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2016 Community Health Needs Assessment, St. John Sapulpa
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EXECUTIVE SUMMARY

Meeting the healthcare needs of the community lies at the heart of the St. John mission. St. John Health System is dedicated to improving the health of the communities we serve, especially those most vulnerable among us. In order to ensure our efforts will impact the health of our communities, St. John Health System recognizes the importance of following a systematic approach to understanding community needs and to develop strategic plans for addressing identified needs. Accordingly, St. John Health System conducts community health needs assessments of the communities we serve every three years. This assessment of community health needs and assets identifies the significant health needs and provides reference for the organization’s response to those needs. This response is otherwise known as an implementation strategy or community health improvement plan. Together, community health assessments and implementation strategies work to align organizational initiatives, programs, and activities to improve the health of the communities we serve.

The importance of assessing community health needs and developing an implementation strategy to address prioritized needs was reinforced by the passage of the Patient Protection and Affordable Care Act (Affordable Care Act, ACA) in 2010. The ACA requires not-for-profit 501(c) (3) healthcare organizations to satisfy certain requirements in order to remain tax-exempt. To comply with federal tax-exemption requirements, a tax-exempt hospital facility must conduct a community health needs assessment every three years and adopt an implementation strategy to meet the community health needs identified through the assessment.

Community health needs assessments are powerful tools possessing the potential to be catalysts for immense community change. These assessments help to identify the most pressing needs and assets of our communities, build relationships with community partners, and direct resources where they are most needed. Through collaboration with community stakeholders and partner organizations, this community-driven process has the potential to enhance program effectiveness, leverage limited resources, and strengthen communities.

St. John Health’s System’s six northeastern Oklahoma member hospitals (St. John Medical Center, St. John Owasso, St. John Broken Arrow, St. John Sapulpa, Jane Phillips Medical Center, and Jane Phillips Nowata Health Center) conducted the first set of community health needs assessments during the 2013 fiscal year. Over the past three years the health system and its member hospitals have worked to address a set of prioritized health needs based on actions outlined in the implementation strategy plans.

The recurring process of updating assessments and implementation strategies reflects changes in the health of the communities we serve over time and helps to ensure ongoing improvement efforts are based on the needs of our communities. An updated set of community health needs assessments were conducted by St. John Health System’s six northeastern Oklahoma hospitals during the 2016 fiscal year. Each hospital also developed an implementation strategy in response to priority health needs identified in their community health needs assessment to be addressed during the 2017-2019 fiscal years. The first set of community health needs assessments and implementation strategies provided a baseline and historical perspective related to some of the same elements assessed in 2016.

The findings of each hospital’s 2016 community health needs assessment have been compiled in written summary reports. This publication provides a comprehensive analysis of the health needs and
assets of the community served by one of St. John Health System’s member hospitals, St. John Sapulpa. For the purposes of this assessment, St. John Sapulpa’s community is defined as Creek County, Oklahoma.

OBJECTIVES

The objectives of St. John Sapulpa’s community health needs assessment are to:

- Increase the understanding of the health needs and assets of our community;
- Build capacity through partnership development and collaboration;
- Align and integrate population health and community health improvement goals with other strategic priorities of St. John Sapulpa and St. John Health System;
- Strengthen the role of the hospital and health system as we work to address community health needs;
- Ensure our efforts will impact the health of the communities we serve, especially those among us who are most vulnerable; and
- Fulfill Internal Revenue Service regulations related to 501(c) (3) non-profit hospital status for federal tax-exemption.

DEFINING THE COMMUNITY SERVED

The definition of the community served by the hospital provided the foundation on which our assessment and subsequent implementation strategy decisions were made. In defining the community served by St. John Sapulpa, the following was taken into consideration:

- General geographic area
- Geopolitical definitions
- Primary and regional service areas
- Patient population
- Areas and populations served by the hospital’s community benefit programs
- Opportunity areas- geographic areas encompassing at-risk, vulnerable, and/or underserved populations
- Availability of health information and data

For the purposes of this assessment, the community served by St. John Sapulpa includes all of Creek County, Oklahoma. St. John Sapulpa is based out of the city of Sapulpa. Accordingly, the city serves as St. John Sapulpa’s primary area of focus within the Creek County community. An effort was made to focus on the community health needs and assets specific to this region as well as Creek County as a whole. Community health improvement efforts as a result of this assessment will primarily center on the city of Sapulpa. It is our hope to ultimately extend our efforts to other cities and towns within Creek County based on lessons learned through our work with the Sapulpa community.

CREEK COUNTY-OKLAHOMA

Creek County’s population is similar to the statewide population. Along with the rest of the state and nation, the population is going through a major demographic shift, both in terms of age and
race/ethnicity. Older age groups have captured a greater relative share of the population over the past several decades, while the share represented by children has declined. Creek County’s overall population is becoming increasingly diverse racially, but the trend is most evident among children.

In 2015, Oklahoma ranked 45th in the nation in health according to the United Health Foundation’s America’s Health Rankings (2016). The following information demonstrates the identified health strengths, challenges, trends, and achievements experienced by the state:

**Strengths:**
- High immunization coverage among children
- High influenza and pneumonia vaccination rates among seniors
- Small disparity in health status by education level
- Though rates are still high, some recent improvement in infant mortality rate
- A number of statewide and local initiatives working to improve health outcomes

**Challenges:**
- High prevalence of obesity
- High rate of cardiovascular deaths
- Limited availability of primary care physicians
- Insufficient number of psychiatrists
- Limited medical and behavioral health care access results in significant health impacts
- High rate of suicide deaths
- High rates binge drinking and alcohol related motor vehicle deaths
- Low rates of fruit and vegetable consumption
- High rates of preventable hospitalizations
- High rates of infant mortality and no or late first trimester prenatal care
- Poor dental care access and health in some areas
- High prevalence of current smoking

In addition, the following indicators have experienced considerable changes:

- From 2014-2015, disparity in health status by education level decreased 22% from 32.1% to 25.1%
- From 2014-2015, smoking decreased 11% from 23.7% to 21.1% of adults.
- Oklahoma had a nearly 50 percent increase in death due to unintentional injuries from 2000 to 2012
- In the past 5 years, preventable hospitalizations decreased 29% from 88.7 to 62.6 per 1,000 Medicare beneficiaries.
- In the past 20 years, low birth weight increased 21% from 6.7% to 8.1% of live births.
- In the past 10 years, children in poverty increased 77% from 14.1% to 25.0% of children
- Oklahoma’s mortality rate dropped 5% percent over the past 20 years while the U.S. mortality rate dropped 20 %
- The uninsured rate in Oklahoma decreased by 5% since 2013 prior to the open enrollment period (the 2016 uninsured rate in the state is 15%)

Oklahoma continues to rank near the bottom in multiple key health status indicators. Many of these outcomes are related to conditions that Oklahomans must live with every day. Poverty, lack of insurance,
limited access to primary care, and inadequate prenatal care, along with risky health behaviors associated with these determinants, such as low fruit/vegetable consumption, low physical activity, and a high prevalence of smoking contributes to the poor health status of our citizens. Diabetes, hypertension, obesity, physical activity and nutrition, and tobacco use are risk factors associated with heart disease and cancer, the leading causes of death in Oklahoma. Perhaps the most disturbing revelation about the state’s health is that Oklahoma continues to be significantly behind the nation in terms of decreases in mortality rate.

Greater socioeconomic need and health impacts are found among certain populations and geographic areas. Disparities in educational attainment are also found across Oklahoma. These areas and populations with high socioeconomic need are also the most affected by health problems, as evidenced by significantly worse health outcome measures, higher hospitalization rates, and myriad health challenges. While Oklahoma has relatively good health insurance coverage, some lower resourced Oklahomans remain uninsured. Oklahoma residents with a disability are also more likely to live in poverty than the general population, which puts them at further disadvantage to accessing needed care and services.

Access to health care is challenging in many counties due to shortages of primary and specialty care. Access challenges also exist for those with no or limited insurance, cultural differences, or complicated needs. Federally designated underserved areas and populations cover nearly the entirety of Oklahoma. Unmet behavioral health, chronic disease management needs, health education and literacy needs, economic development, and healthy behavior supports are recurring themes supported by secondary data review and community input. Addressing the medical and mental health shortage areas and increasing individual and population level access to medical and community care are important needs in Oklahoma.

Similar to the state, Creek County ranks poorly in multiple key health status indicators. According to the 2016 County Health Rankings Creek County ranked 49th out of 77 counties in Oklahoma in regard to health outcomes. This ranking is based on two types of measures: how long people live (length of life) and how healthy people feel while alive (quality of life). In the Oklahoma State Department of Health’s 2014 State of the State’s Health Report, ranked Creek County as 46th in the state for age-adjusted total mortality, with the leading causes of death of heart disease, cancer, stroke, chronic lower respiratory disease, and unintentional injury. Other indicators to note are as follows:

- The rate of cancer incidence was 17% higher than the national rate in 2014
- In 2014, an estimated 1 in 4 adults reported 4+ of poor physical health (25%) and nearly 1 in 4 reported 4+ days of poor mental health (24%) in the previous month
- Creek County ranked 5th highest in the rate of deaths due to nephritis in 2014
- The rate of adult asthma worsened by 6% from 2013-2014
- The rate of deaths due to occupational fatalities doubled from 2013-2014
- In 2015, the infant mortality rate was 8 deaths per 1,000 live births in year

According to the 2016 County Health Rankings, Creek County ranked 44th out of 77 counties in Oklahoma in regard to health factors. This ranking is based on four types of measures: social and economic factors, clinical care, health behaviors, and physical environment. The following indicators are of significance to note:

**Clinical Care:**

2016 Community Health Needs Assessment, St. John Sapulpa
The percentage of uninsured adults improved by 18% in 2014. The uninsured rate for the total population in Creek County decreased 6% from 2013-2015. The rate of primary care physicians per 100,000 population in Creek County in 2013 was 28.4. The ratio of the population to mental health providers in 2015 was 550:1. In 2014, the percentage of women who did obtain prenatal care during their first trimester of pregnancy was 61%.

**Health Behaviors and Risk Factors:**
- In 2014, 37% of adults in Creek County were smokers, which was 35% higher than the national rate and the 10th highest rate in the state.
- Nearly 1 in 5 adults in 2014 reported 3+ days with limited activity in the past month (19%).
- Creek County ranked high in minimal fruit consumption (52.6%) and vegetable consumption (27.2%) in 2014.
- The number of teen births per 1,000 population in 2015 was 53.
- The rate of drug overdose deaths per 100,000 population in 2015 was 22.
- In 2007-2012, 8 out of 10 deaths involved at least one prescription painkiller.

**Socioeconomic Factors:**
- In 2014, 1 in 6 people in Creek County lived in poverty (17%).
- The percentage of the population living in poverty worsened by 34% from 2013-2014.
- In April 2016, the unemployment rate was 5.2% for the population aged 16 and older.
- In 2010-2014, the percent of the population 25 and older with no high school diploma was 14.71% and the percent of the population 25 and older with an associate’s degree or higher was 21.96%.

**Physical Environment:**
- In 2015, Creek County ranked 69th out of 77 counties in Oklahoma for physical environment (air and water quality, housing conditions, and transportation).

In many ways, children face a variety of challenges in Creek County. Many families struggle to be self-sufficient, even while holding down jobs. The continuing impact of social determinants of health, health disparities, and health inequity is evident in our community’s health outcomes and well-being. There is undoubtedly much work to do to improve the health of our county and state. However, it is equally important to look at our strengths and achievements.

**IDENTIFYING COMMUNITY HEALTH NEEDS: METHODOLOGY**

This community health needs assessment is a systematic, data-driven approach to determining the health status, behaviors, and needs of residents in Creek County. Community health needs and assets for Creek County were determined using a combination of secondary and primary data (community input). Data contained in this assessment were obtained through multiple sources and methods designed to gather both qualitative and quantitative information. Data collection methods and sources used in this assessment include the following:

- Comprehensive review of secondary data sources
- Input from community leaders and representatives
• Health system input from our Community Health Needs Assessment (CHNA) Advisory Group and leadership

Our Approach

Central to our efforts to improve the health of individuals and communities is our focus on promoting health and well-being all persons, and a commitment to health equity and eliminating barriers to good health. Our assessment took into account the following:

• A multitude of factors or health determinants influence the health of our community;
• A commitment to assess and address the four determinants of health: clinical care, health behaviors, physical environment, and socioeconomic factors;
• Addressing health disparities, health equity, and social determinants of health through community building and improvement initiatives is an important component of improving the health of the community;
• Our health and well-being are products of not only the health care we receive, but also the places where we live, learn, work, and play;
• Zip codes can mean more to health than genetic codes;
• A focus on identifying geographic areas of greatest need helps to better understand at-risk and vulnerable populations;
• The importance of incorporating information on the health and well-being of priority populations, or those most in need;
• Working together has a greater impact than working alone; and
• Engaging the community and joining forces with community stakeholders allows all involved to share in the experience of understanding community health needs and to work collaboratively with the communities we serve.

Priority Populations

Priority populations focused upon in this assessment included those most vulnerable among us. This includes, but was not limited to: persons living in poverty, children, pregnant women, older adults, uninsured and underinsured individuals, members of ethnic or minority groups, members of medically underserved populations, and otherwise vulnerable or at-risk populations.

Community Engagement & Collaboration

St. John Health System and St. John Sapulpa engaged the Creek County Health Department, the Oklahoma State Department of Health’s Regional Turning Point consultant for Creek County, the Creek County Community Partnership, the Creek County Healthy Living Program and Coalition, and a multitude of other community partner organizations throughout this community health needs assessment. The health system hospital worked closely with Creek County Health Department and these partners to conduct this assessment.

Central to this community assessment is the community input received from community members, community representatives and leaders, the public health workforce, and community-based
A number of community stakeholders and local organizations engaged in our hospital community input meeting at St. John Sapulpa on May 5, 2016.

Secondary Data

The most current secondary data was reviewed for the purpose of providing a comprehensive overview of the community. A variety of non-governmental and governmental data sources were used including a broad set of indicators from local, state, and federal agencies. Indicators are measurements that summarize the state of health and quality of life in the community. County, state, and national level public health surveillance was an especially important source of secondary data. The Community Commons’ (www.communitycommons.org) Community Health Needs Assessment served as the main secondary data source for this assessment. A number of data sources, information, and figures were also provided courtesy of several local, state, and national organizations.

In addition to general indicators of health status, this assessment includes indicators covering many of the social determinants of health. Measures that reflect the health and well-being of priority populations, or those most in need, were also included. Data comparisons were made at the ZIP code, census tract, region, county, state, and national levels to allow for evaluation of geographic disparities. Other data considerations included trends over time, county and state level rankings, benchmark comparisons at the state and national level, organizational needs and priorities, and disparities by age, gender, and race/ethnicity. Additionally, the Department of Health and Human Service’s Healthy People 2020 initiative goals were utilized as indicators for areas for improvement or success.

Primary Data — Community Input

Community input provides information and insights about the health and well-being of the community that cannot be obtained through secondary data alone. This assessment employed two methods of community input to yield the desired results. For the purposes of this assessment, community input was obtained through the following methods:

- A community input meeting with 18 community members, leaders, and representatives
- Input from the public health workforce and local coalitions/partnerships
- Input from the health system’s Community Health Needs Assessment (CHNA) Advisory Group and leadership

Community input was solicited from a diverse set of community stakeholders such as community members, community organizations, and the public health workforce. A variety of sources ensured that as many different perspectives as possible were represented while satisfying the broad interests of the community. Sources of community input for this assessment were as follows:

- Community members, leaders and representatives
- Local public health workforce
- Representatives of medically underserved, low-income, minority, at-risk, and otherwise vulnerable populations
- Health system CHNA Advisory Group and leadership
Community stakeholders who provided community input represented a variety of community sectors including: community members, healthcare providers and services, non-profit agencies, community-based organizations, private businesses, volunteer organizations, education and academia, community developers, faith communities and faith-based organizations, government representatives, safety net service providers, law enforcement and first responders, economic and workforce development, the public health workforce, and other interest groups working with at-risk and vulnerable populations. This assessment especially focused on community input from those with special knowledge or expertise in public health as well as members and representatives of medically underserved, low income, minority, or otherwise vulnerable populations. Each offered critical strengths and insights on the health needs and assets of the community.

**SIGNIFICANT COMMUNITY HEALTH NEEDS**

Primary and secondary data were evaluated and synthesized to identify significant community health needs in Creek County. These needs span the following topic areas and are often inter-related:

- Diet, nutrition, and physical activity
- Weight and obesity
- Mental health and mental health disorders
- Chronic disease management
- General education and workforce development
- Health education and literacy
- Access to health services and affordability
- Tobacco use
- Substance abuse (especially opioid abuse)
- Economic and social environment
- Prevention and safety
- Aging problems and care
- Children’s health
- Child abuse/neglect
- Available public transportation
- Physical environment
- Health behaviors
- Prenatal care and infant mortality
- Teen births
- Resource development and awareness

**PRIORITIZATION PROCESS & PRIORITY HEALTH NEEDS**

St. John Health System and St. John Sapulpa called together hospital decision makers as well as community partners, leaders and representatives to prioritize the significant community health needs of Creek County considering several criteria: magnitude/severity of health; opportunity to intervene at a prevention level; circle of influence/ability to impact change; support from the community; and capacity to address underserved populations as well as populations deemed vulnerable. The following community health needs were selected as the top four priorities:
- Wellness and Chronic Disease Prevention
- Affordability and Access to Care
- Behavioral Health (mental health and substance abuse)
- Health Education and Literacy

CONCLUSION

This report describes the findings of a comprehensive health needs assessment for the residents of Creek County, Oklahoma. The prioritization of the identified significant health needs will guide the community health improvement efforts of St. John Sapulpa and St. John Health System. From this process, St. John Sapulpa and St. John Health System will outline how they will address the top four prioritized health needs in our fiscal year 2017-2019 implementation strategy.
INTRODUCTION

St. John Health System is deeply committed to its local communities. Since 1926, St. John Health System has been an integral part of every community it serves—providing nationally recognized healthcare services and giving back through care for persons living in poverty, education of medical care professionals, medical research, and many other services that help make our communities better places to live.

True to this commitment and central to our Catholic driven-mission, is St. John Health System’s dedication to improving the health of the communities we serve, especially the most vulnerable among us. The health system has a long tradition of working to improve community health through community benefit activities. In order to ensure our efforts will impact the health of the communities we serve, St. John Health System recognizes it is essential to follow a systematic approach to understanding community needs and to develop strategic plans for addressing identified needs. Accordingly, St. John Health System conducts community health needs assessments of the communities we serve every three years.

According to the Catholic Health Association of the United States (2015), a community health needs assessment is “a systematic process involving the community to identify and analyze community health needs and assets in order to prioritize, plan, and act upon unmet community health needs.” The health needs of members of medically-underserved, low-income, minority, and otherwise vulnerable populations are a central focus of the assessment. The findings from the assessment are made widely available to the public in the form of a written summary report.

The community health needs assessment also serves as a guide for the development of an implementation strategy for each our hospitals. The implementation strategy is a three year hospital plan for addressing a prioritized set of identified health needs. This written summary plan is also known as the hospital’s community benefit plan and serves to help hospital and health system leadership understand as well as communicate the goals, objectives, and approaches we will undertake to address community needs. Additionally the plan aids community members and partners in understanding the hospital and health system’s role in supporting the improvement of health and well-being in our communities. Together, St. John Health System’s community health needs assessments and implementation strategies ensure alignment with our mission and the communities we serve.

St. John Health’s System’s six northeastern Oklahoma member hospitals (St. John Medical Center, St. John Broken Arrow, St. John Owasso, St. John Sapulpa, Jane Phillips Medical Center, and Jane Phillips Nowata Health Center) conducted the first set of community health needs assessments and developed subsequent implementation strategies during the 2013 fiscal year. Over the past three years the health system and its member hospitals have worked to address a set of prioritized health needs based on actions outlined in the implementation strategy plans.

The recurring process of updating assessments and implementation strategies reflects changes in the health of the communities we serve over time and helps to ensure ongoing improvement efforts are based on the needs of our communities. An updated set of community health needs assessments were

conducted by St. John Health System’s six northeastern Oklahoma hospitals during the 2016 fiscal year. Each hospital also developed an implementation strategy in response to priority health needs identified in their community health needs assessment to be addressed during the 2017-2019 fiscal years. The first set of community health needs assessments and implementation strategies provided a baseline and historical perspective related to some of the same elements assessed in 2016.

The findings of each hospital’s 2016 community health needs assessment have been compiled in written summary reports. This publication provides a comprehensive analysis of the health needs and assets of the community served by one of St. John Health System’s member hospitals, St. John Sapulpa. For the purposes of this assessment, St. John Sapulpa’s community is defined as Creek County, Oklahoma.

*Note: The health system’s seventh member hospital, Sedan City Hospital serving Chautauqua County and the Lower 8 Region of Southeastern Kansas conducted its first community health needs assessment during the 2014 fiscal year. This assessment was completed in partnership with the Chautauqua County Health Department, the Lower 8 of Southeast Kansas Public Health Preparedness Region, and the Kansas Health Institute. An updated community health needs assessment and implementation strategy will be completed by the hospital in the 2017 fiscal year.

**PURPOSE**

The health of a community is determined by the physical, mental, environmental, spiritual, social well-being, and subjective quality of life of its residents. This updated 2016 community health needs assessment provides a basis for understanding the factors that contribute to the health of the Creek County community. Additionally, this assessment informs several types of planning within the community, hospital, and health system. These plans include: community-based plans which outline community-wide health improvement initiatives and programs; the hospital’s implementation strategy for addressing the health needs of the community, and the health’s system’s operational and strategic plans which set the performance goals for the organization. Ultimately, the assessment and subsequent plans support the improvement of the community’s health and well-being and ensure alignment with the needs of the community.

Community health needs assessments help to identify the most pressing needs and assets of our communities, build relationships with community partners, and direct resources where they are most needed. Through collaboration with community partners, this community-driven process has the potential to enhance program effectiveness, leverage limited resources, and strengthen communities. The process serves as the foundation for identifying those in greatest need, recognizing existing assets and resources, developing strategic plans, and mobilizing hospital and community partners to work together to promote the health and well-being of the community. Community health needs assessments are essential to community development and community health improvement efforts. These powerful tools have the potential to be catalysts for immense community change.

The concept of the community health needs assessment is not new. In fact, these assessments have been widely-used in the public health field for decades. However, community health needs assessments have received heightened attention among healthcare providers and organizations in recent years with the passage of the Patient Protection and Affordable Care Act (Affordable Care Act, ACA) in 2010. The importance of assessing community health needs and developing an implementation strategy to address prioritized needs was reinforced by the ACA. This law added new requirements for non-profit, 501(c) (3) healthcare organizations related to their community benefit processes and tax exemption. Under ACA, section 501(r) was added to the Internal Revenue Service Code and requires not-for-profit 501(c) (3)
healthcare organizations to satisfy certain requirements in order to remain tax-exempt. In order to comply with federal tax-exemption requirements, a tax-exempt hospital facility must:

- Conduct a community health needs assessment every three years
- Adopt an implementation strategy to meet the community health needs identified through the assessment
- Report how it is addressing the needs identified in the community health needs assessment and a description of needs that are not being addressed with the reasons why such needs are not being addressed

The community health needs assessment must be informed by input from the populations we aim to serve, or those who are most in need. These populations include persons living in poverty and members of populations deemed disparate or otherwise vulnerable. Additionally, the hospital facility must continually involve the community in the process and ensure the community health needs assessment is widely available to the public.

When focused on legal compliance and reporting guidelines, it is easy to lose sight of the significance and value of the community health needs assessment process. However, it is essential for healthcare organizations to embrace this process. The rapidly changing landscape of health care further underscores the importance of assessing and addressing community health needs. Accordingly, the alignment of population health and community health improvement initiatives with other strategic healthcare priorities is becoming more common among health care organizations in recent years. The opportunity to examine the health of the community with a population health lens as well as to address the disparities in health experienced by those we serve is immensely important. It is a critical step in our efforts to transform the quality of care we provide to our patients, reduce high costs, and improve poor health outcomes. This process, especially the focus on community engagement, has the potential to result in meaningful actions that transform organizations and produce measurable health improvement in the communities we serve.

**OBJECTIVES**

The objectives of St. John Sapulpa’s community health needs assessment are to:

- Increase the understanding of the health needs and assets of our community;
- Build capacity through partnership development and collaboration;
- Align and integrate population health and community health improvement goals with other strategic priorities of St. John Sapulpa and St. John Health System;
- Strengthen the role of the hospital and health system as we work to address community health needs;
- Ensure our efforts will impact the health of the communities we serve, especially those among us who are most vulnerable; and
- Fulfill Internal Revenue Service regulations related to 501(c) (3) non-profit hospital status for federal tax-exemption.

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OUR HEALTH SYSTEM

ASCENSION

Ascension is a faith-based healthcare organization dedicated to transformation through innovation across the continuum of care. As the largest non-profit health system in the U.S. and the world’s largest Catholic health system, Ascension is committed to delivering compassionate, personalized care to all, with special attention to persons living in poverty and those most vulnerable. In fiscal year 2015, Ascension provided nearly $2 billion in care of persons living in poverty and other community benefit programs. Approximately 160,000 associates and 36,000 aligned providers serve in 2,000 sites of care – including 137 hospitals and more than 30 senior living facilities – in 24 states and the District of Columbia.

ST. JOHN HEALTH SYSTEM

Established in 1926 with the opening of St. John’s Hospital (now St. John Medical Center) in Tulsa, Oklahoma, St. John Health System is a fully-integrated healthcare delivery system encompassing seven hospitals in northeastern Oklahoma and southern Kansas. 2016 marks the 90th anniversary of the founding of St. John in Tulsa by our legacy sponsors, the Sisters of the Sorrowful Mother. Now as part of Ascension Health, St. John Health System has access to additional resources to help us continue to transform the quality of care we provide to our patients.

St. John Health System is organized as a tax-exempt integrated healthcare delivery system. Our mission is to continue the healing ministry of Jesus Christ by providing medical excellence and compassionate care to all those we serve, especially persons living in poverty or who are otherwise deemed vulnerable. Ascension and St. John Health System together are focused on delivering health care that is safe, health care that works and health care that leaves no one behind. We are working to transform health care delivery in the nation to provide high-quality, cost-effective care that is safe and which emphasizes wellness and prevention as well as episodic care.

St. John Health System serves as an important safety net provider of a broad continuum of healthcare services to the citizens of northeastern Oklahoma and the surrounding region. The health system’s service area contains 260 ZIP codes in 32 counties in Oklahoma, Kansas, and Arkansas. The health system’s primary service area is approximately 1.1 million people (Figure 1). The six main hospitals owned by St. John Health System are located in northeastern Oklahoma and together possess approximately 800 beds in service. Each of these six hospitals operates a full-service, 24-hour, 365-day emergency room providing both urgent and emergency care to all individuals, regardless of their ability to pay.
St. John Health System also has an array of partner and subsidiary healthcare facilities. In all, the health system serves more than 3,500 patients every day.

**St. John Hospitals:**
- St. John Medical Center
- St. John Broken Arrow
- St. John Owasso
- St. John Sapulpa
- Jane Phillips Medical Center
- Jane Phillips Nowata Hospital
- Sedan City Hospital

**Other St. John Facilities:**
- St. John Clinic
- St. John Villas senior living centers
- St. John Urgent Care centers
- Regional Medical Laboratory (RML)
- A variety of outpatient treatment centers

St. John Health System owns and operates St. John Clinic which operates as a multi-specialty physician clinic. A team of more than 500 physicians and mid-level providers are employed by St. John...
Clinic. Additionally, St. John Clinic serves patients in over 95 clinic locations, including urgent care clinics, throughout northeastern Oklahoma and southeastern Kansas.

St. John Health System also owns Regional Medical Lab Inc. (RML), a nationally-renowned commercial reference laboratory that provides testing services for thousands of physicians and hospitals within a four-state region. As one of the region’s largest reference laboratories, RML performs more than nine million procedures each year. RML provides onsite inpatient laboratory services for St. John Medical Center in Tulsa, Oklahoma as well as outpatient laboratory services for other hospitals, clinics and physician offices in the Tulsa metropolitan area, northeastern Oklahoma, southern and western Oklahoma and southeastern Kansas. The primary RML facility is located in Tulsa, Oklahoma and several satellite locations are spread throughout Tulsa, northeastern and central Oklahoma and southeastern Kansas.

CommunityCare Managed Health Care Plans of Oklahoma, one of the area’s largest health insurers, is fifty percent owned by St. John Health System. CommunityCare offers many health care insurance options for individuals and families, including the region’s highest rated Medicare Advantage plan for those who are age 65 or older.

St. John Health System and Tulsa Cancer Institute joined forces in 2016 to introduce Oklahoma Cancer Specialists and Research Institute (OCSRI). Together, we are Oklahoma’s first and only certified member of MD Anderson Cancer Network®, a program of MD Anderson Cancer Center. MD Anderson consistently ranks No. 1 in cancer care in the annual "Best Hospitals” survey published by U.S. News & World Report.

**St. John Health System touches the lives of thousands of patients every day:**

- More than 60,000 annual hospital admissions, including 19,000 “observation” patients
- More than 35,000 annual surgeries performed in St. John hospitals. St. John also is a minority owner in two ambulatory surgery centers that perform more than 28,000 annual outpatient surgeries
- More than 3,600 annual births at St. John hospitals
- More than 160,000 annual patient visits to St. John hospital emergency departments
- More than 60,000 annual urgent care visits to St. John urgent care clinics
- Nearly 500,000 annual patient visits to St. John Clinic physician offices
- RML performs more than 9 million annual laboratory tests

Our Mission, Vision and Values guide everything we do at St. John and Ascension. They are foundational to our work to transform healthcare and express our priorities when providing care and services, particularly to those most in need. As the health system develops initiatives to address needs within the communities we serve, we strive to ensure that our Mission, Vision, and Values are maintained and promoted.

**Mission**

Rooted in the loving ministry of Jesus as healer, we commit ourselves to serving all persons with special attention to those who are poor and vulnerable. Our Catholic health ministry is dedicated to spiritually-centered, holistic care which sustains and improves the health of individuals and communities. We are advocates for a compassionate and just society through our actions and our words.
Vision

We envision a strong, vibrant Catholic health ministry in the United States that leads healthcare’s transformation. We will ensure service that is committed to health and well-being for our communities while meeting the needs of individuals throughout their lives. We will expand the role of laity, in both leadership and sponsorship, to ensure a Catholic health ministry in the future.

Values

- Service of the poor: Generosity of spirit, especially for persons most in need
- Reverence: Respect and compassion for the dignity and diversity of life
- Integrity: Inspiring trust through personal leadership
- Wisdom: Integrating excellence and stewardship
- Creativity: Courageous innovation
- Dedication: Affirming the hope and joy of our ministry

ST. JOHN SAPULPA

St. John Sapulpa is a 25-bed facility located in Sapulpa, Oklahoma. St. John Sapulpa joined the St. John Health System in 1997 with the acquisition of Bartlett Memorial Hospital. The facility was renamed St. John Sapulpa in 2000. Designated as a Critical Access Hospital, the St. John Sapulpa offers Creek County residents to much needed quality medical care, including a fully equipped (24 hour, 365 day per year) emergency center and the capability to accept acute patients.

St. John Sapulpa offers full-service primary care as well as gastroenterology, general surgery, ophthalmology and podiatry. In addition it provides swing-bed care - skilled nursing care plus the benefit of “rehabilitation” therapies to help patients transition to home or a long term care facility. Swing beds can also be utilized to help rehabilitate from surgery, illness or accident.

St. John Sapulpa touches the lives of patients every day:

- More than 1,400 annual hospital admissions, including “observation” patients.
- More than 200 annual surgeries performed.
- More than 19,000 annual patient visits to St. John Sapulpa emergency department.
- More than 18,000 annual other patient visits for diagnostic testing and treatment.

COMMUNITY SERVED

The definition of the community served by the hospital provided the foundation on which our assessment and subsequent implementation strategy decisions were made. In defining the community served by St. John Sapulpa, the following was taken into consideration:

- General geographic area
- Geopolitical definitions
- Primary and regional service areas
- Patient population
- Areas and populations served by the hospital’s community benefit programs
- Opportunity areas- geographic areas encompassing at-risk, vulnerable, and/or underserved populations
- Availability of health information and data

St. John Sapulpa is a growing community hospital serving northeastern Oklahoma. The primary service area is Creek County and the surrounding counties. Although, St. John Sapulpa serves patients who live throughout the northeastern Oklahoma region and beyond, the community served for purposes of this community health needs assessment is defined as Tulsa, County, Oklahoma. The decision to focus on the geopolitical definition of Creek County was largely influenced by the fact that a significant number of patients utilizing St. John Sapulpa’s services reside in Creek County. In fact, an estimated 67 percent of inpatient and outpatient visits originated in Creek County in the 2015 fiscal year (Table 1). Within Creek County the top five ZIP codes of patient origin in the 2015 fiscal year were 74066, 74039, 74010, 74131, and 74041 (Table 2).

**Table 1: Top 15 Counties of Patient Origin- Inpatient and Outpatient Volumes in FY 2015**

<table>
<thead>
<tr>
<th>County</th>
<th>Total Number of Visits</th>
<th>Percent of Total Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County</td>
<td>16,753</td>
<td>67.0%</td>
</tr>
<tr>
<td>Tulsa County</td>
<td>6,436</td>
<td>25.7%</td>
</tr>
<tr>
<td>Okmulgee County</td>
<td>688</td>
<td>2.8%</td>
</tr>
<tr>
<td>Pawnee County</td>
<td>183</td>
<td>0.7%</td>
</tr>
<tr>
<td>Osage County</td>
<td>106</td>
<td>0.4%</td>
</tr>
<tr>
<td>Wagoner County</td>
<td>76</td>
<td>0.3%</td>
</tr>
<tr>
<td>Rogers County</td>
<td>75</td>
<td>0.3%</td>
</tr>
<tr>
<td>Muskogee County</td>
<td>38</td>
<td>0.2%</td>
</tr>
<tr>
<td>Lincoln County</td>
<td>34</td>
<td>0.1%</td>
</tr>
<tr>
<td>Payne County</td>
<td>28</td>
<td>0.1%</td>
</tr>
<tr>
<td>Oklahoma County</td>
<td>26</td>
<td>0.1%</td>
</tr>
<tr>
<td>Okfuskee County</td>
<td>26</td>
<td>0.1%</td>
</tr>
<tr>
<td>Mayes County</td>
<td>24</td>
<td>0.1%</td>
</tr>
<tr>
<td>Washington County</td>
<td>21</td>
<td>0.1%</td>
</tr>
<tr>
<td>Kay County</td>
<td>15</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

*Inpatient and outpatient volumes include emergency room visits.
Table 2: Top 10 Creek County Zip Codes of Patient Origin- Inpatient and Outpatient Volumes in FY 2015

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>City</th>
<th>Total Number of Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>74066</td>
<td>Sapulpa</td>
<td>12,315</td>
</tr>
<tr>
<td>74039</td>
<td>Kellyville</td>
<td>1,455</td>
</tr>
<tr>
<td>74010</td>
<td>Bristow</td>
<td>653</td>
</tr>
<tr>
<td>74131</td>
<td>Tulsa</td>
<td>600</td>
</tr>
<tr>
<td>74041</td>
<td>Kiefer</td>
<td>571</td>
</tr>
<tr>
<td>74044</td>
<td>Mannford</td>
<td>561</td>
</tr>
<tr>
<td>74067</td>
<td>Sapulpa</td>
<td>254</td>
</tr>
<tr>
<td>74050</td>
<td>Oakhurst</td>
<td>145</td>
</tr>
<tr>
<td>74028</td>
<td>Depew</td>
<td>109</td>
</tr>
<tr>
<td>74030</td>
<td>Drumright</td>
<td>45</td>
</tr>
</tbody>
</table>

*Inpatient and outpatient volumes include emergency room visits.

In addition to the fact that a large number of patients served by the hospital reside in Creek County, most public data is available at the county level. Additional factors influencing the definition of the community were the areas and populations served by the hospital’s community benefit programs as well as the geographic areas for populations deemed at-risk or vulnerable.

For the purposes of this assessment, the community served by St. John Sapulpa includes all of Creek County, Oklahoma (Figure 2). St. John Sapulpa is based out of the city of Sapulpa. Accordingly, the city serves as St. John Sapulpa’s primary area of focus within the Creek County community. An effort was made to focus on the community health needs and assets specific to this region as well as Creek County as a whole. Community health improvement efforts as a result of this assessment will primarily center on the city of Sapulpa. It is our hope to ultimately extend our efforts to other cities and towns within Creek County based on lessons learned through our work with the Sapulpa community.

Figure 2: Creek County, Oklahoma Map
CREEK COUNTY

Creek County is a county located in the U.S. state of Oklahoma. Its county seat is Sapulpa. Founded at statehood, in 1907, it was named after the Creek tribe. Before statehood, the area was part of the Creek Nation in Indian Territory. The area has a rich history. This history includes, but is not limited to: early Native American inhabitants, and the advent of the railroads, and the oil boom.

Located in east-central Oklahoma, Creek County is bordered by Pawnee County on the north, Tulsa and Okmulgee counties on the east, Okfuskee County on the south, and Lincoln and Payne counties on the west. The cities and towns officially recognized in Creek County are: Bristow, Drumright, Mannford, Oiltont, Sapulpa, Stroud, Depew, Kellyville, Kiefer, Lawrence Creek, Mounds, Shamrock, and Slick. Major highways include: Interstate 44, U.S. Historic Route 66, U.S. Route 75, and State highways 33, 97, and 117. With 969.77 square miles of land and water, the county is drained by the Cimarron River, tributaries of the Arkansas River, and the Deep Fork and the Little Deep Fork of the North Canadian River.

According to the American Community Survey (2013), Creek County had an estimated population of 70,000 individuals in 2013. The population density for the county is approximately 70 persons per square mile. The median age is 37 years and for every 100 females there are 96 males. Nearly 14 percent of the residents live below the poverty line. Creek County’s largest industries by employment are manufacturing, retail trade, construction, and state and local government.

City of Sapulpa

St. John Sapulpa is based out of Sapulpa, the largest city in Creek County. The city of Sapulpa is located primarily in Creek County. A small portion of the city, however, is located in Tulsa County. According to the 2010 U.S. Census, Sapulpa’s population was approximately 20,000. The population density of Sapulpa is over 800 persons per square mile which is much greater than that of Creek County as a whole. Approximately 16% of residents live below the poverty line.

COMMUNITY HEALTH NEEDS ASSESSMENT PROCESS: METHODOLOGY

Community health needs and assets for Creek County were determined using a combination of secondary and primary data (community input). Secondary data is existing data that has already been collected and published by another party. Secondary data about the health status of the U.S. population at the state and county level is routinely collected by governmental and non-governmental agencies through surveys and surveillance systems. In contrast, primary data is new data and is collected or observed directly through firsthand experience. Common methods of primary data are surveys, interviews, and direct observation. Community input is a type of primary data collection. Many methods can be used to gather community input, including key informant interviews, focus groups, listening circles, community meetings and forums, and surveys.

Including multiple data sources and stakeholder views is especially important when assessing the level of consensus that exists regarding priority community health needs. If alternative data sources including

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support similar conclusions, then confidence is increased regarding the most problematic health needs in a community. Data contained in this assessment were obtained through multiple sources and methods designed to gather both qualitative and quantitative information. Qualitative data is descriptive information and quantitative data is numeric information. Data collection methods and sources used in this assessment include the following:

- Comprehensive review of secondary data sources
- Input from community leaders and representatives
- Input from the public health workforce and local coalitions/partnerships
- Health system input from our Community Health Needs Assessment (CHNA) Advisory Group and leadership

A comprehensive review of secondary data sources served as the foundation for assessing the community. Recognizing its vital importance in understanding the health needs and assets of the community, this assessment primarily focused on gathering and summarizing community input. Accordingly, input from community members, community leaders and representatives, local coalitions/partnerships, and the health’s system’s Community Health Needs Assessment (CHNA) Advisory Group and leadership was obtained to expand upon information gleaned from the secondary data review. A concerted effort was made to obtain community input from persons who represent the broad interests of the community served by the hospital, including those with special knowledge and expertise of public health issues and populations deemed vulnerable.

Detailed descriptions of our approach, the secondary data and community input used in this assessment, and the methods of collecting and analyzing this information are included in the sections that follow.

OUR APPROACH

In order to effectively identify and address the health needs of a community, it is essential to have an understanding of health and the conditions that contribute to health and well-being. According to the World Health Organization, health is defined as a “state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.” A person’s state of health is a result of a number of interwoven and contributing factors and levels of influence. Accordingly, our goal was to follow a more holistic approach to assessment and community health improvement. This assessment takes into account a multitude of factors influencing the health of our community.

The Social-Ecological Model (SEM) of Health

The social-ecological model (SEM) of health is a public health framework used to describe the multilevel systems of influence that explain the complex interaction between individuals and the social context in which they live and work (Figure 3). The SEM provides a framework to help understand the various factors and behaviors that affect health and wellness. Health and well-being is shaped not only by behavior choices of individuals, but also by complex factors that influence those choices within the social

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environment through reciprocal causation. With this model, we can closely examine a specific health issue in a particular setting or context. For example, the model can help identify factors that contribute to heart disease in specific populations. With this knowledge, effective heart disease interventions can be developed for a specific population with the greatest impact in mind.

Human behavior is difficult to change and is nearly impossible to modify without understanding the environment in which one lives. In order to increase behavior that supports health and wellness, efforts need to focus on behavior choices and the multitude of factors that influence those choices. The SEM helps identify factors that influence behavior by considering the complex interplay between five hierarchical levels of influence: 1) individual or intrapersonal, 2) interpersonal, 3) institutional or organizational, 4) community, and 5) societal/public policy factors (Figure 3). The model demonstrates how the changes and interactions between these five levels over the course of one’s life affect health and wellness. Through utilizing the SEM, the likelihood of developing sustainable interventions with the broadest impact on health and wellness is increased.

**Figure 3: Social Ecological Model of Health**

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Determinants of Health

Health is a complex and multi-dimensional concept. The Centers for Disease for Disease Control and Prevention describes health as “influenced by the health care we receive, our own choices, and our communities.” In order to better understand the factors that contribute to the health of our community, this assessment utilizes a population health model developed by the University of Wisconsin Population Health Institute known as the County Health Rankings Model (Figure 4).

Figure 4: University of Wisconsin Population Health Institute’s County Health Rankings Model

Health outcomes signify a community’s overall health. Two types of health outcomes are typically assessed: length of life (how long people live) and quality of life (how healthy people feel while alive).

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Health factors contribute to health and are otherwise known as determinants of health. There are five commonly recognized determinants of health:

1. Biology and genetics
2. Clinical care
3. Health behaviors
4. Physical Environment
5. Social and Economic factors

This assessment focuses on four of the five aforementioned determinants of health: clinical care, health behaviors, physical environment, and socioeconomic factors. Each of these determinants of health is in turn, based on several measures (Figure 4). Some determinants of health are more modifiable than others. It is important to note that clinical care alone is not enough to improve community health as it only accounts for 20% of the factors that influence health. Together clinical care and health behaviors account for only 50% of the intervenable factors that contribute to health. Socioeconomic factors and the physical environment account for the remaining 50% of impactable health determinants (Figure 5). Therefore, in order to have a greater impact on the health of the community, it is important to focus on all four determinants of health for assessment and intervention.

Figure 5: Determinants of Health


Health Disparities

As aforementioned, this community health needs assessment process included the broad community as well as populations deemed underserved, at-risk, or otherwise vulnerable. In an effort to highlight the health needs of these populations, this assessment examines health disparities in the community served. Health disparities are defined by Healthy People 2020 as “a particular type of health difference that is closely linked with social, economic, and environmental disadvantage.”

Certain disadvantaged populations are at greater risk of experiencing health disparities. Healthy People 2020 asserts, “health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their: racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.”

For example in Creek County, black/African-American, Hispanic/Latino families, and older adults are more likely to live in poverty and experience poorer health outcomes than their white neighbors.

Health Inequities and Health Equity

Health inequities are closely linked to health disparities and are also closely examined in this assessment. Health inequities are “differences in health that are avoidable, unfair, and unjust.” Health inequities are closely associated with social, economic, and environmental conditions. In contrast, health equity is focused on the elimination of health and healthcare disparities. Healthy People 2020 defines health equity as the “attainment of the highest level of health for all people.” In short, health equity pertains to efforts to ensure that all people have full and equal access to opportunities that enable them to lead healthy lives.

Social Determinants of Health

When examining health disparities health inequities, it is important to consider the social determinants of health. Healthy People 2020 describes social determinants of health as the “conditions in the places where people live, learn, work, and play” that affect a wide range of health risks and outcomes. These conditions include the social, economic, and physical factors and resources contributing to a range of environments and settings and are often responsible for health disparities and inequities. According to Healthy People 2020, there are five generally recognized categorical types of social determinants of health:

1. Economic Stability
   - Access to economic and job opportunities

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• Poverty
• Food security
• Housing stability

2. Education
• Access to higher education opportunities
• High school graduation
• Early childhood education and development
• Language
• Literacy

3. Social and Community Context
• Social cohesion and support
• Availability of community-based resources and resources to meet daily living needs
• Discrimination
• Incarceration

4. Health and Health Care
• Access to healthcare services (e.g. primary and specialty care)
• Health literacy

5. Neighborhood and Built Environment
• Environmental conditions (e.g. exposure to toxins and other physical hazards, green spaces, physical barriers, aesthetics of environment)
• Access to sidewalks and bike lanes
• Safe and affordable housing
• Access to healthy foods
• Public safety (e.g. crime and violence)

Addressing health disparities, health equity, and social determinants of health through community building and improvement initiatives is an important component of improving the health of the community. Therefore, indicators of health related health disparities, health equity, and social determinants of health are a central focus of this assessment and our health system’s community health improvement efforts. Central to our efforts to improve the health of individuals and communities is our focus on promoting health and wellbeing of all persons, and a commitment to health equity and eliminating barriers to good health.

IDENTIFYING GEOGRAPHIC AREAS OF GREATEST NEED

Our health and well-being are products of not only the health care we receive, but also the places where we live, learn, work, and play.6 As a result, our zip code can be more important than our genetic code. Identifying areas of greatest need was an important component of this assessment as it helped us to identify where there are at-risk and vulnerable populations most in need. This allows us to ensure our efforts include programs to address vulnerable populations, as such programs and populations have the potential for greatest gains.6

One tool used identify geographic areas of greatest need was the SocioNeeds Index® developed by the Healthy Communities Institute (now Xerox Community Health Solutions) (Figure 6). This tool is available on the Ascension Community Health Improvement Platform available to all Ascension health ministries. The Index is used to help determine which areas of the community served are in most need of services and interventions. The Index summarizes multiple socioeconomic indicators, ranging from poverty to
education, which may impact health or access to care. All ZIP codes in the United States are given an Index value from 0 (low need) to 100 (high need). Within the community served, ZIP codes are ranked based on their Index value. These ranks are used to identify the relative level of need within the community.¹⁴

Figure 6: The HCI SocioNeeds Index

![Diagram showing how the HCI SocioNeeds Index works.](source)


PRIORITY POPULATIONS

Although this assessment aims to include information on all populations in the geographic area, a special effort was made to incorporate information on the health and well-being of priority populations, or those most in need. Priority populations focused upon in this assessment, include, but were not limited to: persons living in poverty, children, pregnant women, older adults, uninsured and underinsured individuals, members of ethnic or minority groups, members of medically underserved populations, and otherwise vulnerable or at-risk populations. This focus ensures alignment with our mission and that subsequent implementation strategies specifically meet the needs of the most vulnerable.

COMMUNITY ENGAGEMENT AND COLLABORATION

The process of conducting community health needs assessments and developing implementation strategies, serves as an ideal opportunity for the health system to initiate and strengthen mutually-beneficial relationships within the community we serve. Recognizing this opportunity and the fact that we cannot do this work alone, we engaged, partnered, and collaborated with a diverse set of community stakeholders in this process. These stakeholders represented a variety of community sectors including: community members, nonprofit and community-based organizations, safety net providers, local schools and educational institutions, local government officials and agencies, churches and faith-based organizations, healthcare providers, private businesses, community developers, law enforcement, community health centers, healthcare consumer advocates, and the public health workforce. It is important to note that each sector in the community, including community members, has a unique role. Each sector brings critical strengths and insights to our collaboration.

Working together has a greater impact than working alone. Engaging the community and joining forces with community stakeholders allows all involved to share in the experience of understanding community health needs and to work collaboratively with the communities we serve. Working in partnership with a diverse set of community stakeholders ensures we are well-positioned to help improve health outcomes among vulnerable and disparate populations. This work will ultimately allow us to address the social determinants of health to measurably improve the health outcomes of the entire community. Furthermore, it is our hope that our engagement of the community will serve to empower community-driven solutions for community health improvement.

St. John Health System and St. John Sapulpa engaged the Creek County Health Department, the Oklahoma State Department of Health’s Regional Turning Point consultant for Creek County, the Creek County Community Partnership, and Oklahoma State University Prevention Programs including the Creek County Healthy Living Program and Coalition, as well a multitude of other community partner organizations throughout this community health needs assessment. The health system hospital worked closely with these partners to conduct this assessment. Throughout the assessment process, St. John Health System and St. John Sapulpa worked to initiate and strengthen our relationships with these community partners and will continue to do so to promote effective and community-driven community health improvement initiatives within Creek County. Though much work needs to still be done in terms of building relationships in the community, it is important to recognize the steps taken to move us forward in our mutual work to improve the health and well-being of the community.

The Creek County Health Department works to prevent disease promote health and protect communities by providing education on healthy behaviors, injury prevention, protecting the food we eat
and assisting in improving access to care. The health department serves all of Creek County and has locations in Sapulpa, Bristow, and Drumright.\(^\text{15}\)

The Creek County Community Partnership (CCCP) was formed in 1993 as the Creek County Interagency. In 2006, after strategic planning with the support of agencies like Federation of Families and Sooner SUCCESS, the name was changed to Creek County Community Partnership to encompass all of Creek County services and agencies. Currently there are over 30 agencies represented in the partnership. The partnership serves as a community support hub for several Creek County grants such as Systems of Care, Strategic Prevention Framework/Partnership for Success (SPF/PFS), TSET Healthy Living Program, Regional Prevention Coordinator, Creek Nation Behavioral Health, the Parent Pro Program, and Sooner Success.\(^\text{16}\)

A facet of the Creek County Community Partnership, the Creek County Healthy Living Coalition serves to empower Creek County citizens to live healthier by promoting education, partnerships and prevention. The original coalition was formed approximately 12 years ago. The coalition was known as the Creek County Tobacco Coalition for about 10 years. However, when TSET announced they were combining the areas of nutrition and physical activity with the tobacco, the coalition changed its name to Creek County Healthy Living Coalition to encompass all three areas. The work of the coalition is focused in four sectors: businesses, schools, community institutions and organizations, and city/governments. An estimated 57 members belong to the coalition with an average of 15-20 attending each monthly meeting.

The Creek County Substance Abuse Committee and SPF/PFS Program are a couple of a number of committees and programs supported by the Creek County Community Partnership. The Creek County Substance Abuse Committee has the goal to reduce substance abuse and mental health issues throughout Creek County. This is done through the collaboration of many Creek County agencies. Currently the committee is focused on the prevention of underage drinking, tobacco use, misuse of prescription drugs, and suicide prevention. The SPF/PFS Program is designed to work in the community to determine the effects and causes of prescription drug misuse. The program works to involve citizens and officials in overcoming these issues.

The CCCP serves as a valued resource for community partners and families where agencies and organizations share information and programming. Through various work groups and committees, the CCCP has addressed child abuse prevention, healthy lifestyle initiatives, and drug abuse and tobacco use prevention.\(^\text{17}\) Over the past year the coalition also worked together on many initiatives including partnering on the Super Hero Blue Ribbon Dash, Child Abuse Prevention Month, Prescription Drug Take Back days, Mental Health Crisis Prevention Training, Toys for Tots, Community Baby Shower, Mounds Food Drive, and a number of other programs and events.

The Creek County Community Partnership, of which the Creek County Health Department is a member, conducts a comprehensive community health assessment on a five-year cycle. This process uses a strategic planning process called MAPP (Mobilizing to Action through Planning and Partnerships). MAPP has four separate health assessment tools that collect data from different aspects of the public health

\(^{15}\) Oklahoma State Department of Health. (2016). *Creek County Department of Health*. Retrieved from: https://www.ok.gov/health/County_Health_Departments/Creek_County_Health_Department/.


Central to this community assessment is the community input received from community members, community representatives and leaders, the public health workforce, and community-based organizations. A number of community stakeholders and local organizations engaged in our health a community input meeting at St. John Sapulpa on May 5, 2016.

INFORMATION GAPS

Although it is quite comprehensive, this assessment cannot measure all possible aspects of health and also cannot represent every possible population with Creek County. These gaps might in some ways limit the ability to assess all of the community’s health needs.

For example, certain population groups such as the transient population, institutionalized people or those who only speak a language other than English or Spanish may not be adequately represented in the secondary data and community input. Other population groups such as lesbian/gay/bisexual/transgender residents, undocumented residents, and members of certain racial/ethnic or immigrant groups might not be identifiable or might not be represented in numbers sufficient for independent analysis.

In addition, the following challenges resulted in limitations for assessing the health needs of the community:

- Irregular intervals of time in which indicators are measured
- Changes in standards used for measuring indicators
- True service area encompasses several partial counties, but most health data is not available at that level
- Some sources of valuable data are completed with grand funds or budgeted under a prior administration and not repeated, so that comparisons cannot be made
- Inconsistencies in reported data
- Limitation in representation from all sectors of the community
- Community input was primarily obtained from leaders and key representatives of the community rather than the community members themselves
- Not all health process and outcome measures available through secondary health data were reviewed due to the broad focus of the assessment

Despite the data limitations, we can be reasonably confident of the overarching themes represented through our assessment data. This is based on the fact that data collection included multiple methods, both qualitative and quantitative, and engaged the hospital as well as participants from the community.

SECONDARY DATA: COMMUNITY OVERVIEW

In identifying the health needs and assets of Creek County, a review of publically available secondary data was conducted.
SECONDARY DATA METHODOLOGY AND SOURCES

The most current secondary data was reviewed for the purpose of providing a comprehensive overview of the community. A variety of non-governmental and governmental data sources were used including a broad set of indicators from local, state, and federal agencies. Indicators are measurements that summarize the state of health and quality of life in the community. County, state, and national level public health surveillance was an especially important source of secondary data. Most of this data was available online. In general data was available for 2013 or 2014. However, data sources ranged from 2005-2016 depending on availability. Specific data source citations are included throughout the report.

In addition to general indicators of health status, this assessment includes indicators covering many of the social determinants of health. Measures that reflect the health and well-being of priority populations, or those most in need, were also included. Data comparisons were made at the ZIP code, census tract, region, county, state, and national levels to allow for evaluation of geographic disparities. Other data considerations included trends over time, county and state level rankings, benchmark comparisons at the state and national level, organizational needs and priorities, and disparities by age, gender, and race/ethnicity. Additionally, the Department of Health and Human Service’s Healthy People 2020 initiative goals were utilized as indicators for areas for improvement or success.

The Community Commons’ (www.communitycommons.org) Community Health Needs Assessment served as the main secondary data source for this assessment. This toolkit is a free web-based platform designed to assist hospitals and organizations seeking to better understand the needs and assets of their communities. The platform automatically generates a multitude of indicators of health status and social determinants of health based on the most currently available secondary data sources.

A number of data sources, information, and figures were also provided courtesy of the 211 Oklahoma Helpline, Community Service Council of Tulsa, Enroll America, Metropolitan Human Services Commission, Oklahoma State Department of Health, the University of Wisconsin Population Health Institute’s County Health Rankings & Roadmaps, and Xerox Community Health Solutions (formerly Healthy Communities Institute). Hospital data was also an important source of information included in this assessment.

Recommendations of Ascension Health, the Catholic Health Association of the United States, Centers for Disease Control and Prevention, Oklahoma State Department of Health, United Health Foundation, American Hospital Association’s Association for Community Health Improvement, and University of Wisconsin Population Health Institute were considered in determining which health indicators to review. Additional considerations were the indicators reviewed and reported in the partnering entities assessments as well as the availability of secondary data.

The review covered the following health indicator topics:

1. Demographics
2. Health Outcomes
   A. Health Status
      • Health Outcomes Ranking
      • Mortality-Total Mortality
      • Mortality-Causes of Death
3. Health Factors
   - Health Factors Ranking
B. Social and Economic Factors
   - Socioeconomic Status
   - Social Environment
C. Geographic Areas of Highest Need
D. Clinical Care
   - Access to Care
   - Quality of Care
E. Health Behaviors and Risk Factors
   - Diet and Physical Activity
   - Weight Status
   - Hypertension
   - Dental Care
   - Teen Births
   - Tobacco Use
   - Substance Use
F. Physical Environment
   - Air and Water Quality
   - Housing and Transit
   - Food Access
   - Access to Physical Activity Opportunities

Oklahoma continues to rank near the bottom in multiple key health status indicators. Many of these outcomes are related to conditions that Oklahomans must live with every day. Poverty, lack of insurance, limited access to primary care, and inadequate prenatal care, along with risky health behaviors associated with these determinants, such as low fruit/vegetable consumption, low physical activity, and a high prevalence of smoking contributes to the poor health status of our citizens. In 2015, Oklahoma ranked 45th in the nation in health according to the United Health Foundation’s *America’s Health Rankings* (2016).18

Similar to the state, Creek County ranks poorly in multiple key health status indicators. A comprehensive overview of the secondary health data follows. Unless otherwise noted, the source of information is the Community Commons’ Creek County Community Health Needs Assessment.

---

DEMOGRAPHICS

Current population demographics and changes in demographic composition over time play a determining role in the types of health and social services needed by communities.

Population

Total Population

Definition
The total population is presented simply as the number of individuals living in Creek County and the population density per square mile, according to the 2010-2014 5-year population estimates by the American Community Survey.

Why Is This Indicator Important?
The numeric size of the population is used as the basis for deriving many of the rates for the community health indicators presented later in this report, such as geographic area specific rates and gender, age, and racial/ethnic specific rates.

How Are We Doing?
A total of 70,607 people live in the 950.15 square mile report area defined for this assessment according to the U.S. Census Bureau American Community Survey 2010-14 5-year estimates. The population density for this area, estimated at 74.31 persons per square mile, is greater than the Oklahoma average population density of 55.67 persons per square mile. This was less than the national average population density of 88.93 persons per square mile (Table 3 and Figure 7).

Table 3: Population Density per Square Mile, Creek County 2010-2014

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Total Land Area (Square Miles)</th>
<th>Population Density (Per Square Mile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,607</td>
<td>950.15</td>
<td>74.31</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,818,851</td>
<td>68,596.05</td>
<td>55.67</td>
</tr>
<tr>
<td>United States</td>
<td>314,107,083</td>
<td>3,531,932.26</td>
<td>88.93</td>
</tr>
</tbody>
</table>

Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016

Overall, the female population (50.46%) slightly exceeded the male population (49.54%) (Figure 8).

Figure 8: Total Population by Gender, Creek County 2010-2014

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Male</th>
<th>Female</th>
<th>Percent Male</th>
<th>Percent Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>34,978</td>
<td>35,629</td>
<td>49.54%</td>
<td>50.46%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1,891,526</td>
<td>1,927,325</td>
<td>49.53%</td>
<td>50.47%</td>
</tr>
<tr>
<td>United States</td>
<td>154,515,152</td>
<td>159,591,920</td>
<td>49.19%</td>
<td>50.81%</td>
</tr>
</tbody>
</table>
Percentages of the population age 65 (15.90%) and older and 5-17 (18.20%) were the highest (Figure 9). The median age of the population was 40.4 years old which was higher than in the Oklahoma (36.2) and the U.S. (37.4).  

Figure 9: Total Population by Age Groups, Creek County, 2010-1014

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Age 0-4</th>
<th>Age 5-17</th>
<th>Age 18-24</th>
<th>Age 25-34</th>
<th>Age 35-44</th>
<th>Age 45-54</th>
<th>Age 55-64</th>
<th>Age 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>6.26%</td>
<td>18.2%</td>
<td>8.05%</td>
<td>11.58%</td>
<td>12.24%</td>
<td>14.27%</td>
<td>13.5%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>6.94%</td>
<td>17.71%</td>
<td>10.17%</td>
<td>13.63%</td>
<td>12.23%</td>
<td>13.26%</td>
<td>12.07%</td>
<td>13.99%</td>
</tr>
<tr>
<td>United States</td>
<td>6.36%</td>
<td>17.13%</td>
<td>9.96%</td>
<td>13.47%</td>
<td>12.96%</td>
<td>14.09%</td>
<td>12.29%</td>
<td>13.75%</td>
</tr>
</tbody>
</table>

Whites comprised 79.73 percent of the population and Native American/Alaska Natives made up the largest minority race at 8.97 percent (Figure 10).
Hispanics comprised 3.5 percent of the population, although that is likely an underestimation because of potential undercounting of undocumented Hispanic immigrants (Figure 11). It should be noted that race and ethnicity are separate concepts. Individuals of Hispanic origin are those who indicate that their country of origin is Mexico, Puerto Rico, Cuba, Central or South America, or some other Hispanic origin, and can be of any race. Non-Hispanic refers to all people whose ethnicity is not Hispanic.
Figure 11: Total Population by Ethnicity Alone, Creek County 2010-2014

Data Source: Same as above.
Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016

Population Change

Definition
This demographic indicator is presented as the percentage change in the population within the county from the U.S. Census Bureau Decennial Census, between 2000 and 2010.

Why Is This Indicator Important?
Trends in general population growth and decline help target specific locations and/or demographic groups where public health efforts should be focused in order to ensure adequate access to community-based programs.

How Are We Doing?
According to the United States Census Bureau Decennial Census, between 2000 and 2010 the population grew by 2600 persons, a change of 3.86%. (Table 4 and Figure 12).  

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2016 Community Health Needs Assessment, St. John Sapulpa
Table 4: Percent Population Change, Creek County 2000-2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>67,367</td>
<td>69,967</td>
<td>2,600</td>
<td>3.86%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,450,653</td>
<td>3,751,351</td>
<td>300,698</td>
<td>8.71%</td>
</tr>
<tr>
<td>United States</td>
<td>280,405,781</td>
<td>307,745,539</td>
<td>27,339,758</td>
<td>9.75%</td>
</tr>
</tbody>
</table>


Figure 12: Population Change, Percent by Tract, U.S. Census 2000-2010

The male population in Creek County had the largest increase in population between 2000 and 2010 (4.93%) as compared to the female population (2.84%) (Figure 13). This increase was similarly reflected in Oklahoma and the U.S.
Figure 13: Population Change (2000-2010) by Gender, Creek County

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Male Population Change, Total</th>
<th>Male Population Change, Percent</th>
<th>Female Population Change, Total</th>
<th>Female Population Change, Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>1,625</td>
<td>4.93%</td>
<td>975</td>
<td>2.84%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>161,081</td>
<td>9.5%</td>
<td>139,615</td>
<td>7.96%</td>
</tr>
<tr>
<td>United States</td>
<td>13,738,020</td>
<td>10.02%</td>
<td>13,601,733</td>
<td>9.55%</td>
</tr>
</tbody>
</table>

Data Source: Same as above.
Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016

**Increasing Hispanic Population:**

Based on U.S. Census data, the Hispanic populations in Creek County, the state, and the nation, have been increasing since 2000. According to the 2014 American Community Survey 5-year estimates, the Hispanic population numbered 2,471 in Creek County. In 2010-2014, Hispanics comprised 3.5 percent of the Creek County population, which was lower than the state value of 9.37 percent and the U.S. percentage of 16.9 percent (Figure 11). The percent change in the Hispanic population in 2000-2010 was 67.7 percent which was lower than in Oklahoma (85.2%), but significantly higher than in the U.S. (42.9%) (Figure 14). However, due to the potential undercounting of undocumented Hispanic immigrants, the number was likely much higher. There are many barriers which can lead to health disparities inequalities in health care and preventative services among this group.
Figure 14: Population Change (2000-2010) by Hispanic Origin

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Hispanic Population Change, Total</th>
<th>Hispanic Population Change, Percent</th>
<th>Non-Hispanic Population Change, Total</th>
<th>Non-Hispanic Population Change, Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>869</td>
<td>67.73%</td>
<td>1,731</td>
<td>2.62%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>152,703</td>
<td>85.16%</td>
<td>147,992</td>
<td>4.52%</td>
</tr>
<tr>
<td>United States</td>
<td>15,152,943</td>
<td>42.93%</td>
<td>12,099,099</td>
<td>4.92%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above.*
*Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016*

All races increased from 2000 to 2010 except for Blacks (-10.44%) which experienced a decrease in population. The most striking growth occurred in the population of Native Hawaiian/Pacific Islanders which was estimated to have a 164.71 percent increase from 2000-2010 (*note this may have been due to a statistical error with data*). The population of ‘other race’ was the population with next highest percent increase in population (73.52%) (Figure 15).
Figure 15: Percent Population Change (2000-2010) by Race

Increasing Immigrant Population:

According to the American Community Survey of the U.S. Census Bureau, in 2013 Oklahoma was home to 218,432 immigrants, accounting for 5.7% of the state's total population (up from 2.1% in 1990, and 3.8% in 2000). Just over one-third of Oklahoma's immigrant population (76,300 people) in 2013 were considered naturalized U.S. citizens, making them eligible to vote. These New Americans - immigrants or the native-born children of immigrants - accounted for 2.6% of all Oklahoma's registered voters.  

---

Population in Limited English Households/ Population with Limited English Proficiency

**Definition**

This section includes two indicators. The first indicator reports the percentage of the population aged 5 and older living in Limited English speaking households. A “Limited English speaking household” is one in which no member 14 years old and over (1) speaks only English at home or (2) speaks a language other than English at home and speaks English “Very well.”

The second indicator reports the percentage of the population aged 5 and older who speak a language other than English at home and speak English less than "very well."

**Why Is This Indicator Important?**

These indicators are significant as they identify households and populations that may need English-language assistance. These indicators are relevant because an inability to speak English well creates barriers to healthcare access, provider communications, and health literacy/education.

**How Are We Doing?**

In 2010-2014, the percent of the population in Creek County that was linguistically isolated was .44 percent which was lower than in Oklahoma overall (2.43%) and in the U.S. overall (4.66%) (Figure 16 and Figure 17). The percent of the population 5 years old and older in Creek County with limited English proficiency was .99 percent which was lower than in Oklahoma overall (3.97%) and in the U.S. overall (8.6%) (Figure 18 and Figure 19).

**Figure 16: Percent Linguistically Isolated Population by Locality, 2010-2014**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 5</th>
<th>Linguistically Isolated Population</th>
<th>Percent Linguistically Isolated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>66,188</td>
<td>294</td>
<td>0.44%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,553,984</td>
<td>86,214</td>
<td>2.43%</td>
</tr>
<tr>
<td>United States</td>
<td>294,133,376</td>
<td>13,692,809</td>
<td>4.66%</td>
</tr>
</tbody>
</table>


Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016
Figure 17: Population Linguistically Isolated Households, Percent by Tract, ACS 2010-2014

Data Source: Same as above
Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016

Figure 18: Percent Population Age 5+ with Limited English Proficiency by Locality. 2010-2014

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>66,188</td>
<td>604</td>
<td>0.91%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,553,984</td>
<td>141,231</td>
<td>3.97%</td>
</tr>
<tr>
<td>United States</td>
<td>294,133,388</td>
<td>25,305,204</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

Data Source: Same as above.
Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016
In 2010-2014. The percent of the population in Creek County with limited English proficiency by Hispanic ethnicity alone was 19.49 percent which was lower than Oklahoma (32.39%) and the U.S. (33.12%) (Figure 20).\textsuperscript{13} Whites were the race with the highest percentage of limited English proficiency (48.43%) followed by ‘some other race’ (36.62%) and Asian (13.58%) (Figure 21).\textsuperscript{14}
### Figure 21: Population with Limited English Proficiency by Race Alone, Total, Creek County

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Hispanic / Latino</th>
<th>Total Not Hispanic / Latino</th>
<th>Percent Hispanic / Latino</th>
<th>Percent Not Hispanic / Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>424</td>
<td>180</td>
<td>19.49%</td>
<td>0.28%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>101,164</td>
<td>40,067</td>
<td>32.39%</td>
<td>1.24%</td>
</tr>
<tr>
<td>United States</td>
<td>15,881,488</td>
<td>9,423,716</td>
<td>33.12%</td>
<td>3.83%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above.*

*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016*

In 2010-2014, the language spoken at home in Creek County with the highest percentage of the population with limited English proficiency was Spanish (78.15%). Asian and Pacific Island languages made up the second highest percentage (13.58%) (Figure 22). \(^{14}\)
Families with Children

Definition

This indicator reports the percentage of households with families with children under the age of 18 in the county. As defined by the U.S. Census Bureau, a family household is any housing unit in which the householder is living with one or more individuals related to him or her by birth, marriage, or adoption. A non-family household is any household occupied by the householder alone, or by the householder and one or more unrelated individuals.  

Why Is This Indicator Important?

This indicator is significant as it identifies households with children. Adequate resources, healthy and safe environments, and positive intellectual and emotional development of children are key to eventual transition into healthy and productive adulthood. Unfortunately, these are not guaranteed and many children do not have the opportunity to benefit from such conditions.

How Are We Doing?

According to the most recent the American Community Survey estimates, 32.4 percent of all occupied households in the report area are family households with one or more child (ren) under the age of 18 (Table 5 and Figure 22).

---

Table 5: Families with Children (Under Age 18), Percent of Total Households, Creek County 2010-2014

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Households</th>
<th>Total Family Households</th>
<th>Families with Children (Under Age 18)</th>
<th>Families with Children (Under Age 18), Percent of Total Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>26,232</td>
<td>18,753</td>
<td>8,506</td>
<td>32.43%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1,450,117</td>
<td>964,329</td>
<td>473,383</td>
<td>32.64%</td>
</tr>
<tr>
<td>United States</td>
<td>116,211,088</td>
<td>76,958,064</td>
<td>37,554,348</td>
<td>32.32%</td>
</tr>
</tbody>
</table>


Figure 23: Households with Children (Age 0-17), Percent by Tract, ACS 2010-2014

Data Source: Same as above.
Source: Courtesy of Community Commons.

The populations of white (80.86%) and Native American/Alaskan Native (8.60%) had the highest percentages of families with children in 2010-2014 (Figure 23).
An estimated 79.1 percent of the households with children under age 18 were Hispanic. This was higher than in Oklahoma (72.7%) and in the U.S. (67.2%) (Figure 24).  

Figure 25: Family Households with Children by Ethnicity Alone
### Table

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Hispanic / Latino</th>
<th>Total Not Hispanic / Latino</th>
<th>Percent Hispanic / Latino</th>
<th>Percent Not Hispanic / Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>368</td>
<td>8,090</td>
<td>79.14%</td>
<td>44.24%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>51,140</td>
<td>419,926</td>
<td>72.7%</td>
<td>46.97%</td>
</tr>
<tr>
<td>United States</td>
<td>7,289,959</td>
<td>30,122,004</td>
<td>67.18%</td>
<td>45.57%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above.*

*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016*

### Family Type

**Definition**

This section includes two indicators on family type. The first indicator, female headed household, is defined as a household headed by a female with related children less than 18 years of age, with no husband present. It is presented as a percentage of all households with related children less than 18 years of age, based on 2013 American Community Survey 5-year estimates. The second indicator reports on children in non-traditional settings, reports the number of children living grandparents, other relatives, non relatives, and those living in institutions based on the 2010 U.S. Census. Institutions are supervised facilities, such as correctional facilities, nursing facilities, psychiatric hospitals, group homes for juveniles, and residential treatment center for juveniles. Information included in this section was prepared by and provided courtesy of the Community Service Council. This information was sourced from the Community Service Council’s (supported by the Metropolitan Human Services Commission in Tulsa) *Community Profile: Creek County 2015*.

### Why Is This Indicator Important?

Family structure is widely known to be associated with children’s chances of growing up in poverty, struggling or succeeding academically, and more. Relatively less attention is paid to children’s health outcomes—but these, too, are related to family structure.

Households headed by single women are more likely to be impoverished, which impacts the physical, mental, and educational outcomes of the children raised in these homes. Children living with grandparents similarly face an increased risk for poor health outcomes. Parents with limited economic resources face many obstacles to healthy living and opportunities for learning. The effects of living in a single-parent household and grandchildren being raised by grandparents go beyond the children; the mothers and grandparents are also affected. Single mothers and grandparents raising grandchildren often report higher levels of psychological distress, lower levels of perceived social support, and poorer eating habits, all of which affect their ability to parent.\(^{24, 25}\)

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How Are We Doing?

According to the 2013 American Community Survey estimates, female headed families are most common among American Indians (37.9%) and Whites (22.1%) in Creek County. The percent of female-headed families among Blacks and Hispanics were much lower at 13.2 percent and 12.8 percent respectively. Due to small sample sizes, data for black and Asian family types were reported with large margins of error and therefore should be interpreted with caution.\(^\text{17}^{\text{18}}\)

Since 2000, children are increasingly living with grandparents, other relatives and non-relatives. Oklahoma ranks 4\(^{\text{th}}\) in grandparents raising grandchildren. One of the major reasons is our high rate of incarceration of women; we have ranked #1 in the incarceration of women for all but one of the past 10 years when we were outpaced by Texas.\(^{18}\)

Many of the children living with non-relatives are in foster care homes. Oklahoma is tied for the 44\(^{\text{th}}\) state in rate of children 0-17 in the foster care system with a rate of 8/1,000; the national average is 5/1000. Children in the foster care system tend to face some tough challenges. Forty to 50 percent of children in foster care will not finish high school; 60 percent will become homeless, go to jail or die within one year of leaving the foster care system at 18. Girls in foster care are 600 percent more likely than the general population to become pregnant before age 21. Foster care is more likely to be on public assistance as adults. The number of children in foster care is commonly used as an indicator for the future prison population. Eighty percent of the prison population were once foster children.\(^{18}^{26}\)

**Figure 26: Family Type for Children for Children under Age 5 by Race and Ethnicity, Creek County 2009-2013**


Figure 27: Children in Non-Traditional Settings: Creek County, 2009-2013

![Bar chart showing children in non-traditional settings by living arrangement, with Creek County data from 2009-2013.](chart.png)


HEALTH OUTCOMES

Examining a community’s health outcomes allows linkages between social determinants of health and outcomes to be assessed. By comparing, for example, the prevalence of certain chronic diseases to indicators in other categories (e.g., poor diet and exercise) with outcomes (e.g., high rates of obesity and diabetes), various causal relationship may emerge, allowing a better understanding of how certain community health needs may be addressed.

Health Status

Health Outcomes Ranking

Definition

This indicator demonstrates overall rankings in health outcomes for counties throughout the state. The healthiest county in the state is ranked #1. The ranks are based on two types of measures: how long people live (length of life) and how healthy people feel while alive (quality of life). The distribution of health outcomes is based on an equal weighting of length and quality of life. This information is based on the 2016 County Health Rankings & Roadmaps courtesy of the University of Wisconsin Population Health Institute.
Why Is This Indicator Important?

The overall rankings in health outcomes represent how healthy counties are within the state.

How Are We Doing?

The map below, demonstrates the distribution of health outcomes in Oklahoma (Figure 28). Lighter shades indicate better performance in the respective summary rankings. In 2016, Creek County ranked 49th out of 77 counties in Oklahoma in regard to health outcomes (Figure 28 and Table 6). According to the Oklahoma State Health Department’s 2014 State of the State’s Health report, one in four Creek County adults reported four or more days of poor physical health (25%) and nearly one in four reported four or more days of poor mental health (24%) in the previous month.

Figure 28: 2016 Oklahoma Health Outcomes Map

Table 6: 2016 Oklahoma Health Outcomes Table

<table>
<thead>
<tr>
<th>County</th>
<th>Rank</th>
<th>County</th>
<th>Rank</th>
<th>County</th>
<th>Rank</th>
<th>County</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adair</td>
<td>76</td>
<td>Delaware</td>
<td>53</td>
<td>Lincoln</td>
<td>35</td>
<td>Pittsburg</td>
<td>54</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>15</td>
<td>Dewey</td>
<td>43</td>
<td>Logan</td>
<td>6</td>
<td>Pontotoc</td>
<td>38</td>
</tr>
<tr>
<td>Atoka</td>
<td>46</td>
<td>Ellis</td>
<td>7</td>
<td>Love</td>
<td>25</td>
<td>Pottawatomie</td>
<td>37</td>
</tr>
<tr>
<td>Beaver</td>
<td>11</td>
<td>Garfield</td>
<td>21</td>
<td>Major</td>
<td>23</td>
<td>Pushmataha</td>
<td>65</td>
</tr>
<tr>
<td>Beckham</td>
<td>44</td>
<td>Garvin</td>
<td>68</td>
<td>Marshall</td>
<td>36</td>
<td>Roger Mills</td>
<td>5</td>
</tr>
<tr>
<td>Blaine</td>
<td>62</td>
<td>Grady</td>
<td>30</td>
<td>Mayes</td>
<td>33</td>
<td>Rogers</td>
<td>4</td>
</tr>
<tr>
<td>Bryan</td>
<td>47</td>
<td>Grant</td>
<td>29</td>
<td>McClain</td>
<td>13</td>
<td>Seminole</td>
<td>71</td>
</tr>
<tr>
<td>Caddo</td>
<td>70</td>
<td>Greer</td>
<td>27</td>
<td>McClintock</td>
<td>66</td>
<td>Sequoyah</td>
<td>61</td>
</tr>
<tr>
<td>Canadian</td>
<td>3</td>
<td>Harmon</td>
<td>26</td>
<td>Mcnichols</td>
<td>74</td>
<td>Stephens</td>
<td>34</td>
</tr>
<tr>
<td>Carter</td>
<td>67</td>
<td>Harper</td>
<td>45</td>
<td>Murrey</td>
<td>56</td>
<td>Texas</td>
<td>9</td>
</tr>
<tr>
<td>Cherokee</td>
<td>58</td>
<td>Haskell</td>
<td>55</td>
<td>Muskogee</td>
<td>63</td>
<td>Tillman</td>
<td>31</td>
</tr>
<tr>
<td>Choctaw</td>
<td>75</td>
<td>Hughes</td>
<td>69</td>
<td>Noble</td>
<td>14</td>
<td>Tulsa</td>
<td>20</td>
</tr>
<tr>
<td>Cimarron</td>
<td>39</td>
<td>Jackson</td>
<td>48</td>
<td>Nowata</td>
<td>32</td>
<td>Wagoner</td>
<td>8</td>
</tr>
<tr>
<td>Cleveland</td>
<td>2</td>
<td>Jefferson</td>
<td>77</td>
<td>Okfuskee</td>
<td>72</td>
<td>Washington</td>
<td>17</td>
</tr>
<tr>
<td>Coal</td>
<td>60</td>
<td>Johnston</td>
<td>73</td>
<td>Oklahoma</td>
<td>28</td>
<td>Washita</td>
<td>16</td>
</tr>
<tr>
<td>Comanche</td>
<td>24</td>
<td>Kay</td>
<td>42</td>
<td>Okmulgee</td>
<td>59</td>
<td>Woods</td>
<td>10</td>
</tr>
<tr>
<td>Cotton</td>
<td>40</td>
<td>Kingfisher</td>
<td>1</td>
<td>Osage</td>
<td>19</td>
<td>Woodward</td>
<td>21</td>
</tr>
<tr>
<td>Craig</td>
<td>50</td>
<td>Kiowa</td>
<td>64</td>
<td>Ottawa</td>
<td>57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creek</td>
<td>49</td>
<td>Latimer</td>
<td>41</td>
<td>Pawnee</td>
<td>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Custee</td>
<td>18</td>
<td>Le Flore</td>
<td>51</td>
<td>Payne</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Mortality

Total Mortality

Definition

This indicator reports the total mortality rate presented as the number of deaths per 100,000 population (based on U.S. 2000 standard population) in 2010-2014. The rates were age-adjusted to account for differences in age distribution.

Why is This Indicator Important?

Mortality rates are important in the measurement of disease and health as it relates to public health planning. Analyzing trends in mortality in specific demographic groups over a period of time can reflect changes in health and highlight areas that need to be targeted through public health services and interventions.²⁷

How Are We Doing?

Oklahoma had the 4th highest death rate from all causes in the nation in 2012.\textsuperscript{28, 29} The total mortality rate in Oklahoma (897.6 per 100,000 population) was over 20 percent higher than the U.S. total mortality rate (724.6 deaths per 100,000 population) in 2014.\textsuperscript{23, 24} While the U.S. mortality rate dropped 20% over the last 20 years, Oklahoma’s rate only decreased 5 percent.\textsuperscript{23, 24} The total mortality rate per 100,000 population in Creek County in 2014 was 960.7, a rate that was higher than both Oklahoma and the U.S. (Table 7).\textsuperscript{23, 24}

Table 7: Total Mortality Rates (Age-Adjusted, Deaths per 100,000 Population) by Locality, 2014

<table>
<thead>
<tr>
<th>Locality</th>
<th>Rate of Deaths per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County</td>
<td>938.1</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>897.6</td>
</tr>
<tr>
<td>U.S.</td>
<td>724.6</td>
</tr>
</tbody>
</table>


As expected, older adults in Creek County and Oklahoma experience higher death rates per 100,000 population. Death rates per 100,000 population among adults 35-84 were higher in Creek County than Oklahoma overall (Table 8).\textsuperscript{24, 30}

Table 8: Total Mortality Rates (Deaths per 100,000 Population) by Age, Oklahoma 2014

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>Rate of Deaths per 100,000 Population, Oklahoma</th>
<th>Rate of Deaths per 100,000 Population, Creek County</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24</td>
<td>87.0</td>
<td>79.5</td>
</tr>
<tr>
<td>25-34</td>
<td>139.2</td>
<td>122.4</td>
</tr>
<tr>
<td>35-44</td>
<td>262.3</td>
<td>355.0</td>
</tr>
<tr>
<td>45-54</td>
<td>592.6</td>
<td>701.6</td>
</tr>
<tr>
<td>55-64</td>
<td>824.6</td>
<td>1,517.2</td>
</tr>
<tr>
<td>65-74</td>
<td>1,228.1</td>
<td>2,702.7</td>
</tr>
<tr>
<td>75-84</td>
<td>5,421.5</td>
<td>5,486.9</td>
</tr>
<tr>
<td>85+</td>
<td>14,421.7</td>
<td>12,464.0</td>
</tr>
</tbody>
</table>


In Oklahoma, men had a 34 percent higher death rate than women (Table 9). This disparity was similarly evident among Creek County residents.

Table 9: Total Mortality Rates (Age-Adjusted, Deaths per 100,000 Population) by Gender, 2014

<table>
<thead>
<tr>
<th>Gender</th>
<th>Rate of Deaths per 100,000 Population, Oklahoma</th>
<th>Rate of Deaths per 100,000 Population, Creek County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1,042.2</td>
<td>1,080.1</td>
</tr>
<tr>
<td>Female</td>
<td>773.9</td>
<td>811.5</td>
</tr>
</tbody>
</table>


There are evident disparities in mortality rates among minorities as compared to White Oklahomans and Creek County residents. Hispanic Oklahomans had a death rate that was approximately half that of other racial/ethnic groups in Oklahoma and Creek County (Table 10).

Table 10: Total Mortality Rates (Age-Adjusted, Deaths per 100,000 Population) by Race/Ethnicity, 2014

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Rate of Deaths per 100,000 Population, Oklahoma</th>
<th>Rate of Deaths per 100,000 Population, Creek County</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Non-Hispanic</td>
<td>882.2</td>
<td>937.4</td>
</tr>
<tr>
<td>Black Non-Hispanic</td>
<td>1,025.0</td>
<td>702.3</td>
</tr>
<tr>
<td>American Indian Non-Hispanic</td>
<td>1,018.1</td>
<td>1,100.6</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>481.2</td>
<td>--</td>
</tr>
<tr>
<td>Hispanic</td>
<td>560.5</td>
<td>603.6</td>
</tr>
</tbody>
</table>


Deaths from All Causes

Definition

The mortality rate from all causes is presented as the number of deaths per 100,000 population (based on U.S. 2000 standard population), in 2014. The rates were age-adjusted to account for differences in age distribution.

Why Is This Indicator Important?

Mortality rates are important in the measurement of disease and health as it relates to public health planning. Analyzing trends in mortality in specific demographic groups over a period of time can reflect changes in health and highlight areas that need to be targeted through public health services and interventions.

How Are We Doing?

According to the Oklahoma State Health Department’s 2014 State of the State’s Health report, Creek County ranked 46th in the state for total mortality (age-adjusted). Creek county ranked 5th highest in the rate of deaths due to nephritis. The top five causes of death were heart disease, cancer, chronic lower
respiratory disease, accidents, and stroke. These top five causes were the same as the top five in the U.S. overall (Table 7).  

Table 11: Leading Causes of Death, Creek County 2014

<table>
<thead>
<tr>
<th>LEADING CAUSES OF DEATH (RATE PER 100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause of Death</td>
</tr>
<tr>
<td>Heart Disease</td>
</tr>
<tr>
<td>Cancer</td>
</tr>
<tr>
<td>Chronic Lower Respiratory Disease</td>
</tr>
<tr>
<td>Unintentional Injury (Accidents)</td>
</tr>
<tr>
<td>Cerebrovascular Disease (Stroke)</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Alzheimer’s Disease</td>
</tr>
<tr>
<td>Suicides</td>
</tr>
<tr>
<td>Influenza/Pneumonia</td>
</tr>
<tr>
<td>Nephritis (Kidney Disease)</td>
</tr>
</tbody>
</table>


Premature Death

Definition

This indicator reports Years of Potential Life Lost (YPLL) before age 75 per 100,000 population for all causes of death, age-adjusted to the 2000 standard. YPLL measures premature death and is calculated by subtracting the age of death from the 75 year benchmark.

Why Is This Indicator Important?

This indicator is relevant because a measure of premature death can provide a unique and comprehensive look at overall health status.

How Are We Doing?

The years of potential life lost per 100,000 population in Creek County was 10,716. This rate was higher than in Oklahoma (9,239) and the U.S. (6,588) (Figure 29 and Figure 30).
Figure 29: Years of Potential Life Lost, Rate per 100,000 Population

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population, Census 2010</th>
<th>Total Premature Deaths, 2011-2013 Average</th>
<th>Total Years of Potential Life Lost, 2011-2013 Average</th>
<th>Years of Potential Life Lost, Rate per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>69,967</td>
<td>415</td>
<td>7,498</td>
<td>10,716</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,751,351</td>
<td>18,447</td>
<td>346,370</td>
<td>9,239</td>
</tr>
<tr>
<td>United States</td>
<td>312,732,537</td>
<td>1,119,700</td>
<td>20,584,925</td>
<td>6,588</td>
</tr>
</tbody>
</table>


Figure 30: Premature Death, Years Lost Rate (Per 100,000 Population) by County, NVSS 2011-2013

Data Source: Same as above. Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016.
Life Expectancy

Definition
Life expectancy is the average additional number of years a person can expect to live at a certain age. The term ‘life expectancy’ it is generally referring to the average number of years a person may expect to live when they are born.

Why Is This Indicator Important?
Life expectancy trends, along with other health indicators, can help public health officials identify health disparities in the community and measure health improvement outcomes. Health officials can use this information to implement health policies and interventions to target issues that negatively and positively impact health within the community.

How Are We Doing?
The life expectancy at birth for Oklahomans in 2011-2013 was 76 years. This was lower than the United States (77.2 years). The U.S. has seen life expectancy increase by 3.3 years (1990-2010) while Oklahoma has only seen an increase of 0.9 years over that same time. Between 1990 and 2012, the life expectancy for Oklahoma women has essentially stayed the same (increase of 0.1 years) while men have seen an increase of 1.6 years. In 2013, the life expectancy in Creek County was even lower than in Oklahoma and the United States at 74.5 years (Table 12).

In 2013, female life expectancy in Creek County was in the worst 25% of all counties in Oklahoma at 77.5 years, while male life expectancy was in the worst 10% of all counties at 71.4 years. This compares to the national average of 81.2 years for females and 76.5 years for males. Changes in Creek County over the period from 1985 to 2013 were in the worst-performing 10% of all counties in Oklahoma for females and in the worst-performing 10% of all counties for males, with females having a decrease of 0.7 years and males having a decrease of 0.9 years. The national average was an increase of 3.1 years for females and an increase of 5.5 years for males.

Table 12: Life Expectancy by Locality, 2013

<table>
<thead>
<tr>
<th>Locality</th>
<th>Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County</td>
<td>74.5</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>76.0</td>
</tr>
<tr>
<td>U.S.</td>
<td>77.2</td>
</tr>
</tbody>
</table>

Hospital Utilization

Hospital Utilization

Definition

This indicator is an estimate of the use of acute care hospitals by Creek County residents during 2013. An acute care hospital is a short-term hospital (generally less than 30 days) where a patient is treated for a brief but severe episode of illness, for conditions that are the result of disease or trauma, and during recovery from surgery. It is presented as the number of hospital discharges per 1,000 population.

Why Is This Indicator Important?

Hospital inpatient utilization data give an indication of the magnitude and types of illnesses experienced by a population. It also identifies trends in age, gender, and race/ethnicity distributions among those who are admitted to the hospital. Changes in utilization trends may also reflect technological advances and efforts to shift care to outpatient services.

How Are We Doing?

The overall hospital utilization rate for Creek County in 2013 was 142 discharges per 1,000 population. This was higher than the rate in Oklahoma, which was 119.9 discharges per 1,000 population (Table 13). Females accounted for the majority of hospital discharges (57.7 %). By race, whites made up the majority of discharges (86.7 %), followed by American Indians (7.9 percent).31

Table 13: Hospital Discharges per 1,000 Population by Locality, 2013

<table>
<thead>
<tr>
<th>Locality</th>
<th>Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County</td>
<td>142</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>119.9</td>
</tr>
</tbody>
</table>


The largest percentage of hospital stays were paid for by Medicare (43.8 %) followed by private insurance (24.5 %) and Medicaid (21.7 %) (Figure 31).25

---

Figure 31: Primary Payer for Hospital Discharges, Creek County 2013


Circulatory conditions made up the largest number of all Creek County hospital stays in 2013. This includes heart diseases such as congestive heart failure, heart attack, coronary artery disease, and irregular heartbeat. Respiratory conditions were the second most common reason for inpatient hospitalization in Creek County. This includes asthma, chronic obstructive pulmonary disease (COPD), bronchitis, and other conditions related to the lungs and respiratory system (Table 14).

Table 14: Inpatient Discharges by Medical Diagnosis Code, Creek County 2013

<table>
<thead>
<tr>
<th>Major Disease Category (MDC)</th>
<th>Number of Discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseases And Disorders Of The Circulatory System</td>
<td>1,265</td>
</tr>
<tr>
<td>Diseases And Disorders Of The Respiratory System</td>
<td>1,184</td>
</tr>
<tr>
<td>Diseases And Disorders Of The Musculoskeletal System And Connective Tissue</td>
<td>1,135</td>
</tr>
<tr>
<td>Diseases And Disorders Of The Digestive System</td>
<td>928</td>
</tr>
<tr>
<td>Pregnancy, Childbirth And The Puerperium</td>
<td>869</td>
</tr>
<tr>
<td>Newborns And Other Neonates With Conditions Originating In The Perinatal Period</td>
<td>797</td>
</tr>
<tr>
<td>Diseases And Disorders Of The Nervous System</td>
<td>597</td>
</tr>
<tr>
<td>Diseases And Disorders Of The Kidney And Urinary Tract</td>
<td>541</td>
</tr>
<tr>
<td>Infectious And Parasitic Diseases</td>
<td>424</td>
</tr>
<tr>
<td>Mental Diseases And Disorders</td>
<td>391</td>
</tr>
</tbody>
</table>
The top ten inpatient cases by medical diagnosis code (MDC) for St. John Sapulpa discharges in FY 2015 were also reviewed (Table 15). Respiratory conditions were the most common reason for hospitalization at St. John Sapulpa.

Table 15: Top 10 Inpatient Cases by Medical Diagnosis Code for St. John Sapulpa Discharges between 7/1/2014 and 6/30/2015

<table>
<thead>
<tr>
<th>Medical Diagnosis Code</th>
<th>Total Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISEASES &amp; DISORDERS OF THE RESPIRATORY SYSTEM</td>
<td>208</td>
</tr>
<tr>
<td>FACTORS INFLUENCING HLTH STAT &amp; OTHR CONTACTS WITH HLTH SERVCS</td>
<td>95</td>
</tr>
<tr>
<td>DISEASES &amp; DISORDERS OF THE MUSCULOSKELETAL SYSTEM &amp; CONN TISSUE</td>
<td>88</td>
</tr>
<tr>
<td>DISEASES &amp; DISORDERS OF THE DIGESTIVE SYSTEM</td>
<td>78</td>
</tr>
<tr>
<td>DISEASES &amp; DISORDERS OF THE CIRCULATORY SYSTEM</td>
<td>66</td>
</tr>
</tbody>
</table>

### Chronic Disease

#### Diabetes

**Definition**

This indicator is presented as the age-adjusted percentage of adult Creek County residents aged 20 and older who had ever been diagnosed with diabetes in 2012. It is important to note that this includes both type 1 and type 2 diabetes.

**Why Is This Indicator Important?**

This indicator is relevant because diabetes is a prevalent problem in the U.S.; it may indicate an unhealthy lifestyle and puts individuals at risk for further health issues. Diabetes mellitus (DM) occurs when the body cannot produce or respond appropriately to insulin. Insulin is a hormone that the body needs to absorb and use glucose (sugar) as fuel for the body’s cells. Without a properly functioning insulin signaling system, blood glucose levels become elevated and other metabolic abnormalities occur, leading to the development of serious, disabling complications. Effective therapy can prevent or delay diabetic complications. However, almost 25 percent of Americans with DM are undiagnosed, and another 57 million Americans have blood glucose levels that greatly increase their risk of developing DM in the next several years.\(^{32}\) Few people receive effective preventative care, which makes DM an immense and complex public health challenge.

**How Are We Doing?**

In 2012, 11 percent of Creek County residents reported that they had been diagnosed with diabetes. This was similar to the rate in Oklahoma (10.76%) and was slightly higher than the rate in the U.S. (9.1%) (Figure 32 and Figure 33).\(^{33}\)

---


Figure 32: Percent Adults with Diagnosed Diabetes (Age-Adjusted) by Locality, 2012

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 20</th>
<th>Population with Diagnosed Diabetes</th>
<th>Population with Diagnosed Diabetes, Crude Rate</th>
<th>Population with Diagnosed Diabetes, Age-Adjusted Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>51,882</td>
<td>6,589</td>
<td>12.7</td>
<td>11%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,773,112</td>
<td>320,796</td>
<td>11.57</td>
<td>10.76%</td>
</tr>
<tr>
<td>United States</td>
<td>234,058,710</td>
<td>23,059,940</td>
<td>9.85</td>
<td>9.11%</td>
</tr>
</tbody>
</table>


Figure 33: Diabetes Prevalence, Percent of Adults Age 20 by County, CDC NCCDPHP 2012

Diabetes Prevalence, Percent of Adults Age 20 by County, CDC NCCDPHP 2012

- Over 11.0%
- 9.6 - 11.0%
- 8.1 - 9.5%
- Under 8.1%
- Report Area

Data Source: Same as above.

Males had a higher prevalence of diabetes than females (13.2 percent compared to 8.7 percent). Also, adults age 55+ had higher rates of diabetes. The prevalence of diabetes doubled from ages 45 – 54 to 55 – 64. With regard to race and ethnicity, black, non-Hispanics had a higher prevalence than other races/ethnicities (Figure 34).†
The rate of diabetes in Creek County increased from 2004 – 2012 (Figure 35).

---

**Figure 34: Adults with Diagnosed Diabetes by Gender**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Males with Diabetes</th>
<th>Percent Males with Diabetes</th>
<th>Total Females with Diabetes</th>
<th>Percent Females with Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>3,200</td>
<td>11.6%</td>
<td>3,030</td>
<td>10%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>158,087</td>
<td>11.45%</td>
<td>148,924</td>
<td>9.75%</td>
</tr>
<tr>
<td>United States</td>
<td>10,907,085</td>
<td>9.62%</td>
<td>10,574,108</td>
<td>8.28%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above.*

*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016.*
Cancer

Definition
This indicator is presented as the incidence rate of residents who have been diagnosed with cancer per 100,000 population. This is an annual rate (or average annual rate) based on the time period indicated, 2008-2012. Rates are age-adjusted by 5-year age groups to the 2000 U.S. standard million population. It is important to note that this includes all cancer sites, or types of cancer.

Why Is This Indicator Important?
Cancer was the second leading cause of death from 2011 – 2013. Continued advances in cancer research, detection, and treatment have resulted in a decline in both incidence and death rates for all cancers, although it is still one of the leading causes of death in the United States. More than half of all individuals who develop cancer will be alive in five years. Many cancers are preventable by reducing risk factors such as use of tobacco products, physical inactivity and poor nutrition, obesity, and UV light exposure. Other cancers can be prevented by getting vaccinated against human papillomavirus and hepatitis B virus.

How Are We Doing?
The all sites cancer incidence rate in Creek County was 495.5 with a 95% confidence interval from 474.1 to 517.6 and 420 average annual cases over 2008-2012. This rate was higher than the incidence rates in Oklahoma (450.8) and the U.S. (453.8). The Creek County trend is stable (Figure 36).\(^\text{34}\) According to the Oklahoma State Health Department’s 2014 State of the State’s Health report, the rate of cancer incidence was 17% higher than the national rate.\(^\text{27}\)

---

Heart Disease

Definition

This indicator represents the percentage of adults aged 18 and older have ever been told by a doctor that they have coronary heart disease or angina. Indicator percentages are acquired from analysis of annual survey data from the Centers for Disease Control and Prevention’s (CDC) Behavioral Risk Factor Surveillance System (BRFSS) for years 2011-2012.

Why Is This Indicator Important?

Heart disease has been the number one cause of death for Creek County residents, as well as Oklahomans and United States residents, for many years. Risk factors for heart disease include conditions such as high cholesterol, high blood pressure and diabetes, behaviors such as tobacco use, poor diet, physical inactivity, obesity and excessive alcohol use, and genetic factors. Most of these risk factors can be controlled through healthy lifestyle choices, and well as medications when necessary.
How Are We Doing?

In 2011-2012, 4,113, or 8.4 percent of Creek County adults aged 18 and older reported having ever been told by a doctor that they had coronary heart disease or angina. This was lower than percentages of adults with heart disease in Oklahoma (5.1%) and the U.S. (4.4%) (Figure 37 and Figure 38).  

Figure 37: Percent of Adults with Heart Disease, 2011-2012

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Survey Population (Adults Age 18)</th>
<th>Total Adults with Heart Disease</th>
<th>Percent Adults with Heart Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>48,803</td>
<td>4,113</td>
<td>8.4%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,825,960</td>
<td>143,494</td>
<td>5.1%</td>
</tr>
<tr>
<td>United States</td>
<td>236,406,904</td>
<td>10,407,185</td>
<td>4.4%</td>
</tr>
</tbody>
</table>


Figure 38: Heart Disease (Diagnosed), Percent of Adults Age 18 by County, BRFSS 2011-2012

Data Source: Same as above. Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016.

---

With regard to race and ethnicity whites had higher percentages of heart disease (5.56%) than blacks (4.22%) and other races (4.92%). Non-Hispanics had higher percentages of heart disease than other races/ethnicities (Figure 39).\(^{30}\)

**Figure 39: Adults Ever Diagnosed with Heart Disease, Percent by Race / Ethnicity**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Non-Hispanic Other Race</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oklahoma</td>
<td>5.56%</td>
<td>4.22%</td>
<td>4.92%</td>
<td>1.44%</td>
</tr>
<tr>
<td>United States</td>
<td>4.99%</td>
<td>3.63%</td>
<td>3.23%</td>
<td>2.92%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above*

*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016.*

**Asthma Prevalence**

**Definition**

This indicator represents the percentage of percentage of adults aged 18 and older who self-report that they have ever been told by a doctor, nurse, or other health professional that they had asthma. Indicator percentages are acquired from analysis of annual survey data from the Centers for Disease Control and Prevention’s (CDC) Behavioral Risk Factor Surveillance System (BRFSS) for years 2011-2012.

**Why Is This Indicator Important?**

This indicator is relevant because asthma is a prevalent problem in the U.S. that is often exacerbated by poor environmental conditions.

**How Are We Doing?**

In 2011-2012, 7,142, or 14.5 percent of Creek County adults aged 18 and older reported having ever been told by a doctor that they had asthma. This was lower than percentage of adults with asthma in Oklahoma (14.2%), but was the same as the percentage of adults with asthma in the U.S. (13.4%) (Figure 40 and Figure 41).\(^{30}\)
Figure 40: Percent of Adults with Asthma, 2011-2012

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Survey Population (Adults Age 18)</th>
<th>Total Adults with Asthma</th>
<th>Percent Adults with Asthma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>49,133</td>
<td>7,142</td>
<td>14.5%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,840,351</td>
<td>403,172</td>
<td>14.2%</td>
</tr>
<tr>
<td>United States</td>
<td>237,197,465</td>
<td>31,697,608</td>
<td>13.4%</td>
</tr>
</tbody>
</table>


Figure 41: Percent of Adults Age 18 Diagnosed with Asthma by County, BRFSS, 2011-2012

Asthma (Diagnosed), Percent of Adults Age 18 by County, BRFSS 2011-12

With regard to race and ethnicity, non-Hispanic other races had higher percentages of asthma (17.85%) than blacks (15.32%) and whites (13.88%). Hispanics/Latinos had the lowest percentages of asthma than other races/ethnicities (8.66%) (Figure 42).
Figure 42: Adults Ever Diagnosed with Asthma by Race/Ethnicity, Percent

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Non-Hispanic Other Race</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oklahoma</td>
<td>13.88%</td>
<td>15.32%</td>
<td>17.85%</td>
<td>8.66%</td>
</tr>
<tr>
<td>United States</td>
<td>13.19%</td>
<td>15.75%</td>
<td>11.9%</td>
<td>12.02%</td>
</tr>
</tbody>
</table>

Data Source: Same as above

**Behavioral Health**

**Mentally Unhealthy Days**

**Definition**

This indicator represents the average number of mentally unhealthy days reported in past 30 days (age-adjusted). This measure is based on survey responses to the question: “Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” The value was reported by the University of Wisconsin Population Health Institute County Health Rankings & Roadmaps and is the average number of days a county’s adult respondents report that their mental health was not good. The measure is based on single-year 2014 BRFSS data and is age-adjusted to the 2000 U.S. population.⁷

**Why Is This Indicator Important?**

Overall health depends on both physical and mental well-being. Measuring the number of days when people report that their mental health was not good, i.e., poor mental health days, represents an important facet of health-related quality of life.

Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with challenges. It
is essential to personal well-being, family and interpersonal relationships, and the ability to contribute to community or society. Mental health disorders are the leading cause of disability in the United States and Canada, accounting for 25 percent of all years of life lost to disability and premature mortality.

How Are We Doing?

Creek County residents reported on average 4.3 mentally unhealthy days in the past 30 days (age-adjusted) in 2014. This number was higher than the average number of mentally unhealthy days reported in Oklahoma overall (4.1 days) and significantly higher than the number of mentally unhealthy days reported among the top U.S. performers, or the counties in the 90th percentile (2.8 days) (Table 17).

Table 16: Age-Adjusted Number of Self-Reported Mentally Unhealthy Days by Locality, 2014

<table>
<thead>
<tr>
<th>Locality</th>
<th>Number of Self-Reported Mentally Unhealthy Days (Age-Adjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>2.8</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>4.1</td>
</tr>
<tr>
<td>Creek County</td>
<td>4.3</td>
</tr>
</tbody>
</table>


Adults Reporting Mental Illness in the Past Year

Definition

This indicator represents the percentage of adults reporting any mental illness and serious mental illness in the past year. Any mental illness is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, as assessed by the Mental Health Surveillance Study (MHSS) Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders (MHSS-SCID), which is based on the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

Serious mental illness (SMI) is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, as assessed by the Mental Health Surveillance Study (MHSS) Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders (MHSS-SCID), which is based on the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). SMI includes individuals with diagnoses resulting in serious functional impairment. The values were reported by the Kaiser Family Foundation and were based on estimates from the Substance Abuse and Mental Health

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Why Is This Indicator Important?

Mental health and physical health are closely connected. Mental health plays a major role in people’s ability to maintain good physical health. Mental illnesses, such as depression and anxiety, affect people’s ability to participate in health-promoting behaviors. In turn, problems with physical health, such as chronic diseases, can have a serious impact on mental health and decrease a person’s ability to participate in treatment and recovery.

How Are We Doing?

According to the Oklahoma Department of Mental Health and Substance Abuse services, Oklahoma ranks 2nd in the nation in percent of population with mental illness. Furthermore, Oklahoma ranks 50th in the nation (worst) in adults who suffer some form of mental illness.

In 2013-2014, 19 percent of Oklahoma residents reported any mental illness in the past year and 4.3% of Oklahoma residents reported a serious mental illness in the past year. This was slightly higher than the average U.S. reported percentages (18.3% for any mental illness and 4.2% for a serious mental illness within the past year) (Table 18).

Table 17: Adults Reporting Mental Illness by Locality, 2013-2014

<table>
<thead>
<tr>
<th>Location</th>
<th>Adults Reporting Any Mental Illness in the Past Year</th>
<th>Adults Reporting Serious Mental Illness in the Past Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>18.3%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>19.0%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>


Deaths from Suicide

Definition

The mortality rate from suicide is presented as the number of deaths from suicide per 100,000 population, over the years 2009 – 2013. The rates were age-adjusted to account for differences in age distribution among localities and races/ethnicities.

Why Is This Indicator Important?

This indicator is relevant because suicide is an indicator of poor mental health. Suicide was the eighth leading cause of death in Creek County in 2013. Although the causes of suicide are complex and determined by multiple factors, the goal of suicide prevention is to reduce risk factors and increase factors that promote resilience (protective factors). Risk factors include family history of suicide or child maltreatment, previous suicide attempts, history of mental disorders and substance abuse, and barriers to mental health treatment. Protective factors include effective clinic care for mental, physical, and substance abuse disorders, family and community support, and easy access to a variety of clinical

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39 Oklahoma Department of Mental Health and Substance Abuse Services. (2015).
interventions and support for help seeking. Prevention aims to address all levels of influence (individual, relationship, community, and societal).

How Are We Doing?
Oklahoma is the highest ranking state in the nation for deaths by suicide. From 2007-2011, 14 Creek County residents committed suicide. The 2009-2013 age-adjusted death rate in was 19.9 deaths per 100,000 individuals. This rate was higher than in Oklahoma (17) and the U.S. (12.3). None of these regions met the Healthy People 2020 goal of 10.2 suicide deaths or less per 100,000 population. (Figure 43).

**Figure 43: Suicide, Age-Adjusted Death Rate per 100,000 Population by Locality**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Average Annual Deaths, 2007-2011</th>
<th>Crude Death Rate (Per 100,000 Pop.)</th>
<th>Age-Adjusted Death Rate (Per 100,000 Pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,218</td>
<td>14</td>
<td>19.4</td>
<td>19.9</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,785,164</td>
<td>643</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>United States</td>
<td>311,430,373</td>
<td>39,308</td>
<td>12.6</td>
<td>12.3</td>
</tr>
<tr>
<td><strong>HP 2020 Target</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>&lt;= 10.2</strong></td>
</tr>
</tbody>
</table>


The suicide rate was 20.9 deaths per 100,000 population in non-Hispanic Whites (20.9). This was higher compared to other races and Hispanics in Oklahoma (Figure 44).

---

Figure 44: Age-Adjusted Suicide Death Rate by Race/Ethnicity, Creek County 2009-2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Asian or Pacific Islander</th>
<th>American Indian / Alaskan Native</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>20.9</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>19.3</td>
<td>8.7</td>
<td>10</td>
<td>14.4</td>
<td>6.6</td>
</tr>
<tr>
<td>United States</td>
<td>15.3</td>
<td>5.5</td>
<td>6</td>
<td>10.8</td>
<td>5.8</td>
</tr>
</tbody>
</table>

*Data Source:* Same as above  

In 2009-2013, Creek County and Oklahoma males had the highest rate of suicide deaths per 100,000 population (30.6 and 27.7) (Figure 45). The vast majority of male suicides were by gun.  

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**Figure 45: Suicide Mortality, Age-Adjusted Rate (Per 100,000 Pop.) by Gender**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>30.6</td>
<td>no data</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>27.7</td>
<td>6.8</td>
</tr>
<tr>
<td>United States</td>
<td>19.9</td>
<td>5.2</td>
</tr>
</tbody>
</table>

*Data Source:* Same as above


### Teens and Adults Reporting Substance Dependence or Abuse in the Past Year

**Definition**

This indicator represents the percentage of teens (12-17) and adults (18+) reporting substance abuse dependence or abuse in the past year. Alcohol dependence and abuse and illicit drug dependence and abuse were combined for this measure. Dependence or abuse is based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). The values were reported by the Kaiser Family Foundation and were based on estimates from the Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2013 and 2014.

*Why Is This Indicator Important?*

When consumed in excess, alcohol is harmful to the health and well-being of those that drink as well as their families, friends, and communities. Prescription drug misuse and illicit drug use also have substantial health, economic, and social consequences.

In 2012, an estimated 23.1 million Americans age 12 and older needed treatment for substance abuse. Substance abuse generally refers to alcohol and both prescription and illegal drug abuse. Disorders related to substance abuse cause some of the highest rates of disability and disease burden in the U.S.
This can result in high costs to families, employers, and publicly funded health care systems. Additionally, chronic diseases such as diabetes and heart disease can be caused by drug and alcohol use. Approximately 50 percent of individuals with a substance abuse condition also have an underlying mental health disorder. Addressing the impact of substance use alone is estimated to cost Americans more than $600 billion each year.\(^3\)

How Are We Doing?

According to the Oklahoma Department of Mental Health and Substance Abuse Services, Oklahoma ranks 2\(^{nd}\) highest in the nation with substance abuse disorders.\(^4\) Oklahoma ranks 43\(^{rd}\) in the nation in alcohol and drug abuse according to Mental Health America.\(^5\)

In 2013-2014, 2.1 percent of teens and 6.8 percent of adults in Oklahoma reported alcohol dependence or abuse in the past year. Additionally, 3 percent of teens and 2.3 percent of adults in Oklahoma reported illicit drug dependence or abuse in the past year. This was slightly lower than the average U.S. reported percentages (2.8 percent of teens and 6.9 percent of adults reported alcohol dependence or abuse and 3.5 percent of teens and 2.6 percent of adults reported illicit drug dependence or abuse in the past year) (Table 19 and Table 20).\(^6\)

| Table 18: Teens and Adults Reporting Alcohol Dependence or Abuse by Locality, 2013-2014 |
|-----------------------------------|-----------------------------------|
| Location                          | Teens Ages 12-17 Reporting Alcohol Dependence or Abuse in the Past Year | Adults Ages 18+ Reporting Alcohol Dependence or Abuse in the Past Year |
| United States                     | 2.8%                          | 6.9%                            |
| Oklahoma                          | 2.1%                          | 6.8%                            |


| Table 19: Teens and Adults Reporting Illicit Drug Dependence or Abuse by Locality, 2013-2014 |
|-----------------------------------|-----------------------------------|
| Location                          | Teens Ages 12-17 Reporting Illicit Drug Dependence or Abuse in the Past Year | Adults Ages 18+ Reporting Illicit Drug Dependence or Abuse in the Past Year |
| United States                     | 3.5%                          | 2.6%                            |
| Oklahoma                          | 3.0%                          | 2.3%                            |


Drug Overdose Deaths

Definition

This indicator represents number of all drug overdose deaths per 100,000 population in 2012-2014. ICD-10 codes used include X40-X44, X60-X64, X85, and Y10-Y14. These codes used cover accidental, intentional, and of undetermined poisoning by and exposure to: 1) nonopioid analgesics, antipyretics and

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antirheumatics, 2) antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified, 3) narcotics and psychodysleptics [hallucinogens], not elsewhere classified, 4) other drugs acting on the autonomic nervous system, and 5) other and unspecified drugs, medicaments and biological substances. The value is reported University of Wisconsin Population Health Institute County Health Rankings & Roadmaps and is based on estimates from the Compressed Mortality File (CMF), a county-level national mortality and population database spanning the years 1968-2010. Compressed mortality data are updated annually. Additional information was sourced from the Oklahoma State Department of Health and Kaiser Family Foundation.

**Why Is This Indicator Important?**

The United States is experiencing an epidemic of drug overdose deaths. Since 2002, the rate of drug overdose deaths has increased by 79 percent nationwide, with a 200 percent increase in deaths involving opioids (opioid pain relievers and heroin) since 2000.

**How Are We Doing?**

Creek County had an estimated 22 all drug overdose deaths per 100,000 population (47 deaths total) in 2012-2014. This was slightly lower than the all drug overdose death rate per 100,000 population in Oklahoma overall (20) and significantly higher than the all drug overdose deaths rate per 100,000 reported among the top U.S. performers, or the counties in the 90th percentile (8). In 2012, Oklahoma had the 5th highest poisoning death rate in the nation. Four out of five unintentional poisoning deaths in Oklahoma involved at least one prescription drug, with painkillers (opioids) being the most common.

According to the Oklahoma State Department of Health, more than eight out of ten Creek County deaths involved at least one prescription drug in 2007-2012. Furthermore, eight out of ten deaths involved at least one prescription painkiller. In 2007-2012, Creek County males were more likely to die of an unintentional poisoning than females. Creek County adults age 35-54 had the highest rate of unintentional poisoning death. Additionally, Creek County adults age 45-54 were nearly twice as likely to die of an unintentional poisoning compared to teens and young adults age 15-24. One in three Creek County residents who died of an unintentional poisoning had a history of mental health problems and half who died had a history of substance abuse. Approximately three out of four Creek County poisoning deaths occurred at a home or apartment, while one out of five occurred at a hospital. The most common cities of residence of decedents were Sapulpa, Mannford, and Bristow.

In 2014, the age-adjusted opioid overdose death rate per 100,000 population in Oklahoma was 13. This state rate was higher than the rate in the U.S. (9) (Table 21). In 2007-2012, eight out of 10 Creek County deaths involved at least one prescription painkiller (opioid).

---


Table 20: Drug Overdose Deaths by Locality, 2012-2014

<table>
<thead>
<tr>
<th>Location</th>
<th>Opioid Overdose Death Rate (Age-Adjusted)</th>
<th>All Drug Overdose Death Rate (Age-Adjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>9.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>13.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Creek County</td>
<td>--</td>
<td>22.00</td>
</tr>
</tbody>
</table>


Maternal and Child Health

Infant Mortality Rate

Definition

Infant mortality is defined as the death of a child in the first year of life.\(^46\) The infant mortality rate is presented as the number of infant deaths per 1,000 live births, over the years 2006 – 2010.

Why Is This Indicator Important?

Infant mortality is often used as an indicator to measure the health and well-being of a community because factors affecting the health of an entire population can also influence the mortality rate of infants. There are obvious disparities in infant mortality by age, race, and ethnicity of the mother. Some of the causes of infant mortality are serious birth defects, premature birth, SIDS, maternal complications of pregnancy, and injuries such as suffocation. Many of these factors can be influenced by good preconception and prenatal care for mothers.\(^25\)\(^47\)

How Are We Doing?

Between 2006 and 2010, 40 Creek County infants died before the age of one, which was a rate of 8.8 deaths per 1,000 live births. This rate was higher than the infant mortality rate in Oklahoma (7.8) and the U.S. (6.5). The U.S. overall was the only region to meet the Healthy People 2020 target for infant mortality of 6.0 deaths per 1,000 live births. (Figure 46 and Figure 47).\(^48\)

---


Figure 46: Infant Mortality Rate per 1,000 Births, Creek County 2006-2010

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Births</th>
<th>Total Infant Deaths</th>
<th>Infant Mortality Rate (Per 1,000 Births)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>4,535</td>
<td>40</td>
<td>8.8</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>272,495</td>
<td>2,125</td>
<td>7.8</td>
</tr>
<tr>
<td>United States</td>
<td>20,913,535</td>
<td>136,369</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>HP 2020 Target</strong></td>
<td></td>
<td></td>
<td>&lt;= 6.0</td>
</tr>
</tbody>
</table>


Figure 47: Infant Mortality, Rate per 1,000 Live Births by County, AHRF 2006-2010

*Data Source: Same as above. Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016*

Black and American Indian/Alaskan Native infant mortality in Oklahoma and the U.S. was higher than that of whites. The infant mortality rate was higher among non-Hispanics than Hispanics (Figure 48).23
Figure 48: Infant Mortality Rate by Locality, 2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Non-Hispanic Asian</th>
<th>Non-Hispanic American Indian / Alaskan Native</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>6.3</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>7.3</td>
<td>13.3</td>
<td>5.2</td>
<td>9.2</td>
<td>5.4</td>
</tr>
<tr>
<td>United States</td>
<td>5.5</td>
<td>12.7</td>
<td>4.5</td>
<td>8.5</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Data Source: Same as above.
Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016

Low Birth Weight

Definition

Low birth weight is defined as infants who weigh less than 2,500 grams (5 pounds, 8 ounces) at birth. This indicator is expressed as a percentage of all births to Creek County mothers, over the years 2006 – 2012.

Why Is This Indicator Important?

Low birth weight is the single most important factor affecting neonatal mortality and is a significant determinant of post neonatal mortality. Low birth weight infants who survive are at increased risk for health problems ranging from neurodevelopmental disabilities to respiratory disorders. Risk factors include smoking, alcohol use, lack of weight gain, age, low income, low education level, stress, domestic violence or other abuse, being unmarried, previous preterm birth, and exposure to air pollution or

drinking water contaminated by lead. Prevention includes early and regular prenatal care to help identify conditions and behaviors that can result in low birth weight infants.  

**How Are We Doing?**

Overall, 8.3 percent of Creek County infants were born weighing less than 2,500 grams from 2006 – 2010. This was the same as in Oklahoma and slightly higher than the United States (8.3 percent and 8.2 percent, respectively) (Figure 49).  

None of these regions met the Healthy People 2020 target of 7.8 percent.  

**Figure 49: Low Birth Weight Births by Race/Ethnicity of Mother, Creek County 2011-2013**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Live Births</th>
<th>Low Weight Births (Under 2500g)</th>
<th>Low Weight Births, Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>6,188</td>
<td>514</td>
<td>8.3%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>372,505</td>
<td>30,918</td>
<td>8.3%</td>
</tr>
<tr>
<td>United States</td>
<td>29,300,495</td>
<td>2,402,641</td>
<td>8.2%</td>
</tr>
<tr>
<td>HP 2020 Target</td>
<td>&lt;= 7.8%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Racial disparity was evident with black mothers having almost twice the percentage of low birth weight infants as white mothers (13.7 percent compared to 7.7 percent). The percentage of low birth weight infants was higher among non-Hispanic mothers in Oklahoma. (Figure 50).  

---


Figure 50: Low Birth Weight Births, Percent by Race/Ethnicity

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Non-Hispanic Asian or Pacific Islander</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>7.7%</td>
<td>13.7%</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>7.9%</td>
<td>14.7%</td>
<td>7.5%</td>
<td>6.6%</td>
</tr>
<tr>
<td>United States</td>
<td>7.2%</td>
<td>13.6%</td>
<td>8.2%</td>
<td>7%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above.*
*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016*

**Infectious Disease**

**Chlamydia**

**Definition**

This indicator is presented as the number of newly reported cases of Chlamydia per 100,000 population.

**Why Is This Indicator Important?**

This indicator is relevant because it is a measure of poor health status and indicates the prevalence of unsafe sex practices. Chlamydia is a sexually transmitted disease (STD) caused by the bacterium *Chlamydia trachomatis*. It is the most commonly reported STD in Creek County. It is known as the “silent” disease because it is typically asymptomatic. Only about 30 percent of women experience symptoms and as many as 25 percent of men have no symptoms. If left untreated, however, Chlamydia can cause...
serious health conditions, including short and long-term reproductive problems. Chlamydia can be transmitted to infants during birth and can result in eye infections which may lead to blindness.\(^\text{52}\)

**How Are We Doing?**

In 2014, there were 286 new cases of Chlamydia reported in Creek County, which is a rate of 405.85 cases per 100,000 population.\(^\text{53}\) The Chlamydia incidence rate in Creek County was lower than the rate in Oklahoma (536.5 cases per 100,000 population) and in the United States (456.08 cases per 100,000 population) (Figure 51).\(^\text{48}\)

**Figure 51: Chlamydia Incidence Rates by Locality, 2014**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Total Chlamydia Infections</th>
<th>Chlamydia Infection Rate (Per 100,000 Pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,470</td>
<td>286</td>
<td>405.85</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,850,326</td>
<td>20,657</td>
<td>536.5</td>
</tr>
<tr>
<td>United States</td>
<td>316,128,839</td>
<td>1,441,789</td>
<td>456.08</td>
</tr>
</tbody>
</table>


*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016*

With regard to race/ethnicity, the highest rate of new Chlamydia cases was among Black Oklahoman’s (incidence rate of 1,670.2 per 100,000 population) (Figure 52). The incidence rate of Chlamydia in Creek County has steadily risen in recent years.\(^\text{48}\)

---


Figure 52: Chlamydia Cases by Race/Ethnicity, Oklahoma 2014

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Asian / Pacific Islander</th>
<th>American Indian / Alaska Native</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oklahoma</td>
<td>334.6</td>
<td>1,670.2</td>
<td>181.8</td>
<td>627.5</td>
<td>603.8</td>
</tr>
<tr>
<td>United States</td>
<td>187</td>
<td>1,152.6</td>
<td>115.8</td>
<td>689.1</td>
<td>376.2</td>
</tr>
</tbody>
</table>

*Data Source:* Same as above.

**Gonorrhea**

**Definition**

This indicator is presented as the number of newly reported cases of gonorrhea per 100,000 population.

**Why Is This Indicator Important?**

This indicator is relevant because it is a measure of poor health status and indicates the prevalence of unsafe sex practices. Gonorrhea is a sexually transmitted disease (STD) caused by Neisseria gonorrhoeae. It is the second most commonly reported STD in Creek County. Untreated gonorrhea can lead to severe and painful infections, and infertility in both men and women. A pregnant woman risks possible blindness and/or life-threatening infections for her baby.\(^5^4\)

**How Are We Doing?**

In 2014, Creek County reported an incidence rate of 124.9 cases of gonorrhea per 100,000 population (88 total cases). Creek County’s gonorrhea incidence rate was lower than Oklahoma (159.4 cases per 100,000 population), but higher than the United States (110.7 cases per 100,000 population) (Figure 53).

**Figure 53: Gonorrhea Incidence Rate by Locality, 2014**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Total Gonorrhea Infections</th>
<th>Gonorrhea Infection Rate (Per 100,000 Pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,470</td>
<td>88</td>
<td>124.88</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,850,063</td>
<td>6,137</td>
<td>159.4</td>
</tr>
<tr>
<td>United States</td>
<td>316,128,839</td>
<td>350,062</td>
<td>110.73</td>
</tr>
</tbody>
</table>

Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016*

With regard to race/ethnicity, the majority of new gonorrhea cases in Oklahoma were Black (incidence rate of 857.8 per 100,000 population) (Figure 54). The incidence rate of Gonorrhea in Creek County has steadily risen in recent years.  

**Figure 54: Gonorrhea Cases by Race/Ethnicity, Oklahoma 2014**
HIV/AIDS

**Definition**
This indicator is presented as the prevalence of HIV/AIDS per 100,000 population.

**Why Is This Indicator Important?**
This indicator is relevant because HIV is a life-threatening communicable disease that disproportionately affects minority populations and may also indicate the prevalence of unsafe sex practices. HIV is a virus spread through bodily fluids that affects the immune system. As HIV destroys specific cells in the immune system, the body loses the ability to fight off infections and disease, which leads to AIDS. In the United States HIV is mainly spread through having unprotected sex or sharing injection drug equipment with someone who has HIV. HIV can be prevented by limiting the number of sexual partners, never sharing needles, and using condoms correctly and consistently.

The CDC estimated that about 1.2 million people were living with HIV at the end of 2011, and about 14 percent did not know they were infected. Certain racial/ethnic groups, such as blacks, American Indians/Alaskan Natives, Asians and Hispanics/Latinos, are disproportionately affected compared to the general population.

**How Are We Doing?**
In 2014, there were 55 cases of HIV/AIDS reported in Creek County, which is a rate of 93.8 cases per 100,000 population. The HIV/AIDS prevalence rate in Creek County was lower than the rate in Oklahoma (171.8 cases per 100,000 population) and the U.S. (353.2 cases per 100,000 population) (Figure 55).

---

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Asian / Pacific Islander</th>
<th>American Indian / Alaska Native</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oklahoma</td>
<td>78.9</td>
<td>857.9</td>
<td>26</td>
<td>127.3</td>
<td>125</td>
</tr>
<tr>
<td>United States</td>
<td>39.8</td>
<td>422.9</td>
<td>19.9</td>
<td>166.4</td>
<td>72.7</td>
</tr>
</tbody>
</table>

*Data Source:* Same as above.

---


Figure 55: Population with HIV/AIDS, Rate per 100,000 by Locality, 2014

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Population Age 13</th>
<th>Population with HIV / AIDS</th>
<th>Population with HIV / AIDS, Rate (Per 100,000 Pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>58,635</td>
<td>55</td>
<td>93.8</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,162,620</td>
<td>5,433</td>
<td>171.79</td>
</tr>
<tr>
<td>United States</td>
<td>263,765,822</td>
<td>931,526</td>
<td>353.16</td>
</tr>
</tbody>
</table>


With regard to race, the majority of HIV/AIDS cases were Black (677.71 cases per 100,000 population) (Figure 56).

Figure 56: HIV/AIDS Cases by Race/Ethnicity, Creek County 2011-2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Hispanic / Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>79.18</td>
<td>677.71</td>
<td>no data</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>136</td>
<td>569.5</td>
<td>192.6</td>
</tr>
<tr>
<td>United States</td>
<td>174</td>
<td>1,243.8</td>
<td>462</td>
</tr>
</tbody>
</table>

*Data Source:* Same as above.

**Dental Health**

**Poor Dental Health**

**Definition**
This indicator reports the percentage of adults age 18 and older who self-report that six or more of their permanent teeth have been removed due to tooth decay, gum disease, or infection. Indicator percentages are acquired from analysis of annual survey data from the Centers for Disease Control and Prevention’s (CDC) Behavioral Risk Factor Surveillance System (BRFSS) for years 2006-2010.

**Why Is This Indicator Important?**
This indicator is relevant because it indicates lack of access to dental care and/or social barriers to utilization of dental services.

**How Are We Doing?**
In 2006-2010, 13,649, or 26.5 percent of Creek County adults aged 18 and older reported having poor dental health. This was higher than the percentage of adults with poor dental health Oklahoma (21.8%) and the percentage of adults with poor dental health in the U.S. (15.7%) (Figure 57 and Figure 58).

**Figure 57: Percent Adults with Poor Dental Health, 2006-2010**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population (Age 18)</th>
<th>Total Adults with Poor Dental Health</th>
<th>Percent Adults with Poor Dental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>51,497</td>
<td>13,649</td>
<td>26.5%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,793,624</td>
<td>608,605</td>
<td>21.8%</td>
</tr>
<tr>
<td>United States</td>
<td>235,375,690</td>
<td>36,842,620</td>
<td>15.7%</td>
</tr>
</tbody>
</table>

With regard to race and ethnicity non-Hispanic Blacks had higher percentages of poor dental health (25.44%) than other races (23.66%) and Whites (21.86%) in Oklahoma. Hispanics/Latinos had lower percentages of dental health than other races/ethnicities (8.36%) (Figure 59).  

Figure 58: Adults Age 18 without a Dental Exam in the Past 12 Months, Percent by County, BRFSS 2006-2010

Adults Age 18 Without Dental Exam in Past 12 Months, Percent by County, BRFSS 2006-10

- Over 42.0%
- 34.1 - 42.0%
- 26.1 - 34.0%
- Under 26.1%
- No Data or Data Suppressed
- Report Area

Data Source: Same as above.
Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016
## HEALTH FACTORS

Health factors are based on four types of measures: health behaviors, clinical care, social and economic, and physical environment factors. Health factors contribute to health and are otherwise known as determinants of health.

### Health Factors Ranking

**Definition**

This indicator demonstrates the overall rankings in health factors for counties throughout the state. The ranks are based on weighted scores four types of measures: health behaviors, clinical care, social and economic, and physical environment factors. The healthiest county in the state is ranked #1. This information is based on the 2016 County Health Rankings & Roadmaps courtesy of the University of Wisconsin Population Health Institute.

**Why Is This Indicator Important?**

The overall rankings in health factors represent what influences the health of a county. They are an estimate of the future health of counties as compared to other counties within a state.

**How Are We Doing?**

The map below, displays Oklahoma’s summary rankings for health factors (Figure 61). Lighter shades indicate better performance in the respective summary rankings. In 2016, Creek County ranked 44th out of 77 counties in Oklahoma in regard to health factors (Figure 60 and Table 22).

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Non-Hispanic Other Race</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oklahoma</td>
<td>21.86%</td>
<td>25.44%</td>
<td>23.66%</td>
<td>8.3%</td>
</tr>
<tr>
<td>United States</td>
<td>16.04%</td>
<td>21.6%</td>
<td>12.11%</td>
<td>10.31%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above*

*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016.*
Figure 60: 2016 Oklahoma Health Factors Map


Table 21: 2016 Oklahoma Health Factors Table

<table>
<thead>
<tr>
<th>County</th>
<th>Rank</th>
<th>County</th>
<th>Rank</th>
<th>County</th>
<th>Rank</th>
<th>County</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adair</td>
<td>77</td>
<td>Delaware</td>
<td>60</td>
<td>Lincoln</td>
<td>37</td>
<td>Pittsburgh</td>
<td>53</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>15</td>
<td>Dewey</td>
<td>21</td>
<td>Logan</td>
<td>16</td>
<td>Pontotoc</td>
<td>34</td>
</tr>
<tr>
<td>Atoka</td>
<td>75</td>
<td>Ellis</td>
<td>10</td>
<td>Love</td>
<td>27</td>
<td>Pottawatomie</td>
<td>43</td>
</tr>
<tr>
<td>Beaver</td>
<td>11</td>
<td>Garfield</td>
<td>20</td>
<td>Major</td>
<td>9</td>
<td>Pushmatah</td>
<td>69</td>
</tr>
<tr>
<td>Beckham</td>
<td>25</td>
<td>Garvin</td>
<td>50</td>
<td>Marshall</td>
<td>48</td>
<td>Roger Mills</td>
<td>13</td>
</tr>
<tr>
<td>Blaine</td>
<td>40</td>
<td>Grady</td>
<td>19</td>
<td>Mayes</td>
<td>51</td>
<td>Rogers</td>
<td>6</td>
</tr>
<tr>
<td>Bryan</td>
<td>54</td>
<td>Grant</td>
<td>3</td>
<td>McClain</td>
<td>5</td>
<td>Seminole</td>
<td>72</td>
</tr>
<tr>
<td>Caddo</td>
<td>62</td>
<td>Greer</td>
<td>33</td>
<td>McCurtain</td>
<td>67</td>
<td>Sequoyah</td>
<td>74</td>
</tr>
<tr>
<td>Canadian</td>
<td>1</td>
<td>Harmon</td>
<td>57</td>
<td>McIntosh</td>
<td>65</td>
<td>Stephens</td>
<td>38</td>
</tr>
<tr>
<td>Carter</td>
<td>46</td>
<td>Harper</td>
<td>22</td>
<td>Murray</td>
<td>35</td>
<td>Tensas</td>
<td>36</td>
</tr>
<tr>
<td>Cherokee</td>
<td>59</td>
<td>Haskell</td>
<td>63</td>
<td>Muskogee</td>
<td>61</td>
<td>Tillman</td>
<td>52</td>
</tr>
<tr>
<td>Chotaw</td>
<td>76</td>
<td>Hughes</td>
<td>73</td>
<td>Noble</td>
<td>12</td>
<td>Tulsa</td>
<td>17</td>
</tr>
<tr>
<td>Cimarron</td>
<td>30</td>
<td>Jackson</td>
<td>26</td>
<td>Nowata</td>
<td>41</td>
<td>Wagoner</td>
<td>14</td>
</tr>
<tr>
<td>Cleveland</td>
<td>4</td>
<td>Jefferson</td>
<td>58</td>
<td>Okfuskee</td>
<td>66</td>
<td>Washington</td>
<td>8</td>
</tr>
<tr>
<td>Coal</td>
<td>68</td>
<td>Johnston</td>
<td>71</td>
<td>Oklahoma</td>
<td>23</td>
<td>Washita</td>
<td>31</td>
</tr>
<tr>
<td>Comanche</td>
<td>39</td>
<td>Kay</td>
<td>38</td>
<td>Okmulgee</td>
<td>64</td>
<td>Woods</td>
<td>7</td>
</tr>
<tr>
<td>Cotton</td>
<td>45</td>
<td>Kingfisher</td>
<td>2</td>
<td>Osage</td>
<td>49</td>
<td>Woodward</td>
<td>29</td>
</tr>
<tr>
<td>Craig</td>
<td>42</td>
<td>Kiowa</td>
<td>47</td>
<td>Ottawa</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creek</td>
<td>44</td>
<td>Latimer</td>
<td>55</td>
<td>Pawnee</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Custer</td>
<td>24</td>
<td>Le Flore</td>
<td>70</td>
<td>Payne</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data specific to the four health measures (social and economic factors, clinical care, health behaviors and physical environment factors) used to compile the health factors rankings were reviewed and are presented below. Social and economic factors are the first health factor measure presented, as they are essential to understanding the barriers to health in the community. Furthermore, the availability of socioeconomic data for specific sub-populations and sub-county geographies provides a framework for identifying the populations most vulnerable to the poor health outcomes identified. Geographic areas of highest need are also presented in this section (based on socioeconomic need).

**Social and Economic Factors**

**Socioeconomic Status**

Economic and social insecurity often are associated with poor health. Poverty, unemployment, and lack of educational achievement affect access to care and a community’s ability to engage in healthy behaviors. Ensuring access to social and economic resources provides a foundation for a healthy community.

**Per Capita Household Income**

**Definition**

The per capita income in this report area is the average (mean) income computed for every man, woman, and child in the specified area. This measure is based on 2014 American Community Survey 5-year estimates.

**Why Is This Indicator Important?**

Income is a common measure of socioeconomic status. Current income provides a direct measure of the quality of food, housing, leisure-time amenities, and health care an individual is able to acquire, as well as reflecting their relative position in society.\(^{57}\)

**How Are We Doing?**

The estimated per capita income for Creek County in 2013 was $22,736. (Figure 61 and Figure 62).\(^{14}\)

---

There was clear racial inequality among per capita incomes, with black and ‘some other race’ populations having less than half the per capita incomes of whites, Native American/Alaskan Natives, and Native Hawaiian/Pacific Islanders (Figure 63).
Hispanics had significantly less in terms of per capita income than non-Hispanics (Figure 64). ¹⁴
Figure 64: Per Capita Income by Ethnicity, Creek County

![Per Capita Income by Ethnicity](image)

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Hispanic / Latino</th>
<th>Not Hispanic / Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>$16,741</td>
<td>$22,953</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>$13,226</td>
<td>$25,881</td>
</tr>
<tr>
<td>United States</td>
<td>$16,367</td>
<td>$31,033</td>
</tr>
</tbody>
</table>

Data Source: Same as above

Creek County had a disparity index score of 28.55 (some disparity) which was lower than Oklahoma and the U.S.

Table 22: Per Capita Income by Race/Ethnicity, Disparity Index

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Disparity Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>28.55</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>31.89</td>
</tr>
<tr>
<td>United States</td>
<td>29.2</td>
</tr>
</tbody>
</table>

Data Source: Same as above

Population below Poverty

Definition

This indicator is the percentage of persons living 100 percent below the federal poverty level and is taken from the 2014 American Community Survey. The Census Bureau determines poverty levels using a
set of income thresholds that vary by family size and composition. In 2014, the Census Bureau designated that the weighted average poverty threshold for a family of four was $23,850.\textsuperscript{58}

\textit{Why Is This Indicator Important?}

Health outcomes are worse for individuals with low incomes than for their more affluent counterparts. Lower-income individuals experience higher rates of chronic illness, disease, and disabilities, and also die younger than those who have higher incomes. Individuals living in poverty are more likely than their affluent counterparts to experience fair or poor health, or suffer from conditions that limit their everyday activities. They also report higher rates of chronic conditions such as hypertension, high blood pressure, and elevated serum cholesterol, which can be predictors of more acute conditions in the future.\textsuperscript{59}

\textit{How Are We Doing?}

Estimates for 2014 stated that the poverty rate for Creek County was 15.4 percent (Figure 65 and Figure 66).\textsuperscript{14} According to the Oklahoma State Department of Health’s 2014 State of the State’s Health report, one in six people in Creek County lived in poverty. The percentage of the population living in poverty worsened by 34 percent from 2013-2014.\textsuperscript{24}

\textbf{Figure 65: Percent Population in Poverty}

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Population in Poverty</th>
<th>Percent Population in Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>69,598</td>
<td>10,716</td>
<td>15.4%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,704,019</td>
<td>625,508</td>
<td>16.89%</td>
</tr>
<tr>
<td>United States</td>
<td>306,226,400</td>
<td>47,755,608</td>
<td>15.59%</td>
</tr>
</tbody>
</table>


The female population living in poverty was higher (16.7%) than the male population living in poverty (14.1%) (Figure 67).  

Figure 67: Population in Poverty by Gender
The 2014 American Community Survey showed that approximately 70 percent of the white population and 12 percent of the Native American/Alaskan Native population lived below the poverty line. About twenty-eight percent of the Hispanic population lived below the poverty level (Figure 68). \(^{14}\)

**Figure 68: Population in Poverty by Race Alone, Total**

![Population in Poverty by Race Alone, Total](image)

About 15.8 percent of the Hispanic population lived below the poverty level (Figure 69). \(^{14}\)
Figure 69: Population in Poverty by Ethnicity

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Hispanic / Latino</th>
<th>Total Not Hispanic / Latino</th>
<th>Percent Hispanic / Latino</th>
<th>Percent Not Hispanic / Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>391</td>
<td>10,325</td>
<td>15.84%</td>
<td>15.38%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>97,348</td>
<td>528,160</td>
<td>27.96%</td>
<td>15.74%</td>
</tr>
<tr>
<td>United States</td>
<td>12,880,559</td>
<td>34,875,048</td>
<td>24.77%</td>
<td>13.72%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above*

*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016*

**Educational Attainment**

**Definition**
Educational attainment is defined as completion of at least a high school education by the population age 25 and older. It is presented as a percentage of the total population 25 and older, based on 2014 American Community Survey 5-year estimates.

**Why Is This Indicator Important?**
Education is a basic component of socioeconomic status, because it shapes future occupational opportunities and earning potential. Education also provides knowledge and life skills that allow better-educated persons to more readily gain access to information and resources that promote health.60

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How Are We Doing?

Creek County was estimated to have 14.7 percent of its population with no high school diploma in 2010-2014, according to the American Community Survey.¹⁴ This percentage was higher than both Oklahoma (13.31%) and the U.S. (13.67%) (Figure 70 and Figure 71).¹⁴

Figure 70: Educational Attainment by Race/Ethnicity, Creek County 2013

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>47,657</td>
<td>7,009</td>
<td>14.71%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,489,023</td>
<td>331,202</td>
<td>13.31%</td>
</tr>
<tr>
<td>United States</td>
<td>209,056,128</td>
<td>28,587,748</td>
<td>13.67%</td>
</tr>
</tbody>
</table>


Figure 71: Population with No High School Diploma (Age 25), Percent by Tract, ACS 2010-2014

Population with No High School Diploma (Age 25), Percent by Tract, ACS 2010-14

- Over 21.0%
- 16.1 - 21.0%
- 11.1 - 16.0%
- Under 11.1%
- No Data or Data Suppressed
- Report Area

Data Source: Same as above
Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016

2016 Community Health Needs Assessment, St. John Sapulpa
With regard to gender, females had lower educational attainment (14.1%) as compared to males (15.4%) (Figure 72).  

**Figure 72: Educational Attainment by Locality, 2013**

![Educational Attainment by Locality, 2013](image)

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Male</th>
<th>Total Female</th>
<th>Percent Male</th>
<th>Percent Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>3,554</td>
<td>3,455</td>
<td>15.36%</td>
<td>14.09%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>171,338</td>
<td>159,864</td>
<td>14.18%</td>
<td>12.49%</td>
</tr>
<tr>
<td>United States</td>
<td>14,483,210</td>
<td>14,104,538</td>
<td>14.37%</td>
<td>13.03%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above*

*Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016*

This percentage was highest in whites (80.81%), followed by Native Americans/Alaskan Natives (7.71%) (Figure 73).
Figure 73: Population with No High School Diploma by Race Alone

Data Source: Same as above
Source: Courtesy of Community Commons. Retrieved from: www.communitycommons.org on April 1, 2016

About 34.2 percent of Hispanics had a high school education or higher (Figure 74).

Figure 74: Population with No High School Diploma by Ethnicity
In 2010-2014, 21.96 percent of the population in Creek County aged 25 and older, or 10,466 obtained an Associate’s level degree or higher. This percentage was lower than Oklahoma (30.96%) and the U.S. (37.21%) (Figure 75 and Figure 76).

**Figure 75: Percent Population Age 25 with Associate's Degree or Higher**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 25</th>
<th>Population Age 25 with Associate’s Degree or Higher</th>
<th>Percent Population Age 25 with Associate’s Degree or Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>47,657</td>
<td>10,466</td>
<td>21.96%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,489,023</td>
<td>770,662</td>
<td>30.96%</td>
</tr>
<tr>
<td>United States</td>
<td>209,056,128</td>
<td>77,786,232</td>
<td>37.21%</td>
</tr>
</tbody>
</table>

Data Source: Same as above
Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016
Unemployment Rate

Definition

This indicator is presented as the percentage of the total civilian labor force (age 16 and older) that was unemployed in April 2016, based on information from the U.S. Department of Labor, Bureau of Labor Statistics. This is the source that is often reported by economists in the news as a measure of the health of the economy.

Why Is This Indicator Important?

This indicator is relevant because unemployment creates financial instability and barriers to access including insurance coverage, health services, healthy food, and other necessities that contribute to poor health status. Health insurance is a major determinant of access to both preventive and acute health care. Most Americans rely on employer-provided insurance. Thus, unemployment affects their access to health services, due to both loss of employer-sponsored health insurance and reduced income. Unemployed adults have poorer mental and physical health than employed adults; this pattern is also found for insured and uninsured adults. Unemployed adults are less likely to receive needed medical care and prescription drugs due to cost than the employed in each insurance category.  

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How Are We Doing?

The overall unemployment rate in April 2016 for Creek County was 5.2 percent. This was higher than Oklahoma (4.2%) and the United States (4.7%) (Figure 77). The unemployment rate in Creek County has been decreasing each year since peaking in 2010.\(^\text{62}\)

Figure 77: Unemployment Rate by Locality, 2016

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Labor Force</th>
<th>Number Employed</th>
<th>Number Unemployed</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>31,798</td>
<td>30,149</td>
<td>1,649</td>
<td>5.2</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1,852,350</td>
<td>1,773,837</td>
<td>78,513</td>
<td>4.2</td>
</tr>
<tr>
<td>United States</td>
<td>159,624,372</td>
<td>152,082,706</td>
<td>7,541,666</td>
<td>4.7</td>
</tr>
</tbody>
</table>


Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016

Social Environment

Social environments lacking safe living environments and supportive social networks present a high public health risk for serious illness and premature death. Without a network of support and a safe community, individuals and families cannot thrive.

Community Safety: Violent Crime

Definition

This indicator reports the rate of violent crime offenses reported by law enforcement per 100,000 residents, based on estimates from the Federal Bureau of Investigation’s (FBI) Uniform Crime Reporting (UCR) Program. Crime totals, population figures, and crime rates are multi-year estimates for the three year period 2010-2012. County-level estimates are created by the National Archive of Criminal Justice Data (NACJD) based on agency-level records in a file obtained from the FBI, which also provides aggregated county totals. Violent crime includes homicide, rape, robbery, and aggravated assault.

Why Is This Indicator Important?

This indicator is relevant because it assesses community safety. High levels of violent crime compromise physical safety and psychological well-being. High crime rates can also deter residents from pursuing healthy behaviors such as exercising outdoors. Additionally, exposure to crime and violence has been shown to increase stress, which may exacerbate hypertension and other stress-related disorders.

and may contribute to obesity prevalence. Exposure to chronic stress also contributes to the increased prevalence of certain illnesses.

How Are We Doing?
The violent crime rate in 2010-2012 for Creek County was 199.9 per 100,000 population. This was lower than Oklahoma (470.9) and the United States (395.5) rates per 100,000 population (Figure 78).

![Figure 78: 2010-2012 Creek County Violent Crime Rate per 100,000 Population](image)

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Violent Crimes</th>
<th>Violent Crime Rate (Per 100,000 Pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,528</td>
<td>141</td>
<td>199.9</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,783,867</td>
<td>17,820</td>
<td>470.9</td>
</tr>
<tr>
<td>United States</td>
<td>306,859,354</td>
<td>1,213,859</td>
<td>395.5</td>
</tr>
</tbody>
</table>


Deaths from Homicide

Definition
The mortality rate from homicide (murder) is presented as the number of deaths from homicide per 100,000 population, over the years 2007 – 2013. The rates were age-adjusted to account for differences in age distribution among localities, ZIP codes, and races/ethnicities. Rates were based on the residence of the victim, not the location of the crime.

---

Why Is This Indicator Important?

This indicator is relevant because homicide rate is a measure of poor community safety and is a leading cause of premature death. Over three-quarters of the total homicides in the nation during 2011 – 2013 were caused by assault with firearms.\textsuperscript{68} In the U.S. there are significant disparities in homicide deaths by age, race/ethnicity, and sex. The homicide rate is particularly high among young, black males.\textsuperscript{69}

How Are We Doing?

From 2007 – 2013, Creek County had an age-adjusted death rate of 3 deaths per 100,000 individuals. This rate was higher than that of Oklahoma (7), the U.S. (5.2), and the top performing counties in the U.S. (2).\textsuperscript{7} The Healthy People 2020 national goal is to reduce the homicide death rate to 5.5 deaths per 100,000 population.\textsuperscript{70} The United States overall met this target, but Creek County and Oklahoma did not.

Males in Oklahoma had a higher age-adjusted rate of homicide mortality than females (10.3 vs. 3.1 homicide deaths per 100,000 population) (Figure 79).\textsuperscript{23}

\textbf{Figure 79: Age-Adjusted Homicide Death Rate by Gender, Oklahoma}

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>10.3</td>
<td>3.1</td>
</tr>
<tr>
<td>United States</td>
<td>8.4</td>
<td>2.3</td>
</tr>
</tbody>
</table>


There was clear racial disparity, with blacks dying from homicide in Oklahoma at a rate five times that of whites (25.3 compared to 4.6). The homicide death rate for Hispanics was 5.2 per 100,000 population. The age-adjusted rate for Asians/Pacific Islanders is not shown because it is based on a relatively small number of deaths (Figure 80).

**Figure 80: Age-Adjusted Homicide Death Rate by Race/Ethnicity, Oklahoma**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Asian or Pacific Islander</th>
<th>American Indian / Alaskan Native</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>4.6</td>
<td>25.3</td>
<td>no data</td>
<td>7.8</td>
<td>5.2</td>
</tr>
<tr>
<td>United States</td>
<td>2.6</td>
<td>18.9</td>
<td>1.9</td>
<td>5.8</td>
<td>5.1</td>
</tr>
</tbody>
</table>

**Deaths from All Accidents**

**Definition**

Unintentional injuries (accidents) include motor vehicle accidents, accidental falls, drowning, fires, and poisonings. The death rate from unintentional injuries is the number of deaths from accidents per 100,000 population, over the years 2007 – 2013. The rates were age-adjusted to account for differences in age distribution among localities, ZIP codes, and races/ethnicities.
Why Is This Indicator Important?

This indicator is relevant because accidents are a leading cause of death in the U.S. Accidents were the fifth leading cause of death in Creek County from 2014. Motor vehicle accidents accounted for one quarter of all deaths. Motor vehicle safety prevention efforts often aim to improve car/booster seat and seat belt use, reduce impaired driving, as well as focus on high risk groups such as child passengers, teen drivers, and older adult drivers.  

How Are We Doing?

Accidents killed 48 Creek County residents from 2007 to 2013, for a death rate of 68.2 deaths per 100,000 individuals. This rate was higher than Oklahoma (61) and the U.S. (38.6) (Figure 81). None of these regions met the Healthy People 2020 target of 36.0 deaths from unintentional injuries per 100,000 population. 

Figure 81: Age-Adjusted Unintentional Injury (Accident) Death Rate by Race/Ethnicity, Creek County

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Average Annual Deaths, 2007-2011</th>
<th>Crude Death Rate (Per 100,000 Pop.)</th>
<th>Age-Adjusted Death Rate (Per 100,000 Pop.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,218</td>
<td>48</td>
<td>68.93</td>
<td>68.2</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,785,164</td>
<td>2,339</td>
<td>61.79</td>
<td>61</td>
</tr>
<tr>
<td>United States</td>
<td>311,430,373</td>
<td>124,733</td>
<td>40.05</td>
<td>38.6</td>
</tr>
<tr>
<td><strong>HP 2020 Target</strong></td>
<td></td>
<td></td>
<td></td>
<td>&lt;= 36.0</td>
</tr>
</tbody>
</table>


Males had a higher rate of accident mortality than females (91.4 compared to 45.4 per 100,000 population) (Figure 82).  

---

Figure 82: Unintentional Injury (Accident) Mortality, Age-Adjusted per 100,000 Population by Gender

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>91.4</td>
<td>45.4</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>78.5</td>
<td>44.4</td>
</tr>
<tr>
<td>United States</td>
<td>52.3</td>
<td>26</td>
</tr>
</tbody>
</table>

Data Source: Same as above.

With regard to race, the death rate was highest among whites (70.6 deaths per 100,000) and second highest among American Indians (60.4 deaths per 100,000 population). The unintentional injury death rate was higher among non-Hispanics than Hispanics in Oklahoma (72.1 compared to 36 deaths per 100,000 population) (Figure 83).23
Figure 83: Unintentional Injury (Accident) Mortality, Age-Adjusted Rate per 100,000 Population by Race/Ethnicity

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Asian or Pacific Islander</th>
<th>American Indian / Alaskan Native</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70.6</td>
<td>no data</td>
<td>no data</td>
<td>60.4</td>
<td>no data</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>64</td>
<td>44.3</td>
<td>29.5</td>
<td>72.1</td>
<td>36</td>
</tr>
<tr>
<td>United States</td>
<td>43.2</td>
<td>32.8</td>
<td>15.2</td>
<td>48.1</td>
<td>26.4</td>
</tr>
</tbody>
</table>

Data Source: Same as above.
Source: Courtesy of Community Commons. Retrieved from: [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016

Social/Emotional Support

**Definition**

This indicator represents the percentage of adults aged 18 and older who self-report that they receive insufficient social and emotional support all or most of the time. This information is based on 2006-2012 estimates from the Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

**Why Is This Indicator Important?**

This indicator is relevant because social and emotional support is critical for navigating the challenges of daily life as well as for good physical and mental health. Socially isolated individuals have an increased risk for poor health outcomes. Individuals who lack adequate social support are particularly vulnerable to the effects of stress, which has been linked to cardiovascular disease and unhealthy behaviors such as

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overeating and smoking in adults, and obesity in children and adolescents.\textsuperscript{73} Social and emotional support is also linked to educational achievement and economic stability.

\textit{How Are We Doing?}

The age-adjusted percent of adults self-reporting inadequate social/emotional support in 2006-2012 in Creek County was 20.9 percent. This was higher than percentages in Oklahoma (20.1) and the United States (20.7) (Figure 84).\textsuperscript{74}

\textbf{Figure 84: Percent of Adults without Adequate Social/Emotional Support (Age-Adjusted), Creek County}

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 18</th>
<th>Estimated Population Without Adequate Social/Emotional Support</th>
<th>Crude Percentage</th>
<th>Age-Adjusted Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>52,041</td>
<td>10,981</td>
<td>21.1%</td>
<td>20.9%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,793,624</td>
<td>561,518</td>
<td>20.1%</td>
<td>20.1%</td>
</tr>
<tr>
<td>United States</td>
<td>232,556,016</td>
<td>48,104,656</td>
<td>20.7%</td>
<td>20.7%</td>
</tr>
</tbody>
</table>


\textbf{Child Abuse and Neglect}

\textit{Definition}

The Oklahoma Department of Human Services (OKDHS) assesses all accepted reports of alleged child abuse and neglect and, if necessary, investigates individuals responsible for the child’s care. Investigations are conducted when the report contains allegations of serious threats to the child’s safety, whereas assessments are conducted when the allegation of abuse or neglect does not constitute a serious or immediate threat to a child’s health or safety. This indicator is presented as the number of alleged and confirmed cases of child abuse or neglect. Please note that these rates reflect a duplicated count of children confirmed to be victims of child abuse and neglect.


Why Is This Indicator Important?

Healthy and safe environments are important to the well-being and development of children. Victims of child abuse are at higher risk of having a number of adverse outcomes throughout their life, including physical, psychological, and behavioral consequences. Physical consequences include abusive head trauma, impaired brain development, and poor physical health. Psychological consequences include difficulties during infancy, poor mental and emotional health, cognitive difficulties, and social difficulties. Behavioral consequences include difficulties during adolescence, juvenile delinquency, adult criminality, substance abuse, and abusive behavior.75

How Are We Doing?

From July 1, 2012 – June 30, 2013 (fiscal year 2013), there were a total of 1,156 reports of alleged child abuse or neglect received in Creek County.76 Overall, there were 11.5 confirmed cases of child abuse or neglect per 1,000 children in Creek County during the 2013 fiscal year. During fiscal year 2013, Creek County had a lower rate of confirmed child abuse cases compared to Oklahoma (12.0 confirmed cases per 1,000 children) but higher than the United States (9.1 confirmed cases per 1,000 children) (Figure 85).77

Figure 85: Confirmed Child Abuse Rate by Locality, FY 2009-2013

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Adverse Childhood Experiences (ACE)

Definition

The Adverse Childhood Experiences (ACE) study – a collaboration between the Centers for Disease Control and Prevention and Kaiser Permanente’s Health Appraisal Clinic in San Diego, with lead researchers Robert Anda, MD and Vincent Felitti, MD, in the late 1990s – found correlations between childhood neglect, abuse and household dysfunction with later-life health and well-being. This is one of the largest investigations ever conducted to assess relationships between child maltreatment and later-life health and well-being. Information included in this section on the ACE study was prepared by and provided courtesy of the Community Service Council. This information was sourced from the Community Service Council’s (supported by the Metropolitan Human Services Commission in Tulsa) Community Profile: Creek County 2015. Oklahoma and Creek County ACE rankings data was sourced from the Oklahoma Institute for Child Advocacy and the Annie E. Casey Foundation KIDS COUNT 2014 and 2015 resources.

Why Is This Indicator Important?

This study has received renewed interest in recent years as a conceptual model to examine the potential for changes in well-being through the life cycle of the child. The implications for our state are dramatic with the large number of children experiencing child abuse and neglect, incarcerated parents, single parenting, as well as other negative indicators.

The study found that children who experience adverse childhood trauma may have disrupted neurodevelopment which increases their risk for school failures and ultimately poorer well-being throughout the life span, including greater incidences of premature death. Risk for health problems increases as number of ACEs increases (Figure 86). Adolescent pregnancy, early initiation of sexual activity and long-term psychosocial consequences have been shown to correlate inversely with childhood family strengths – the greater the number of strengths, the lower the risk of these events occurring.

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79 Community Service Council, supported by the Metropolitan Human Services Commission in Tulsa. (2015).
A child’s early years matter because early relationships and experiences help shape the architecture and wiring of the brain, creating either a sturdy or fragile foundation for a young child’s cognitive, emotional and behavioral development. Nurturing relationships with parents and other caregivers, as well as stimulating and educationally rich environments, help young children thrive. But the experience of poverty and related risk factors — such as poor parenting, inadequate nutrition, frequent moves and changes in non-parental caregivers, insufficient cognitive stimulation and unsafe environments — can actually suppress brain development and have lasting effects.  

Adverse childhood experiences include, but are not limited to:
- Recurrent physical abuse
- Recurrent emotional abuse
- Sexual abuse
- An alcohol or drug abuser in the household
- An incarcerated household member
- Household member who is chronically depressed, suicidal, institutionalized or mentally ill
- Mother being treated violently
- One or neither parent living with child
- Emotional or physical neglect

Any one of these experiences may be traumatic enough by itself to create changes in neurodevelopment, but the increase in the number of adverse childhood experiences increases the...
correlation with negative lifetime outcomes. According to the study, approximately 13% of average middle-class Americans experienced 4 or more of these conditions as a child (15% of women, 9% of men). Some of the resulting conditions include drug, alcohol and nicotine addiction, obesity, depression and suicide, unintentional pregnancy, heart disease, cancer and premature death (Figure 87). 73 74 75

**Figure 87: Adverse Childhood Experiences (ACEs)**


A child’s earliest relationships and experiences matter. Early intervention can prevent, or at least reduce, some of the negative effects associated with adverse childhood experiences.

**How Are We Doing?**

Approximately 1 in 6 children in Oklahoma experience 3 or more ACEs (Figure 97). Furthermore, 1 in 4 children in Oklahoma live in poverty and 1 in 10 births in Oklahoma are to a teen mother. 81

---

Figure 88: Percent of Children Experiencing Adverse Childhood Experiences (ACEs) by Number

<table>
<thead>
<tr>
<th>Number of ACEs</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ACEs</td>
<td>45%</td>
</tr>
<tr>
<td>1-2 ACEs</td>
<td>38%</td>
</tr>
<tr>
<td>3+ ACEs</td>
<td>17%</td>
</tr>
</tbody>
</table>


Oklahoma ranked 39th in the U.S. in terms of overall child well-being as ranked by the Annie E. Casey Foundation in 2015 (Table 23). The overall rank is a composite index derived from the combined data across the four domains: (1) Economic Well-Being, (2) Education, (3) Health and (4) Family and Community. Creek County had a moderate likelihood (relative to other Oklahoma counties) of experiencing adversity and having increased risk for adult health and social problems, as ranked by the Oklahoma Institute for Child Advocacy in 2014. Creek County ranked 30th out of Oklahoma’s 77 counties in terms of overall child well-being in 2014 (Table 23).

Table 23: Overall Child Well-Being by Locality, 2014-2015

<table>
<thead>
<tr>
<th>Locality</th>
<th>Overall Rank</th>
<th>Economic Well-Being Rank</th>
<th>Education Rank</th>
<th>Health Rank</th>
<th>Family and Community Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oklahoma</td>
<td>39</td>
<td>30</td>
<td>42</td>
<td>39</td>
<td>41</td>
</tr>
<tr>
<td>Creek County</td>
<td>30</td>
<td>27</td>
<td>53</td>
<td>34</td>
<td>34</td>
</tr>
</tbody>
</table>


**Incarceration**

**Definition**

This indicator examines the number of justice-involved individuals in corrections facilities, the rate of female incarceration, and incarceration trends within the state. Estimates are based on data from the Oklahoma Department of Corrections and the Bureau of Justice Statistics.

**Why Is This Indicator Important?**

The health disparities that exist in our communities are especially evident in the population that cycles in and out of our jails and prisons. For many obvious reasons, justice-involved populations in prison are among the unhealthiest members of society. Most come from impoverished communities where chronic and infectious diseases, drug abuse and other physical and mental stressors are present at much higher rates than in the general population. Health care in those communities also tends to be poor or nonexistent.

The experience of being locked up — which often involves dangerous overcrowding and inconsistent or inadequate health care — exacerbates these problems, or creates new ones. Justice-involved populations have very high rates of physical illness, mental illness, and substance use disorders. And their health problems have significant impacts on the communities from which they come and to which they return.

**How Are We Doing?**

Despite efforts to reduce incarceration, Oklahoma's incarnated justice-involved population is growing at a steady pace. The trend includes a surge of state justice-involved populations being held in county jails in recent months and the rate of women in prison reaching its highest recorded level.  

Oklahoma Department of Corrections data show that since late 2014, a year when early-release policies were relaxed to help reduce incarceration, the number of justice-involved individuals in corrections facilities has increased by nearly 1,200, reaching 28,095 near the end of 2015. The total also rose throughout 2014. Data released by the U.S. Bureau of Justice Statistics also show that Oklahoma had the second highest incarceration rate in the nation in 2014, at 700 justice-involved persons per 100,000 population. The national rate was 471 (Table 24). Oklahoma also had the highest rate nationally of justice-involved persons housed in in-state private prison facilities, including halfway houses, according to Bureau of Justice Statistics data for 2014.

---


Table 24: Number of Incarcerated Justice-Involved Persons per 100,000 Population by Locality, 2014

<table>
<thead>
<tr>
<th>Locality</th>
<th>Number of Incarcerated Justice-Involved Persons Per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>471</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>700</td>
</tr>
</tbody>
</table>


In 2014, nearly 3% of non-Hispanic black males and 1% of Hispanic males were serving sentences of at least 1 year in U.S. prisons, compared to less than 0.5% of non-Hispanic white males. An estimated 516,900 black males (37%), 453,500 white males (32%), and 308,700 Hispanic males (22%) were in custody. Black men had the highest imprisonment rate in every age group and were in state or federal facilities 3.8 to 10.5 times more often than white men and 1.4 to 3.1 times more often than Hispanic men. Fifty percent of federal inmates and 16% of state prisoners were convicted drug offenders. In comparison, 53% of state prisoners and 7% of federal prisoners were serving time for violent offenses.

In addition, the state also led the nation in rates of imprisonment of female offenders in 2014, the latest year for which national data is available. Oklahoma's lockup rate for women – 143 per capita in 2014 – was more than twice the national rate and the highest it's been since the Bureau of Justice Statistics began tracking numbers in 1978 (Table 25).

Table 25: Female Incarceration Rates per 100,000 Population by Locality, 2014

<table>
<thead>
<tr>
<th>Locality</th>
<th>Female Incarceration Rates Per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>65</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>143</td>
</tr>
</tbody>
</table>


Women in state prisons are more likely than men to be incarcerated for a drug or property offense. In 2014, the imprisonment rate for African American women in the U.S. (109 per 100,000) was more than twice the rate of imprisonment for white women (53 per 100,000). Hispanic women were incarcerated at 1.2 times the rate of white women in the U.S. (64 vs. 53 per 100,000). The national rate of imprisonment for African American women has been declining since 2000, while the rate of imprisonment for white women continues to rise. More than 60% of women in state prisons have a child under the age of 18.

In 2015, there was a resurgence in jail backup. In 2014, the Oklahoma Department of Corrections began trying to reduce the number of state justice-involved populations being temporarily held in county jails until they could be transferred to a prison. The state pays the counties for each day that a justice-involved individual sentenced to prison is housed in a jail. That group is referred to as the “jail backup.”
backup of around 1,700 justice-involved persons at the end of 2013 was decreased down to 313 by the end of 2014. However, the backup number has since more than doubled to 795 individuals, according to 2015 Corrections Department data.

**Homelessness**

**Definition**

Each January, the cities, counties, and agencies of the OK 500 North Central Oklahoma Continuum of Care, conduct a one-night survey of homelessness (point-in-time survey). OK 500 represents the north central region of Oklahoma, including Noble, Osage, Pawnee, Creek, Kay, Payne, Grant, Garfield counties and the city of Enid. Oklahoma is comprised of eight Continuums of Care (CoC). These entities manage the provision of services to the homeless, among other functions. By definition, CoCs involve nonprofit homeless providers; victim service providers; faith-based organizations; governments; businesses; advocates; public housing agencies; school districts; social service providers; mental health agencies; hospitals; universities; affordable housing developers; law enforcement and other organizations that serve the homeless and those at risk of becoming homeless. These entities are governed by a community plan that helps them deliver services to the homeless and/or to prevent a return to the homeless. CoCs provide a variety of services aimed at outreach, engagement and assessment, including emergency shelter, rapid re-housing, transitional housing, and permanent housing, among others.

This point-in-time survey count records the number of individuals experiencing homelessness and collects demographic information about persons sleeping in emergency shelters, transitional housing, or other sites, as well as the number of non-sheltered people. This indicator presents results from the 2015 point-in-time survey as sourced from Integra Realty Resource’s *Oklahoma Housing Needs Assessment: Creek County*.

**Why Is This Indicator Important?**

Homelessness is a growing public health problem. It is associated with behavioral, social and environmental risks that lead to poor health outcomes such as heart diseases, cancer, liver disease, kidney disease, skin infections, HIV/AIDS, pneumonia, and tuberculosis. Furthermore, homelessness often presents barriers to healthcare access. As a result of this, people experiencing homelessness have a life expectancy that is estimated to be about 25 – 35 years shorter than the general population.

**How Are We Doing?**

On January 30, 2015, there were 201 persons experiencing homelessness in Creek County, 56 of which were children under 18. Approximately 154 of the 201 individuals experiencing homelessness were sheltered in emergency shelter or transitional housing. The majority of this population was over the age of 24.

---

There were a total of 136 households identified as experiencing homelessness. Most families with children were sheltered. There exists limited data on homeless youth and young adults in this region.82

The number of persons experiencing chronic homelessness, defined by the U.S. Department of Housing and Urban Development as someone who has been continuously homeless for one full year or four times within the past three years and has a disability, surveyed during the 2015 count was 29.82 In 2015, the largest subpopulations of individuals experiencing homelessness in OK 500 included: the individuals experiencing chronic homelessness (29), individuals experiencing chronic substance abuse (23), and individuals who were victims of domestic violence (24). The population of domestic violence victims in this area is disproportionately high, possibly because of the limited resources available in the region that address domestic violence. Approximately 12 individuals who were experiencing homelessness were also experiencing a severe mental illness. Approximately 11 of the identified individuals were veterans.82

Housing Affordability: Housing Cost Burden (30%)

Definition
This indicator reports the percentage of the households where housing costs exceed 30% of total household income. This indicator provides information on the cost of monthly housing expenses for owners and renters.

Why Is This Indicator Important?
Where we live is at the very core of our daily lives. Housing is generally an American family’s greatest single expenditure, and, for homeowners, their most significant source of wealth. Given its importance, it is not surprising that factors related to housing have the potential to help—or harm—our health in major ways. This information offers a measure of housing affordability and excessive shelter costs.

How Are We Doing?
In 2010-2014, the percentage of cost burdened households (over 30% of income) was 22.96%. This percentage was slightly higher than in Oklahoma overall (27%), but lower than in the U.S. overall (34.86%) (Figure 89 and 90).90

---

Figure 89: Percentage of Households where Housing Costs Exceed 30% of Income by Locality, 2010-2014

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Households</th>
<th>Cost Burdened Households (Housing Costs Exceed 30% of Income)</th>
<th>Percentage of Cost Burdened Households (Over 30% of Income)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>26,232</td>
<td>6,022</td>
<td>22.96%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1,450,117</td>
<td>391,510</td>
<td>27%</td>
</tr>
<tr>
<td>United States</td>
<td>116,211,096</td>
<td>40,509,856</td>
<td>34.86%</td>
</tr>
</tbody>
</table>


Figure 90: Cost Burdened Households Percent by Tract, ACS, 2010-2014

Cost Burdened Households (Housing Costs Exceed 30% of Household Income), Percent by Tract, ACS 2010-14

- Over 35.1%
- 28.1 - 35.0%
- 21.1 - 28.0%
- Under 21.1%
- No Data or Data Suppressed
- Report Area

Food Insecurity Rate

Definition

This indicator reports three different measures: 1) the estimated percentage of the population that experienced food insecurity at some point during the report year; 2) the estimated percentage of the population under age 18 that experienced food insecurity at some point during the report year; and 3) the estimated percentage of the total population and the population under age 18 that experienced food insecurity at some point during the report year, but are ineligible for State or Federal nutrition assistance. Food insecurity is the household-level economic and social condition of limited or uncertain access to adequate food. Assistance eligibility is determined based on household income of the food insecure households relative to the maximum income-to-poverty ratio for assistance programs (SNAP, WIC, school meals, CSFP and TEFAP).

Why Is This Indicator Important?

Food insecurity refers to the inability to afford enough food for an active, healthy life. Associations exist between food insecurity and adverse health outcomes among children adults.

How Are We Doing?

In 2013, the percentage of the population in Creek County with experiencing food insecurity was 16.23%. This was similar to the percentage in Oklahoma (17%), but lower slightly lower than the percentage in the U.S. (15.21%) (Figure 91 and Figure 92). The child food insecurity rate in Creek County was 25.66% which was slightly higher than the rate in Oklahoma (25.64%) and higher than the rate in the U.S. (23.49%) (Table 26). The percentages of the total population and children experiencing food insecurity ineligible for food assistance in Creek County were 28% and 25% respectively. These percentages were lower than percentages in Oklahoma and the U.S. overall (Figure 93).

Figure 91: Percentage of the Population Experiencing Food Insecurity by Locality, 2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Food Insecure Population, Total</th>
<th>Food Insecurity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,246</td>
<td>11,400</td>
<td>16.23%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,850,568</td>
<td>654,640</td>
<td>17%</td>
</tr>
<tr>
<td>United States</td>
<td>320,750,757</td>
<td>48,770,990</td>
<td>15.21%</td>
</tr>
</tbody>
</table>


Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016


2016 Community Health Needs Assessment, St. John Sapulpa
Figure 92: Population Experiencing Food Insecurity, Percent by County, Feeding American 2013

Data Source: Same as above.

Table 26: Children Experiencing Food Insecurity by Locality, 2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Population Under Age 18</th>
<th>Food Insecure Children, Total</th>
<th>Child Food Insecurity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>17,304</td>
<td>4,440</td>
<td>25.66%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>947,832</td>
<td>242,990</td>
<td>25.64%</td>
</tr>
<tr>
<td>United States</td>
<td>73,580,326</td>
<td>17,284,530</td>
<td>23.49%</td>
</tr>
</tbody>
</table>

Data Source: Same as above.
### Geographic Areas of Highest Need

**Definition**

The Healthy Communities Institute (HCI) SocioNeeds Index® summarizes multiple socioeconomic indicators, ranging from poverty to education, which may impact health or access to care. All ZIP codes in the United States are given an Index value from 0 (low need) to 100 (high need). Within Creek County, ZIP codes are ranked based on their Index value. These ranks are used to identify the relative level of need within the county.

**Why Is This Indicator Important?**

Social and economic factors are well known to be strong determinants of health outcomes. Examining geographic areas based on socioeconomic need helps to determine which areas in the county are most in need of services and interventions.

**How Are We Doing?**

Geographically, there are parts of Creek County for which socioeconomic needs and quality of life issues are of greater concern (Figure 94). The Index shows that zip codes 74039, 74010, and 74066 are the three geographic areas with the highest socioeconomic needs within Creek County and are more...
likely to be affected by poor health outcomes (Table 27).\footnote{Xerox Community Health Solutions. (2016). Healthy Communities Institute SocioNeeds Index ®. Retrieved from: \url{http://ascension.thehcn.net/}.} It is important to note these ZIP codes are similarly evidenced as experiencing the highest socioeconomic needs by other socioeconomic indicators presented in this assessment.

**Figure 94: HCI SocioNeeds Index ® by ZIP Code in Creek County**

![Map of Creek County ZIP Codes](http://ascension.thehcn.net/)

**Table 27: Top 10 Creek County ZIP Codes with Highest Socioeconomic Need, HCI SocioNeeds Index ® Values and Rankings by ZIP Code, Creek County**

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>Index</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>74039</td>
<td>66.2</td>
<td>5</td>
</tr>
<tr>
<td>74010</td>
<td>60.0</td>
<td>5</td>
</tr>
<tr>
<td>74066</td>
<td>48.9</td>
<td>4</td>
</tr>
<tr>
<td>74131</td>
<td>44.6</td>
<td>3</td>
</tr>
<tr>
<td>74044</td>
<td>41.6</td>
<td>2</td>
</tr>
<tr>
<td>74041</td>
<td>30.2</td>
<td>1</td>
</tr>
</tbody>
</table>

Clinical Care

Access to Health Care

A lack of access to care presents barriers to good health. The supply and accessibility of facilities and physicians, the rate of uninsurance, financial hardship, transportation barriers, cultural competency, and coverage limitations all affect access.

Rates of morbidity, mortality, and emergency hospitalizations can be reduced if community residents access services such as health screenings, routine tests, and vaccinations. Prevention indicators can call attention to a lack of access or knowledge regarding one or more health issues and can inform program interventions.

Health Professional Shortage Areas

Definition

This indicator reports the designation of an area as a Health Professional Shortage Area (HPSA). HPSAs demonstrate a critical shortage of either primary care, dental, or mental health providers, in accordance with the federal U.S. Health Resources and Services Administration (HRSA) Shortage Designation Branch guidelines. There are three types of HPSA designations: Primary Care, Dental, and Mental Health. Each type of HPSA is further classified into one of the following categories: geographic, population group, facility, or automatic. This information was sourced from the Oklahoma State Department of Health Center For Health Innovation And Effectiveness, Office of Primary Care and Rural Health Development’s Oklahoma Health Workforce Data Book 2014-2015.

Primary Care HPSA: identifies within an area that there is insufficient access to primary care physicians (M.D. and D.O.) that primarily practice in one of the following specialties: family practice, general practice, internal medicine, pediatrics, OB/GYN, and general geriatrics. A population-to-provider ratio based on the number of provider FTEs (full time equivalents, 1 Full Time Equivalent (FTE) = 40 hours of direct patient care per week) is used to determine eligibility.

Dental HPSA: Identifies an area’s access to dental care. Unlike the Primary Care and Mental Health HPSAs, dental provider FTEs (full time equivalents) are calculated by weighting the number of patient care hours provided by a dentist (general and pediatric) per week by the dentist’s age and the number of assistants the dentist employs.

Mental Health HPSA: Identifies an area’s access to either psychiatrists only, or core mental health professionals (CMHPs) which include psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage and family therapists. Similar to Primary Care and Dental HPSAs, a population-to-provider ratio is used to help determine eligibility. Several different population-to-provider ratios are available for consideration depending on whether the population to-provider ratios include psychiatrists only or include all CMHPs.

HPSA Sub-Categories: Each type of HPSA must be categorized into one of the following categories. Each category has a different set of qualifying criteria.
- **Geographic:** This designation demonstrates a shortage for the total population of an area. (e.g., if a county has a population-to-provider ratio of greater than 3,500 to 1, the entire county is likely a geographic HPSA).

- **Population Group:** This designation demonstrates a shortage of providers for population groups. A population group must be one of the following:
  - Low income populations (greater than 30% of population with incomes at or below 200% of the Federal Poverty Level).
  - Migrant and/or seasonal farm workers and families
  - Medicaid-eligible
  - Native American/Native Alaskan
  - Homeless Populations
  - Other populations isolated from access by means of a specified language, cultural barriers, or handicap.

- **Facility:** Facilities can be designated as a HPSA if the facility is located in a Medically Underserved Area (MUA). Facilities that can apply for this designation include community health centers, rural health clinics, federal correctional facilities, and state hospitals. Some of the factors used to evaluate a facility’s designation eligibility are outpatient census, wait times, patients’ residences, and in-house faculty.

- **Automatic:** All Federally Qualified Health Centers and Rural Health Clinics that provide access to care regardless of ability to pay receive automatic facility HPSA designation.

**HPSA Scoring**
Each HPSA is given a score by the Shortage Designation Branch based on certain specific criteria for each type of HPSA. This score indicates the degree of shortage. The federal Shortage Designation Branch calculates a score (0 to 25 for both primary care and mental health, and 0 to 26 for dental) with 25/26 representing the highest degree of shortage for each designated HPSA. The score is used to prioritize areas of greatest need for providers including National Health Service Corps placements. Each HPSA application is evaluated and scored based on the criteria listed below.

**Primary Care:**
- Population-to-provider ratio
- Percent of individuals below 100% of the federal poverty level
- Infant health index (infant mortality rate or low birth weight rate)
- Average travel time or distance to nearest source of non-designated accessible care

**Dental:**
- Population-to-provider ratio
- Percent of individuals below 100% of the federal poverty level
- Water fluoridation status
- Average travel time or distance to nearest source of non-designated accessible care

**Mental Health:**
- Population-to-provider ratio
- Percent of individuals below 100% of the federal poverty level
- Youth ratio (ratio of children under 18 to adults ages 18-64)
- Elderly ratio (ratio of adults over 65 to adults ages 18-64)
- Substance abuse prevalence
- Alcohol abuse prevalence
- Average travel time or distance to nearest source of non-designated accessible care

**Why Is This Indicator Important?**
This indicator is relevant because a shortage of health professionals contributes to access and health status issues.

**How Are We Doing?**
Creek County is a designated Primary Care and Mental Health Population Group HPSA. In 2016, Creek County ranked 11 (moderate shortage) in terms of primary care shortage and 13 (moderate shortage) in terms mental health shortage according to scoring by the federal Shortage Designation Branch.

**Facilities Designated as Health Professional Shortage Areas**

**Definition**
This indicator reports the number and location of healthcare facilities designated as Health Professional Shortage Areas (HPSAs), defined as having shortages of primary medical care, dental or mental health providers. Facilities can be designated as a HPSA if the facility is located in a Medically Underserved Area (MUA). Facilities that can apply for this designation include community health centers, rural health clinics, federal correctional facilities, and state hospitals. Some of the factors used to evaluate a facility’s designation eligibility are outpatient census, wait times, patients’ residences, and in-house faculty. Health Professional Shortage Area (HPSA) facility files were acquired from the U.S. Health Resources and Services Administration (HRSA) GIS data warehouse. The point locations of these institutions, along with their designation type, were intersected with geographic areas to provide a count of the total number of facilities in an area.

**Why Is This Indicator Important?**
This indicator is relevant because a shortage of health professionals contributes to access and health status issues.

**How Are We Doing?**
In 2016, there were an estimated five (one primary care, three mental health care, and one dental health care) facilities designated as HPSA facilities in Creek County according to the U.S. Health Resources and Services Administration (HRSA) (Table 28 and Figure 95).

---

Table 28: Facilities Designated as Health Professional Shortage Areas, Creek County 2016

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Primary Care Facilities</th>
<th>Mental Health Care Facilities</th>
<th>Dental Health Care Facilities</th>
<th>Total HPSA Facility Designations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>106</td>
<td>103</td>
<td>96</td>
<td>305</td>
</tr>
<tr>
<td>United States</td>
<td>3,599</td>
<td>3,171</td>
<td>3,071</td>
<td>9,836</td>
</tr>
</tbody>
</table>


Figure 95: Facilities Designated as HPSAs, HRSA HPSA Database April 2016


Medically Underserved Areas

Definition

A Medically Underserved Area designation identifies areas with a shortage of healthcare services. Designation is based on the explanation as to why the area in question is rational (similar to the HPSA process) and the documentation of four factors: health care provider-to-population ratio, infant mortality rate, percentage of population below 100% of the federal poverty level, and the percentage of population aged 65 and over. 2016 data on Medically Underserved Areas was acquired from the U.S. Health Resources and Services Administration (HRSA) data warehouse.

Why Is This Indicator Important?

This indicator is relevant because a shortage of healthcare services leads to access and health status issues.
**How Are We Doing?**

According to the US Health Resources and Services Administration (HRSA) data warehouse, there is one area in northwest Creek County designated as a Medically Underserved Area in 2016 (Figure 108). Creek County is considered a partial Medically Underserved Area.  

**Figure 96: Areas Designated as Medically Underserved Areas HRSA MUA Database, Tulsa County 2016**

![Map showing medically underserved areas in Creek County](image)


**Access to Primary Care**

**Definition**

This indicator reports the number of primary care physicians per 100,000 population. Doctors classified as "primary care physicians" by the AMA include: General Family Medicine MDs and DOs, General Practice MDs and DOs, General Internal Medicine MDs and General Pediatrics MDs. Physicians age 75 and over and physicians practicing sub-specialties within the listed specialties are excluded. This physician data was acquired from the 2013-14 Health Resources and Services Administration (HRSA) Area Health Resource File (AHRF). These counts are tabulations from the 2012 American Medical Association (AMA) Physician Masterfiles.

**Why Is This Indicator Important?**

This indicator is relevant because a shortage of health professionals contributes to access and health status issues. Access to regular primary care is important to preventing major health issues and emergency department visits. For many people, having good access to health care means having a regular doctor, being able to schedule timely appointments, and being able to find new doctors when needed.
Good access to doctors is especially important for people with Medicare—seniors and adults with permanent disabilities—because they are significantly more likely than others to need healthcare services.  

How Are We Doing?

In 2012, there was a rate of 28.4 primary care physicians per 100,000 population in Creek County according to the 2013-14 Health Resources and Services Administration (HRSA) Area Health Resource File (AHRF). The rate of primary care physicians per 100,000 population is higher in Creek County than in Oklahoma (64) and the U.S. (75.8) (Figure 97).  

Figure 97: Primary Care Physicians, Rate per 100,000 Population, by Locality 2012

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population, 2013</th>
<th>Primary Care Physicians, 2013</th>
<th>Primary Care Physicians, Rate per 100,000 Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,470</td>
<td>20</td>
<td>28.4</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,850,568</td>
<td>2,464</td>
<td>64</td>
</tr>
<tr>
<td>United States</td>
<td>316,128,839</td>
<td>239,500</td>
<td>75.8</td>
</tr>
</tbody>
</table>


Access to Dentists

Definition

This indicator reports the number of primary care physicians per 100,000 population. Doctors classified as "primary care physicians" by the AMA include: General Family Medicine MDs and DOs, General Practice MDs and DOs, General Internal Medicine MDs and General Pediatrics MDs. Physicians age 75 and over and physicians practicing sub-specialties within the listed specialties are excluded. This physician data was acquired from the 2013-14 Health Resources and Services Administration (HRSA) Area Health Resource File (AHRF). These counts are tabulations from the Centers from Medicare and Medicaid Services (CMS) National Provider Identification (NPI) File, accessed January 2014.

---

Why Is This Indicator Important?

This indicator is relevant because a shortage of health professionals contributes to access and health status issues.

How Are We Doing?

In 2013, there was a rate of 31.2 dentists per 100,000 population in Creek County according to the 2013-14 Health Resources and Services Administration (HRSA) Area Health Resource File (AHRF). The rate of dentists per 100,000 population is lower in Creek County than in Oklahoma (55.4) and the U.S. (63.2). (Figure 98).  

Figure 98: Dentists, Rate per 100,000 Population by Locality, 2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population, 2013</th>
<th>Dentists, 2013</th>
<th>Dentists, Rate per 100,000 Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>70,470</td>
<td>22</td>
<td>31.2</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,850,568</td>
<td>2,133</td>
<td>55.4</td>
</tr>
<tr>
<td>United States</td>
<td>316,128,839</td>
<td>199,743</td>
<td>63.2</td>
</tr>
</tbody>
</table>


Lack of a Consistent Source of Primary Care

Definition

This indicator reports the percentage of adults aged 18 and older who self-report that they do not have at least one person who they think of as their personal doctor or health care provider. This data was acquired from analysis of annual survey data from the Center for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System (BRFSS) for years 2011-2012.

Why Is This Indicator Important?

This indicator is relevant because access to regular primary care is important to preventing major health issues and emergency department visits.

How Are We Doing?

In 2011-2012, the percentage of adults without a consistent source of primary care (by self-report) in Creek County was 20.00 percent which was lower than in Oklahoma (24.13%) and the U.S. (22.07%) (Figure 99 and Figure 100).

---

Figure 99: Percentage of Adults without Any Regular Doctor by Locality, 2011-2012

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Survey Population (Adults Age 18)</th>
<th>Total Adults Without Any Regular Doctor</th>
<th>Percent Adults Without Any Regular Doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>49,489</td>
<td>9,897</td>
<td>20.00%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,843,159</td>
<td>686,103</td>
<td>24.13%</td>
</tr>
<tr>
<td>United States</td>
<td>236,884,668</td>
<td>52,290,932</td>
<td>22.07%</td>
</tr>
</tbody>
</table>


Figure 100: No Consistent Source of Primary Care, Percent of Adults Age 18 by County, BRFSS 2011-2012

The percentage of Hispanic or Latinos reporting no consistent source of primary care in Oklahoma in 2011-2012 was 48.74 percent which was higher than non-Hispanics. Non-Hispanic black’s had the highest self-reported percentage without a consistent source of primary care in Oklahoma, followed by non-Hispanic other races (29.33%) and non-Hispanic whites (19.98%) (Figure 101). 93
Figure 101: Adults without a Consistent Source of Primary Care, Percent by Race/Ethnicity

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Non-Hispanic Other Race</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oklahoma</td>
<td>19.98%</td>
<td>31.78%</td>
<td>29.33%</td>
<td>48.74%</td>
</tr>
<tr>
<td>United States</td>
<td>17.15%</td>
<td>25.28%</td>
<td>25.47%</td>
<td>38.58%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above.*

*Source: Courtesy of Community Commons. Retrieved from [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016.*

**Access to Behavioral Health Providers**

*Definition*

This indicator reports the rate of behavioral health providers per 100,000 population. This includes psychiatrists (D.O. and M.D.) in the county.

*Why Is This Indicator Important?*

This indicator is relevant because a shortage of behavioral health providers contributes to access issues and worsening mental health conditions. Access to mental health services, especially early treatment, greatly improves outcomes and can change the course of an individual’s life, increasing the chances for a brighter future.

*How Are We Doing?*

There is an evident shortage of behavioral health providers in Creek County and Oklahoma. In 2015, Creek County had 1 psychiatrist and a rate of .14 psychiatrists per 10,000 population. Oklahoma had 341 psychiatrists and a rate of .89 psychiatrists per 10,000 population (Table 29). Many psychiatrists in Oklahoma are centered at the University of Oklahoma Health Sciences Center in Oklahoma City.

---

In the U.S. there is 1 psychiatrist for every 6,530 people. In Oklahoma, there is less than 1 psychiatrist for every 10,000 people. To put the shortage of psychiatrists in Oklahoma in better perspective: to get to the national average, Oklahoma would need to add 321 new psychiatrists.\(^{100}\)

In addition, there were zero child and adolescent psychiatrists and only two clinical/counseling psychologists in Creek County in 2015. In Oklahoma there were 26 child and adolescent psychiatrists and 512 clinical/counseling psychologists in 2015.\(^{95}\) According to the University of Wisconsin Population Health Institute’s 2016 County Rankings and Roadmaps, the ratio of the population in Creek County to mental health providers was 550:1 in 2016. This ratio was much higher compared to Oklahoma (270:1) and the top U.S. performing counties (270:1).\(^{7}\)

### Table 29: Psychiatrists by Locality, 2015

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Number of Psychiatrists</th>
<th>Rate of Psychiatrists per 10,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County</td>
<td>1</td>
<td>.14</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>341</td>
<td>.89</td>
</tr>
</tbody>
</table>


### Barriers to Accessing Behavioral Health Services

#### Definition

This indicator reports on a number of barriers to behavioral health services (mental health and substance abuse services).

#### Why Is This Indicator Important?

This indicator is relevant access to behavioral health services, especially early treatment, greatly improves outcomes and can change the course of an individual’s life, increasing the chances for a brighter future.

#### How Are We Doing?

The Oklahoma Department of Mental Health Substance Abuse Services network reported being able to serve 190,000 Oklahomans in 2015. However, behavioral health access remains low as six out of 10 adults reported not receiving treatment and four out of 10 youth did not receive treatment in 2015.\(^{28}\)

Inpatient psychiatric beds in Oklahoma (there are no inpatient mental health facilities in Creek County) are full all of the time because the outpatient system is not able to prevent and limit psychiatric emergencies.\(^{95}\) The limited number of psychiatrists to do the outpatient psychiatric care needed complicates this problem. As a result primary care physicians, inpatient general medical hospital wards, local police departments, and the county jails receive the overflow of psychiatric and substance-related emergencies.\(^{95}\) Issues in terms of lack of preventative services, disjointed coordination of care, care silos,

---

and the limitations to accessing the outpatient behavioral health system further impose major barriers to accessing behavioral health services.

**Number of Healthcare Facilities and Beds**

**Definition**
This indicator reports the number of healthcare facilities as reported by the Oklahoma State Department of Health Center for Health Innovation and Effectiveness, Office of Primary Care and Rural Health Development’s *2014-2015 Oklahoma Health Workforce Data Book*.

**Why Is This Indicator Important?**
This indicator is relevant because the supply and accessibility of facilities and beds affect access and health status.

**How Are We Doing?**
In 2015, there were a total of one general medical/surgical hospital, two Critical Access Hospitals, one free clinic, one Tribal Indian Health Services facility, 1 urgent care center, one adult crisis center, and 16 retail pharmacies in Tulsa County. Additionally, there were an estimated 70 hospital beds and 634 nursing home beds (Table 30).

**Table 30: Number of Healthcare Facilities and Beds, Creek County 2015**

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Medical/Surgical Hospitals</td>
<td>1</td>
</tr>
<tr>
<td>Critical Access Hospitals</td>
<td>2</td>
</tr>
<tr>
<td>Rural Health Clinics</td>
<td>1</td>
</tr>
<tr>
<td>Federally Qualified Health Centers</td>
<td>0</td>
</tr>
<tr>
<td>Free Clinics</td>
<td>1</td>
</tr>
<tr>
<td>Indian Health Services (Federal)</td>
<td>0</td>
</tr>
<tr>
<td>Indian Health Services (Tribal)</td>
<td>1</td>
</tr>
<tr>
<td>Veterans Affairs Facilities</td>
<td>0</td>
</tr>
<tr>
<td>Urgent Care Centers</td>
<td>1</td>
</tr>
<tr>
<td>Inpatient Mental Health Centers</td>
<td>0</td>
</tr>
<tr>
<td>Community Mental Health Centers</td>
<td>0</td>
</tr>
<tr>
<td>Adult Crisis Centers</td>
<td>1</td>
</tr>
<tr>
<td>Retail Pharmacies</td>
<td>16</td>
</tr>
<tr>
<td>Number of Hospital Beds</td>
<td>70</td>
</tr>
<tr>
<td>Number of Nursing Home Beds</td>
<td>634</td>
</tr>
</tbody>
</table>
Rate of Uninsured

Definition
This indicator reports the rate of uninsured in 2015 as well as the decrease in rate of uninsured from 2013 to 2015. Individual-level estimates are grouped by geography, race, age, gender, and other characteristics which aids in understanding the landscape of the uninsured population across the country, in the state of Oklahoma and its counties. All uninsured rates listed are based on the Enroll America/Civics Analytics uninsured model. All data, figures, and information in this section were provided courtesy of Enroll America and were sourced from Enroll America’s 2015 Oklahoma State Snapshot.

Why is This Indicator Important?
This indicator is relevant because lack of insurance is a primary barrier to healthcare access including regular primary care, specialty care, and other health services that contributes to poor health status. The lack of health insurance is considered a key driver of health status.

How Are We Doing?
Since 2013, Oklahoma is participating in the Federally-facilitated Health Insurance Marketplace. In 2013, before the first open enrollment period for the Health Insurance Marketplace, Oklahoma’s uninsured rate of 20.5 percent and was 4.1 percent greater than the national uninsured rate. In 2015, Oklahoma’s uninsured rate improved as it decreased to 15.4%. The 2015 Oklahoma uninsured rate is a 5.1 percent decrease since 2013 prior to the first open enrollment period. Oklahoma’s rate of uninsured was 4.7 percent greater than the national rate (Figure 103).\(^\text{101}\)

Despite some recent attention to Medicaid expansion in state Legislature in 2016 after years of no traction, as of 2016 Oklahoma has not expanded Medicaid coverage to low-income adults.

In 2015, the uninsured rate for Creek County was 16 percent. This was a six percent decrease from 2013 when the uninsured rate in Creek County was 22 percent. More uninsured people lived in Oklahoma County (20% of the uninsured population) and Tulsa County (15% of the uninsured population) than any other county. The counties with the highest uninsured rates currently were Cherokee County (26%), Pushmataha County (25%), Okfuskee County (24%) and Coal County (24%) (Figure 104).
Definition
This indicator reports the rates of uninsured adults (18-64) in 2013 and 2015. Individual-level estimates are grouped by geography, race, age, gender, and other characteristics which aids in understanding the landscape of the uninsured population across the country, in the state of Oklahoma and its counties. All uninsured rates listed are based on the Enroll America/Civics Analytics uninsured model. All data, figures, and information in this section were provided courtesy of Enroll America and were sourced from Enroll America’s 2015 Oklahoma State Snapshot.

Why Is This Indicator Important?
This indicator is relevant because lack of insurance is a primary barrier to healthcare access including regular primary care, specialty care, and other health services that contributes to poor health status. The lack of health insurance is considered a key driver of health status.

How Are We Doing?
An estimated 22 percent of Hispanics in Oklahoma were uninsured, 18 percent of African Americans were uninsured, and 21 percent of young adults (ages 18-34) were uninsured in 2015. Hispanic men ages 18 to 34 (29%) had the highest 2015 uninsured rates, followed by African American men ages 18 to 34 (26%) and Hispanic women ages 18 to 34 (26%) (Figure 105).
In Creek County, the rates of uninsured by race/ethnicity, gender, and age were as follows:

2015 Uninsured Rates by Race
- Black: 19%
- White: 16%
- Hispanic: 21%
- Asian: 19%

2015 Uninsured Rates by Gender
- Male: 17%
- Female: 16%

2015 Uninsured Rates by Age
- Ages 18 to 34: 22%
- Ages 35 to 44: 15%
- Ages 45 to 54: 15%
- Ages 55 to 64: 14%

Uninsured Children (Under 18)

Definition
This indicator reports the percentage of children under age 19 without health insurance coverage in 2013. This data was compiled by the Small Area Health Insurance Estimates (SAHIE) program. The SAHIE program models health insurance coverage by combining survey data with population estimates and administrative records. SAHIE estimates are a product of the U.S. Census Bureau with funding from the Centers for Disease Control and Prevention.
Why Is This Indicator Important?

This indicator is relevant because lack of insurance is a primary barrier to healthcare access including regular primary care, specialty care, and other health services that contributes to poor health status. The lack of health insurance is considered a key driver of health status.

How Are We Doing?

In 2013, the percentage of the population under age 19 in Creek County without health insurance was 8.09 percent, which was lower than in Oklahoma overall (9.14%), but higher than in the U.S. overall (6.28%) (Figure 105).102

Figure 105: Percentage of Population Under Age 19 Without Health Insurance by Locality, 2013

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>17,662</td>
<td>16,234</td>
<td>91.91%</td>
<td>1,428</td>
<td>8.09%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>980,288</td>
<td>890,730</td>
<td>90.86%</td>
<td>89,558</td>
<td>9.14%</td>
</tr>
<tr>
<td>United States</td>
<td>76,146,139</td>
<td>71,365,802</td>
<td>93.72%</td>
<td>4,780,337</td>
<td>6.28%</td>
</tr>
</tbody>
</table>

Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016

Medicaid Enrollment

Definition

This indicator reports the percentage of the population with insurance enrolled in Medicaid (or other means-tested public health insurance) in 2010-2014. Medicaid is an entitlement program that provides medical benefits to low-income individuals and families who have inadequate or no health insurance. This information was based on information from U.S. Census Bureau’s American Community Survey 2010-2014.

Why Is This Indicator Important?

This indicator is relevant because it assesses vulnerable populations which are more likely to have multiple health access, health status, and social support needs; when combined with poverty data, providers can use this measure to identify gaps in eligibility and enrollment. Medicaid provides health coverage for certain low-income individuals, such as families and children, pregnant women, the older

adults, and people with disabilities. It covers one in five Americans, including more than one in three children and 40 percent of all births. Medicaid coverage of children and pregnant women has led to increased access to care and improved child health and birth outcomes. Relative to the uninsured, adults with Medicaid have increased access to preventive and primary care, reduced out-of-pocket burdens, and they are less likely to forgo care due to cost. However, provider shortages and low provider participation in Medicaid, particularly among specialists, are a major concern.  

How Are We Doing?

Creek County had 11,742 unduplicated Medicaid enrollees during 2010-2014 which represents 20.58 percent of the total population. This was the similar the percentage of Oklahoma residents (20.79 %) and the U.S. (20.75%) (Figure 106 and Figure 107).  

Despite some recent attention to Medicaid expansion in state Legislature in 2016 after years of no traction, as of 2016 Oklahoma has not expanded Medicaid coverage to low-income adults.

Figure 106: Medicaid Enrollees by Locality

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population (For Whom Insurance Status is Determined)</th>
<th>Population with Any Health Insurance</th>
<th>Population Receiving Medicaid</th>
<th>Percent of Insured Population Receiving Medicaid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>69,868</td>
<td>57,061</td>
<td>11,742</td>
<td>20.58%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,737,426</td>
<td>3,075,817</td>
<td>639,509</td>
<td>20.79%</td>
</tr>
<tr>
<td>United States</td>
<td>309,082,272</td>
<td>265,204,128</td>
<td>55,035,660</td>
<td>20.75%</td>
</tr>
</tbody>
</table>

Figure 107: Insured, Medicaid/Means-Tested Coverage, Percent by Tract, ACS 2010-2014

Individuals under the age of 18 in Creek County were the population with the highest percentage receiving Medicaid (60.77%) (Figure 108). 14

Figure 108: Population Receiving Medicaid by Age Group

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Under Age 18</th>
<th>Age 18 - 64</th>
<th>Age 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>7,136</td>
<td>3,443</td>
<td>1,163</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>387,698</td>
<td>191,922</td>
<td>59,889</td>
</tr>
<tr>
<td>United States</td>
<td>27,324,286</td>
<td>21,746,868</td>
<td>5,964,506</td>
</tr>
</tbody>
</table>

Data Source: Same as above.
Medicare Enrollment

Definition

This indicator represents the number of aged and/or disabled individuals enrolled in Medicare Part A and/or B through Original Medicare or Medicare Advantage and Other Health Plans during 2016. Medicare enrollment is based on CMS administrative enrollment data and are calculated using a person-year methodology.

Why Is This Indicator Important?

Medicare provides health coverage for older adults, and people with disabilities. The program protects the well-being and financial security of millions of American families as they age or if they become disabled. Medicare beneficiaries depend on the program to provide critical health services such as preventive services, including flu shots and diabetes screenings, hospital stays, lab tests and critical supplies like wheelchairs and prescription drugs.

How Are We Doing?

According to the Centers for Medicare & Medicaid Services (CMS) Program Statistics, there were a total of 13,730 individuals enrolled in Medicare (70% Original Medicare and 30% Medicare Advantage plans) in Creek County in 2015. With a total population of 70,607 residents, this corresponds to a beneficiary density of 185 beneficiaries per 1,000 residents (Table 31). 104

There were a total of 687,156 individuals enrolled in Medicare (82% Original Medicare and 18% Medicare Advantage and other plans) in Oklahoma in April 2016. An estimated 55,504,005 individuals were enrolled in Medicare (68% Original Medicare and 32% Medicare Advantage plans) in the U.S in April 2016 (Table 31). 99 The U.S. total includes Medicare beneficiaries residing in the following territories: American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands. Additionally, Medicare beneficiaries residing in foreign countries and other outlying areas and beneficiaries in unknown areas of residence are also included in this total.

Table 31: Total Number of Oklahoma Medicare Beneficiaries in April 2016

<table>
<thead>
<tr>
<th>Location</th>
<th>Total Medicare Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County</td>
<td>13,730</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>687,156</td>
</tr>
<tr>
<td>United States</td>
<td>56,459,538</td>
</tr>
</tbody>
</table>


The 2014 gender breakdown for Medicare patients in Creek County was:

---


2016 Community Health Needs Assessment, St. John Sapulpa
• Female: 53.1%
• Male: 46.9%

The 2014 gender breakdown for Medicare patients in Oklahoma was:

• Female: 55.0%
• Male: 45.0%

The 2014 gender breakdown for Medicare patients in America was:

• Female: 54.7%
• Male: 45.4%

The 2014 proportions of ethnicities for Medicare patients in Creek County were:

• White (Non Hispanic): 85.9%
• African American: 2.7%
• Hispanic: 0.8%
• Other: 10.6%

The 2014 proportions of ethnicities for Medicare patients in Oklahoma were:

• White (Non Hispanic): 82.4%
• African American: 5.6%
• Hispanic: 2.0%
• Other: 10.0%

The 2014 proportions of ethnicities for Medicare patients in America were:

• White (Non-Hispanic): 79.9%
• African American: 9.7%
• Hispanic: 5.8%
• Other: 4.6%

Emergency Room Visits among Medicare Beneficiaries

Definition

This indicator reports trends in Medicare-recipient emergency department visits per 1,000 beneficiaries over the past over eight years (2007-2014) for Creek County.

Why Is This Indicator Important?

Lack of access to adequate and timely health care services can lead to increased use of the hospital emergency department as a source of primary care. According to the CDC, uninsured adults were more
likely than those with private health insurance or a public health plan to visit the emergency room due to having no other place to go. This can place unnecessary strain on the hospital emergency department.

**How Are We Doing?**

In 2007-2014, Creek County emergency department visits occurred on average 719 times per 1,000 beneficiaries. Emergency department visits for beneficiaries in the county took place 62 more times per 1,000 beneficiaries than the national rate for beneficiaries in the U.S.  

**Late or No Prenatal Care**

**Definition**

This indicator is defined as births to Creek County mothers who had no prenatal care or did not begin prenatal care until after the first trimester (greater than 12 weeks gestation). It is presented as a percentage of all births in 2012.

**Why Is This Indicator Important?**

Prenatal care is medical attention for expecting mothers and their developing babies. It also includes the mother caring for herself by following her healthcare provider’s advice, practicing good nutrition, getting plenty of rest, exercising sensibly, and avoiding things that could harm her or her baby, such as smoking and alcohol. This indicator is relevant because engaging in prenatal care decreases the likelihood of maternal and infant health risks. Babies born to mothers who received late or no prenatal care are more likely to be born at a low birth weight and are more likely to die. This indicator can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

**How Are We Doing?**

In 2012, a total of 39 percent of Creek County mothers did not receive prenatal care or received delayed prenatal care (after the first trimester). In other words, 61 percent of Creek County mothers received prenatal care during the first trimester. This was lower than the rate of prenatal care in both Oklahoma (68.2 percent) and the United States (64.1 percent) (Figure 128). Creek County, Oklahoma, and the U.S. all fell short of the Healthy People 2020 first trimester prenatal care goal of 77.9 percent.

According to Community Service Council’s *Community Profile: Creek County 2015* (supported by the Metropolitan Human Services Commission in Tulsa, the trimester of entry into prenatal care has been fluctuating in Creek County since at least 1980. The percentage of pregnant women no care, however,

---


has increased from less than one percent in 1980 to nearly three percent in 2013 (Figure 109). This trend is a problem as adequate and early care is essential for best birth outcomes.  

**Figure 109: Births by Trimester of Entry into Prenatal Care, Creek County, 1980-2013**

![Births by Trimester of Entry into Prenatal Care: Creek County, 1980 to 2013](chart)


From 2011 to 2012, the percentage of pregnant women in Oklahoma who received first trimester prenatal care improved across all demographic categories. As education increased, so did the percent of women who received first trimester prenatal care. College graduates were 42 percent more likely than those who had not graduated high school to receive first trimester prenatal care. Non-Hispanic White women had the highest rate for early prenatal care compared to non-Hispanic Black women who had the lowest. The rate of initiating first trimester prenatal care did not vary substantially across regions.  

**Quality of Care**

High quality health care is timely, safe, effective, and affordable—the right care for the right person at the right time. High quality care in inpatient and outpatient settings can help protect and improve health and reduce the likelihood of receiving unnecessary or inappropriate care.  

**Hospital Readmissions among Medicare Beneficiaries**

---

**Definition**

This indicator reports trends in Medicare-recipient acute hospital readmission rates per 1,000 beneficiaries over the past over eight years (2007-2014) for Creek County.

**Why Is This Indicator Important?**

Hospital readmissions, especially those that are avoidable, are a strong indicator of poor health outcomes. These readmissions are strongly linked to our nation’s “fragmented health care system that too often leaves discharged patients confused about how to care for themselves at home, and unable to follow instructions and get the necessary follow-up care.” Readmissions are also very costly and use up resources that healthcare organizations often do not have to spare.\(^{109}\)

**How Are We Doing?**

In 2007-2014, Creek County showed a 19.16 percent hospital readmission rate per 1,000 beneficiaries. Compared to the national average for all counties and states, hospital readmissions in the county occurred 2.39 percent more frequently than the average rate (16.78%).

**Preventable Hospital Events**

**Definition**

This indicator reports the discharge rate (per 1,000 Medicare enrollees) for conditions that are ambulatory care sensitive (ACS). ACS conditions include pneumonia, dehydration, asthma, diabetes, and other conditions which could have been prevented if adequate primary care resources were available and accessed by those patients.

**Why Is This Indicator Important?**

This indicator is relevant because analysis of ACS discharges allows demonstrating a possible “return on investment” from interventions that reduce admissions (for example, for uninsured or Medicaid patients) through better access to primary care resources. Diseases typically associated with preventable hospitalization include diabetes, hypertension, congestive heart failure, angina, asthma, dehydration, bacterial pneumonia and urinary infections. Patients who actively participate in their care and adopt healthy lifestyle behaviors may avoid some hospital admissions. Comprehensive, coordinated outpatient care has been shown to reduce preventable hospitalizations.\(^{24}\)

**How Are We Doing?**

In 2013, the age-adjusted ambulatory care sensitive condition discharge rate per 1,000 Medicare enrollees was 95.7 in Creek County, 71.4 in Oklahoma, and 59.2 in the U.S (Figure 110).\(^{110}\)

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Mammography Screening

Definition
This indicator reports the percentage of female Medicare enrollees, age 67-69, who have received one or more mammograms in the past two years.

Why Is This Indicator Important?
This indicator is relevant because engaging in preventive behaviors allows for early detection and treatment of health problems. This indicator can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

How Are We Doing?
In 2013, the percentage of female Medicare enrollees who have received one or more mammograms in the past two years was 58 percent in Creek County, 55 percent in Oklahoma, and 63 percent in the U.S. (90th percentile or top 10 percent was 71%) (Table 20). The percentage of female Medicare enrollees who have received one or more mammograms in the past two years has worsened over recent years in Creek County.
Table 32: Percent Female Medicare Enrollees with Mammogram in Past 2 Years by Locality, 2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Percent Female Medicare Enrollees with Mammogram in Past 2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>50%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>55%</td>
</tr>
<tr>
<td>United States</td>
<td>63%</td>
</tr>
</tbody>
</table>


Diabetes Monitoring - Hemoglobin A1c Test

Definition
This indicator reports the percentage of Medicare patients with diabetes who have a hemoglobin A1c (hA1c) test, a blood test which measures blood sugar levels, administered by a health care professional in the past year.

Why Is This Indicator Important?
This indicator is relevant because engaging in preventive behaviors allows for early detection and treatment of health problems. This indicator can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

How Are We Doing?
In 2013, the percentage of Medicare enrollees with diabetes who have had a hemoglobin A1c (hA1c) test in the past year was 81 percent in Creek County, 78 percent in Oklahoma, and 85 percent in the U.S. (90th percentile or top 10 percent was 90%) (Table 33).

Table 33: Percentage of Medicare Enrollees with Diabetes with Annual Exam by Locality, 2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Percent Medicare Enrollees with Diabetes with Annual Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>81%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>78%</td>
</tr>
<tr>
<td>United States</td>
<td>85%</td>
</tr>
</tbody>
</table>

Health Behaviors and Risk Factors

Health behaviors such as poor diet, a lack of exercise, substance abuse, and other risk factors contribute to poor health status.

Diet and Physical Activity

The environments where we live, learn, work, and play affect our access to healthy food and opportunities for physical activity which, along with genetic factors and personal choices, shape our health and our risk of being overweight and obese.

Fruit/Vegetable Consumption

Definition

This indicator is the percentage of Creek County residents who reported that they consumed less than five servings of fruit and vegetables daily in 2005-2009.

Why Is This Indicator Important?

Fruits and vegetables are part of a well-balanced and healthy diet. Eating more fruits and vegetables along with whole grains and lean meats, nuts, and beans is a way to lose weight or maintain a healthy weight. Most fruits and vegetables are naturally low in fat, sodium, and calories. None have cholesterol. Along with helping to control weight, diets rich in fruits and vegetables may reduce the risk of some types of cancer and other chronic diseases.¹¹¹

Fruits and vegetables also provide essential vitamins and minerals, fiber, and other substances that are important for good health. Nutrients that are obtained from fruits and vegetables include potassium, dietary fiber, folate (folic acid), vitamin A, and vitamin C. These nutrients can help lower cholesterol and blood pressure, as well as keep the body healthy overall. Consumption of folate (folic acid) is especially important for women of childbearing age who may become pregnant. Folate (folic acid) lowers the risk of birth defects during fetal development.¹¹²

How Are We Doing?

In 2005-2009, 87.7 percent of Creek County residents reported that they consumed less than five servings of vegetables daily. This was higher than Oklahoma (84.5%) and the United States (75.7%) (Figure 111).¹¹³

According to the Oklahoma State Health Department’s 2014 State of the State’s Health report, 52.6 percent of Creek County residents reported they did not eat at least one fruit daily and 27.2% of Creek County residents they did not eat at least one vegetable daily in 2011.  

In 2011, Oklahoma ranked as the 50th state in the nation for fruit consumption and the 44th state in the nation for vegetable consumption. The percent of adults who ate fruit and vegetables increased with education and income. Approximately 44 percent of youth reported they did not eat at least one piece of fruit daily and 40 percent reported they did not eat at least one vegetable daily. More than half of men in Oklahoma did not eat at least one vegetable every day.

**Physical Activity**

**Definition**

This indicator is presented as the percentage of adults in 2012 who reported no physical activity in the past month, other than their regular job.

**Why Is This Indicator Important?**

This indicator is relevant because current behaviors are determinants of future health and this indicator may illustrate a cause of significant health issues, such as obesity and poor cardiovascular health. Regular physical activity can improve the health and quality of life of people of all ages, regardless of the presence of a chronic disease or disability. Among adults and older adults, physical activity can lower the risk of early death, coronary heart disease, stroke, high blood pressure, type 2 diabetes, breast and colon cancer, falls, and depression. Among children and adolescents, physical activity can improve bone health, improve cardiorespiratory and muscular fitness, decrease levels of body fat, and reduce

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symptoms of depression. For people who are inactive, even small increases in physical activity are associated with health benefits.

How Are We Doing?

Overall, 33.6 percent of Creek County adults reported no leisure time physical activity in the previous month in 2012. This was higher than in Oklahoma (29.8%) and the United States (22.6%) (Figure 112). All of these regions except Creek County met the Healthy People 2020 national target of 32.6 percent of adults reporting no leisure time physical activity. The prevalence of ‘no physical activity’ increased in Creek County from 2011 – 2012.

Figure 112: Percent Population with No Leisure Time Physical Activity by Locality, 2012

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 20</th>
<th>Population with no Leisure Time Physical Activity</th>
<th>Percent Population with no Leisure Time Physical Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>51,756</td>
<td>18,270</td>
<td>33.6%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,770,324</td>
<td>845,275</td>
<td>29.8%</td>
</tr>
<tr>
<td>United States</td>
<td>231,341,061</td>
<td>53,415,737</td>
<td>22.6%</td>
</tr>
</tbody>
</table>


Females were more likely than males to have no leisure time physical activity (35.2% compared to 31.9%) (Figure 113).  

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115 Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (2012).
Figure 113: Adults with No Leisure-Time Physical Activity by Gender

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Males with No Leisure-Time Physical Activity</th>
<th>Percent Males with No Leisure-Time Physical Activity</th>
<th>Total Females with No Leisure-Time Physical Activity</th>
<th>Percent Females with No Leisure-Time Physical Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>8,395</td>
<td>31.9%</td>
<td>9,875</td>
<td>35.2%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>395,823</td>
<td>28.79%</td>
<td>449,453</td>
<td>30.74%</td>
</tr>
<tr>
<td>United States</td>
<td>24,071,561</td>
<td>21.2%</td>
<td>29,344,293</td>
<td>23.94%</td>
</tr>
</tbody>
</table>

Data Source: Same as above.

Weight Status

Overweight and Obese

Definition
This indicator is the percentage of Creek County residents who were overweight or obese in 2012. Overweight is defined by the World Health Organization as individuals who have a body mass index (BMI) greater than or equal to 25. Obesity refers to individuals who have a BMI greater than or equal to 30. BMI is calculated by taking the person’s weight in kilograms divided by the square of his height in meters ($kg/m^2$).
Why Is This Indicator Important?

Excess weight may indicate an unhealthy lifestyle and puts individuals at risk for further health issues. A variety of factors, including behavioral, environmental, and genetic factors can all play a role in overweight/obese. Individuals who are overweight or obese have an increased risk of many health conditions: heart disease, type 2 diabetes, certain cancers, hypertension, and stroke, as well as other conditions. Obesity and overweight (and associated health problems) have a significant economic impact on the health system through direct medical costs, lost productivity in the general workforce, and early death.  

How Are We Doing?

In 2012, 35.7 percent of Creek County residents were overweight compared to 34.9 percent of Oklahomans and 35.8 percent of residents of the United States (Figure 114).

Figure 114: Percent Adults Overweight by Locality, 2011-2012

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Survey Population (Adults Age 18)</th>
<th>Total Adults Overweight</th>
<th>Percent Adults Overweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>47,337</td>
<td>16,891</td>
<td>35.7%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,730,646</td>
<td>954,311</td>
<td>34.9%</td>
</tr>
<tr>
<td>United States</td>
<td>224,991,207</td>
<td>80,499,532</td>
<td>35.8%</td>
</tr>
</tbody>
</table>


With regard to race/ethnicity, percent overweight was most prevalent among white, non-Hispanic (NH) and Hispanic individuals in Oklahoma and the U.S. (Figure 115).  

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In 2012, 35.6 percent of Creek County residents were obese compared to 32.4 percent of Oklahomans and 27.1 percent of residents of the United States (Figure 116).  

**Figure 116: Percent Obese by Locality, 2012**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 20</th>
<th>Adults with BMI &gt; 30.0 (Obese)</th>
<th>Percent Adults with BMI &gt; 30.0 (Obese)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>51,724</td>
<td>18,362</td>
<td>35.6%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,770,964</td>
<td>898,600</td>
<td>32.4%</td>
</tr>
<tr>
<td>United States</td>
<td>231,417,834</td>
<td>63,336,403</td>
<td>27.1%</td>
</tr>
</tbody>
</table>

*Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (2012).  
Source: Courtesy of Community Commons. Retrieved from [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016.*
Men were more likely to be obese than women (36.6% compared to 34.6%) (Figure 117).\textsuperscript{113}

**Figure 117: Percent Obese by Gender**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Males Obese</th>
<th>Percent Males Obese</th>
<th>Total Females Obese</th>
<th>Percent Females Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>9,259</td>
<td>36.6%</td>
<td>9,102</td>
<td>34.6%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>445,684</td>
<td>32.76%</td>
<td>452,912</td>
<td>32.1%</td>
</tr>
<tr>
<td>United States</td>
<td>31,423,447</td>
<td>27.7%</td>
<td>31,912,963</td>
<td>26.59%</td>
</tr>
</tbody>
</table>

*Data Source: Same as above.*

*Source: Courtesy of Community Commons. Retrieved from [www.communitycommons.org](http://www.communitycommons.org) on April 1, 2016.*

**Hypertension**

**High Blood Pressure**

**Definition**

This indicator is presented as the percentage of adult Creek County residents age 18 and older who had ever been diagnosed with high blood pressure in 2006-2012.

**Why Is This Indicator Important?**
Uncontrolled high blood pressure can lead to serious health consequences if untreated. It is sometimes called ‘the silent killer,’ because it has no symptoms, so individuals may not be aware that it is damaging their arteries, heart, and other organs. Possible health consequences include heart disease, stroke, kidney damage, as well as other complications. Risk factors for high blood pressure include family history, age, low physical activity, poor diet, overweight/obese, and high alcohol consumption.\textsuperscript{118}

**How Are We Doing?**

In 2006-2012, 34 percent of Creek County residents reported having high blood pressure. This was higher than in Oklahoma (32.3%) and the United States (28.16%) (Figure 118).\textsuperscript{111} These regions did not meet the Healthy People 2020 national goal of reducing the proportion of individuals with high blood pressure to 26.9 percent.\textsuperscript{119}

**Figure 118: High Blood Pressure by Locality, 2005-2013**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population (Age 18)</th>
<th>Total Adults with High Blood Pressure</th>
<th>Percent Adults with High Blood Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>52,041</td>
<td>17,694</td>
<td>34%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,793,624</td>
<td>902,341</td>
<td>32.3%</td>
</tr>
<tr>
<td>United States</td>
<td>232,556,016</td>
<td>65,476,522</td>
<td>28.16%</td>
</tr>
</tbody>
</table>


**High Blood Pressure Management**

**Definition**

This indicator is presented as the percentage of adults who self-reported that they are not taking medication for their high blood pressure according to the CDC’s Behavioral Risk Factor Surveillance System (2006-2010).

**Why Is This Indicator Important?**

This indicator is relevant because engaging in preventive behaviors decreases the likelihood of developing future health problems. When considered with other indicators of poor health, this indicator


can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

How Are We Doing?

In the report area, 21.9 percent of adults, or 11,264, self-reported that they are not taking medication for their high blood pressure according to the CDC's Behavioral Risk Factor Surveillance System (2006-2010). This was higher than in Oklahoma (20.2%) and slightly higher than in the U.S. (21.7%) (Figure 119).\textsuperscript{111}

Figure 119: Percent Adults with High Blood Pressure Not Taking Medication by Locality, 2006-2010

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population (Age 18)</th>
<th>Total Adults Not Taking Blood Pressure Medication (When Needed)</th>
<th>Percent Adults Not Taking Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>439,019</td>
<td>93,939</td>
<td>21.4%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,793,624</td>
<td>565,511</td>
<td>20.2%</td>
</tr>
<tr>
<td>United States</td>
<td>235,375,690</td>
<td>51,175,402</td>
<td>21.7%</td>
</tr>
</tbody>
</table>


Hispanic or Latino adults were more likely to report not taking medication for high blood pressure than non-Hispanic adults (29.77%). Non-Hispanic adults of other races were also more likely to report not taking medication high blood pressure (22.92%) (Figure 120).\textsuperscript{111}
Dental Care

Dental Care Utilization

Definition

This indicator reports the percentage of adults aged 18 and older who self-report that they have not visited a dentist, dental hygienist or dental clinic within the past year.

Why Is This Indicator Important?

This indicator is relevant because engaging in preventive behaviors decreases the likelihood of developing future health problems. This indicator can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

How Are We Doing?

In the report area, 45.3 percent of adults, or 23,344, self-reported that they had not visited a dental provider or clinic within the past year according to the CDC’s Behavioral Risk Factor Surveillance System (2006-2010). This was higher than in Oklahoma (42.3%) and the U.S. (30.2%) (Figure 121). 111

Males were more likely to be without a recent dental exam than females (44.82% compared to 39.92%) in Oklahoma. With regard to race and ethnicity, Non-Hispanic blacks in Oklahoma were the most likely to report not having had a recent dental exam compared to other race/ethnic groups (50.89%). Hispanic
or Latinos in Oklahoma were the second most likely to report no recent dental exam (50.29%). Non-Hispanic whites in Oklahoma were the least likely to report no recent dental exam (39.63%).

Figure 121: Percentage of Adults without a Recent Dental Exam by Locality, 2006-2010

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population (Age 18)</th>
<th>Total Adults Without Recent Dental Exam</th>
<th>Percent Adults with No Dental Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>51,497</td>
<td>23,344</td>
<td>45.3%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,793,624</td>
<td>1,181,932</td>
<td>42.3%</td>
</tr>
<tr>
<td>United States</td>
<td>235,375,690</td>
<td>70,965,788</td>
<td>30.2%</td>
</tr>
</tbody>
</table>


**Teen Births**

**Teen Birth Rate Ages 15 – 19**

*Definition*

This indicator is presented as the number of live births to Creek County teenagers ages 15 – 19 per 1,000 females in this age group, over the years 2006-2012.

*Why Is This Indicator Important?*

This indicator is relevant because in many cases, teen parents have unique social, economic, and health support services. Additionally, high rates of teen pregnancy may indicate the prevalence of unsafe sex practices. Teen pregnancy can have negative health impacts on both the mother and the child. Infants born to teen mothers are at an increased risk of being born prematurely and at a low birth weight. They are also at a greater risk of infant mortality. Teen mothers are more likely to smoke during pregnancy and less likely to receive appropriate prenatal care.

Although teen birth rates are declining, there are still significant disparities among racial and ethnic minorities, as well as socioeconomically disadvantaged youth of any race or ethnicity. Social and economic costs related to teen parents and childbirth includes increased health care and foster care costs, increased high school dropout rates, and lower educational attainment for teen mothers and their children. The children of teen mothers are also more likely to be incarcerated at some time during

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adolescence, have more health problems, give birth as a teenager, and face unemployment as a young adult.\textsuperscript{119} The children of teens are also more likely to depend on publicly provided healthcare.\textsuperscript{119}

\textit{How Are We Doing?}

There were 2,372 births to Creek County teens ages 15 – 19 from 2006-2012, for a birth rate of 54.1 live births per 1,000 females ages 15 – 19. This was significantly higher than Oklahoma (42.9) and the United States (26.5) (Figure 122). Teen births have been decreasing in Creek County, Oklahoma, and the U.S. since 2005\textsuperscript{122}

\textbf{Figure 122: Teen Birth Rates (Ages 15-19) by Locality, 2006-2012}

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Female Population Age 15 - 19</th>
<th>Births to Mothers Age 15 - 19</th>
<th>Teen Birth Rate (Per 1,000 Population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>2,372</td>
<td>128</td>
<td>54.1</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>128,840</td>
<td>6,932</td>
<td>53.8</td>
</tr>
<tr>
<td>United States</td>
<td>10,736,677</td>
<td>392,962</td>
<td>36.6</td>
</tr>
</tbody>
</table>


Black were the race with the highest birth rate for teenagers ages 15 – 19 (55.2). Additionally, the birth rate for Hispanic women in this age group was lower than that of non-Hispanic women (35.9) (Figure 123).\textsuperscript{120}


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\textit{2016 Community Health Needs Assessment, St. John Sapulpa}
Tobacco Use

Tobacco Use among Current Smokers

Definition

This indicator is the percentage of Creek County residents who self-reported currently smoking cigarettes in 2006-2012.

Why Is This Indicator Important?

Tobacco use is the single most preventable cause of death and disease in the United States. Tobacco use causes cancer, heart disease, lung diseases (including emphysema, bronchitis, and chronic airway obstruction), premature birth, low birth weight, stillbirth, and infant death. Secondhand smoke causes heart disease and lung cancer in adults and a number of health problems in infants and children, including severe asthma attacks, respiratory infections, ear infections, and is associated with Sudden Infant Death Syndrome (SIDS). There is no risk-free level of exposure to secondhand smoke.
**How Are We Doing?**

In 2006-2012, 32.9 percent of Creek County residents reported smoking cigarettes on some days or every day (current smokers). This was higher than Oklahoma (24.5%) and the United States (18.1%) (Figure 124). None of these regions met the Healthy People 2020 national goal of reducing smoking prevalence to 12.0 percent.

**Figure 124: Current Smokers by Locality, 2006-2012**

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 18</th>
<th>Total Adults Regularly Smoking Cigarettes</th>
<th>Percent Population Smoking Cigarettes (Crude)</th>
<th>Percent Population Smoking Cigarettes (Age-Adjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>52,041</td>
<td>16,393</td>
<td>31.5%</td>
<td>32.9%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,793,624</td>
<td>673,263</td>
<td>24.1%</td>
<td>24.5%</td>
</tr>
<tr>
<td>United States</td>
<td>232,556,016</td>
<td>41,491,223</td>
<td>17.8%</td>
<td>18.1%</td>
</tr>
</tbody>
</table>


---

**Substance Use**

**Alcohol Consumption**

**Definition**

This indicator reports the percentage of adults aged 18 and older who self-report heavy alcohol consumption (defined as more than two drinks per day on average for men and one drink per day on average for women).

**Why Is This Indicator Important?**

This indicator is relevant because current behaviors are determinants of future health and this indicator may illustrate a cause of significant health issues, such as cirrhosis, cancers, and untreated mental and behavioral health needs.

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How Are We Doing?

In Creek County, an estimated 16.4 percent of adults reported drinking excessively (age-adjusted) according to the CDC's Behavioral Risk Factor Surveillance System (2006-2010). This was higher than in Oklahoma (13.9%), but slightly lower than in the U.S. (16.9%) (Figure 125).  

Figure 125: Estimated Adults Drinking Excessively (Age-Adjusted Percentage) by Locality, 2006-2010

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population Age 18</th>
<th>Estimated Adults Drinking Excessively</th>
<th>Estimated Adults Drinking Excessively (Crude Percentage)</th>
<th>Estimated Adults Drinking Excessively (Age-Adjusted Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>52,041</td>
<td>7,702</td>
<td>14.8%</td>
<td>16.4%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>2,793,624</td>
<td>368,758</td>
<td>13.2%</td>
<td>13.9%</td>
</tr>
<tr>
<td>United States</td>
<td>232,556,016</td>
<td>38,248,349</td>
<td>16.4%</td>
<td>16.9%</td>
</tr>
</tbody>
</table>


Physical Environment

A community's health also is affected by the physical environment. A safe, clean environment that provides access to healthy food and recreational opportunities is important to maintaining and improving community health.

Air and Water Quality

Clean air and safe water are prerequisites for health. Poor air or water quality can be particularly detrimental to vulnerable populations such as the very young, the elderly, and those with chronic health conditions.

Air Quality - Ozone

Definition

This indicator reports the percentage of days per year with Ozone (O3) levels above the National Ambient Air Quality Standard of 75 parts per billion (ppb). Figures are calculated using data collected by monitoring stations and modeled to include census tracts where no monitoring stations exist.
Why Is This Indicator Important?

This indicator is relevant because poor air quality contributes to respiratory issues and overall poor health.

How Are We Doing?

Within the report area, 10, or 2.71 percent of days exceeded the emission standard of 75 parts per billion (ppb) in 2012. This was higher than in Oklahoma (2.27%) and in than in the U.S. (1.24%) (Figure 126).124

Figure 126: Percentage of Days Exceeding Standards, Population-Adjusted Average by Locality, 2012

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Average Daily Ambient Ozone Concentration</th>
<th>Number of Days Exceeding Emissions Standards</th>
<th>Percentage of Days Exceeding Emissions Standards, Crude Average</th>
<th>Percentage of Days Exceeding Standards, Pop. Adjusted Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>69,967</td>
<td>45.66</td>
<td>10</td>
<td>2.74%</td>
<td>2.71%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,751,351</td>
<td>45.05</td>
<td>8.35</td>
<td>2.29%</td>
<td>2.27%</td>
</tr>
<tr>
<td>United States</td>
<td>312,471,327</td>
<td>38.95</td>
<td>4.46</td>
<td>1.22%</td>
<td>1.24%</td>
</tr>
</tbody>
</table>


Air Pollution - Particulate Matter 2.5

Definition

Air Pollution - Particulate Matter is the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) in a county. Fine particulate matter is defined as particles of air pollutants with an aerodynamic diameter less than 2.5 micrometers. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air.

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Why Is This Indicator Important?
The relationship between elevated air pollution, particularly fine particulate matter and ozone, and compromised health has been well documented. Negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.  

How Are We Doing?
The average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) in Creek County was 10.5 which was slightly higher than in Oklahoma (10.3) and higher than the top 90th percentile, or top 10 percent of the counties in the U.S. (9.5).  

Water Quality-Drinking Water Violations

Definition
Drinking Water Violations is an indicator of the presence or absence of health-based drinking water violations in counties served by community water systems. Health-based violations include Maximum Contaminant Level, Maximum Residual Disinfectant Level and Treatment Technique violations. A "Yes" indicates that at least one community water system in the county received a violation during the specified time frame; while a "No" indicates that there were no health-based drinking water violations in any community water system in the county.

Why Is This Indicator Important?
Recent studies estimate that contaminants in drinking water sicken 1.1 million people each year. Ensuring the safety of drinking water is important to prevent illness, birth defects, and death for those with compromised immune systems. A number of other health problems have been associated with contaminated water, including nausea, lung and skin irritation, cancer, kidney, liver, and nervous system damage.  

How Are We Doing?
Creek County measured positive ("Yes") for drinking water violations in 2016.

Housing and Transit

The housing options and transit systems that shape our communities’ built environment affect where we live and how we get from place to place. The choices we make about housing and transportation, and the opportunities underlying these choices, also affect our health.

Severe Housing Problems

Definition
This indicator reports the percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities. Severe overcrowding is defined as more than 1.5 persons per room. Severe cost burden is defined as monthly housing costs (including utilities) that exceed 50% of monthly income.
Why Is This Indicator Important?

This indicator is relevant because good health depends on having homes that are safe and free from physical hazards. When adequate housing protects individuals and families from harmful exposures and provides them with a sense of privacy, security, stability and control, it can make important contributions to health. In contrast, poor quality and inadequate housing contributes to health problems such as infectious and chronic diseases, injuries and poor childhood development.\(^7\)

How Are We Doing?

The percentage of households with at least 1 of 4 housing problems (overcrowding, high housing costs, or lack of kitchen or plumbing facilities) in Creek County was 12 percent in 2008-2012. This was lower than in Oklahoma (14%) and higher than the top 90\(^{th}\) percentile, or top 10 percent of the counties in the U.S. (9%) (Figure 155).\(^{126}\)

Figure 127: Severe Housing Problems, Oklahoma

Use of Public Transportation

Definition

This indicator reports the percentage of population using public transportation as their primary means of commute to work. Public transportation includes buses or trolley buses, streetcars or trolley cars, subway or elevated rails, and ferryboats.

Why Is This Indicator Important?

The transportation choices that communities and individuals make have important impacts on health through active living, air quality, and traffic crashes. The choices for commuting to work can include

---

walking, biking, taking public transit, carpooling, or the most damaging to the health of communities which is individuals commuting alone by car. In most counties, the latter is the primary form of transportation to work. 

How Are We Doing?

The percentage of the population in Creek County using public transit for commuting to work was .21 percent in 2010-2014. This was lower than in Oklahoma (.48%) and significantly lower than in the U.S. (5.06%) (Figure 128 and 129).

Figure 128: Percentage of the Population Using Public Transit for Commute to Work by Locality

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>29,242</td>
<td>61</td>
<td>0.21%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1,686,185</td>
<td>8,100</td>
<td>0.48%</td>
</tr>
<tr>
<td>United States</td>
<td>141,337,152</td>
<td>7,157,671</td>
<td>5.06%</td>
</tr>
</tbody>
</table>


Figure 129: Workers Traveling to Work Using Public Transit, Percent by Tract, ACS 2010-2014

Workers Traveling to Work Using Public Transit, Percent by Tract, ACS 2010-14

<table>
<thead>
<tr>
<th>Percent of Workers Using Public Transit</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 4.0%</td>
<td>Purple</td>
</tr>
<tr>
<td>1.1 - 4.0%</td>
<td>Medium Purple</td>
</tr>
<tr>
<td>0.1 - 1.0%</td>
<td>Light Purple</td>
</tr>
<tr>
<td>No Workers Using Public Transit</td>
<td>Gray</td>
</tr>
<tr>
<td>No Data or Data Suppressed</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Food Access

Food Access - Low Food Access

Definition
This indicator reports the percentage of the population living in census tracts designated as food deserts. A food desert is defined as a low-income census tract (where a substantial number or share of residents has low access to a supermarket or large grocery store).

Why Is This Indicator Important?
This indicator is relevant because it highlights populations and geographies facing food insecurity.

How Are We Doing?
The percentage of the population in Creek County with low food access was 16.65 percent in 2010. This was significantly lower than in Oklahoma (28.66%) and lower than in the U.S. (23.61%) (Figure 130). Some disparities in food access are evident by the population map below (Figure 131).

Figure 130: Percentage of Population with Low Food Access by Locality, 2010

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>69,967</td>
<td>11,653</td>
<td>16.65%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,751,351</td>
<td>1,075,089</td>
<td>28.66%</td>
</tr>
<tr>
<td>United States</td>
<td>308,745,538</td>
<td>72,905,540</td>
<td>23.61%</td>
</tr>
</tbody>
</table>


Food Access — Healthy Food Access

Definition
This indicator reports the percentage of population living in census tracts with no or low access to healthy retail food stores. Figures are based on the CDC Modified Retail Food Environment Index. For this indicator, low food access tracts are considered those with index scores of 10.0 or less (0=worst; 10=best).

Why Is This Indicator Important?
There is strong evidence that residing in a food desert is correlated with a high prevalence of overweight, obesity, and premature death. Supermarkets traditionally provide healthier options than convenience stores or smaller grocery stores. Additionally, lack of access to fresh fruits and vegetables is a substantial barrier to consumption and is related to premature mortality.

How Are We Doing?
In 2011, the percentage of the population in tracts with no healthy food outlet was 39.78%. This was higher than in Oklahoma (37.41%) and significantly higher than in the U.S. (18.63%) (Table 34). An estimated 6.49 percent of the population in Creek County resides in tracts with high healthy food access which is higher than in Oklahoma (3.51%) and in the U.S. (5.02%). The disparities in healthy food access are evident by the population map below (Figure 132).

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128 Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. (2011).
Table 34: Percentage of Population with Healthy Food Access by Locality, 2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>69,967</td>
<td>12.46%</td>
<td>39.78%</td>
<td>3.24%</td>
<td>38.02%</td>
<td>6.49%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,751,351</td>
<td>1.96%</td>
<td>37.41%</td>
<td>30.39%</td>
<td>26.74%</td>
<td>3.51%</td>
</tr>
<tr>
<td>United States</td>
<td>312,474,470</td>
<td>0.99%</td>
<td>18.63%</td>
<td>30.89%</td>
<td>43.28%</td>
<td>5.02%</td>
</tr>
</tbody>
</table>

Data Source: Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. (2011).

Figure 132: Modified Retail Food Environmental Index Score by Tract, DNPAO 2011

Data Source: Same as above.
Access to Physical Activity Opportunities

Recreation and Fitness Facility Access

Definition
This indicator reports the number per 100,000 population of recreation and fitness facilities as defined by North American Industry Classification System (NAICS) Code 713940.

Why Is This Indicator Important?
This indicator is relevant because the role of the built environment is important for encouraging physical activity. Individuals who live closer to sidewalks, parks, and gyms are more likely to exercise and other healthy behaviors.

How Are We Doing?
In 2013, the rate of recreation and fitness facilities per 100,000 population was 1.43 which was significantly lower than in the Oklahoma (7.2) and in the U.S. (9.7) (Figure 133).

Figure 133: Recreation and Fitness Facilities, Rate per 100,000, by Locality 2013

<table>
<thead>
<tr>
<th>Report Area</th>
<th>Total Population</th>
<th>Number of Establishments</th>
<th>Establishments, Rate per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County, OK</td>
<td>69,967</td>
<td>1</td>
<td>1.43</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,751,351</td>
<td>270</td>
<td>7.2</td>
</tr>
<tr>
<td>United States</td>
<td>312,732,537</td>
<td>30,393</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Data Source: U.S. Census Bureau. (2013). County Business Patterns. Additional data analysis by CARES.
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016

PRIMARY DATA: COMMUNITY INPUT

Community input provides information and insights about the health and well-being of the community that cannot be obtained through secondary data alone. Community stakeholders understand the “why” and “how” behind the numbers and can share details on barriers to health services that exist within the community. Sometimes the numbers are missing for certain issues and experts or professionals who have special knowledge of community health needs can fill in information or “data gaps” not covered by available secondary data. Community stakeholders also know where strengths and assets exist within the community, including resources and programs to address areas of concern. Given the vital importance of

community input in understanding the health needs of a community, the IRS requires that community input be taken into consideration during the community health needs assessment process.

Community input is a primary focus of this assessment. Accordingly, input from community members, community leaders and representatives, as well as the health’s system’s Community Health Needs Assessment (CHNA) Advisory Group and leadership was obtained to expand upon information gleaned from the secondary data review. A concerted effort was made to obtain community input from persons who represent the broad interests of the community served by the hospital, including those with special knowledge and expertise of public health issues and populations deemed vulnerable. This assessment also took in to account the importance of engaging communities on an ongoing basis and the promotion of a continual dialogue. This includes disseminating the results of the assessment within the community and engaging the community in mutually reinforcing and community-driven activities to improve the community health and well-being.

COMMUNITY INPUT METHODOLOGY

As aforementioned, community input is a form of primary data collection. Many methods can be used to gather community input, including key informant interviews, focus groups, listening circles, community forums, and surveys. This assessment employed a couple of methods of community input to yield the desired results. For the purposes of this assessment, community input was obtained through the following methods:

- A community input meeting with 18 community members, leaders, and representatives
- Input from the public health workforce and local coalitions/partnerships
- Input from the health system’s Community Health Needs Assessment (CHNA) Advisory Group and leadership

COMMUNITY INPUT SOURCES

Community input is best obtained from a diverse set of community stakeholders such as community members, community organizations, and the public health workforce. A variety of sources ensures that as many different perspectives as possible are represented while satisfying the broad interests of the community. Sources of community input for this assessment were as follows:

- Community members, leaders and representatives
- Local public health workforce and coalitions/partnerships
- Representatives of medically underserved, low-income, minority, at-risk, and otherwise vulnerable populations
- Health system CHNA Advisory Group and leadership

Community stakeholders who provided community input represented a variety of community sectors including: community members, healthcare providers and services, non-profit agencies, community-based organizations, private businesses, volunteer organizations, education and academia, community developers, faith communities and faith-based organizations, government representatives, safety net service providers, law enforcement and first responders, economic and workforce development, and the public health workforce, and other interest groups working with at-risk and vulnerable populations. This assessment especially focused on community input from those with special knowledge or expertise in
public health as well as members and representatives of medically underserved, low income, minority, or otherwise vulnerable populations. Each offered critical strengths and insights on the health needs and assets of the community.

The following is visual representation of the types of constituents who contributed community input throughout this assessment process (Figure 134):

**Figure 134: Community Input Sources**


The following sections summarize this assessment’s community input, how and when it was gathered, community members and other stakeholders who participated in the process, and a description of the medically underserved, low-income, minority, at-risk, or otherwise deemed vulnerable populations being represented by organizations or individuals that provided input.

**COMMUNITY INPUT MEETING**

On May 5, 2016, a total of 18 community leaders and representatives participated in a community input meeting conducted at St. John Sapulpa. The purpose of this meeting was to solicit community input from persons representing the broad interests of the community, especially those most in need. The meeting was intended to obtain community input specific to the hospital and surrounding community of Creek County.
COMMUNITY INPUT MEETING DESIGN

Community representatives and leaders, who represent the broad interests of the community, were identified and invited to attend these meetings by this assessment’s author and members of the health system’s Community Health Needs Assessment (CHNA) Advisory Group. These meetings each took place over a two hour period and consisted of four main exercises:

1. Hospital assessment exercise
2. Nominal group exercise to validate and prioritize health needs based on top health needs identified
3. Community perception group exercise
4. Community capacity assessment exercise

Each participant was asked to give a brief introduction to the group at the beginning of the meeting. A PowerPoint presentation and overview of the community health needs assessment process was also conducted at the beginning of the session to orient attendees. Following the presentation, the group was asked to engage in a hospital assessment exercise through discussion. Participants were asked two questions about their community perceptions of St. John Sapulpa in terms of community health improvement strengths and opportunities. Flip charts were utilized to record input.

In order to identify, validate, and prioritize significant community health needs, participants were engaged in a nominal group exercise using wall charts and post-it notes to number and rank significant health concerns identified. A total of seven concerns were selected as the top health concerns of the community to have the participants prioritize and included:

- Poor Diet and Physical Inactivity
- Mental Health
- Alcohol and Drug Use
- Tobacco Use
- Access to Health Care
- Chronic Disease
- Education (includes Health Literacy)

Following the nominal group exercise, participants broke up into groups of four-five to complete a community perception exercise as a group. Participants were asked to identify the top three things that make them proud of their community and the top three things that they would like to change about the community. Answers were discussed and recorded as a group on index note cards.

The last exercise consisted of community capacity exercise. Participants were asked to identify existing organizational assets (organizations, programs, services, resources, etc.) in the community that can be used to address the top six identified health needs. A pre-filled excel spreadsheet was projected on to the projection screen. As participants offered information on available assets, the information was entered into the grid on the spreadsheet.
COMMUNITY INPUT MEETING OBJECTIVES

The main objectives of hosting a community input meeting at the hospital were as follows:

1. Solicit community input and facilitate dialogue;
2. Engage community stakeholders;
3. Initiate or strengthen partnerships and collaboration;
4. Identify community perceptions of Jane Phillips Medical Center in terms of community health improvement strengths and opportunities;
5. Determine top and prioritize top community health concerns; and
6. Assess the availability and types of resources and assets within the community to address top community health needs.

COMMUNITY INPUT MEETING PARTICIPANTS

The participant constituency was diverse and included those with professional experience and/or the ability to represent populations that are medically underserved, low-income, minority, at-risk, or otherwise deemed vulnerable. Community representatives and leaders also included those with special knowledge of and/or expertise in public health. Participants represented: healthcare services, law enforcement, first responders, education, non-profit agencies, faith communities, government representatives, safety net service providers, volunteer organizations, private businesses, the public health workforce, and other interest groups working with vulnerable populations.

Agencies, coalitions, organizations, partnerships, and programs who participated in the community input meeting included the following:

- American Heritage Bank
- Caring Community Friends
- City of Sapulpa
- Creek County Emergency Ambulance Service
- Creek County Community Partnership
- Creek County Health Department
- Creek County Healthy Living Program
- Oklahoma State University Department of Wellness
- Oklahoma State University Prevention Program
- Oklahoma Turning Point-Creek County, Oklahoma State Department of Health
- Sapulpa Chamber of Commerce
- Sapulpa Police Department
- Sooner SUCCESS Program
- St. John Sapulpa

COMMUNITY INPUT MEETING FINDINGS

The following sections provide summaries of findings from the three of the four exercises completed with community leaders and representatives:
Community Input Group Discussion – Compilation of Answers

Question 1: What is St. John Sapulpa doing well that improves the health of the community?

- Wait time in ER
- Efforts to improve health of the community get involved with community partnerships
- Expansion of services
- Improved coordination with providers for mental health and crisis triage
  - Improves public safety
- Coordination with Creek County Health Department on health classes (e.g. Tai Chi for older adults)

Question 2: What opportunities exist for St. John Sapulpa to improve the health of the community?

- Survey patients and residents of county to obtain community input
- Community engagement
- Develop a Community Health Improvement Board – connection with PCPs
- Focus groups to obtain community input (patients and family/friends as well as residents of county)
- Wellness checks
- Health information / preventative care
- Continued collaboration to leverage efforts
- Leverage volunteers – increase awareness
- Increase awareness of available services
- Outreach beyond Sapulpa (Bristow)
- Collaborate with other Creek County Hospitals
- Increase primary care access
- Advertise / publicity
- Accept more insurance plans/networks
- Increase pediatric access (SoonerCare)
- Arrange for community volunteers to help with transportation of patients to healthcare appointments
- Increase efficiency of transfers
- Increase marketing of services
- Partnering with Vo-Tech
- School education & partnership
- Increase partnerships with home health providers
- Strengthen partnerships with Paramedics, Law Enforcement, Chaplains
- Add Community Health Workers to staff to help patients navigate health services/improve health outcomes

Community Perception Group Exercise – Compilation of Answers
Question 1: If you had the power to change anything in the community, what are the top three things you would change to improve the health of the community?

- Make parks tobacco-free
- More mental health beds
- More information on programs offered locally
- Greater focus on education at a younger age, health education and general (use education to empower community members)
- Increase cost of cigarettes or don’t sell at all
- More programs, treatments, services for obesity – create official diagnosis for obesity
- Mental Health / Drug Abuse/use
- Poverty – Living wages / promote economic development
- Education – broadly defined to encompass all aspects of education including empowerment
- Health improvement policies
- Reputation / stigma of county (blue-collar, high crime, impoverished)
- Access to healthcare
- Transportation

Question 2: What are the top three things about the community that you are proud of?

- We have a state-of-the-art hospital
- We have 13 parks & 2 lakes with many opportunities for physical activity including a dog park coming soon
- 13 United Way agencies and community involvement
- Skilled care services at St. John Sapulpa
- Pride / community legacy
- Sapulpa schools summer feeding program
- Small town feeling
- Community festivals (events)
- Community partnerships
- Parks
- Long standing coalition
- Health Department

Prioritized Community Health Concerns

The following list shows the top seven health concerns as prioritized by community leaders and representatives in the meeting (listed in order of highest to lowest prioritization).

1. Lack of Education/Health Literacy
2. Access to Health Care
3. Poor Diet/Inactivity
4. Mental Health
5. Alcohol/Drug Abuse
6. Chronic Disease
7. Tobacco Use

For more detailed information on the prioritization methodology utilized to confirm this ranking, please see the St. John Sapulpa Community Input Meeting Prioritization of Community Health Concerns in the Appendices. The community capacity assessment exercise is summarized in the “Resources and Assets Section”.

**CHNA ADVISORY GROUP AND HEALTH SYSTEM LEADERSHIP INPUT**

A Community Health Needs Assessment (CHNA) Advisory Group was formed in the beginning of this assessment process to provide direction, input, and guidance. This group met several times during the process between February and May 2016. Group membership consisted of thirteen key representatives from hospital facilities, St. John Clinic, and departments throughout the health system. These members assisted with the design and coordination of the hospital community health input meetings and also helped to compile information and data related to our evaluation of impact from our 2013 community health needs assessment process. Additional members of hospital and health system leadership were also engaged to provide input and guidance throughout the process. A listing of the CHNA Advisory Group members and hospital/health system leadership that contributed to this process is available in the Acknowledgements section at the beginning of this report.

A short community health needs prioritization survey was emailed to CHNA Advisory Group members and hospital/health system leadership via SurveyMonkey in April 2016. A total of fifteen members and leadership responded to the survey (Figure 135).
The following list shows the top six health concerns among the health system CHNA Advisory Group and leadership for the hospital (*listed in order of highest to lowest prioritization, but it is important to note some concerns tied in terms of the number of individuals reporting them as a problem):

- Poor Diet/Inactivity
- *Chronic Disease
- *Tobacco Use
- **Access to Healthcare
- **Mental Health
- Alcohol/Drug Abuse

*Tied for second highest priority (13 responses each.  
**Tied for the third highest priority (12 responses each)

**RESOURCES AND ASSETS**

Efforts to identify existing resources and assets in the community that can be leveraged to address the priority health needs were undertaken as part of this assessment process. A comprehensive listing
including a count of and types of community resources offered in the community is located in the Appendices.

**Community Capacity Assessment**

A community capacity assessment grid for Creek County was completed based on the input from community leaders and representatives. Following the compilation of the grid, the count of all assets was tabulated to present a number of agencies and programs (Figure 136). The community capacity exercise conducted with community leaders and representatives also served to identify organizational assets (agencies, program, resources, etc) that can be leveraged to address top health needs identified. A detailed listing of all of the identified organizational assets that includes names of all agencies and programs is available in the Appendices section.

Figure 136: Creek County Community Capacity Assessment

A detailed listing of all of the identified organizational assets that includes names of all agencies and programs is available in the Appendices section.
PRIORITIZATION OF SIGNIFICANT COMMUNITY HEALTH NEEDS

SIGNIFICANT COMMUNITY HEALTH NEEDS

Primary and secondary data were evaluated and synthesized to identify significant community health needs in Creek County. These needs span the following topic areas and are often inter-related:

- Diet, nutrition, and physical activity
- Weight and obesity
- Mental health and mental health disorders
- Chronic disease management
- General education
- Health education and literacy
- Access to health services and affordability
- Tobacco use
- Substance abuse
- Economic and social environment
- Prevention and safety
- Aging problems and care
- Children’s health
- Available public transportation
- Physical environment
- Health behaviors

PRIORITIZATION PROCESS

St. John Health System and St. John Sapulpa called together hospital decision makers as well as community partners, leaders and representatives to prioritize the significant community health needs of Creek County considering several criteria: magnitude/severity of health; opportunity to intervene at a prevention level; circle of influence/ability to impact change; support from the community; and capacity to address underserved populations as well as populations deemed vulnerable.

PRIORITY HEALTH NEEDS

The following community health needs were selected as the top four priorities:

- Wellness and Chronic Disease Prevention
- Affordability and Access to Care
- Behavioral Health (mental health and substance abuse)
- Health Education and Literacy
PRECEDING CHNA EFFORTS AND EVALUATION OF IMPACT

The community health needs assessment is a cyclical process based on a three year cycle (Figure). The periodic process of updating assessments and implementation strategies reflects changes in the health of the communities we serve over time and helps to ensure ongoing improvement efforts are based on the needs of these communities. An important piece of the cycle is revisiting the progress made on priority health needs set forth in the preceding community health needs assessment. By reviewing the actions taken to address a priority health issue and evaluating the impact those actions have made in the community, it is possible to better target our resources and efforts during our next round of the community health needs assessment cycle.

PRIORITY HEALTH NEEDS IN PRECEDING CHNA

As aforementioned, St. John Sapulpa conducted its first community health needs assessment during the 2013 fiscal year. The hospital also developed an implementation strategy in response to the top needs identified in the community health needs assessment to be addressed during the 2014-2016 fiscal years. Over the past three years, St. John Health System and St. John Sapulpa have worked to address a set of prioritized health needs based on actions outlined in the implementation strategy.

St. John Sapulpa’s priority health needs for FY 2014-2016 were as follows:

- Poor Diet, Physical Inactivity, and Obesity
- Mental Health, Alcohol and Drug Abuse, and Tobacco Use
- Chronic Disease Management
- Access to Healthcare


EVALUATION OF IMPACT

An evaluation of impact of actions taken to address significant health needs identified in the hospital’s FY 2013 community health needs assessment was conducted as part of this updated FY 2016 assessment. All actions since the hospital finished conducting the immediately preceding (FY 2013) community health needs assessment were included in the evaluation. Actions taken during FY 2014-2016 for each identified priority health need are outlined below.

Poor Diet, Physical Inactivity, and Obesity

Throughout FY 2014-2016, St. John Health System and the hospital promoted healthy activity and diet among associates and the communities we serve through a number of health and wellness initiatives, activities, and events.

Local Runs and Walks
The health system and the hospital sponsored and participated in a number of local health promotion walks and runs during this time period including, but not limited to: American Cancer Society Relay for Life events, American Heart and American Stroke Associations’ Heart Walk, Susan G. Komen – Race for the Cure, the Parkinson Foundation of Oklahoma’s Parkinson’s Walk, and Oklahoma Chapter of the Alzheimer’s Association’s Walk to End Alzheimer’s.

The health system offered associates free or discounted registration fees for a number of these local runs and walks in FY 2014-2016.

**Community Partnerships**

St. John Sapulpa worked to build a partnership with the Creek County Department of Health over the evaluation period. Together, the hospital and health department developed plans to host a variety of community programs to promote healthy lifestyles. The hospital is currently offering its facilities for educational classes and recreation activities. In early 2016, the hospital and the Creek County Health Department teamed up to present “Tai Chi – Moving for Better Balance” for the community to improve community wellness and acquaint the public with St. John Sapulpa. The classes have been a success with full attendance and increasing demand.

In 2016, St. John Sapulpa began participating in the Creek County Community Partnership monthly meetings. During the meetings, the partnership worked to initiate and provide programs and services to improve the health and well-being of the community.

**Additional Health and Wellness Events**

St. John Health System and its hospitals sponsored and participated in over 300 community events and health fairs throughout the FY 2014-2016 period. St. John associates promoted health and wellness through health screenings and public education at these events. In 2015 alone, St. John Sapulpa sponsored 4 events. Each year a budget is established for this purpose and is exceeded through identification of additional community requests. The health system and hospital also hosted a multitude of public health education seminars on a variety of wellness and education topics.

In 2014, St John Sapulpa participated at the Health Fairs at Creek County Fairgrounds. Nursing staff provided the community the opportunity to have a health screening for hypertension and provided information on healthy diet and nutrition. **St. John Sapulpa annually hosts blood drives.**

St. John also participated in the 2014 Convoy of Hope. Associates worked at this event and covered the following areas:
- Did education regarding drug abuse at home
- Did education on how medications can look like candy to children
- Diabetes education
- Blood pressure checks/screenings
- Home safety for children
- Hands on CPR

**Associate Health and Wellness**
St. John Health System is committed to the health and well-being of its associates. In FY 2014, St. John Health System and its hospitals began participating in Ascension Health’s Smart Health wellness program initiatives – first focusing on our own associates and subsequently taking lessons learned to the broader community.

A total of 1,538 associates completed the 2015 Wellness Program. As a result of the program we had several preventive measures increase:

- 5.5% increase in breast cancer screenings
- 4.1% increase in A1C testing
- 4% increase in colorectal screening
- 5.7% increase in Wellness visits

The health system also has a Corporate Wellness Program outside of the health plan; including a Healthy Lifestyles Program and a discounted rate at the St. John Medical Center Health Club. In addition, the health system conducted an annual Associate Wellness Week: Associates were given general screening such as weight, blood pressure etc. St John Health System saw a 3.2% increase of participation in the program from 2015 to 2016.

**Patient Wellness**

During FY 2014-2016, St. John Clinic concentrated on those patients who score high or low on their BMI test. Once BMI scores are confirmed, patients are counseled about their test and given a follow-up plan to get them closer to goal. St. John clinic also has a health maintenance module along with ACO measures and Meaningful Use that stresses our providers look at each patient’s BMI and address any that are above normal by giving the patient information on healthy living with diet and exercise. St. John clinic additionally now has on staff, integrated behavioral therapists who counsel patients on stress eating or other eating disorders. These therapists are integrated into our clinics and travel frequently in between locations.

The health system’s Food and Nutrition Services continues to color code healthy menu items on our online menu. Calorie contents of select menu items are now posted on electronic menu boards in the cafeterias.

**Mental Health, Alcohol and Drug Abuse, and Tobacco Use**

**Tobacco Use**

Tobacco use screening and cessation is part of St. John Clinic’s meaningful use program. Each patient is asked at every appointment about their tobacco use. If a patient answers that they do use tobacco, there is education that is printed off automatically through Cerner if the provider so chooses. Both St. John Clinic and the hospital refer patients to the Oklahoma Tobacco Helpline at 1-800-quitnow and okhelpline.com for tobacco cessation.

**Behavioral Health (Mental Health and Substance Abuse)**
St. John Clinic currently has 4 imbedded behavioral health therapists that are shared across our 12 sites. These sites include Tulsa area, Broken Arrow, Owasso, Claremore, Sand Springs, and Sapulpa.

Patients identified at St John Sapulpa as in need of drug and alcohol services are referred to a hospital outpatient department at St John medical center where drug and alcohol services counseling is provided.

**Chronic Disease Management**

**Oklahoma Health Initiatives**

In July, 2013 St. John Health System formed an Accountable Care Organization (“ACO”) named SJFI LLC dba Oklahoma Health Initiatives (“OKHI”) specifically for submission of a Medicare Shared Savings Program application to provide coordinated care to Medicare beneficiaries who are not enrolled through other Medicare shared savings (or other innovation) programs or Medicare Advantage plans. Medicare approved the application and the program began in January, 2014. ACOs are groups of doctors, hospitals, and other health care providers, who come together voluntarily to give coordinated high-quality care to their Medicare patients. According to Medicare, the goal of coordinated care is to ensure that patients, especially the chronically ill, get the right care at the right time, while avoiding unnecessary duplication of services and preventing medical errors. When an ACO succeeds both in delivering high-quality care and spending health care dollars more wisely, it will share in the savings it achieves for the Medicare program.

The OKHI model provides ACO hospitals and physicians with the motive and means for collaborating through shared electronic health records and a physician-driven committee governance structure to improve the care and reduce the cost trend for patients. While initially for Medicare beneficiaries, it is hoped that the program may be expanded in the future to other populations.

**Number of ACO Medicare beneficiaries whose physician(s) participate in OKHI:**

- 11,043 ACO beneficiaries

The OKHI patient care model envisions a person-centered approach to health care emphasizing prevention and wellness, chronic disease management, and better care coordination across the full continuum of care with each Medicare beneficiary as an active participant in his or her care coordination. We seek to improve the health status of each patient in a manner that spends health care dollars wisely and effectively. St. John Sapulpa, St. John Sapulpa, Owasso Medical Facility (St. John Sapulpa), St. John Sapulpa, and Jane Phillips Medical Center participate in OKHI along with various other health care professionals including employed and affiliate physicians.

**Number of ACO physicians and midlevel providers participating in OKHI:**

- 673 (includes Participants and Affiliates)
- 13 ACO Participant TINs
  - 7 of the 13 are Hospital Participant TINs

OKHI met the CMS requirements for the first performance year (calendar year 2014). Preliminary results for performance year 2015 indicate that OKHI improved in all clinical quality measures.
Evidence based care improvement programs are developed by physician led committees and are promoted within OKHI. Programs to date include cardiac imaging, COPD management, heart failure clinic, back pain treatment protocols; falls risk identification, depression screening, annual wellness visit communications, and outpatient palliative care. OKHI promotes such programs through beneficiary and provider newsletters, podcasts for health care professionals, and distribution of care guidelines and recommended protocols. OKHI also collaborates with a regional Health Information Exchange, MyHealth Access Network, for early identification of patients who have been admitted to area emergency rooms and hospitals, and post-discharge follow-up calls are made to ensure that the patients receive the care and services they need to promote their recovery. Through physician engagement, OKHI continues to identify and address health needs consistent with priority needs identified through the Community Health Needs Assessment process as well as through multiple data and analytics tools used to assess the population specific to the ACO.

**Comprehensive Primary Care Initiative**

Fourteen St. John Clinic primary care offices participate in the Comprehensive Primary Care Initiative (CPC). Authorized through the Affordable Care Act, CPC is designed to strengthen primary care through innovative improvements in payment and service delivery models. These offices are among a select group of just 500 practice sites in the United States participating in the program, which aims to transform primary care through patient-centered, comprehensive, coordinated care. CPC focuses on a medical home model in care for high risk patients with chronic conditions.

The CPC offices have a dedicated team of nurses who work daily to coordinate and manage the care of patients who need it most. This includes facilitating referrals to specialists, sharing reports with physicians, connecting patients with resources, and follow-up with patients who have been in the hospital.

**COPD Management**

Several of the St. John Clinic sites have developed COPD rescue packs, which include prescriptions for a steroid and antibiotic, clinic contact information, and instructions. They make sure that patients have the proper inhalers also. If they have to activate their rescue packs, they are asked to contact their doctor. This helps track any readmission of patients with this disease by educating them about attacks and how to deal with them instead of going to the emergency room. On many of our data boards in our clinics, we focus on the readmission rates for COPD and CHF.

**Diabetes Management**

Through CPC, some clinics have chosen to also concentrate on diabetes management. Any patient with an A1C of 9 or greater will be called by the care management team to come up with a care plan that best fits them.

**Access to Health Care**

**Health Insurance Marketplace Outreach and Enrollment**

St. John Health System performed the following activities for the Health Insurance Marketplace in FY15:
• Engaged a total of 772 individuals in discussion about the Health Insurance Marketplace and referred them to enrollment assistance available through our health system.
  o Of those 772 individuals, 643 were engaged in discussion about the enrollment process during one of our health ministry’s 24 onsite or community outreach events held between September 2014 and February 2015.
  o The remaining 129 consumers who were seeking information about the Marketplace spoke to our health ministry’s contracted certified application counselors with the Midland Group over the phone about the enrollment process. If the caller did not schedule an enrollment assistance appointment, they were either inquiring about what plans St. John Health System takes, whether they qualified for a tax credit, or asked general information, but did not want to set up an appointment at that time.

• Our contracted certified application counselors with the Midland Group spoke with 129 consumers who wanted information about enrollment and assisted 40 consumers with navigation activities during the enrollment period.

• Distributed educational signage, flyers, and cards to 119 locations within the health system (included specialty clinics St. John Clinic, some nursing floors at SJMC, patient admissions and financial counseling at all hospitals, inpatient and outpatient specialty departments at all hospitals, hospital EDs, and main lobby and high traffic areas within all hospitals).

St. John Health System performed the following activities for the Health Insurance Marketplace in FY16:

• Performed outreach at 9 events (this includes St. John sponsored events such as Tulsa Zoo Run and the Komen Race as well as community-based events such as Food on the Move and health fairs). Outreach efforts consisted of a booth with information on the Health Insurance Marketplace, our on-site enrollment assistance services, and information on charity care and free/low-cost clinics in the area if needed. Health and wellness education and screenings (e.g. blood pressure, healthy nutrition) were also offered by our RN Ambassadors, a dietician from Healthy Lifestyles, and Dr. Kumar from Trauma Services.

• Made contact with 145 individuals at the outreach events who reported needing health insurance for themselves, a family member, or a friend. Each individual was provided with information on the Health Insurance Marketplace, our enrollment assistance services, and if needed, charity care and free/low-cost clinic information.

• Distributed educational signage, flyers, and cards to 183 locations within the health system (included all clinics within St. John Clinic, a large number of nursing floors at SJMC, patient admissions and financial counseling at all hospitals, inpatient and outpatient specialty departments at all hospitals, hospital EDs, and main lobby and high traffic areas within all hospitals).

• Between November 1, 2015 and January 31, 2016, our contracted certified application counselors with the Midland Group spoke with 145 consumers who wanted information about the Marketplace and assisted 71 consumers with navigation activities.
**Safety Net and Emergency Services**

As a Critical Access Hospital, St. John Sapulpa is an integral part of the mission of service and the continuum of medical care provided by St. John Health System. The hospital and health system serve as an important safety net provider of a broad continuum of health care services to the citizens of Northeastern Oklahoma and the surrounding region. Each of its six main hospitals, including St. John Sapulpa, operates a full-service, 24-hour, 365-day emergency room providing both urgent and emergency care to all individuals, regardless of their ability to pay.

**COMMUNITY BENEFIT**

St. John Health System (St. John) provides more than $70 million per year in quantifiable community benefit, including care for the poor, support for graduate and allied health medical education and community outreach.

Healthcare is expensive. For those who are underinsured or underemployed, getting medical care for themselves and their families can seem impossible. St. John believes healthcare is not only for those who can afford it. A benevolent underpinning of the Roman Catholic faith, St. John provides financial assistance for those whose medical bills could be financially devastating. On average over the past three fiscal years (2013–2016), St. John has provided more than $59 million in unreimbursed care for the poor and underserved*. This number is computed as cost of services, not charges written off.

Oklahoma is challenged by a shortage of critical healthcare resources, including one of the lowest ratios of active patient care physicians—1.79 per 1,000 population—in the U.S.** This critical shortage of doctors is a catalyst for St. John’s participation as a primary teaching hospital for medical residency programs in internal medicine, family medicine and general surgery. Many other physicians and medical students also receive a portion of their residency and medical school training at St. John facilities. In addition, St. John provides financial and operational support for numerous nursing, physician assistant and medical technologist teaching programs, as well as a pharmacy residency training program. St. John believes investing in the next generation of physicians, nurses and other medical professionals is critical to bettering local communities. On average, St. John provides funding in excess of $18 million each year to graduate and allied health medical education programs and to support additional community benefit programs. These programs ensure quality healthcare services will be available for many years to come.

To estimate the cost of community benefit, St. John follows the guidance of the U.S. Catholic Health Association and the Internal Revenue Service. Using these criteria, St. John estimates it has provided an average of more than $70 million in community benefit each year, which represents more than 8 percent of total St. John operating expenses for the last three years (2013–2016). When calculating community benefit, St. John does not include bad debt; shortfalls in difference between payment for and cost of service to Medicare beneficiaries; payment of property, sales, use, income, payroll, and other taxes; or the considerable economic value provided to local communities in which it operates.

St. John’s more than 7,000 physicians, associates and volunteers reach out to eastern Oklahoma and southeastern Kansas communities through:
• Supporting the area United Way, American Heart Association Heart Walk, and other social service and healthcare programs

• Participation in clinical research and trials to improve the care and treatment of patients

• Participation in health education and health screening events

• Partnering with Creek County Health Department, Good Samaritan Health Services, Morton Health Clinic, In His Image Family Medicine Residency Program, Day Center for the Homeless, Tulsa Dream Center, Community Health Connections, Family and Children’s Services, Creek County Medical Society, the University of Oklahoma - Tulsa College of Community Medicine, Tulsa, Broken Arrow and Owasso public schools and many more organizations

• Through the 300 members of the St. John Auxiliary, who greet and serve patients and their families throughout the Health System

St. John is proud of its position as a vital presence in the communities of eastern Oklahoma and southeast Kansas. Among many other accomplishments, St. John has created northeast Oklahoma’s only accredited comprehensive stroke center and ACS level II trauma center, established Oklahoma’s only collaborative agreement with MD Anderson Cancer Network (through St. John Sapulpa), and a rapidly expanding St. John Clinic network, with new primary and urgent care locations.

St. John continues to invest its available resources into programs and services that improve the health and wellness of the citizens in the communities it serves.

COMMUNITY FEEDBACK

St. John Sapulpa’s preceding community health needs assessment and implementation strategy were made available to the public via the health system’s website: http://www.stjohnhealthsystem.com/about/community-health-needs-assessment. In order to collect community feedback on the reports, a contact form was embedded on the health system’s community health needs assessment webpage with a request for comments. No comments had been received on the preceding community health needs assessment and implementation strategy at the time this publication was written.

CONCLUSION

This report describes the findings of a comprehensive health needs assessment for the residents of Creek County, Oklahoma. The prioritization of the identified significant health needs will guide the community health improvement efforts of St. John Sapulpa and St. John Health System. From this process, St. John Sapulpa and St. John Health System will outline how they will address the top four prioritized health needs in our fiscal year 2017-2019 implementation strategy.
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APPENDIX B: COMMUNITY INPUT MEETING PARTICIPANTS

Community Input Meeting Participant List: St. John Sapulpa

Thursday, May 5, 2016
3:00 - 4:30pm

Welcome and General Introduction:

Ron Hoffman
Chief Operating Officer
St. John Sapulpa

Meeting Facilitator:

Annie Smith, LMSW, MPH
Special Projects Manager, Community Health
St. John Health System

Facilitation Assistant:
Kelly Green
Marketing Specialist
St. John Community Relations

**Meeting Organizer:**

Bobbie Smith
Administrative Assistant
St. John Sapulpa

**Meeting Participants:**

Ashley Barnett
Healthy Living Specialist
Oklahoma State University Prevention Programs

Vickie Beyer
Treasurer and Community Volunteer
Caring Community Friends

Percy Brown
SPF-PFS Grant Coordinator
Oklahoma State University Prevention Programs

Rita Diehl
Director
Creek County Emergency Ambulance Service

Shawna Ellis, PHR
AVP Human Resources
American Heritage Bank

Victoria Foster, RN
Clinical Nurse
St. John Sapulpa

Ted Fisher
Economic Development Director
City of Sapulpa

Deputy Mike Haefner
Deputy Chief of Police
Sapulpa Police Department

Ann Hurst, LCSW
Clinical Social Worker

---

2016 Community Health Needs Assessment, St. John Sapulpa
Creek County Health Department

Maggie Jackson, MPH, CHES
Regional Turning Point Consultant
Creek, Grant, Kay, Lincoln, Logan, Noble, Pawnee and Payne Counties
Oklahoma State Department of Health

Fauzia Khan, MBBS, MPH
Regional Turning Point Consultant
Tulsa, Washington, Osage, Rogers Counties

Nicole Michael, MPH, CHES
Public Health Educator
Creek County Health Department

Larry Pickens
EMS Supervisor
Creek County Emergency Ambulance Service

Margie Richardson
TSET Creek County Healthy Living Program Specialist
Oklahoma State University Prevention Programs

Chief Rick Rumsey
Chief of Police
Sapulpa Police Department

Suzanne Shirey, IOM
President
Sapulpa Chamber of Commerce

Erin Strayhorn
Creek County Coordinator
Sooner SUCCESS Program
University of Oklahoma Health Sciences Center, Child Study Center
Developmental and Behavioral Pediatrics
APPENDIX C: COMMUNITY INPUT MEETING AGENDA

Agenda
Community Input Meeting: St. John Sapulpa

Thursday, May 5, 2016 from 3-4:30pm

St. John Sapulpa
Cafeteria

<table>
<thead>
<tr>
<th>Topic</th>
<th>Speaker</th>
<th>Time</th>
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<tbody>
<tr>
<td>Welcome and General Introduction</td>
<td>Ron Hoffman</td>
<td>5 minutes</td>
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<tr>
<td>Group Introductions</td>
<td>Attendees</td>
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</tr>
<tr>
<td>1. Name and organization</td>
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<tr>
<td>Community Health Needs Assessment (CHNA) Presentation</td>
<td>Annie Smith</td>
<td>15 minutes</td>
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<tr>
<td>1. Overview and purpose</td>
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<td></td>
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<tr>
<td>2. Summary of 2013 CHNA and Implementation</td>
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<td></td>
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<tr>
<td>Strategy Plan</td>
<td>3. 2016 CHNA</td>
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<tr>
<td>Community Input</td>
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<tr>
<td>5. Hospital assessment exercise</td>
<td>Annie Smith</td>
<td></td>
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<tr>
<td>6. Nominal group exercise to validate and prioritize health needs based on top health needs identified</td>
<td></td>
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<tr>
<td>7. Community perception group exercise</td>
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<td>8. Community capacity assessment exercise</td>
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<tr>
<td>Next Meeting and Next Steps</td>
<td>Annie Smith</td>
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### APPENDIX D: Community Input Meeting Prioritization of Health Needs

#### St. John Sapulpa Community Input Meeting: Prioritization of Health Concerns

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<th>1's</th>
<th>2's</th>
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<td>Poor Diet/Inactivity</td>
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#### Health Concerns Prioritization Points

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<td>Access to Health Care</td>
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<td>8</td>
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<td>Chronic Disease</td>
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<td>Mental Health</td>
<td>49</td>
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<td>10</td>
<td>12</td>
<td>9</td>
<td>4</td>
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*Each number ranking category was assigned a number of points (the greatest points being awarded to the #1 category and lowest points being awarded to the #7 category). Points for each number category were then multiplied times the number of post-its placed in each corresponding health concern/number category.*
APPENDIX E: CHNA ADVISORY GROUP

St. John Health System Community Health Needs Assessment (CHNA) Advisory Group Members:

- **Ron Hoffman**- COO, St. John Sapulpa
- **Lindsay Hughes**- Physician Relations, St. John Clinic Administration
- **Pam Kiser, RN, MS, CPHQ**- VP/Chief Nurse Executive, St. John Medical Center
- **Jason McCauley**- Regional Administrator Jane Phillips Nowata Health Center
- **Joy McGill**- St. John Media Relations, St. John Health System
- **Mike Moore, CPA**- COO, Jane Phillips Medical Center
- **Ann Paul, MPH**- Chief Strategy Officer, St. John Health System
- **Cheena Pazzo**- VP, Ascension/Chief Communications and Marketing Officer, St. John Health System
- **David Phillips**- President, St. John Sapulpa/COO, St. John Owasso, St. John Broken Arrow
- **Robert Poole, MBA**- Director of Operations and Regional Development, Jane Phillips Medical Center
- **Mary Skonezny, BSN, RN**- Director, Patient Experience, St. John Health System
- **Kathy Smarinsky, MPH**- VP, Clinical Services, St. John Medical Center
- **Mike Wilt**- Executive Director, Bluestem Medical Foundation, Jane Phillips Medical Center
APPENDIX F: CREEK COUNTY COMMUNITY PARTNERSHIP COMMUNITY PARTNERS

- Bristow Public Schools
- Caring Hands
- Caring Community Friends
- Central Tech
- Child Care Resource Center of Tulsa
- Creek County Ambulance Services
- Creek County Department of Human Services
- Creek County Health Department
- Creek County OSU Extension
- CREOKS Behavioral Health (Includes Systems of Care and Wraparound Program)
- Evolution Foundation
- Farmers Insurance
- Mannford Public Schools
- Muskogee Creek Nation
- Muskogee Creek Nation Behavioral Health Services
- Oasis Day Center
- Oklahoma Health Care Authority (OHCA)
- Oklahoma State Department of Health, Turning Point
- Oklahoma State University, Department of Wellness, Prevention Programs
- Oklahoma State University Seretean Wellness Center
- Parkside Psychiatric Hospital and Clinic
- Salvation Army
- Sapulpa Public Schools
- Sooner Success
- St. John Sapulpa and St. John Health System
- Tri-County Area Prevention Resource Center
- Tulsa Planned Parenthood
- University of Oklahoma-Tulsa, Health Sciences Center
- Walgreens
- Youth Services of Creek County
APPENDIX G: HEALTHY LIVING COALITION COMMUNITY PARTNERS

- Bristow Public Schools
- Caring Community Friends
- Choices for Life Foster Care
- City of Sapulpa
- Creek County Ambulance Services
- Creek County Department of Human Services
- Creek County Health Department
- Creek County Literacy Center
- Creek County OSU Extension
- CROKKS Behavioral Health
- Lone Star School
- Mannford Public Schools
- Muskogee Creek Nation Behavioral Health Services
- Muskogee Creek Nation Tobacco Prevention
- Oklahoma State Department of Health, Turning Point
- Oklahoma State University, Department of Wellness, Prevention Programs
- Salvation Army
- Sapulpa Public Schools
- Sooner Success
- St. John Sapulpa and St. John Health System
- TSET Healthy Living Program
- Youth Services of Creek County
## APPENDIX H: COMMUNITY CAPACITY ASSESSMENT

### Poor Diet/Inactivity

<table>
<thead>
<tr>
<th>Organization</th>
<th>Program/Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County Community Partnership</td>
<td></td>
</tr>
<tr>
<td>Creek County Health Department</td>
<td></td>
</tr>
<tr>
<td>Caring Community Friends</td>
<td>Fresh Market Day, Food Programs, Senior Outreach</td>
</tr>
<tr>
<td>Creek County Healthy Living Coalition</td>
<td></td>
</tr>
<tr>
<td>Public Schools in Creek County</td>
<td></td>
</tr>
<tr>
<td>Sapulpa Farmer’s Market</td>
<td></td>
</tr>
<tr>
<td>Creek County Senior Nutrition Program</td>
<td></td>
</tr>
<tr>
<td>St. John Sapulpa Worksite Wellness and Smart Health Initiatives</td>
<td></td>
</tr>
<tr>
<td>Local health and resource fairs</td>
<td></td>
</tr>
<tr>
<td>INCOG Area Agency on Aging</td>
<td></td>
</tr>
<tr>
<td>Annual Creek County</td>
<td></td>
</tr>
<tr>
<td>Blue Ribbon Dash 5K and 1 mile fun run</td>
<td></td>
</tr>
<tr>
<td>OSU Extension</td>
<td></td>
</tr>
<tr>
<td>Salvation Army Creek County Service Center and Boys and Girls Club of Creek County</td>
<td></td>
</tr>
<tr>
<td>Moving For Better Balance- 12 Week Tai Chi Program</td>
<td>Creek County Health Department and St. John Sapulpa</td>
</tr>
<tr>
<td>Bristow Senior Citizens Center</td>
<td></td>
</tr>
<tr>
<td>Sapulpa Senior Citizen and Community Center</td>
<td></td>
</tr>
<tr>
<td>Area Food Pantries and Food Banks</td>
<td></td>
</tr>
<tr>
<td>Creek County Healthy Living Program</td>
<td></td>
</tr>
<tr>
<td>Creek County DHS</td>
<td></td>
</tr>
<tr>
<td>Local parks and recreational areas</td>
<td></td>
</tr>
<tr>
<td>Public Schools Free Lunch Program</td>
<td></td>
</tr>
<tr>
<td>Muscogee (Creek) Nation Division of Health: Sapulpa Indian Health Center</td>
<td></td>
</tr>
<tr>
<td>United Community Action Project (early childhood nutrition and wellness)</td>
<td></td>
</tr>
<tr>
<td>Parent Pro</td>
<td></td>
</tr>
</tbody>
</table>

### Chronic Disease

<table>
<thead>
<tr>
<th>Organization</th>
<th>Program/Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. John Sapulpa and St. John Health System</td>
<td>Inpatient and Outpatient Services</td>
</tr>
<tr>
<td>Bristow Medical Center</td>
<td></td>
</tr>
<tr>
<td>Creek County Healthy Living Coalition</td>
<td></td>
</tr>
<tr>
<td>Creek County Healthy Living Program</td>
<td></td>
</tr>
<tr>
<td>My Health (Health Information Exchange; data for providers that aids in transition of care/care coordination)</td>
<td></td>
</tr>
<tr>
<td>Area Home Health Agencies</td>
<td></td>
</tr>
<tr>
<td>INCOG Area Agency on Aging</td>
<td></td>
</tr>
<tr>
<td>Local Physicians</td>
<td></td>
</tr>
<tr>
<td>Muscogee (Creek) Nation Division of Health: Sapulpa Indian Health Center</td>
<td></td>
</tr>
<tr>
<td>OSU Extension</td>
<td></td>
</tr>
<tr>
<td>Moving For Better Balance-12 Week Tai Chi Program</td>
<td>Creek County Health Department and St. John Sapulpa</td>
</tr>
</tbody>
</table>
## Alcohol/Drug Abuse

<table>
<thead>
<tr>
<th>Organization/Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA/NA Support Groups</td>
</tr>
<tr>
<td>CREOKS Behavioral Health Services</td>
</tr>
<tr>
<td>Muscogee (Creek) Nation Behavioral Health and Substance Abuse Services</td>
</tr>
<tr>
<td>Region 9 Regional Prevention Coordinator (RPC) and State Prevention Framework-State Incentive Grant (SPF-SIG) and Strategic Prevention Framework/Partners for Success</td>
</tr>
<tr>
<td>Celebrate Recovery at local churches</td>
</tr>
<tr>
<td>Creek County Substance Abuse Committee</td>
</tr>
<tr>
<td>St. John Sapulpa and St. John Medical Center-Medical Detox Services</td>
</tr>
<tr>
<td>St. John Medical Center-Psychiatrist</td>
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<tr>
<td>Creek County for Underage Drinking Prevention</td>
</tr>
<tr>
<td>OSU Prevention Programs</td>
</tr>
<tr>
<td>Teen Challenge</td>
</tr>
<tr>
<td>Health Concepts (Sooner care/Medicaid only)</td>
</tr>
</tbody>
</table>

## Access to Healthcare

<table>
<thead>
<tr>
<th>Organization/Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County Health Department</td>
</tr>
<tr>
<td>SOONER Success Program (promotes access)</td>
</tr>
<tr>
<td>St. John Sapulpa and St. John Health System Inpatient and Outpatient Services</td>
</tr>
<tr>
<td>Bristow Medical Center</td>
</tr>
<tr>
<td>Bristow Social Services (prescription assistance)</td>
</tr>
<tr>
<td>Charity Care/Financial Assistance-St. John Sapulpa and St. John Health System</td>
</tr>
<tr>
<td>Local Physicians</td>
</tr>
<tr>
<td>Sapulpa Community Care (prescription and medical supply assistance)</td>
</tr>
<tr>
<td>Cimarron Public Transit System</td>
</tr>
<tr>
<td>INCOG Area Agency on</td>
</tr>
<tr>
<td>Aging</td>
</tr>
<tr>
<td>Oklahoma Project Woman</td>
</tr>
<tr>
<td>Creek County Retired Seniors</td>
</tr>
<tr>
<td>Volunteer Program (transport to Tulsa medical Services for 55+)</td>
</tr>
<tr>
<td>SoonerRide</td>
</tr>
<tr>
<td>St. John Health System-Health</td>
</tr>
<tr>
<td>Insurance Marketplace Outreach and Enrollment Assistance</td>
</tr>
<tr>
<td>Salvation Army Creek County Service Center and Boys and Girls Club of Creek County (promotes access)</td>
</tr>
<tr>
<td>Creek County DHS</td>
</tr>
<tr>
<td>Muscogee (Creek) Nation Division of Health: Sapulpa Indian Health Center</td>
</tr>
<tr>
<td>Caring Community Friends (prescription assistance)</td>
</tr>
<tr>
<td>Creek County Ambulance</td>
</tr>
<tr>
<td>Oklahoma Healthcare Authority</td>
</tr>
<tr>
<td>OSU Extension</td>
</tr>
<tr>
<td>United Community Action Project (Head Start/Early Head Start, Health Insurance Marketplace Navigator,</td>
</tr>
</tbody>
</table>
## Tobacco Use

<table>
<thead>
<tr>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County Tobacco Settlement Endowment Trust (TSET) Grant</td>
</tr>
<tr>
<td>Oklahoma Tobacco Helpline</td>
</tr>
<tr>
<td>Creek County Health Department</td>
</tr>
<tr>
<td>St. John Sapulpa and St. John Health System Smoking Cessation Screenings and Counseling</td>
</tr>
<tr>
<td>OSU Prevention Programs</td>
</tr>
<tr>
<td>Muscogee (Creek) Nation Division of Health: Sapulpa Indian Health Center</td>
</tr>
<tr>
<td>TSET Healthy Living Program</td>
</tr>
<tr>
<td>Creek County Healthy Living Coalition</td>
</tr>
<tr>
<td>SWAT (Students Working Against Tobacco) Groups</td>
</tr>
<tr>
<td>Creek County Healthy Living Program</td>
</tr>
</tbody>
</table>

## Mental Health

<table>
<thead>
<tr>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREOKS Behavioral Health Services</td>
</tr>
<tr>
<td>Wraparound Program (Medical Home Model) for SoonerCare/Medicaid Adults and Children</td>
</tr>
<tr>
<td>Youth Services of Creek County</td>
</tr>
<tr>
<td>OSU Prevention Programs</td>
</tr>
<tr>
<td>Creek County Health Department</td>
</tr>
<tr>
<td>Muscogee (Creek) Nation Division of Health and Substance Abuse Services (also have a Suicide Prevention Grant)</td>
</tr>
<tr>
<td>St. John Medical Center-Psychiatrist</td>
</tr>
<tr>
<td>Evolution Foundation support on grants/Wraparound Program</td>
</tr>
<tr>
<td>Improving Lives Counseling</td>
</tr>
<tr>
<td>Health Concepts (Sooner care/Medicaid only)</td>
</tr>
<tr>
<td>United Community Action Project</td>
</tr>
</tbody>
</table>

## Education (Includes Health Literacy)

<table>
<thead>
<tr>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creek County Health Literacy Program/Sapulpa Library Annex</td>
</tr>
<tr>
<td>OSU Extension</td>
</tr>
<tr>
<td>Creek County Healthy Living Coalition</td>
</tr>
<tr>
<td>Creek County Health Department</td>
</tr>
<tr>
<td>Creek County Community Partnership</td>
</tr>
<tr>
<td>Creek County Healthy Living Program</td>
</tr>
<tr>
<td>OSU Prevention Programs</td>
</tr>
<tr>
<td>Community Action Project (Head Start/Early Head Start)</td>
</tr>
<tr>
<td>Parent Pro</td>
</tr>
<tr>
<td>United Community Action Project- Health and Wellness Education and Empowerment (Head Start/Early Head Start, Health Insurance Marketplace Navigator, health services, Prenatal Program, etc.)</td>
</tr>
</tbody>
</table>
## APPENDIX I: COMMUNITY RESOURCES

### Number of Agencies Providing Basic Needs and Services in Creek County

<table>
<thead>
<tr>
<th>Types of Needs/Services</th>
<th>Count of Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congregate Meals/Nutrition Sites</td>
<td>5</td>
</tr>
<tr>
<td>Utility Assistance</td>
<td>5</td>
</tr>
<tr>
<td>Low Income/Subsidized Rental Housing</td>
<td>4</td>
</tr>
<tr>
<td>Food Pantries</td>
<td>4</td>
</tr>
<tr>
<td>Utility Service Providers</td>
<td>3</td>
</tr>
<tr>
<td>Supportive Housing * Developmental Disabilities</td>
<td>2</td>
</tr>
<tr>
<td>General Clothing Provision</td>
<td>2</td>
</tr>
<tr>
<td>Soup Kitchens</td>
<td>1</td>
</tr>
<tr>
<td>Crisis Shelter * Youth</td>
<td>1</td>
</tr>
<tr>
<td>Supportive Housing</td>
<td>1</td>
</tr>
<tr>
<td>Diapers</td>
<td>1</td>
</tr>
<tr>
<td>Paratransit Programs (Disabled Transportation) * Older Adults</td>
<td>1</td>
</tr>
<tr>
<td>Formula/Baby Food</td>
<td>1</td>
</tr>
<tr>
<td>General Counseling Services * Domestic Violence Issues</td>
<td>1</td>
</tr>
<tr>
<td>Household Goods</td>
<td>1</td>
</tr>
</tbody>
</table>

| **Grand Total**                                             | **33**            |

*Source: 211 Oklahoma Helpline (2016). Creek County Resources.* Additional analysis and data query performed courtesy of My Health Access Network.