting and improving health to ensure healthy communities for this and future generations.
Public health is often defined as promoting, protecting and improving the health of communities, and preventing disease through detection and response. Cherokee Nation believes good public health practice is one that includes a systems approach. A systems approach is one where multiple stakeholders, including tribal and non-tribal entities, work in partnership with a focus on three core public health functions: assessment, policy development and assurance.

- **Assessment** – Learning what health concerns are of greatest priority
  All health concerns of Cherokee citizens are important. Through a tribal health assessment process, Cherokee Nation collects health data and information and then prioritizes its efforts to address community health needs. Health assessment data include birth, illness and mortality statistics, available health resources, unmet health needs, and citizen’s beliefs about personal health and quality of life.

- **Policy Development** – Deciding what action to take based on assessments
  Information gathered through tribal health assessments is then used to develop tribal policies and plans. These plans include, but are not limited to, strategies for health improvement, tribal policies, ordinances and statutes, and services provided.

- **Assurance** – Making sure we are achieving our goals
  Monitoring and evaluating the quality of programs and services provided is essential to making sure goals to promote, protect and improve community health and wellness are achieved.

The Cherokee Nation’s public health system encompasses many tribal, public, private and community organizations that work in partnership to assure conditions in which people can be healthy. Such conditions include, but are not limited to social, economic, education and environmental factors. The Cherokee Nation’s public health system includes tribal departments and programs, local and state health agencies, public schools, community organizations, the health care delivery system, faith-based organizations, public safety, and education and youth development organizations, among many others. Important Cherokee Nation public health system stakeholders include, but are not limited to:

- Community Health Promotion Program
- Behavioral Health Prevention Program
- Cancer Program
- Quality Improvement and Quality Management
- Emergency Medical Services
- Cherokee Elder Care
- Women, Infants & Children (WIC)
- Jack Brown Center
- Public Health Nursing
- Environmental Health
- Emergency and Risk Management
- Health Research Program and Institutional Review Board
- Cherokee Marshal Services (Public Safety and Law Enforcement)
- Geo Information Systems
- Diabetes Prevention Program
- Community Health Representatives

For more information about Cherokee Nation’s Public Health Programs, visit [www.cherokeepublichealth.org](http://www.cherokeepublichealth.org).

Another valued partner within our public health system is the Cherokee Nation health care delivery system, which includes hospitals, clinics, health care providers (such as physicians, nurses and dentists), urgent care services, community health centers, and pharmacies, among others. Since access to care is an important factor that affects the overall health of communities and individuals, the Cherokee Nation health care delivery system is a critical partner in improving health outcomes in Cherokee communities.

Public Health Accreditation

In September 2010, the Cherokee Nation was awarded a grant from the Centers for Disease Control and Prevention to make fundamental changes and enhancements to the tribal public health system and to implement practices that improve the delivery and impact of public health services. To achieve these goals, Cherokee Nation Public Health Programs identified public health accreditation as a means for strengthening public health performance. Public health accreditation is a new national initiative to advance quality and performance within tribal, state and local public health departments. It is a voluntary process by which a public health department can measure its performance against a set of national standards.

Public health accreditation has three prerequisites: a Tribal Health Assessment, a Tribal Health Improvement Plan and an Organizational Strategic Plan. Together, these three documents describe the health status of Cherokee Nation, identify health improvement priorities and strategies, and describe strategic goals for strengthening the public health infrastructure in support of the overall health and wellness of Cherokee citizens. Cherokee Nation Public Health Programs, in pursuit of accreditation and to complete the prerequisites, led a community-driven improvement process to enhance the overall work of the department and improve health outcomes.
10 ESSENTIAL PUBLIC HEALTH SERVICES PROVIDE A FUNDAMENTAL FRAMEWORK FOR DESCRIBING PUBLIC HEALTH ACTIVITIES THAT SHOULD BE UNDERTAKEN IN ALL COMMUNITIES.

The NPHPSP and public health accreditation, both of which are based on the essential services, help stakeholders better understand how well a public health system is performing and identify opportunities for improvement. Using MAPP as a guide, Public Health Programs convened a Public Health Committee comprised of Health Services, Public Health Programs staff and community representatives to participate in the NPHPSP assessment.

Assessment results showed that the Cherokee public health system excels in several areas, with demonstrated capacity to lead health improvement efforts across the Tribal Jurisdictional Service Area. Cherokee Nation’s public health system performs significant activity in linking people to needed services and health care, and in mobilizing community partnerships to disseminate health information and promote healthy choices. Cherokee Nation maintains excellent partnerships with the state and many local health agencies in diagnosing and investigating health problems and hazards. The system also maintains strong performance management and quality improvement efforts in health care, with opportunities for expansion into public health.

The assessment also identified opportunities for improvement including the need for policies and plans that support health improvement. Monitoring the community’s health status and identifying health trends to produce data that can then be used to develop policies and laws that shape public health activities and service delivery. Cherokee Nation can use data more effectively in developing health policies and laws to shape public health activities and service delivery. Greater coordination across the Cherokee public health system could strengthen the Cherokee Nation’s use of resources and maximize efforts to improve health outcomes.
Figure 1. Cherokee Nation Citizens by County, 2013.

COUNTY | NUMBER OF CHEROKEE NATION CITIZENS
---|---
Tulsa | 14,461
Cherokee | 12,049
Rogers | 11,012
Muskogee | 10,071
Sequoyah | 8,510
Adair | 7,510
Ottawa | 6,488
Rogers | 5,244
Washington | 7,129
Wagoner | 5,735
Tulsa | 5,603
Craig | 4,369
Nowata | 2,934
McIntosh | 2,016

For more information about the Cherokee Nation Tribal Health Profile 2013, contact Cherokee Nation Public Health at (918) 453-5600 or (800) 256-0671, or visit www.cherokeepublichealth.org.

Cherokee Nation Public Health Programs also used MAPP as a guide in conducting the Tribal Health Assessment. The Public Health Committee identified members to serve on a Technical Advisory Group (TAG) to plan and conduct the assessment. The TAG completed a review of existing assessments conducted by the state, the Indian Health Service, Oklahoma City Area Office, and other organizations in the region. A list of data indicators and sources was then compiled and presented for comment by various departments and programs within and outside Cherokee Nation. The TAG then finalized a report titled the Cherokee Nation Tribal Health Profile 2013, and distributed the profile to public health system stakeholders and the community at-large. The information below is an executive summary of the Cherokee Nation’s health status.

Many of the services within the Cherokee Nation’s public health system are available to Native Americans, as well as non-Native Americans, residing within the TJSA. Just over 200,000 Native Americans (including Cherokees and citizens of other Tribes) live in the Cherokee TJSA, making up nearly 18 percent of the total population [more than 1.1 million people of all races and ages, according to the 2010 U.S. Census]. While Tulsa County may have the largest number of Cherokee citizens, Native Americans only represent 9 percent of this county’s entire population. Adair County, with the fifth largest number of Cherokee citizens, has the largest percentage of Native Americans residents (53 percent of the county’s population).

Cherokee Nation understands that “place” matters when addressing health status. Where a person lives, levels of income, and education attainment can impact a person’s health and influence how he or she accesses health services. Over the past several years, the median household income for Native Americans residing in the Cherokee Nation TJSA fell below the state average of nearly $44,300. The percentage of Native Americans over 25 that completed high school is lower compared to all races in Oklahoma and in the U.S. Nearly 18 percent of Native American adults in the Cherokee TJSA had less than a high school education or equivalent, while only 8 percent of U.S. adults had the same education level.
Cherokee Nation understands that “place” matters when addressing health status. Where a person lives, levels of income, and education attainment can impact a person’s health and influence how he or she accesses health services. Over the past several years, the median household income for Native Americans residing in the Cherokee Nation TJS was below the state average of nearly $44,300. The percentage of Native Americans over 25 that completed high school is lower compared to all races in Oklahoma and in the U.S. Nearly 18 percent of Native American adults in the Cherokee TJS had less than a high school education or equivalent, while only 8 percent of U.S. adults had the same education level.

WHERE A PERSON LIVES, LEVELS OF INCOME, AND EDUCATION ATTAINMENT CAN IMPACT A PERSON’S HEALTH AND INFLUENCE HOW HE OR SHE ACCESSES HEALTH SERVICES.

Figure 3. Median Household Income for Cherokee Nation Native Americans, 2011.

| Range for the Counties with Lowest Median Income (Adair, McIntosh and Nowata) | $26,440 - $29,400 |
| Range for the Counties with Highest Median Income (Rogers, Tulsa, and Wagoner) | $38,000 - $45,800 |

(Source: U.S. Census, 2011.)

[Note: Ranges presented are approximations. Actual ranges for median household income of Native Americans were $26,440 - 29,400 for Adair, McIntosh and Nowata counties, and $37,997 - 45,804 for Rogers, Tulsa and Wagoner counties.]

Health Status

Community and individual health and behaviors are influenced by many factors, which are often dependent on relationships, settings, cultures and economic conditions. These factors are called determinants and can either have a positive or negative impact on an individual’s and a community’s health. These determinants are often referred to as risk or protective factors. Risk factors are conditions or behaviors that may increase a person’s risk of disease or illness. Protective factors have the opposite effect; they may reduce a person’s chance of disease or illness and promote good health.

An individual’s health is also impacted by factors beyond personal characteristics and behaviors. The physical, social and economic environment a person lives in largely influences individual and community health. For example, people living in communities with access to parks, healthy foods, safe water, clean air, and safe routes for walking or riding a bike are generally healthier. Socioeconomic factors, such as education, employment and income, can impact a family’s quality of life, housing, and access to health care.
Cancer

Cancer is the leading cause of death in the United States. The National Cancer Institute defines cancer as a disease in which abnormal cells divide without control and are able to invade other tissues. More than 100 different types of cancer are known to exist and are most are named for the organ or type of cell in which they start. Healthier lifestyles for individuals and communities through education, counseling and awareness campaigns are some of the ways cancer can be prevented. Some of the ways a person can reduce their risk of cancer is by eating health, maintaining a healthy weight, exercising, limiting sun exposure, and not smoking commercial tobacco. Other prevention strategies include environmental controls such as decreasing exposure to substances that can cause cancer found in unhealthy working or living environments.

Reducing cancer rates requires more than just preventing individuals from being diagnosed with cancer; it also means promoting cancer screening and early detection. Cancer survivorship greatly increases when a person is diagnosed as early as possible. For this reason, cancer screenings for various cancers prior to symptoms (through imaging or laboratory tests such as a mammogram, colonoscopy, and pap smear) can lead to more effective treatment of the disease.

Cancer is a major illness and is the second leading cause of death in Cherokee Nation. Cherokee Nation TJSA Native Americans continued to have higher incidence rates than the state population for some of the most common types of cancer. Lung cancer is a leading cancer for Cherokee Native Americans. It's incidence rate was higher than colon, prostate, breast and cervix cancers during 2004-2008. Figure 5. shows the breakdown for these cancers from 2005-2009. Oklahoma State Department of Health cancer data suggests that incidence rates for these preventable, and screenable, cancers among Native Americans residing in the TJSA have increased in recent years. In 2009, the age-adjusted rate (per 100,000 population) of newly diagnosed breast, colon, cervical, and prostate cancer among Native Americans was 276, up from 247 cases in 2005. From 2005-2009 a total of 1,722 breast, cervical, prostate, lung and colon cancer cases were diagnosed among Cherokee Nation TJSA Native Americans. Figure 6. shows the age-adjusted cancer rates per 100,000 population from 2005-2009.

Lung, colon and breast cancers were among the top ten causes of death for Native Americans in the TJSA. With an average of about 130 deaths per year, the number of deaths for these preventable cancers remained relatively stable among TJSA residents. The preventable cancers include breast, cervical, prostate, lung and colon. During 2004-2008, there were total of 523 deaths due to these cancer sites combined. Figure 7. shows the mortality rate from all cancers among Cherokee Nation TJSA residents, 2005-2009. Cherokee Nation Health Services conducted over 22,500 screenings for breast, cervical, and prostate cancer. Of these, more than one-third of the screenings were pap tests. The number of screenings has increased since 2008, as shown by Figure 8.

RISK FACTORS vary depending on the cancer. In general, the risk for cancer increases for everyone with age; however, there are specific behavioral contributors that increase risk, such as sunlight, cigarette smoking and commercial tobacco use, alcohol use, poor diet, lack of physical activity or being overweight. Environmental factors, such as exposure to ionizing radiation, chemicals or other substances can also increase risk. Family history of cancer may also increase risk.

PROTECTIVE FACTORS include regular physical activity, staying at a healthy weight, maintaining a healthy diet and abstaining from tobacco, alcohol or other harmful substances. Regular doctor visits and cancer screenings can assist with early detection and may improve treatment outcomes.
Obesity and Related Diseases

Obesity, a recognized national epidemic, leads to a whole range of severe health effects and will cause serious and costly complications for individuals, families and communities. "Overweight" and "obesity" are both terms used to describe ranges in weight that are greater than what is generally considered healthy based on a person’s height. A person’s behavior and environment play a significant role in becoming overweight or obese. Obesity can lead to an increased risk for diabetes, heart disease, cancer, stroke, liver disease, sleep apnea, respiratory problems and other significant health consequences, including lower quality of life, decreased productivity, and premature death. Obesity and related diseases are largely preventable.

Data for describing the weight status are limited, for both Cherokee adults and children. Cherokee Nation Public Health Programs receives body weight information for students and is developing a system that monitors obesity rates among our children. A healthy diet and physical activity are key in combating excess weight and obesity. According to a 2011 health survey conducted by Public Health Programs, almost 40 percent of Cherokee adults reported that they exercise vigorously for at least 150 minutes per week, which was lower than the Oklahoma and U.S. populations. Healthy eating and nutrition is an important part of good health. Less than 2 percent of Cherokee adults reported eating 5 or more fruits and vegetables per day.

RISK FACTORS
are environmental, genetic, and behavioral. Environmental factors include access to healthy foods, both in terms of its availability and cost. Sidewalks, parks, and street lighting in a person’s community can also influence whether he or she is physically active. Science shows that genetics plays a role in obesity, especially in the case of genetic disorders. In other cases, one’s susceptibility for obesity is related to both genetics and learned behaviors.

PROTECTIVE FACTORS
are regular physical activity, staying at a healthy weight and maintaining a healthy diet. Other contributing protective factors include a positive outlook and attitude, confidence, and emotional stability.

A HEALTHY DIET AND PHYSICAL ACTIVITY ARE KEY IN COMBATTING EXCESS WEIGHT AND OBESITY. ACCORDING TO A 2011 HEALTH SURVEY CONDUCTED BY PUBLIC HEALTH PROGRAMS, ALMOST 40 PERCENT OF CHEROKEE ADULTS REPORTED THAT THEY EXERCISE VIGOROUSLY FOR AT LEAST 150 MINUTES PER WEEK, WHICH WAS LOWER THAN THE OKLAHOMA AND U.S. POPULATIONS.
Violence and Unintended Injuries

Violence and unintended injuries are a serious public health problem, and impact people at all stages of life, from infants to elders. Violence includes, but is not limited to, child and elder abuse, intimate partner violence, sexual violence, bullying, and self-harm. According to the CDC, each year more than 50,000 people in the U.S. die as a result of violence, and millions of others are left with debilitating physical and emotional injuries. More people die from violence and injuries, such as motor vehicle accidents, falls, or homicides than from any other cause.

The Oklahoma Violent Death Reporting System documents deaths due to suicide, homicide, legal intervention and unintentional firearm injuries in the state. During 2005-2009, Native Americans in the Cherokee TJSA had a higher violent death rate than that for all races in Oklahoma and the U.S. Figure 11 shows these comparisons, including death rates for Native Americans in Oklahoma.

Violence and injuries are leading contributors to premature death, shown through Years of Potential Life Lost (YP LL) measurements. YP LL estimates the average time a person would have lived if they had not died prematurely. Motor vehicle crashes and intentional self-harm (suicide) had the second and third highest YP LL for Cherokee TJSA Native Americans during 2004-2008, respectively. Figure 12 shows the top three YP LL, which includes suicide and motor vehicle crash fatalities.

**Figure 11. Violent deaths rates in Cherokee TJSA and Oklahoma, 2005-2009.**

![Violent deaths rates in Cherokee TJSA and Oklahoma, 2005-2009.](source: The Oklahoma Violent Death Reporting System)

**Figure 12. Top three causes of Years of Potential Life Lost for Cherokee TJSA Native Americans, 2004-2008.**

![Top three causes of Years of Potential Life Lost for Cherokee TJSA Native Americans, 2004-2008.](source: Oklahoma State Department of Health (OSDH), on Oklahoma Statistics on Health Available for Everyone [OK2SHARE])

**RISK FACTORS** that increase the likelihood of a person becoming a victim or perpetrator of violence vary among age groups and genders. Risk factors have a great deal to do with individual behaviors, such as alcohol or substance use and risk taking. Individual social experiences, relationships with others, and the community environment can increase risk depending on safety, social norms, victimization history, parental or community monitoring, group associations and family interactions.

**PROTECTIVE FACTORS** include supportive family and community relationships and networks, access to health care and social services, quality of life, appropriate stress management, and self-concept.

DURING 2005-2009, NATIVE AMERICANS IN THE CHEROKEE TJSA HAD A HIGHER VIOLENT DEATH RATE THAN THAT FOR ALL RACES IN OKLAHOMA AND THE U.S.
Commercial Tobacco Use

The use of commercial tobacco and alcohol are linked to various diseases and risk behaviors leading to adverse health outcomes. Smoking is the single greatest cause of morbidity and mortality in the U.S. Alcohol and the nicotine in tobacco are highly addictive. Health effects linked to commercial tobacco and alcohol abuse include cancer, heart disease and stroke. Excessive alcohol use, binge drinking and underage drinking also increase risk for injuries, violence, and sexual risk behaviors.

Smoking rates among Cherokee Nation adults are consistently higher than the national average. Data from the 2011 Cherokee Nation American Indian Adult Tobacco Survey show that nearly 30 percent of adult respondents were smokers, about 13 percent of men and 27 percent of women. On average, Cherokee smokers had their first cigarette before turning 16 years old. Tobacco use is a particular concern among women of childbearing age; nearly 1 in 4 of these women use commercial tobacco (Figure 13). When Cherokee adult smokers were asked about how tobacco is used, nearly 13 percent reported using it for ceremonial, prayer, or traditional reasons (Figure 14).

[Figure 13: Cherokee Nation Adult Smokers, 2009]

[Figure 14: Non-traditional and traditional use of tobacco among Cherokee Nation smokers, 2009]
Sexual Risk Behaviors Among Youth and Young Adults

Sexual risk behaviors can result in unintended health outcomes such as HIV, sexually transmitted diseases (STDs), and unintended pregnancy. According to a national survey of U.S. high school students in 2011, nearly half had had sexual intercourse. Among those that had had sexual intercourse within the previous three months, almost 40 percent did not use a condom and nearly 15 percent report having four or more partners during their lives. These behaviors increase the risks of STDs and unintended pregnancy, which are important public health issues that are largely preventable. Teen pregnancy and childrearing have substantial social, education and economic impacts on the teen parents, their children and often their families.

Data on STDs that are specific to Cherokee Nation are not available. Data are available for Native Americans receiving services from the Indian Health Service (IHS) in the Oklahoma Service Area and the U.S. Consistent with the national trend, rates of chlamydia cases were higher than gonorrhea rates. Compared to U.S. Native Americans, the Oklahoma IHS Service Area experienced a lower rate of chlamydia but a higher rate for gonorrhea, as shown in Figure 15. Native Americans had the second highest rate of chlamydia and gonorrhea among all racial groups, approximately 2 times higher than Whites in Oklahoma. Adolescents and young adults of all races aged 15-19 and 20-24 years experienced the highest reports of chlamydia and gonorrhea.

On a national level, AI/AN teens experience some of the highest rates of teen pregnancy. For AI/AN teens in Cherokee TJSA, the 2008 birth rate for women ages 15-19 (41.4 per 1,000 women) was similar to the national teen birth rate of 41.5 per 1,000 women. However, the Cherokee TJSA birth rate was higher compared to the Oklahoma rate. Figure 16 shows the 2008 teen birth rates for these groups.

**RISK FACTORS**
Associated with early sexual activity and unprotected sex include permissive or ambivalent attitudes toward premarital sex, lack of confidence to avoid sex or to use contraception consistently, or lack of knowledge about contraception. Other factors include the use of drugs and/or alcohol, feelings of disconnection from family, friends and community, disadvantage or dysfunction in their lives and environments, peer pressure, and low self-esteem or self-concept.

**PROTECTIVE FACTORS** include family and community connection and attachment, education and awareness, attitudes about sex and sexual risk taking, parent-child communication about sex, abstinence and contraception, success in school, a positive self-concept and aspirations and plans for the future.

**Cherokee Nation Tribal Health Profile**
A copy of the Cherokee Nation Tribal Health Profile 2013 is available to the community and is a compilation of health information about Cherokee and American Indians residing within the 14-county Tribal Jurisdictional Service Area. The profile provides a snapshot of information and health statistics on the health areas described above and additional topics. The report provides an overview of our health and wellbeing and was the basis for setting priorities to improve our health. For more information about the Cherokee Nation Tribal Health Profile 2013, contact Cherokee Nation Public Health at (918) 451-5600 or (800) 256-0671, or visit www.cherokeepublichealth.org.
Cherokee Nation convened a Public Health Committee comprised of Clinical Care staff and Public Health Programs staff, both of the sectors that make up Cherokee Nation Health Services. The committee also included Cherokee Nation staff who were not traditionally considered public health but whose jobs impact the health of well-being of people. The Public Health Committee also engaged community representatives who provided input and guidance throughout the improvement planning process. Red Star Innovations, a tribal public health consultant, assisted with planning and facilitating community and stakeholder engagement. The Public Health Committee, which met on a monthly basis, was instrumental in reviewing health assessment data, guiding community engagement efforts, identifying strategic priorities, and developing the overall Tribal Health Improvement Plan.

At the committee’s recommendation, tribal health assessment data was presented to community groups and public health system stakeholders for input and priority setting. Multiple meetings were planned and facilitated in Tahlequah and Tulsa, Oklahoma, with broad representation from Cherokee Nation programs and departments, tribal members, community organizations, schools and other community groups from across the Tribal Jurisdictional Service Area. Using a consistent approach and consensus-building techniques, participants identified the following health areas as priorities addressed in the plan:

- Cancer
- Obesity and Related Diseases
- Violence and Unintended Injury
- Tobacco and Substance Abuse
- Risky Sexual Behaviors

**Health Improvement Priorities**

The Cherokee Tribal Health Improvement Plan is a roadmap that can be used to promote health and quality of life among our communities and families through culture, collaboration, community engagement and empowerment. While all health issues are a priority, the Tribal Health Improvement Plan focuses on the following areas:

**Reducing Cancer Rates**
- Promote cancer screening to increase early stage detection of detectable and treatable cancers
- Increase cancer surveillance activity

**Preventing and Reducing Obesity and Related Diseases**
- Increase access to healthy foods and improve food procurement policies
- Increase physical activity among Cherokee adults and children
- Increase early detection and prevention of childhood overweight and obesity

**Promoting Safer Communities**
- Decrease the incidents of violence and self harm among our Cherokee citizens, families and communities

**Reducing and Preventing Commercial Tobacco and Alcohol Use**
- Promote Tobacco-free and prevention policies to protect people from secondhand smoke exposure
- Increase access to commercial tobacco products among youth under the age of 18
- Increase access to alcohol among youth and adults under the age of 21

**Preventing Sexual Risk Behaviors Among Adolescents and Young Adults**
- Reduce rates of teen pregnancy
- Reduce rates of STDs among individuals 15-29 years

By Cherokee.
HEALTH IMPROVEMENT OBJECTIVES AND PERFORMANCE TARGETS

The Cherokee Nation Tribal Health Improvement Plan is a result of the collaborative efforts of public health leaders, community experts, health providers and other health professionals. Each goal, strategic objective, current rate, target and strategy was developed based on tribal assessment data that will be used to track progress and measure impact. Progress will be monitored in collaboration with the Public Health Committee and the many programs and partners engaged in the implementation of the plan.

**GOAL**

**STRATEGIC OBJECTIVE**

**CURRENT RATE**

**TARGET**

**STRATEGY**

**HEALTH PRIORITY A: REDUCING CANCER RATES**

A.1. Increase the percentage of women age 45 years and older who have received a mammogram

39% [PMIS data]

Increase the number of screenings by 3% annually

• Promote patient self-breast exam and offer screening annually to female patients over 40
• Utilize patient navigators and case managers for patient follow up
• Develop media strategies to raise awareness

A.2. Increase the percentage of adults age 51-75 years who receive colorectal cancer screening examinations

53.4%

Increase the number of screenings by 3% annually

• Partner with the American Cancer Society and local health departments to educate and inform community about the importance of screenings
• Develop media strategies to raise awareness

A.2.1. Routinely utilize and report cancer surveillance data

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Produce a Cancer Burden Report to be disseminated annually beginning in 2014

• Document and track cancer burden and use in health improvement planning
• Develop and implement a collaborative communications plan for dissemination

**HEALTH PRIORITY B: PREVENTING AND REDUCING OBESITY AND RELATED DISEASES**

B.1. Increase access to healthy foods and improve food procurement policies

41.7% reported daily consumption of fruits and dark green vegetables for adults and children (Source: Behavioral Risk Factor Surveillance System)

46% will report daily consumption of fruits and 12.7% dark green vegetables by 2017

• Establish Farm-to-School and School Garden programs with technical assistance and resources provided by Cherokee Nation
• Partner and support schools and childcare centers to adopt nutrition policy standards.
• Partner and support schools and workplaces to increase access to healthy food choices by replacing less healthy food options

B.1. Increase physical activity among Cherokee adults and children

77% of adults

80% in 2017

• Develop joint-use agreements with schools allowing the use of school buildings and facilities for recreation

B.1.2. Increase the number of adults in the Cherokee Nation who self-report engaging in exercise several times per week (Source: Behavioral Risk Factor Surveillance System)

45.4%

Will report daily exercise by adults and children by 2017

**B.2. Increase early detection and prevention of childhood overweight and obesity**

B.2.2. Increase the number of schools who participate in Safe Routes to School programs

1 agreement in place

4 agreements by 2015

• Promote schools to develop safe route agreements that allow use of school facilities for recreation

B.3. Conduct BMI screening with students and refer all youth with a BMI greater than 85% to a health care provider

12 schools in 10 counties

5 elementary schools annually in 14 counties by 2017

• Promote the Cherokee Challenge (Principal Chief’s School Health Leadership Program)

B.3.1. Implement best practices school health model curricula in elementary schools

15 schools in 10 counties

50 elementary schools by 2017

• Provide training with school staff and faculty on age-appropriate and culturally-specific health education

B.3.2. Implement best practices in Cherokee Nation health care facilities for the prevention and treatment of childhood obesity

Toolkit implemented in 9 of 10 facilities

Total implementation by 2016

• Provide repetitive training and updates to clinical staff
• Monitor changes in BMI in children diagnosed with obesity

**HEALTH PRIORITY C: PROMOTING SAFER COMMUNITIES**

C.1. Decrease the incidents of violence and self harm

C.1.1. Increase the number of screenings for depression and risk of suicide

4% (RPMS data)

Increase by 3% annually

• Develop assessments and measures for all programs and partners engaged in the implementation of the plan.

C.1.2. Decrease the percentage of high school students who have attempted suicide

48.1% of adult patients

Increase by 3% annually

• Provide training to providers about violence prevention and suicide risk assessment
• Increase referrals to counseling and prevention programs

**HEALTH PRIORITY D: REDUCING AND PREVENTING COMMERCIAL TOBACCO AND ALCOHOL USE**

D.1. Promote Tobacco-free and prevention policies to protect people from secondhand smoke exposure

D.1.1. Increase the number of school 24/7 Tobacco-Free policies within the TJSA

20% of schools in TJSA

25% in 2015; 35% in 2017

• Conduct assessments of school policies and level of policy promotion, implementation and enforcement using the CDC School Health Index
• Partner with schools and provide technical assistance to promote policy change

D.2. Decrease access to commercial tobacco products by youth under the age of 18

D.2.1. Decrease the non-compliance rate of retail tobacco outlets who sell tobacco to youth under the age of 18 in Adair, Sequoyah, Wagoner, and Cherokee Counties

18% non-compliance rate

Decrease non-compliance rate by 5%

• Secure agreements with county, city and tribal law enforcement by 2013
• Conduct quarterly inspections as scheduled

D.3. Decrease access to alcohol by youth and adults under the age of 21

D.3.1. Decrease the non-compliance rate of retail alcohol outlets who sell alcohol to youth under the age of 21 in Adair, Sequoyah, Wagoner, and Cherokee Counties

25% non-compliance rate

20% non-compliance rate by 2015

• Increase the number of alcohol outlets to adopt policy for all new employees to receive Responsible Beverage Service Training
• Recruit, Consent, and Conduct Responsible Beverage Server/Seller Training to alcohol outlets in the region

**HEALTH PRIORITY E: PREVENTING SEXUAL BEHAVIOR RISKS AMONG ADOLESCENTS AND YOUNG ADULTS**

E.1. Reduce rates of teen pregnancy

E.1.1. Increase the percentage of high school students who use any form of birth control

85.4% of sexually active high school students

95% by 2018

• Provide technical assistance to schools in providing evidence-based education

E.2. Reduce rates of STIs among individuals 15-29

E.2.1. Increase the screening rates for STIs

27% of women screened for STIs

Increase by 5% annually

• Assist clinics in adopting screening guidelines
• Appropriate media campaign to increase awareness

E.2.2. Increase the percentage of sexually active high school students who use condoms

64.6%

Increase by 5% annually

• Provide technical assistance to schools in providing evidence-based education

E.2.3. Decrease the percentage of Native American high school students who engage in sexual activity

56.4%

Decrease by 3% annually

• Provide technical assistance to schools in providing evidence-based education
LOOKING TO THE FUTURE

Cherokee Nation Public Health Programs is committed to working in partnership with individuals, families and our communities to make positive changes that will improve our health and wellness. The Cherokee Nation Tribal Health Improvement Plan is part of a larger effort by both public health staff and clinical staff to promote health and quality of life among our communities and families.

The strategic goals, strategies and measures presented here will focus our attention and help us monitor progress. Both the public health side and clinical side of Cherokee Nation Health Services will work together to work together with other Cherokee departments, local and state governments, schools and universities, faith- and community-based organizations, and others to leverage resources to better serve the needs of our communities. Cherokee Nation Public Health will continue to review and update the plan to meet the changing needs of the community. As more information is gathered and learned, Cherokee Nation will continue to implement evidence-based practices, evaluate short and long-term outcomes and make adjustments to achieve the desired results. Our hope is that a stronger, well-coordinated public health system will lead to better health outcomes for all.

THE CHEROKEE NATION TRIBAL HEALTH IMPROVEMENT PLAN IS PART OF A LARGER EFFORT BY BOTH PUBLIC HEALTH STAFF AND CLINICAL STAFF TO PROMOTE HEALTH AND QUALITY OF LIFE AMONG OUR COMMUNITIES AND FAMILIES.

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The information presented in this Tribal Health Improvement Plan is that of the Cherokee Nation and does not necessarily represent the official position of or endorsement by the Centers for Disease Control and Prevention.