2016

Community Health Needs Assessment

St. John Owasso

Tulsa County, Oklahoma

☩ St. John

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ACKNOWLEDGEMENTS

We would like to acknowledge the contributions of those who supported, advised, and participated in St. John Owasso's Community Health Needs Assessment of Tulsa, County, Oklahoma. We greatly appreciate their contributions.

Written and Prepared By:

Acknowledgements:

St. John Health System- Additional Contributors:

Lex Anderson, CPA- VP, Ascension/CFO, St. John Health System
Debbi Boonstra- Administrative Assistant, St. John Health System
Darin Dammann- Director of Financial Planning and Reporting, Decision Support, St. John Health System
Tracy Davis-Senior Benefits Consultant, Human Resources, St. John Health System
Linda Drumm- Director, Medical Access Program, St. John Health System
Stephanie Farris, Internal Communications Manager, St. John Health System
John Patchett- Graphics Coordinator, Community Relations, St. John Health System
Brad Phelps- Community Relations, St. John Health System

Tulsa County Community Health Needs Assessment Survey Respondents

Tulsa County Community Health Needs Assessment Focus Group Participants

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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 Owasso**. For the purposes of this assessment, St. John Owasso's community is defined as Tulsa County, Oklahoma.

OBJECTIVES

The objectives of St. John Owasso'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 Owasso 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 Owasso, 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 Owasso includes all of Tulsa County, Oklahoma. Tulsa County was divided into eight geographical regions based on ZIP codes and associated communities: downtown Tulsa, east Tulsa, Jenks/Bixby/Glenpool/Tulsa Hills, midtown Tulsa, north City of Tulsa (Tulsa North), Owasso/Sperry/ Collinsville/Skiatook, Sand Springs/west Tulsa, and south Tulsa/Broken Arrow.

St. John Owasso is based out of the city of Owasso. Accordingly, the Owasso/Sperry/ Collinsville/Skiatook region serves as St. John Owasso's primary area of focus within the Tulsa County community. An effort was made to focus on the community health needs and assets specific to this region as well as Tulsa County as a whole. St. John Owasso community health improvement efforts as a result of this assessment will primarily center on the Owasso/Sperry/ Collinsville/Skiatook region. Other parts of the Tulsa County (downtown Tulsa, east Tulsa, Jenks/Bixby/Glenpool/Tulsa Hills, midtown Tulsa,

north Tulsa, Sand Springs/west Tulsa, and south Tulsa/Broken Arrow) will be the focus of the community health improvement efforts of St. John Medical Center and St. John Broken Arrow respectively.

TULSA COUNTY-OKLAHOMA

Tulsa 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. Tulsa 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).[13] 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 %[13]
- **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, Tulsa County ranks poorly in multiple key health status indicators. According to the *2016 County Health Rankings* Tulsa County ranked 20th 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).[7] In the Oklahoma State Department of Health's 2014 *State of the State's Health Report*, ranked Tulsa County as 22nd in the state for age-adjusted total mortality, with the leading causes of death of heart disease, cancer, stroke, and chronic lower respiratory disease. Other indicators to note are as follows:

- Tulsa County had the 10th best rate in the state for deaths attributed to diabetes in 2014
- In 2014, Tulsa County had the 2nd highest rate of cancer incidence in the state
- The suicide rate in Tulsa county was 61% higher than the national rate, but did improve by 25% from 2013-2014
- The rate of deaths due to stroke improved 21% from 2013-2014
- The occupational fatality rate decreased by 22% from 2013-2014

- In 2014, approximately 1 in 4 adults reported 4+ days of poor physical health (24%) and 4+ days of poor mental health (25%) in the previous month.

According to the *2016 County Health Rankings*, Tulsa County ranked 17th out of 77 counties in regard to health factors. [7] 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:
- In 2014, Tulsa County ranked among the worst counties for low rate of adults with a usual source of healthcare (74%)
- The rate of uninsured adults dropped by 17% from 2013-2014
- The uninsured rate for the total population in Tulsa County decreased 5% from 2013-2015

Health Behaviors and Risk Factors:
- In 2014, approximately, 1 in 5 adults reported 3+ days of limited activity in the past month (20%).
- Tulsa County ranked among the 10 best counties for lowest rate of physically inactive adults in 2014
- Tulsa County ranked high in minimal fruit consumption (47.8%) and vegetable consumption (25.4%) in 2014
- In 2010, 63.7% of Tulsa County residents were overweight or obese (35.2 percent overweight; 28.5 percent obese) and in 2015, 30% of residents were obese

Socioeconomic Factors:
- In 2014, 1 in 7 people (15%) in Tulsa County lived in poverty
- The overall unemployment rate in 2013 for Tulsa County was 5.5% and 4.3% in 2015
- Tulsa County was estimated to have an overall educational attainment (completion of at least a high school degree by population aged 25 and older) of 88.5% in 2013

Physical Environment:
- Tulsa County ranked 60th out of 77 counties in Oklahoma for physical environment (air and water quality, housing conditions, and transportation) in 2015[7]

In many ways, children face a variety of challenges in Tulsa 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 Tulsa County. Community health needs and assets for Tulsa 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
- Survey of Tulsa County residents
- Focus groups with community members
- 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 its three hospitals located within Tulsa County, St. John Owasso, St. John Medical Center, and St. John Broken Arrow, engaged the Tulsa City-County Health Department, a community-wide coalition known as Pathways to Health (P2H), the Community Service Council, and a multitude of other community partner organizations throughout this community health needs

assessment. The health system and three Tulsa County hospitals worked closely with Tulsa City-County Health Department and these partners to conduct this assessment.

Central to this community assessment are a survey and focus groups conducted by the Tulsa City-County Health Department, the Oklahoma State University- College of Public Health, and Saxum to obtain direct input from community members. The survey and focus groups are collectively referred to by the Tulsa City-County Health Department and community stakeholders as the *2015-2016 Tulsa County Community Health Needs Assessment (CHNA)*. A number of community stakeholders and local organizations were also engaged in our health system's three Tulsa County hospital community input meetings at St. John Owasso, St. John Medical Center, and St. John Owasso in April 2016.

Note: Each of the three Tulsa County hospital reports only summarizes findings from their respective hospital community input meeting. Therefore, this assessment report only includes findings from the St. John Owasso community input meeting.

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 Tulsa City-County Health Department's *2015 Tulsa County Health Profile* 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 several methods of community input to yield the desired results. For the purposes of this assessment, community input was obtained through the following methods:

- Survey of 2,428 Tulsa County residents
- Sixteen focus groups with 119 community members conducted for each of the eight CHNA regions
- Three Tulsa County hospital community input meetings with 55 community 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:

- Tulsa County community members who participated in the *2015-2016 Tulsa County Community Health Needs Assessment (CHNA)* survey and focus groups
- Community leaders and representatives
- Local public health workforce coalitions/partnerships
- Members and 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, education and academia, non-profit agencies, community-based organizations, private businesses, community developers, faith communities and faith-based organizations, government representatives, safety net service providers, economic and workforce development, mental health/behavioral health services, law enforcement and first responders, 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 Tulsa 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
- 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
- Available public transportation
- Children's health

- Child neglect/abuse
- Physical environment
- Health behaviors
- Resource development and awareness

PRIORITZATION PROCESS & PRIORITY HEALTH NEEDS

St. John Health System and St. John Owasso called together hospital decision makers as well as community residents, partners, leaders and representatives to prioritize the significant community health needs of Tulsa 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 Tulsa County, Oklahoma. The prioritization of the identified significant health needs will guide the community health improvement efforts of St. John Owasso and St. John Health System. From this process, St. John Owasso 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."[1] 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.[1] 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 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 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

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[1] Catholic Health Association of the United States. 2015. *Assessing and Addressing Community Health Needs: 2015 Edition II*. St. Louis: Catholic Health Association of the United States.

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 Owasso**. For the purposes of this assessment, St. John Owasso's community is defined as Tulsa 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 Tulsa 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[2]

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.[2]

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 Owasso'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 Owasso 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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[2] Internal Revenue Service (2012) New Requirements for 501(c) (3) Hospitals Under the Affordable Care Act. Retrieved from: http://www.irs.gov/Charities-&-Non-Profits/Charitable-Organizations/New-Requirements-for-501(c)(3)-Hospitals-Under-the-Affordable-Care-Act

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.
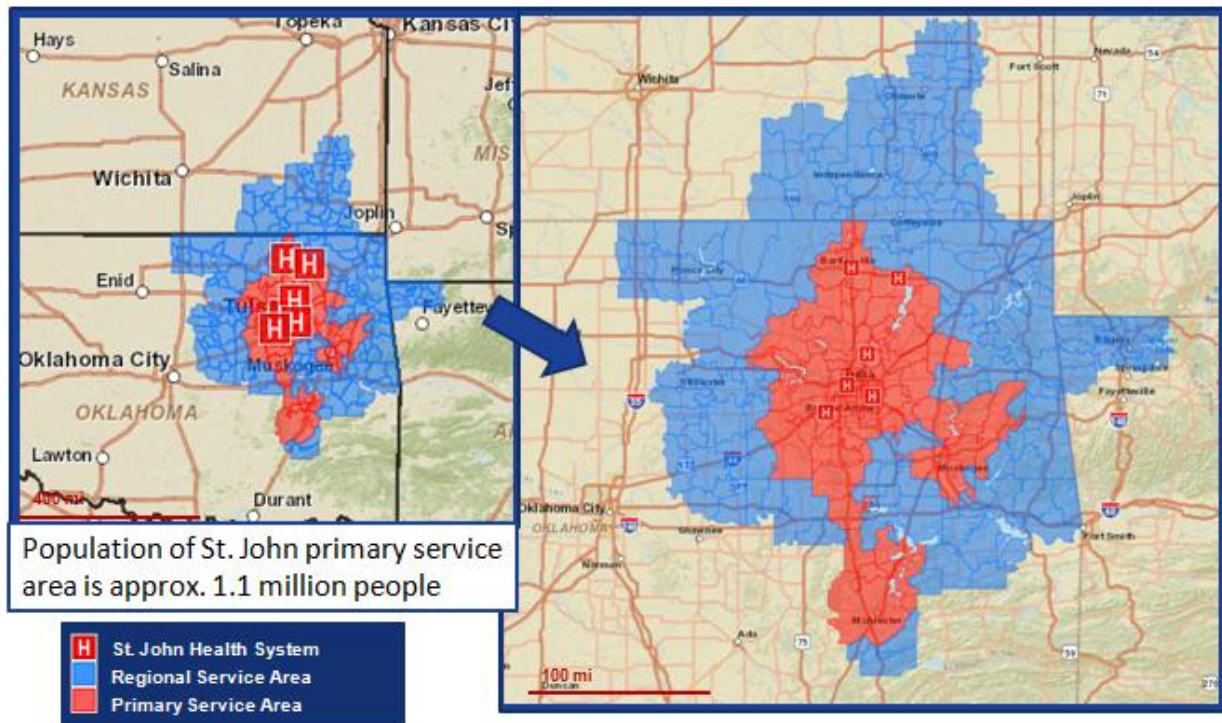
ST. JOHN HEALTH SYSTEM

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.

Figure 1: St. John Health System Service Area

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 Owasso
- St. John Broken Arrow
- St. John Sapulpa
- Jane Phillips Medical Center
- Jane Phillips Nowata Health Center
- 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 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 OWASSO

St. John Owasso is a 36-bed facility located in one of Oklahoma's fastest-growing cities. Opened in 2006, it was Owasso's first hospital. The facility features a 24-hour Emergency Department, medical-surgical and women's units, and offers patient appointments for urgent care in its emergency center.

St. John Owasso's Center for Women's Health includes a full-service labor and delivery unit, postpartum rooms and a newborn nursery. A medical office building connected to the hospital offers easy access to services for patients and physicians.

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

- More than 3,000 annual hospital admissions, including "observation" patients.
- More than 1,400 annual surgeries performed.
- More than 400 annual births.
- More than 22,000 annual patient visits to SJO emergency department.
- More than 37,000 "other" annual 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 Owasso, 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 Owasso is a growing community hospital serving northeastern Oklahoma. The primary service area is Tulsa County and the surrounding counties. Although, St. John Owasso 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 Tulsa County was largely influenced by the fact that a significant number of patients utilizing St. John Owasso's services reside in Tulsa County. In fact, an estimated 62.6% of inpatient and outpatient visits originated in Tulsa County in the 2015 fiscal year (Table 1). Within Tulsa County the top five ZIP codes of patient origin in the 2015 fiscal year were 74055, 74021, 74073, 74126, and 74115 (Table 2).

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

County	Total Number of Visits	Percent of Total Visits
Tulsa County	28,241	62.6%
Rogers County	8,397	18.6%
Osage County	5,333	11.8%
Washington County	819	1.8%
Nowata County	385	0.9%
Mayes County	293	0.6%
Wagoner County	284	0.6%
Creek County	207	0.5%
Craig County	101	0.2%
Muskogee County	59	0.1%
Montgomery County	54	0.1%
Delaware County	52	0.1%
Oklahoma County	52	0.1%
Pawnee County	49	0.1%
Okmulgee County	48	0.1%

Inpatient and outpatient volumes include emergency room visits.

Table 2: Top 10 Tulsa County Zip Codes of Patient Origin- Inpatient and Outpatient Volumes in FY 2015

Zip Code	City	Total Number of Visits
74055	Owasso	15,462
74021	Collinsville	6,719
74073	Sperry	1,795

|		
74126	Tulsa	574
74115	Tulsa	465
74130	Tulsa	217
74112	Tulsa	198
74012	Broken Arrow	192
74110	Tulsa	189
74128	Tulsa	170

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 Tulsa 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. A number of the hospital's community benefit programs serve residents in Tulsa County. Many of these programs serve residents who are living in poverty and are deemed to be particularly vulnerable. Included in these programs is the Tulsa Medical Access Program (MAP), a program to improve access to medical care among the uninsured in the Tulsa area.

For the purposes of this assessment, the community served by St. John Owasso includes all of Tulsa County, Oklahoma. Tulsa County was divided into eight geographical regions based on ZIP codes and associated communities: downtown Tulsa, east Tulsa, Jenks/Bixby/Glenpool/Tulsa Hills, midtown Tulsa, north City of Tulsa (Tulsa North), Owasso/Sperry/ Collinsville/Skiatook, Sand Springs/west Tulsa, and south Tulsa/Broken Arrow (Figure 2). All ZIP codes that are fully or partially within Tulsa County were assigned regions.

St. John Owasso is based out of the city of Owasso. Accordingly, the Owasso/Sperry/ Collinsville/Skiatook region serves as St. John Owasso's primary area of focus within the Tulsa County community. An effort was made to focus on the community health needs and assets specific to this region as well as Tulsa County as a whole. St. John Owasso community health improvement efforts as a result of this assessment will primarily center on the Owasso/Sperry/ Collinsville/Skiatook region. Other parts of the Tulsa County (downtown Tulsa, east Tulsa, Jenks/Bixby/Glenpool/Tulsa Hills, midtown Tulsa, north Tulsa, Sand Springs/west Tulsa, and south Tulsa/Broken Arrow) will be the focus of the community health improvement efforts of St. John Medical Center and St. John Broken Arrow respectively.

Figure 2: 2016 Tulsa County Community Health Needs Assessment Regions Map
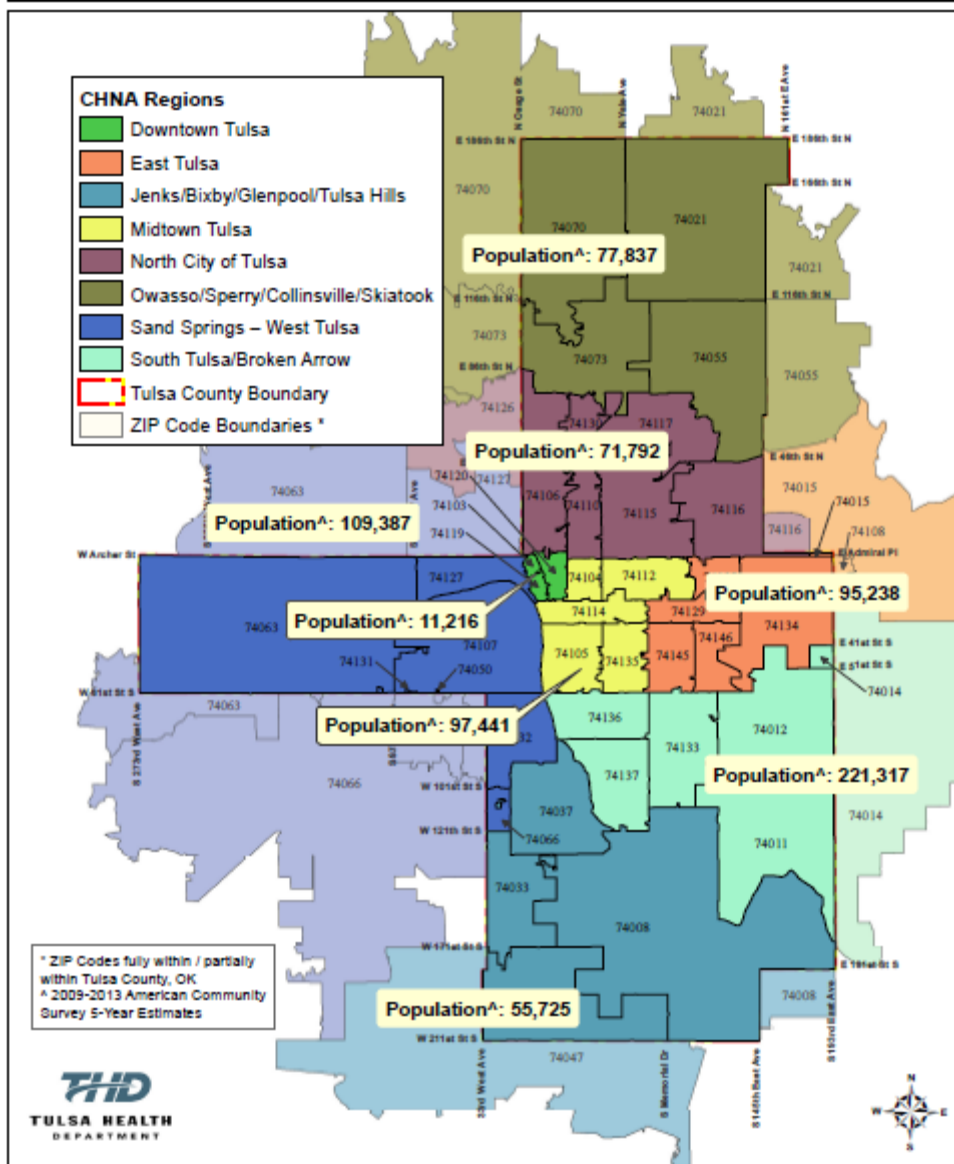
Source: Courtesy of the Tulsa Health Department. (2016). Tulsa County Community Health Needs Assessment: May 2016. Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

TULSA COUNTY

   Tulsa County is a county located in the U.S. state of Oklahoma. Its county seat and largest city is Tulsa. Founded at statehood, in 1907, it was named after the previously established city of Tulsa. Before statehood, the area was part of both the Creek Nation and the Cooweescoowee District of Cherokee Nation in Indian Territory. [3] The county is often referred to as Oklahoma's gateway to "Green Country" due to its lush and rolling hills. [4] The area has a rich and at times turbulent history. This history

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[3] Oklahoma Historical Society. (2016). *Encyclopedia: Creek County*. Retrieved from: http://www.okhistory.org/publications/enc/entry.php?entry=TU008

[4] Tulsa County. (2016). *Tulsa County History*. Retrieved from http://www.tulsacounty.org/Tulsacounty/default.aspx

includes, but is not limited to: early Native American inhabitants, cattlemen, and the advent of the railroads, the 1920s Tulsa Race Riot, and the oil boom. [3]

Tulsa County is located in northeastern Oklahoma on the Arkansas River. Counties adjacent to Tulsa County include: Washington, Rogers, Wagoner, Okmulgee, Creek, Pawnee, and Osage counties. The cities and towns officially recognized in Tulsa County are: Tulsa, Bixby, Broken Arrow, Collinsville, Glenpool, Jenks, Owasso, Sand Springs, Sapulpa (partial inclusion), Liberty, Lotsee, Skiatook, and Sperry. Major highways include: Interstate 44, U.S. Historic Route 66, U.S. Route 75, and U.S. Route 169.

According to the American Community Survey (2013), Tulsa County had an estimated population of 609,610 individuals in 2013.It is the second-most populous county in Oklahoma and the most densely populated county in the state (approximately 1,100 per square mile). Overall, the female population (51.2 percent) slightly exceeds the male population (48.8 percent).The male population compromises 48.8% of the population and the female population is 51.2%. The median age of the population is 35.3 years. Approximately 15% of the population is over the age of 62. [13]

City of Owasso

St. John Owasso is based out of Owasso, one of the largest growing cities in Oklahoma. The city is the third largest in Tulsa County and the 14th largest in Oklahoma with a 2010 Census population of approximately 29,000. Owasso is primary located in the northern part of Tulsa County. A portion of the city, however, is also located in Rogers County. Approximately 7.6 percent of the residents live below the poverty line. [13]

Town of Sperry

The town of Sperry is located in the northwestern part of Tulsa County. According to the 2010 U.S. Census, the population was just over 800 residents. Approximately 18 percent of Sperry residents live below the poverty line. [13]

Town of Skiatook

The town of Skiatook is primarily located in the northwestern portion of Tulsa County. However, a portion of the town lies in eastern Osage County. According the 2010 US Census, the population of Skiatook was an estimated 7,400 persons. Approximately 13 percent of the population lives below the poverty line. [13]

Town of Collinsville

The town of Collinsville is located in northern Tulsa County. According the 2010 US Census, the population is just over 5,600 residents. Approximately 6 percent of the residents live below the poverty line. [13]

COMMUNITY HEALTH NEEDS ASSESSMENT PROCESS: METHODOLOGY

Community health needs and assets for Tulsa 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.[1] 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.[1]

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 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
- Survey of Tulsa County residents
- Focus groups with community members
- Input from community leaders and representatives
- Input from the public health workforce and local coalitions/partnerships
- Input from our health system's 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, 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."[5] 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 environment through reciprocal causation.[6][7] 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.

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[5] World Health Organization. (1948). *Preamble to the Constitution of the World Health Organization*. Adopted by the International Health Conference, N.Y. 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.
[6] Hanson, D., Hanson, J., Vardon, P., McFarlane K., Lloyd, J., Muller, R., et al. (2005). The injury iceberg. An ecological approach to planning sustainable community safety interventions. *Health Promotion of Australia, 16*(1), 5-10.
[7] McLeroy, K.R., Bibeau, D., Steckler, A. & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly, 15*(4), 351-377.

Figure 3: Social Ecological Model of Health

Source Adapted From: Hanson, D., Hanson, J., Vardon, P., McFarlane K., Lloyd, J., Muller, R., et al. (2005). The injury iceberg. An ecological approach to planning sustainable community safety interventions. *Health Promotion of Australia, 16*(1), 5-10. McLeroy, K.R., Bibeau, D., Steckler, A. & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly, 15*(4), 351-377.

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."[8] 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).

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[8] Centers for Disease Control and Prevention. (2015). *Community Health Improvement Navigator*. Retrieved from: http://www.cdc.gov/chinav/.

Figure 4: University of Wisconsin Population Health Institute's County Health Ranking's Model
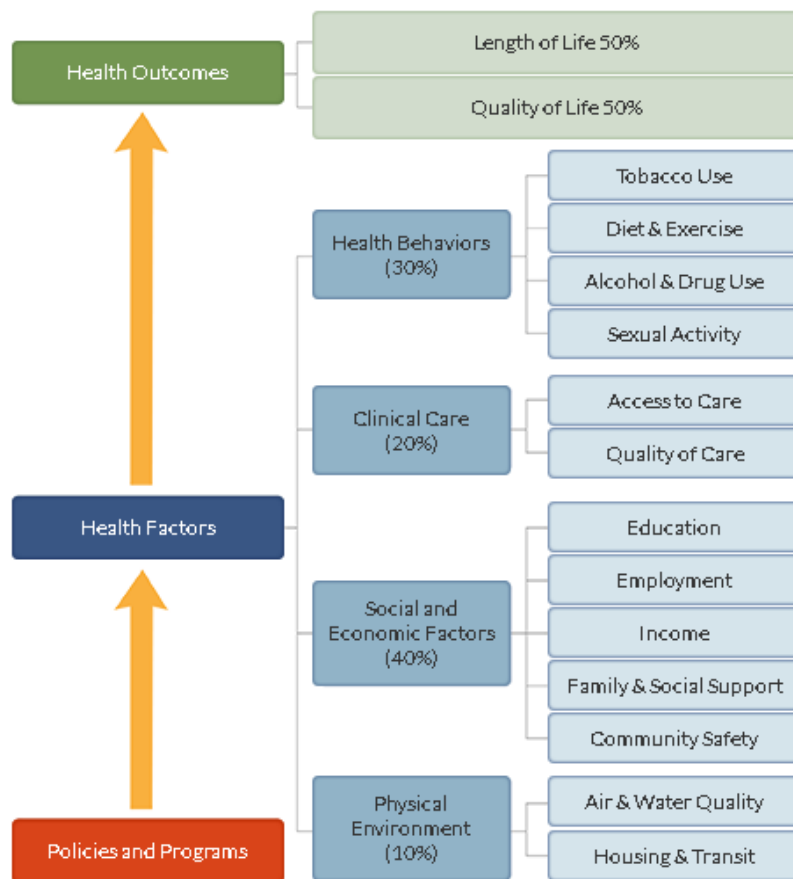
Source: Courtesy of University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

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)[9]. Health factors contribute to health and are otherwise known as determinants of health. There are five commonly recognized determinants of health[10]:

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

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[9] University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.
[10] Centers for Disease Control and Prevention. (2014). *NCHHSTP Social Determinants of Health: Definitions.* Retrieved from: http://www.cdc.gov/nchhstp/socialdeterminants/definitions.html.

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). [7] 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. [6] 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) [6]. 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
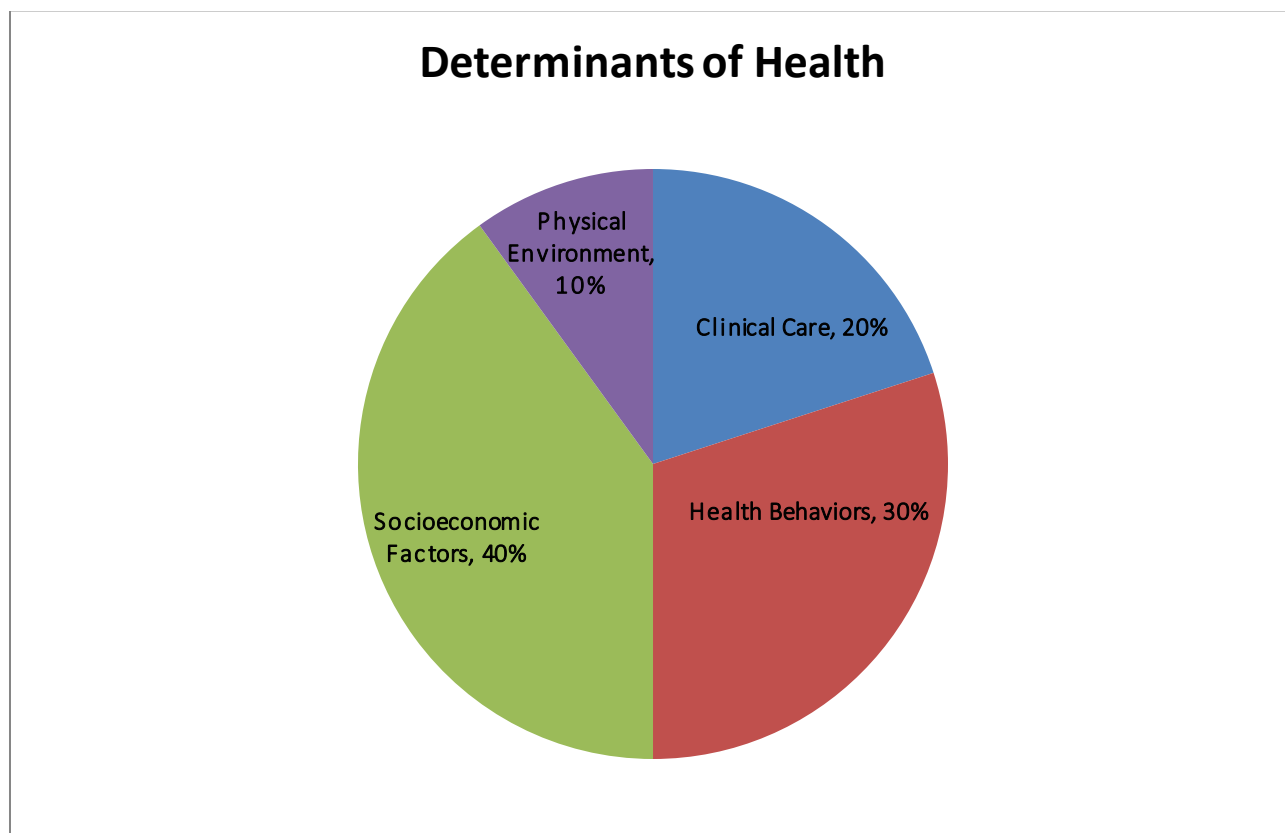
Source: University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

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."[11]

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[11] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2010). *The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. Phase I*

Certain disadvantaged populations are at greater risk of experiencing of health disparities. *Health 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."[7] For example in Tulsa 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. Additionally, two north and south Tulsa ZIP codes (74126 and 74137) less than 25 miles apart had a 10 year difference in life expectancy in 2015.[12]

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".[13] 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."[9] 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.[14] 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[12]:

1. Economic Stability
   - Access to economic and job opportunities
   - Poverty
   - Food security
   - Housing stability
2. Education
   - Access to higher education opportunities
   - High school graduation

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report: Recommendations for the framework and format of Healthy People 2020. Section IV: Advisory Committee findings and recommendations. Retrieved from: http://www.healthypeople.gov/sites/default/files/PhaseI_0.pdf.
[12] Tulsa City-County Health Department. (2015). *Narrowing the Gap*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/Life%20Expectancy%20Report.pdf.
[13] U.S. Department of Health and Human Services, Office of Minority Health. National Partnership for Action to End Health Disparities. (2010). *The National Plan for Action.* Retrieved from: http://www.minorityhealth.hhs.gov/npa/templates/browse.aspx?&lvl=2&lvlid=34.
[14] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2016).*Healthy People 2020: Social Determinants of Health*. Retrieved from: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health.

- 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.[15]

Figure 6: The HCI *SocioNeeds Index* ®
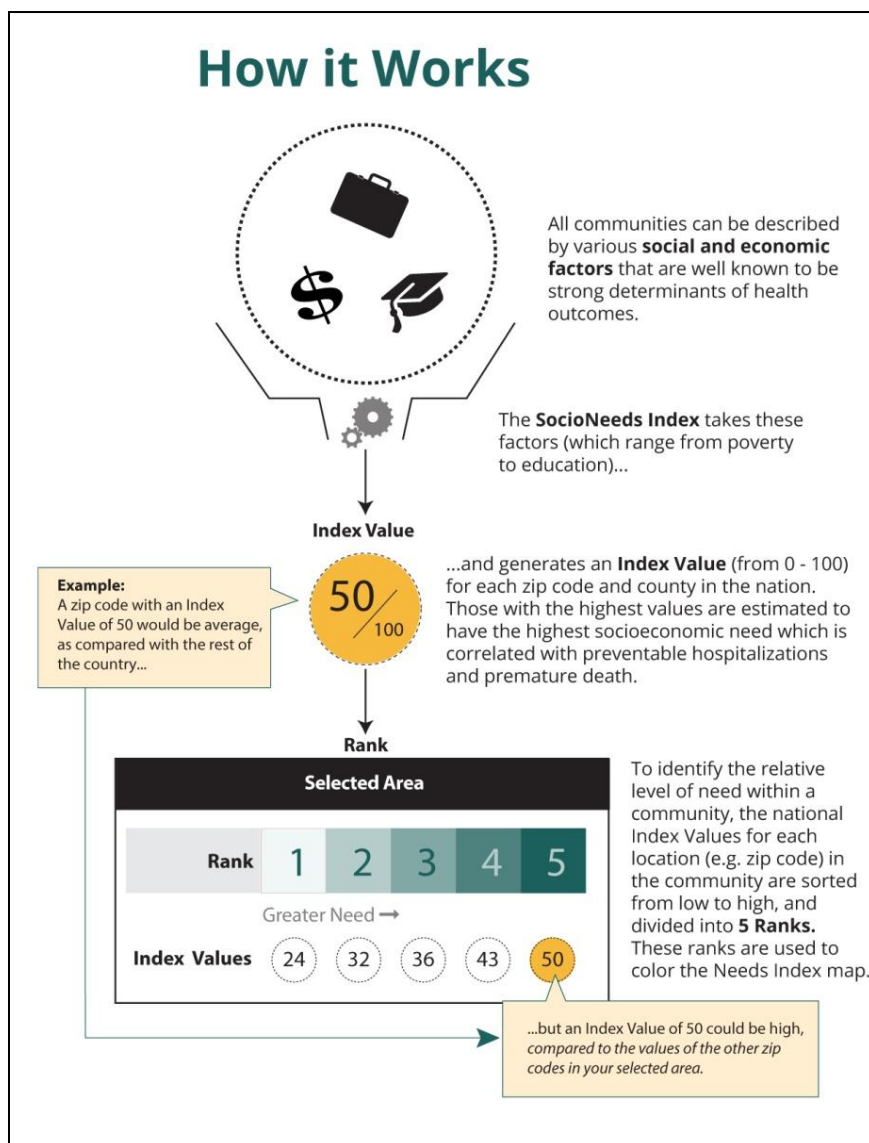
Source: Courtesy of Xerox Community Health Solutions. (2016). *Healthy Communities Institute SocioNeeds Index* ®. Retrieved from: http://ascension.thehcn.net/.

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[15] Xerox Community Health Solutions. (2016). *Healthy Communities Institute SocioNeeds Index* ®. Retrieved from: http://ascension.thehcn.net/.

2016 Community Health Needs Assessment, St. John Owasso

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 its three hospitals located within Tulsa County, St. John Owasso, St. John Medical Center, and St. John Broken Arrow, engaged the Tulsa City-County Health Department, a community-wide coalition known as Pathways to Health (P2H), the Community Service Council, and a multitude of other community partner organizations throughout this community health needs assessment. The health system and three Tulsa County hospitals worked closely with these partners to conduct this assessment. Throughout the assessment process, St. John Health System our Tulsa County hospitals 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 Tulsa County. We are proud of the steps take to move us forward in our mutual work to improve the health and well-being of the community.

The Tulsa City-County Health Department serves both Tulsa County and the city of Tulsa. It is an accredited public health organization that works to empower the community and improve health equity, prevent disease, promote healthy living, and ensure preparedness. [16]

Pathways to Health (P2H) supports the Tulsa City-County Health Department and a multitude of community partners. P2H was formed by the Tulsa City-County Health Department in 2008 in response to a challenge to decrease the overlap of health services and identify gaps where leaders are missing vulnerable populations. Today, P2H is an incorporated non-profit entity with the goal to connect community health resources to those who need it most. P2H leverages community-wide partnerships with more than 90 local agencies, organizations, corporations and health systems to improve the health and wellness of residents of Tulsa County. [17]

The Community Service Council is a community-based organization serving primarily Tulsa County, with some efforts reaching much of eastern Oklahoma and/or the entire state of Oklahoma. The organization brings the community together to research, plan, coordinate and mobilize action, and assess progress towards addressing some of our most critical social service, health, education and civic challenges. The Council is focused on prevention and the promotion of health among individuals, families, and the community as a whole. It also facilitates early access to help through varied information services including the 211 Oklahoma Helpline. [18]

Central to this community assessment are a survey and focus groups conducted by the Tulsa City-County Health Department, the Oklahoma State University- College of Public Health, and Saxum to obtain direct input from community members. The survey and focus groups are collectively referred to by the Tulsa City-County Health Department and community stakeholders as the *2015-2016 Tulsa County Community Health Needs Assessment (CHNA)*. This assessment is a component of a three- year comprehensive community health assessment that is conducted by the Tulsa City-County Health Department and community partners. 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 community. These tools include a Community Themes and Strengths Assessment, a Community Health Needs Assessment, a Forces of Change Assessment, and a Local Public Health System Assessment. Information gleaned from the 2016 MAPP process was used to guide our assessment.

A number of community stakeholders and local organizations were also engaged in our health system's three Tulsa County hospital community input meetings at St. John Owasso, St. John Medical Center, and St. John Owasso in April 2016.

Note: Each of the three Tulsa County hospital reports only summarizes findings from their respective hospital community input meeting. Therefore, this assessment report only includes findings from the St. John Owasso community input meeting.

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[16] Tulsa City-County Health Department. (2016). *About us*. Retrieved from: http://www.tulsa-health.org/about-us.
[17] Pathways to Health. (2016). *About P2H*. Retrieved from: http://pathwaystohealthtulsa.org/about-us/.
[18] Community Service Council. (2016). *About us*. Retrieved from: http://www.csctulsa.org/content.php?p=217.

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 a 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
- 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 Tulsa County, a review of publically available secondary data was conducted.

SECONDARY DATA METHODOLGY 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 Tulsa City-County Health Department's *2015 Tulsa County Health Profile* served as the main secondary data source for this assessment. The profile was provided courtesy of the Tulsa City-County Health Department and a large portion of this report was incorporated into this assessment's review and presentation of secondary data. This comprehensive report provides an assessment of the health of Tulsa County's population and presents information on the many factors that influence health. A full version of the *2015 Tulsa County Health Profile* is available on the Tulsa City-County Health Department's website.

The Community Commons' (www.communitycommons.org) *Community Health Needs Assessment* also served as a major 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-Causes of Death
        - Life Expectancy
        - Hospital Utilization
        - Chronic Disease
        - Behavioral Health
        - Maternal and Child Health

- Infectious Diseases
- Dental Health
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).[19]

Similar to the state, Tulsa County ranks poorly in multiple key health status indicators. A comprehensive overview of the secondary health data follows. Unless otherwise noted, the sources of information are the *2015 Tulsa County Health Profile or the* Community Commons' Tulsa County *Community Health Needs Assessment.*

DEMOGRAPHICS

Population

Total Population

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[19] United Health Foundation. (2016). *America's Health Rankings: Oklahoma*. Retrieved from: http://www.americashealthrankings.org/OK

Definition

The total population is presented simply as the number of individuals living in each ZIP code, according to the 2013 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 ZIP code specific rates and gender, age, and racial/ethnic specific rates.

How Are We Doing?

Tulsa County had an estimated population of 609,610 individuals in 2013. Overall, the female population (51.2 percent) slightly exceeded the male population (48.8 percent) (Figure 7). At lower age ranges, males outnumbered females; however, the opposite was true in older age groups. In fact, females comprised almost 60 percent of the population age 65 and older (Figure 7). Tulsa County's median age (35.3 years) was slightly younger than the state's median age (36.2 years) and the median age of the nation (37.3 years) (Figure 8).[20]

Figure 7: Population by Age and Gender, Tulsa County 2013

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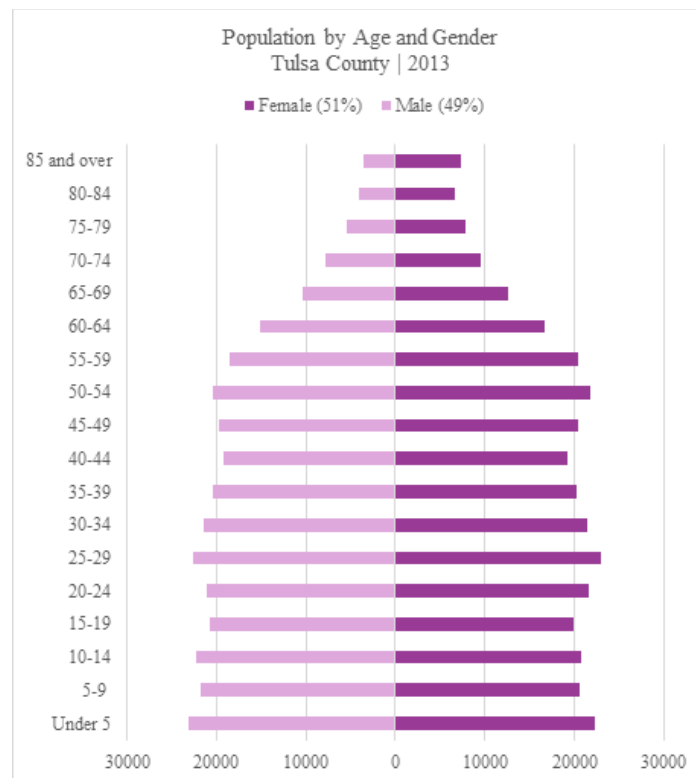
[20] U.S. Census Bureau. (2013). *American Community Survey 2009-2013 5-Year Estimates*. Retrieved from: https://www.census.gov/ programs-surveys/acs/data.html.

2016 Community Health Needs Assessment, St. John Owasso

Figure 8: Population Distribution by Age Group, Tulsa County 2013
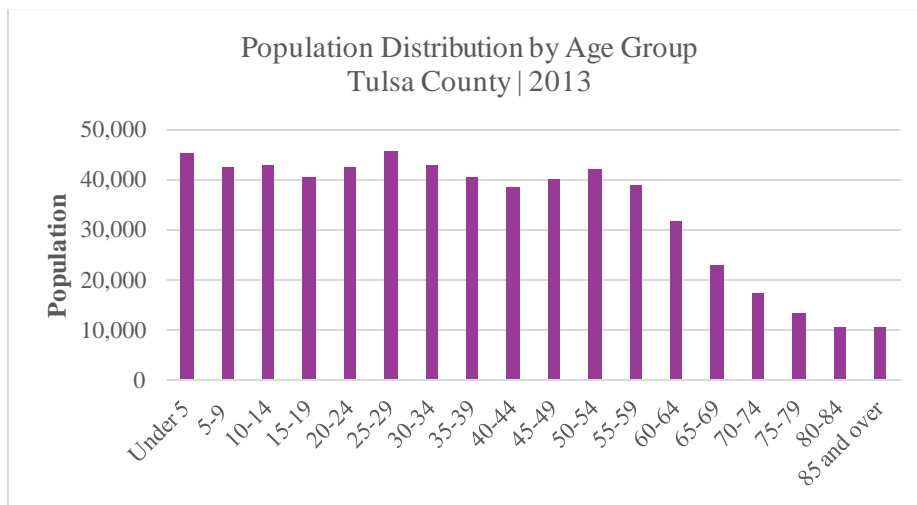
Whites comprised 72.0 percent of the population and blacks made up the largest minority race at 10.3 percent (Figure 8). Hispanics comprised 11.2 percent of the population in 2013, although that is likely an underestimation because of potential undercounting of undocumented Hispanic immigrants (Figure 9).[13] 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 9: Total Population by Race, Tulsa County 2013
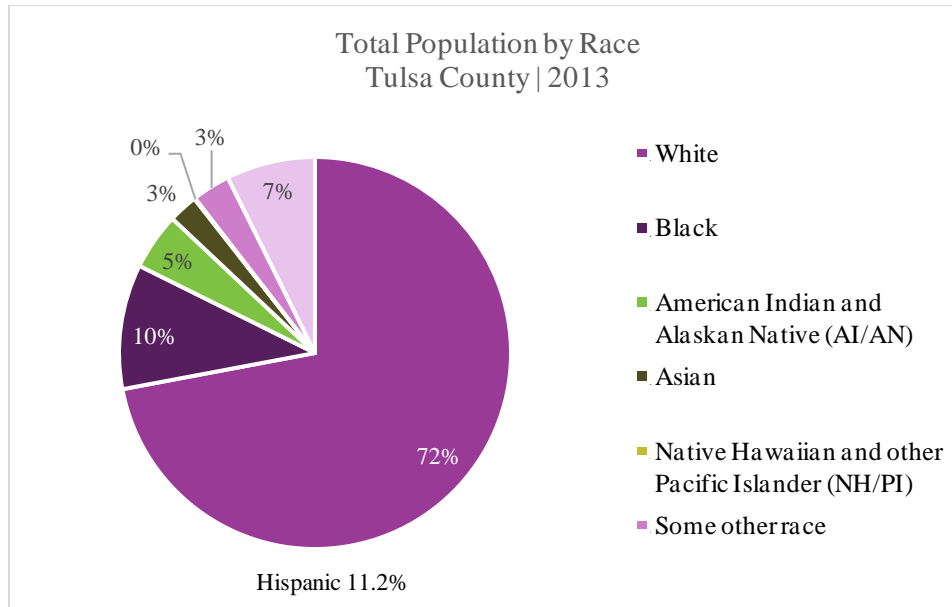
Total Population by Race
Tulsa County | 2013

Pie chart showing:
- 72% White
- 10% Black
- 5% American Indian and Alaskan Native (AI/AN)
- 3% Asian
- 0% Native Hawaiian and other Pacific Islander (NH/PI)
- 3% Some other race
- 7%

Legend:
- White
- Black
- American Indian and Alaskan Native (AI/AN)
- Asian
- Native Hawaiian and other Pacific Islander (NH/PI)
- Some other race

Hispanic 11.2%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest population were 74012 in Broken Arrow and 74133 in south Tulsa. Together, these ZIP codes comprised 16.8 percent of the Tulsa County population. ZIP code 74055 in Owasso had the third largest population, although a portion of this ZIP code is in Rogers County (Figure 10).[13]

Figure 10 : Total Population, Tulsa County 2013 Map
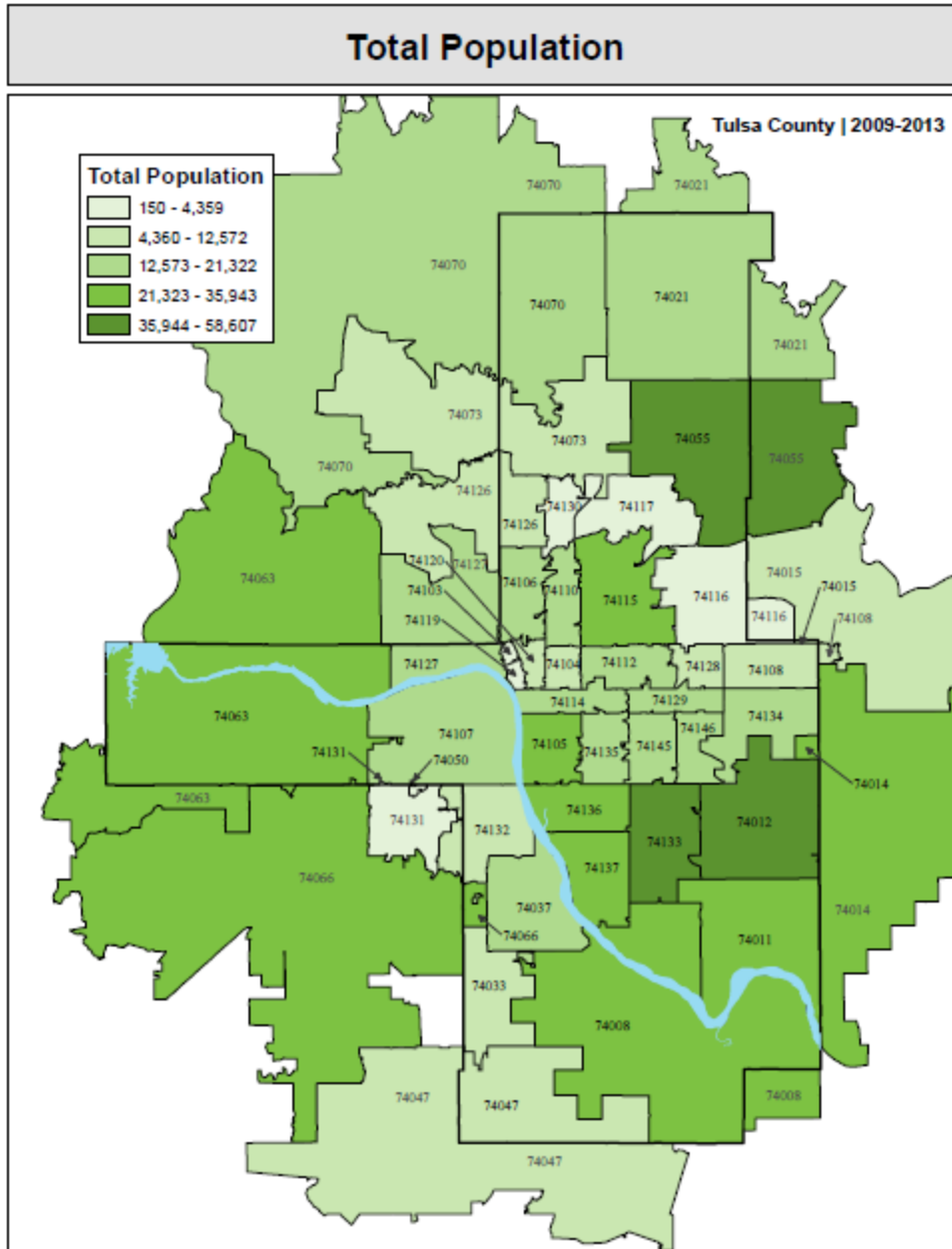
Total Population

Tulsa County | 2009-2013

Total Population
- 150 - 4,359
- 4,360 - 12,572
- 12,573 - 21,322
- 21,323 - 35,943
- 35,944 - 58,607

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Population Change

Definition

   This demographic indicator is presented as the percentage change in the population within each ZIP code from the 2010 Census to the 2013 American Community Survey 5-year estimates. There was minimal change in ZIP code boundaries in this intervening period.

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?

With the exception of Sperry, all cities in Tulsa County experienced growth from 2010 to 2013. Owasso was the fastest growing city, with a 5.7 percent increase in population from 2010 to 2013 (Figure 11). [13] [21]

Figure 11: Population Change by Selected Cities, Tulsa County 2010-2013
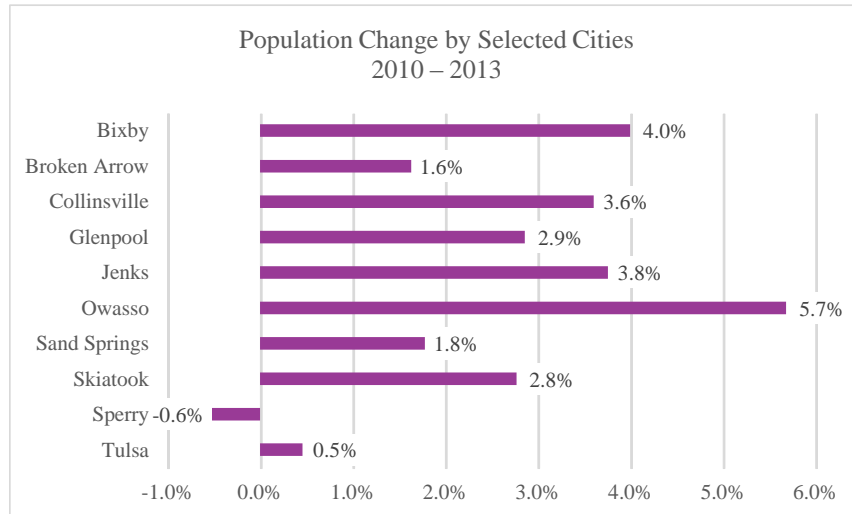
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Although most racial and ethnic populations increased from 2010 to 2013, the black and American Indian/Alaska Native minorities decreased. The most striking growth occurred in the population of two or more races, which was estimated to have a 27.6 percent increase from 2010 − 2013 (Figure 12). [13] [14]

Figure 12: Population Change by Race/Ethnicity, Tulsa County 2013

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[21] U.S. Census Bureau. (2010). *2010 Census*. Retrieved from: https://www.census.gov/2010census/.
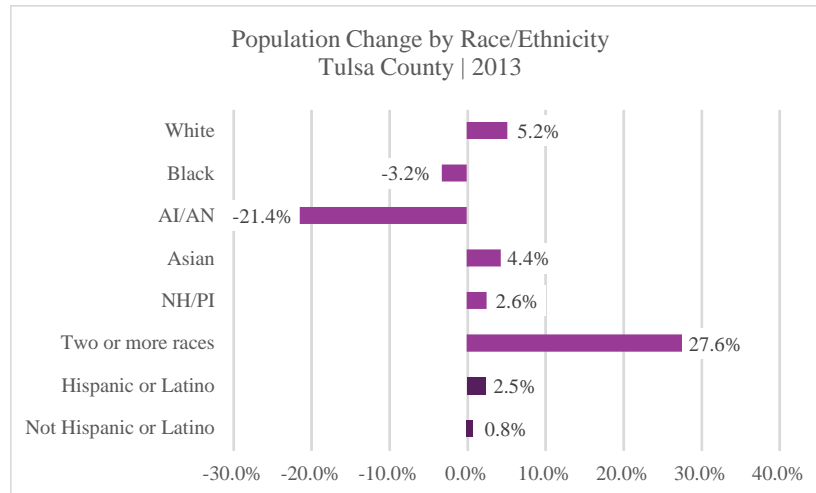
Population Change by Race/Ethnicity
Tulsa County | 2013

Race/Ethnicity	Change
White	5.2%
Black	-3.2%
AI/AN	-21.4%
Asian	4.4%
NH/PI	2.6%
Two or more races	27.6%
Hispanic or Latino	2.5%
Not Hispanic or Latino	0.8%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Increasing Hispanic Population:

Based on U.S. Census data, the Hispanic population in Tulsa County has been increasing since 2000. According to the 2013 American Community Survey 5-year estimates, the Hispanic population numbered 68,260 in Tulsa County. In 2013, Hispanics comprised 11.2 percent of the Tulsa County population, which was higher than the state value of 9.1 percent, but lower than the U.S. percentage of 16.6 percent. 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 preventive services among this group.[14]

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.[13][22]

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."

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[22] Community Service Council, Census Information Center of Eastern Oklahoma. (2016). *Data Blast: April 2016 (41)*. Retrieved from www.csc.org.

2016 Community Health Needs Assessment, St. John Owasso

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 Tulsa County that was linguistically isolated was 3.66% which was higher than in Oklahoma overall (2.43%), but lower than in the U.S. overall (4.66%) (Figure 13 and Figure 14). [13] The percent of the population 5 years old and older in Tulsa County with limited English proficiency was 5.57% which was higher than in Oklahoma overall (3.97%) but lower than in the U.S. overall (8.6%) (Figure 15 and Figure 16). [13]

Figure 13: Percent Linguistically Isolated Population by Locality, 2010-2014

Report Area	Total Population Age 5	Linguistically Isolated Population	Percent Linguistically Isolated Population
Tulsa County, OK	570,370	20,880	3.66%
Oklahoma	3,553,984	86,214	2.43%
United States	294,133,376	13,692,809	4.66%

Percent Linguistically Isolated Population

Tulsa County, OK (3.66%)

Oklahoma (2.43%)

United States (4.66%)

Data Source: U.S. Census Bureau. (2013). *American Community Survey 2010-2014.* Retrieved from: https://www.census.gov/programs-surveys/acs/data.html.

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

Figure 14: Population Linguistically Isolated Households, Percent by Tract, ACS 2010-2014

2016 Community Health Needs Assessment, St. John Owasso
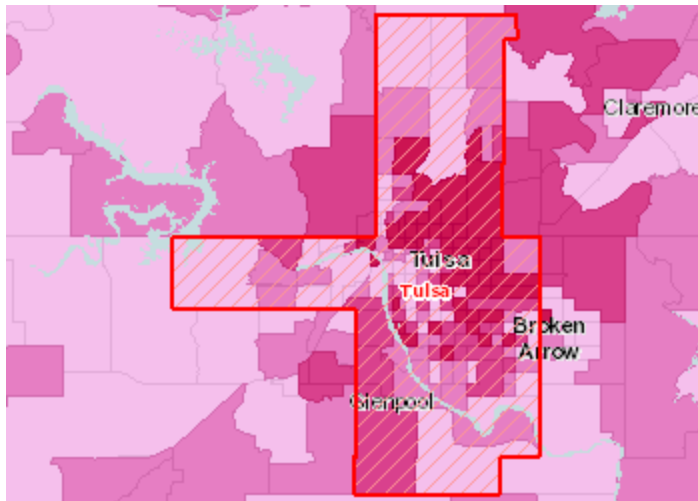
Population in Linguistically Isolated
Households, Percent by Tract, ACS 2010-14

|	
■	Over 3.0%
■	1.1 - 3.0%
■	0.1 - 1.1%
■	No Population in Linguistically Isolated Households
■	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

Figure 15: Percent Population Age 5+ with Limited English Proficiency by Locality. 2010-2014
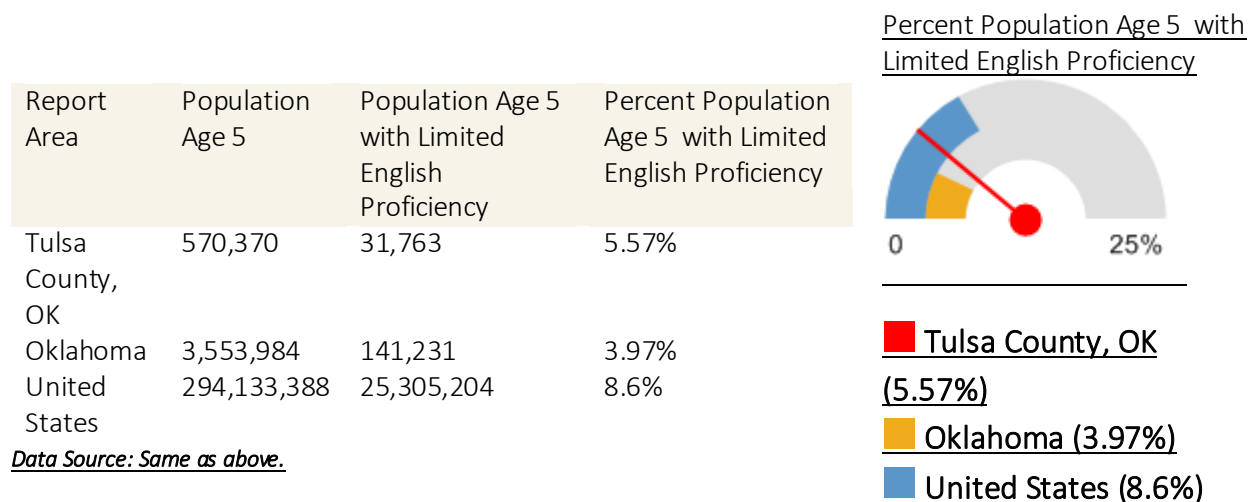
Report Area	Population Age 5	Population Age 5 with Limited English Proficiency	Percent Population Age 5 with Limited English Proficiency
Tulsa County, OK	570,370	31,763	5.57%
Oklahoma	3,553,984	141,231	3.97%
United States	294,133,388	25,305,204	8.6%

Data Source: Same as above.

Source: Courtesy of Community Commons.

Retrieved from: www.communitycommons.org on April 1, 2016

Percent Population Age 5 with
Limited English Proficiency

■ Tulsa County, OK
(5.57%)
■ Oklahoma (3.97%)
■ United States (8.6%)

Figure 16: Population with Limited English Proficiency by Tract, ACS, 2010-2014
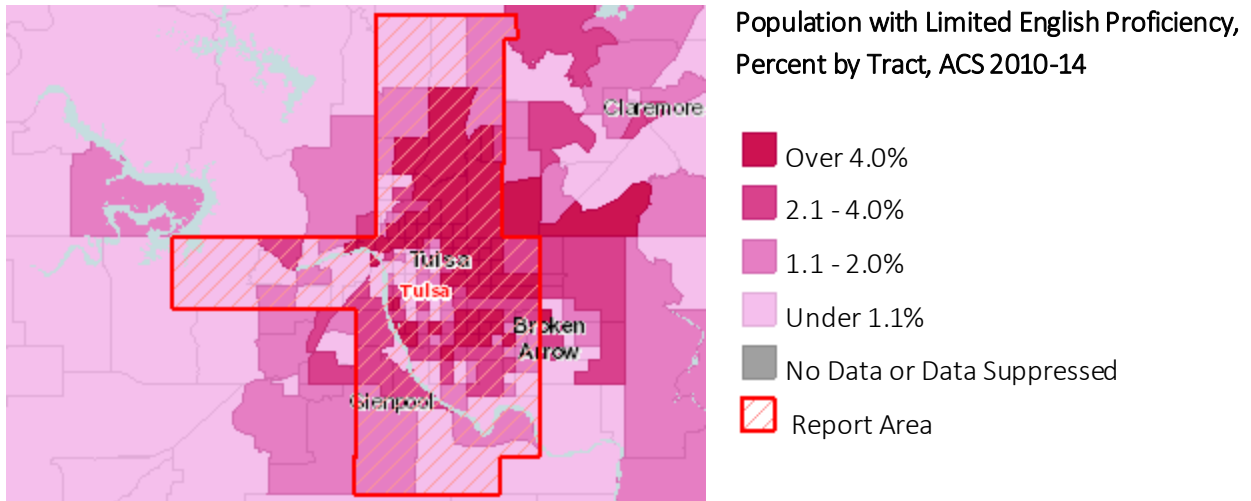
Population with Limited English Proficiency, Percent by Tract, ACS 2010-14

- Over 4.0%
- 2.1 - 4.0%
- 1.1 - 2.0%
- Under 1.1%
- 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

In 2010-2014. The percent of the population in Tulsa County with limited English proficiency by Hispanic ethnicity alone was 38.05% which was significantly higher than in Oklahoma (32.39%) and in the U.S. (33.12%) (Figure 17). [13] Whites were the race with the highest percentage of limited English proficiency (50.63%) followed by some other race (27.40%) and Asian (17.52%) (Figure 18). [13]

Figure 17: Population with Limited English Proficiency by Ethnicity Alone by Locality, 2010-2014
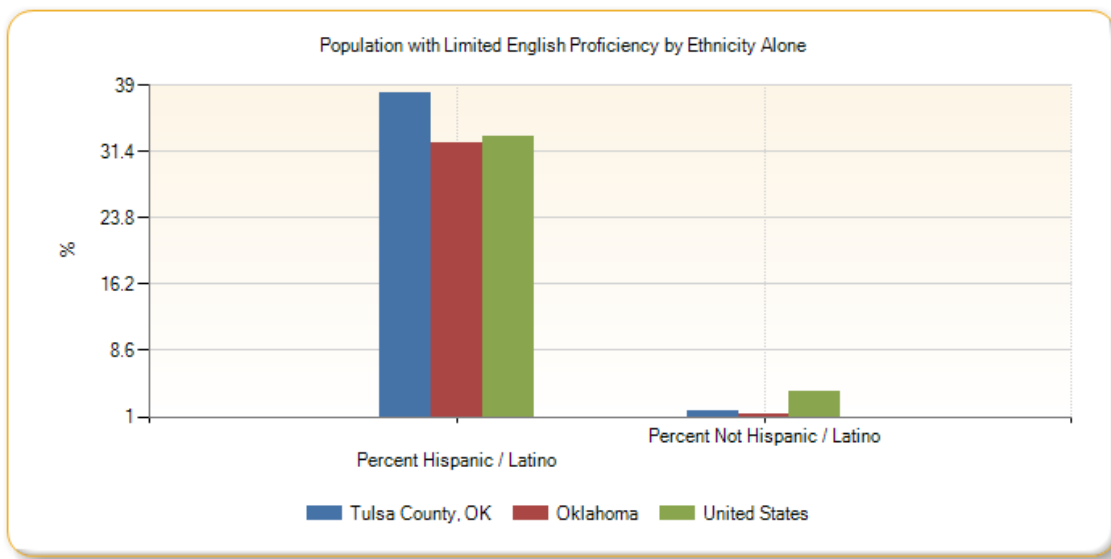
Report Area	Total Hispanic / Latino	Total Not Hispanic / Latino	Percent Hispanic / Latino	Percent Not Hispanic / Latino
Tulsa County, OK	23,276	8,487	38.05%	1.67%
Oklahoma	101,164	40,067	32.39%	1.24%
United States	15,881,488	9,423,716	33.12%	3.83%

Data Source: Same as above.

2016 Community Health Needs Assessment, St. John Owasso

Figure 18: Population with Limited English Proficiency by Race Alone, Total, Tulsa County

Data Source: Same as above.

In 2010-2014, the language spoken at home in Tulsa County with the highest percentage of the population with limited English proficiency was Spanish (75.83%). Asian and Pacific Island languages made up the second highest percentage (17.01%) (Figure 19). [13]

Figure 19: Population with Limited English Proficiency by Language Spoken at Home (4-Category)
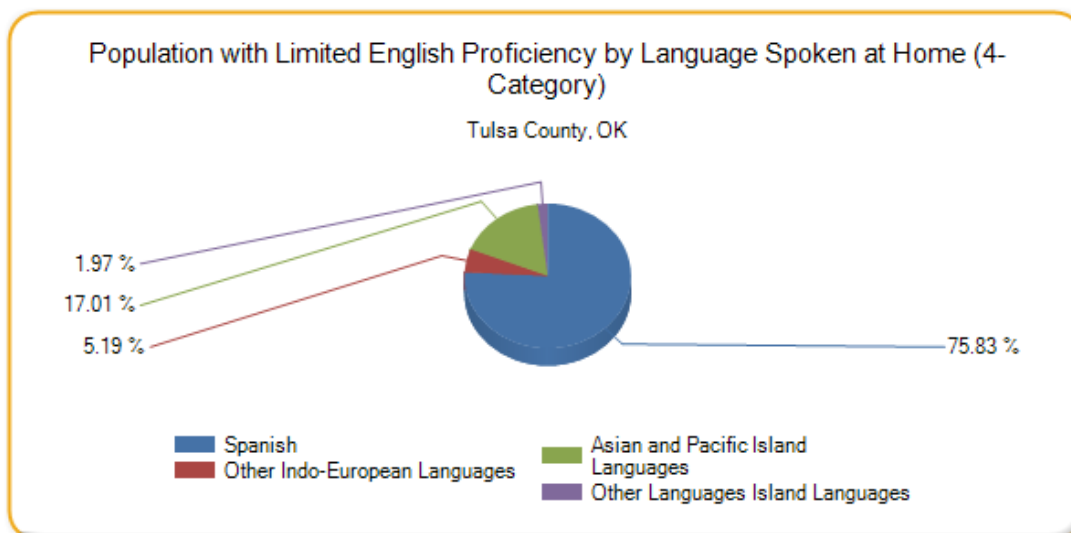
Data Source: Same as above.

2016 Community Health Needs Assessment, St. John Owasso

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 13). Lighter shades indicate better performance in the respective summary rankings. In 2016, Tulsa County ranked 20th out of 77 counties in Oklahoma in regard to health outcomes (Figure 20 and Table 3).[7]

Figure 20: 2016 Oklahoma Health Outcomes Map
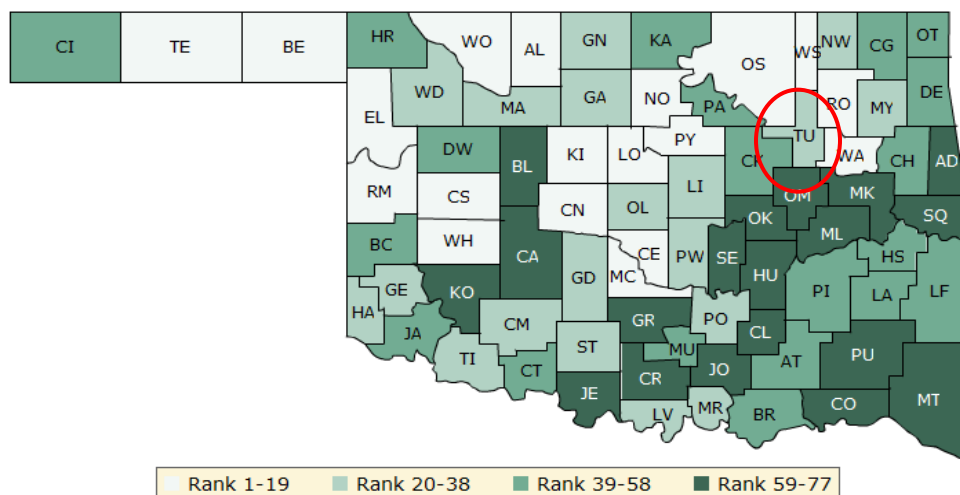
Table 3: 2016 Oklahoma Health Outcomes Table

County	Rank	County	Rank	County	Rank	County	Rank
Adair	76	Delaware	53	Lincoln	35	Pittsburg	54
Alfalfa	15	Dewey	43	Logan	6	Pontotoc	38
Atoka	46	Ellis	7	Love	25	Pottawatomie	37
Beaver	11	Garfield	22	Major	23	Pushmataha	65
Beckham	44	Garvin	68	Marshall	36	Roger Mills	5
Blaine	62	Grady	30	Mayes	33	Rogers	4
Bryan	47	Grant	29	McClain	13	Seminole	71
Caddo	70	Greer	27	McCurtain	66	Sequoyah	61
Canadian	3	Harmon	26	McIntosh	74	Stephens	34
Carter	67	Harper	45	Murray	56	Texas	9
Cherokee	58	Haskell	55	Muskogee	63	Tillman	31
Choctaw	75	Hughes	69	Noble	14	Tulsa	20
Cimarron	39	Jackson	48	Nowata	32	Wagoner	8
Cleveland	2	Jefferson	77	Okfuskee	72	Washington	17
Coal	60	Johnston	73	Oklahoma	28	Washita	16
Comanche	24	Kay	42	Okmulgee	59	Woods	10
Cotton	40	Kingfisher	1	Osage	19	Woodward	21
Craig	50	Kiowa	64	Ottawa	57		
Creek	49	Latimer	41	Pawnee	52		
Custer	18	Le Flore	51	Payne	12		

Mortality- Causes of Death

Deaths from All Causes

Definition

The mortality rate from all causes is presented as the number of deaths per 100,000 population, over the years 2011 − 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?

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.[23]

How Are We Doing?

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[23] Australian Institute of Health and Welfare. (2016). *Why are Mortality Data Important?* Retrieved from: http://www.aihw.gov.au/why-are-mortality-data-important/.

There were 16,645 deaths in Tulsa County from 2011 – 2013. 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 (Figure 21).[24] [25]

Figure 21: Top Causes of Death, Tulsa County 2011-2013
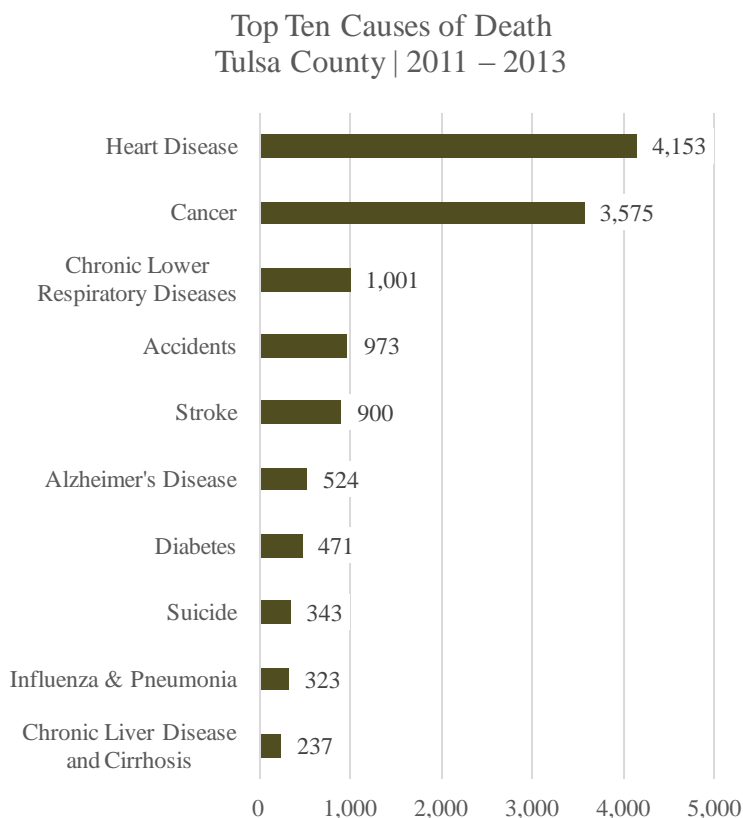
Top Ten Causes of Death
Tulsa County | 2011 − 2013

| Cause	Deaths
Heart Disease	4,153
Cancer	3,575
Chronic Lower Respiratory Diseases	1,001
Accidents	973
Stroke	900
Alzheimer's Disease	524
Diabetes	471
Suicide	343
Influenza & Pneumonia	323
Chronic Liver Disease and Cirrhosis	237

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

With regard to race and ethnicity, blacks had the highest age-adjusted death rate (1,155.8 per 100,000 population), followed by American Indians (1,045.6). Non-Hispanics had a higher age-adjusted death rate than Hispanics (882.1 compared to 508.2) (Figure 22).[17]

Figure 22: Age-Adjusted Death Rate by Race/Ethnicity, Tulsa County 2011-2013

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[24] Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information. (2016). Vital Statistics 2011 to 2013. *Oklahoma Statistics on Health Available for Everyone (OK2SHARE)*. Retrieved from: http://www.health.ok.gov/ok2share.

[25] Centers for Disease Control and Prevention, National Center for Health Statistics. (2016). Deaths: Final Data for 2013. *National Vital Statistics Reports (64)*2.
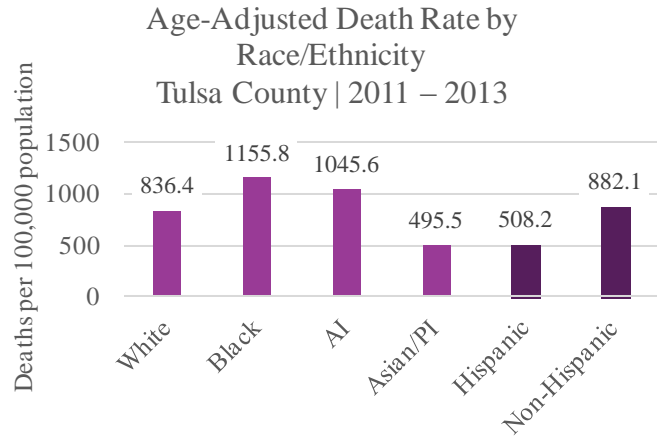
.

Age-Adjusted Death Rate by Race/Ethnicity Tulsa County | 2011 − 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

From 2004 − 2013, Tulsa County consistently had an age-adjusted death rate that was similar to Oklahoma but higher than the U.S. In 2013, the rate was 881.3 in Tulsa County, 910.6 in Oklahoma, and 731.9 in the U.S. (Figure 23).[18]

Figure 23: Age Adjusted Death Rates by Locality, 2004-2013
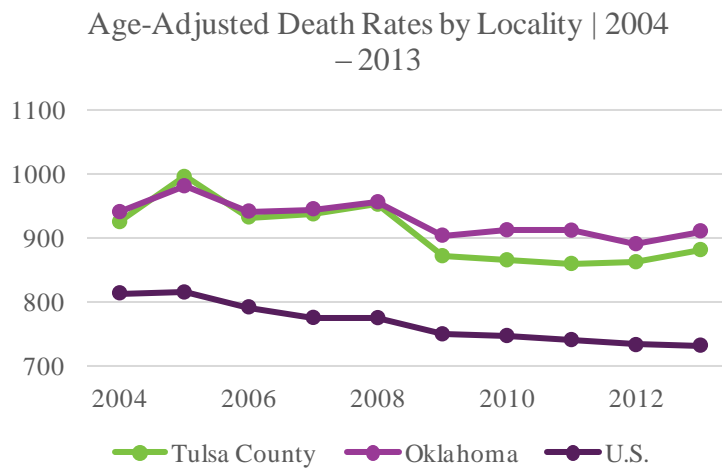
Age-Adjusted Death Rates by Locality | 2004 − 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest overall mortality rates included 74103, 74126, 74130, 74106, 74110, 74115, and 74108 (Figure 24). [17]

Figure 24: Deaths from All Causes, Tulsa County 2011-2013 Map
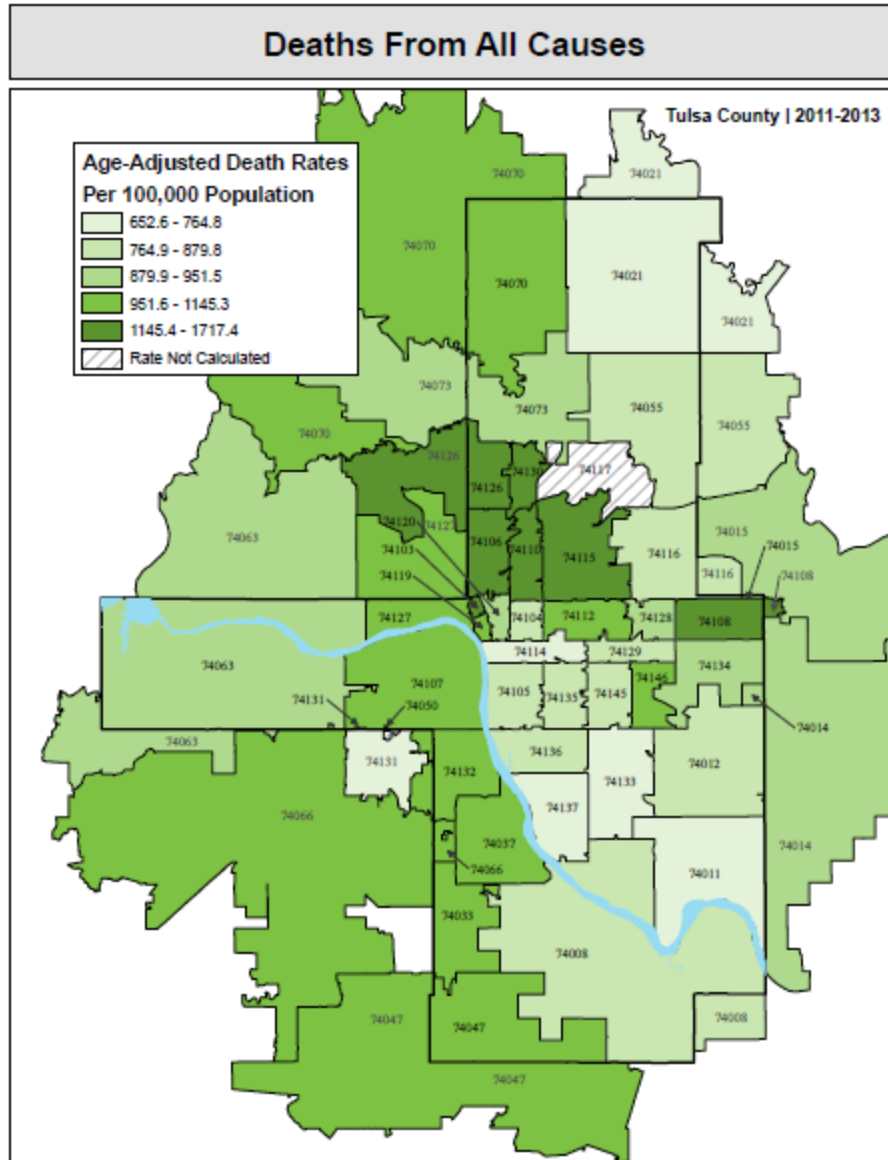
Deaths From All Causes

Tulsa County | 2011-2013

Age-Adjusted Death Rates Per 100,000 Population

- 652.6 - 764.8
- 764.9 - 879.8
- 879.9 - 951.5
- 951.6 - 1145.3
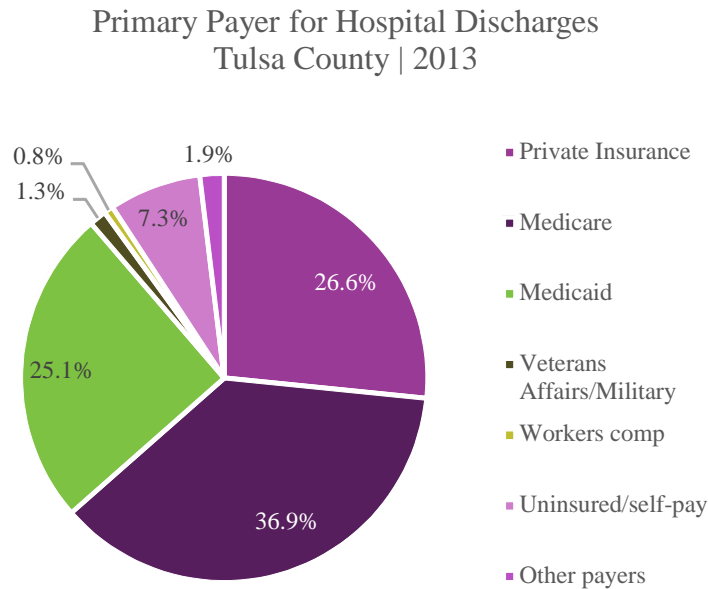- 1145.4 - 1717.4
- Rate Not Calculated

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Life Expectancy

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. Here, the three-year totals for life expectancy at birth are given for each ZIP code.

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?

From 2011 – 2013, Tulsa County residents had a life expectancy of 76.0 years. This was lower than the United States (77.2 years). Additionally, even though both Tulsa County and national life expectancies have increased since 2000 – 2002, the national life expectancy has increased 2.1 percent while Tulsa County's life expectancy has increased only 0.8 percent (Figure 25).[17] [18]

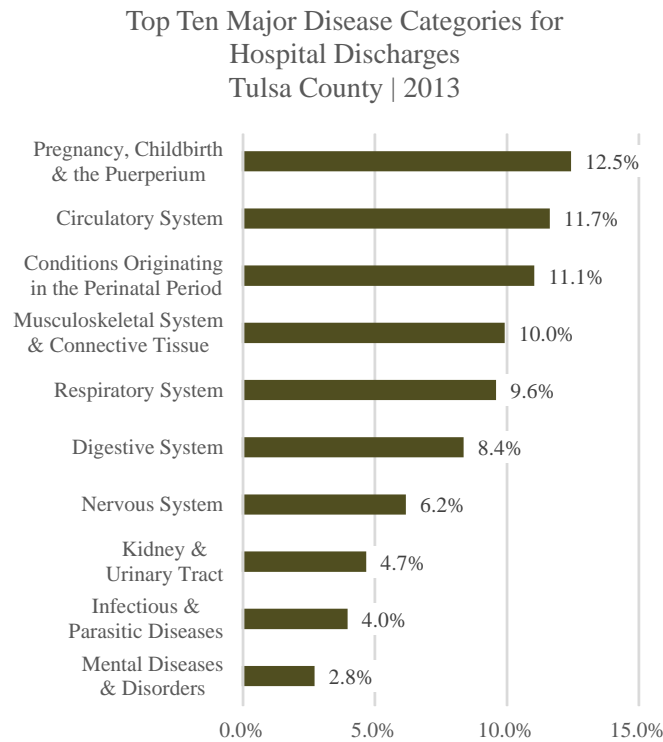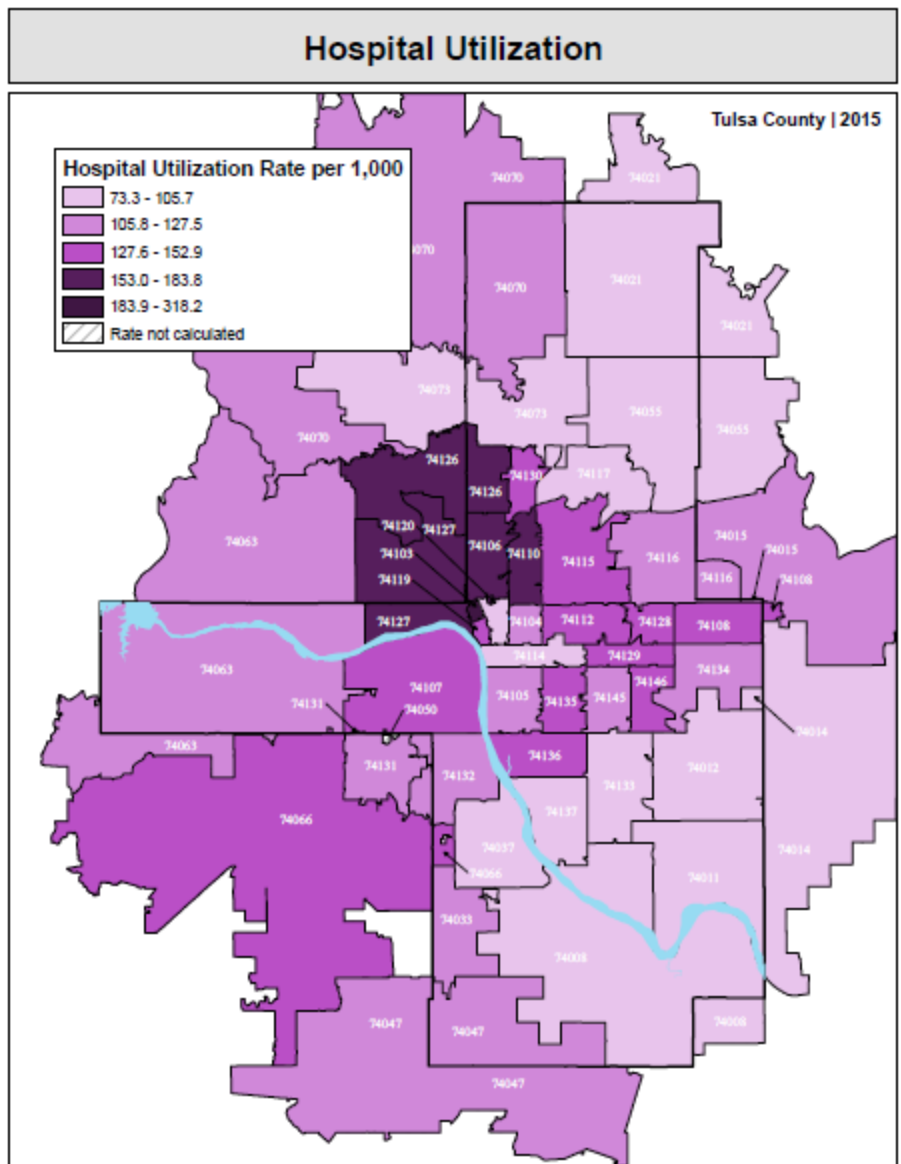**Figure 25: Life Expectancy by Locality, 2000-2013**
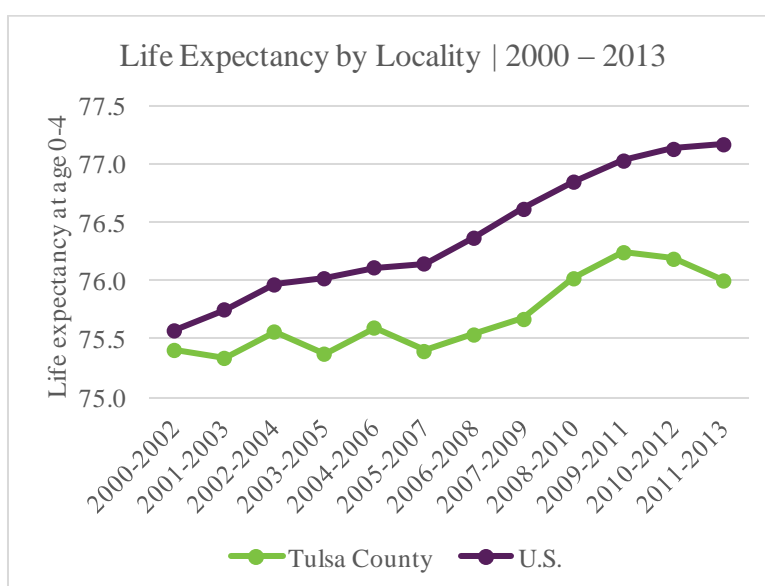
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes 74133, 74137, 74011, 74131, 74114, 74021, and 74008 had the best life expectancies in 2011 – 2013, while ZIP codes 74130, 74110, 74126, 74106, 74115, and 74127 had the worst life expectancies (Figure 26).

From 2002 to 2013, life expectancy in North Tulsa improved 3.1 years. However, vast disparities still exist in life expectancy between different zip codes in Tulsa County. For example, two north and south Tulsa ZIP codes (74126 and 74137) less than 25 miles apart had a **10.7 year difference in life expectancy** in 2013 according to a life expectancy analysis conducted by the Tulsa Health Department in 2015.[10] A Tulsa life expectancy map released by the Virginia Commonwealth University and Robert Wood Johnson Foundation in 2015 similarly shows an **11 year gap in life expectancy** between North Tulsa (70 years) and South Tulsa (81 years) communities.[91]

Figure 26: Life Expectancy, Tulsa County 2011-2013 Map
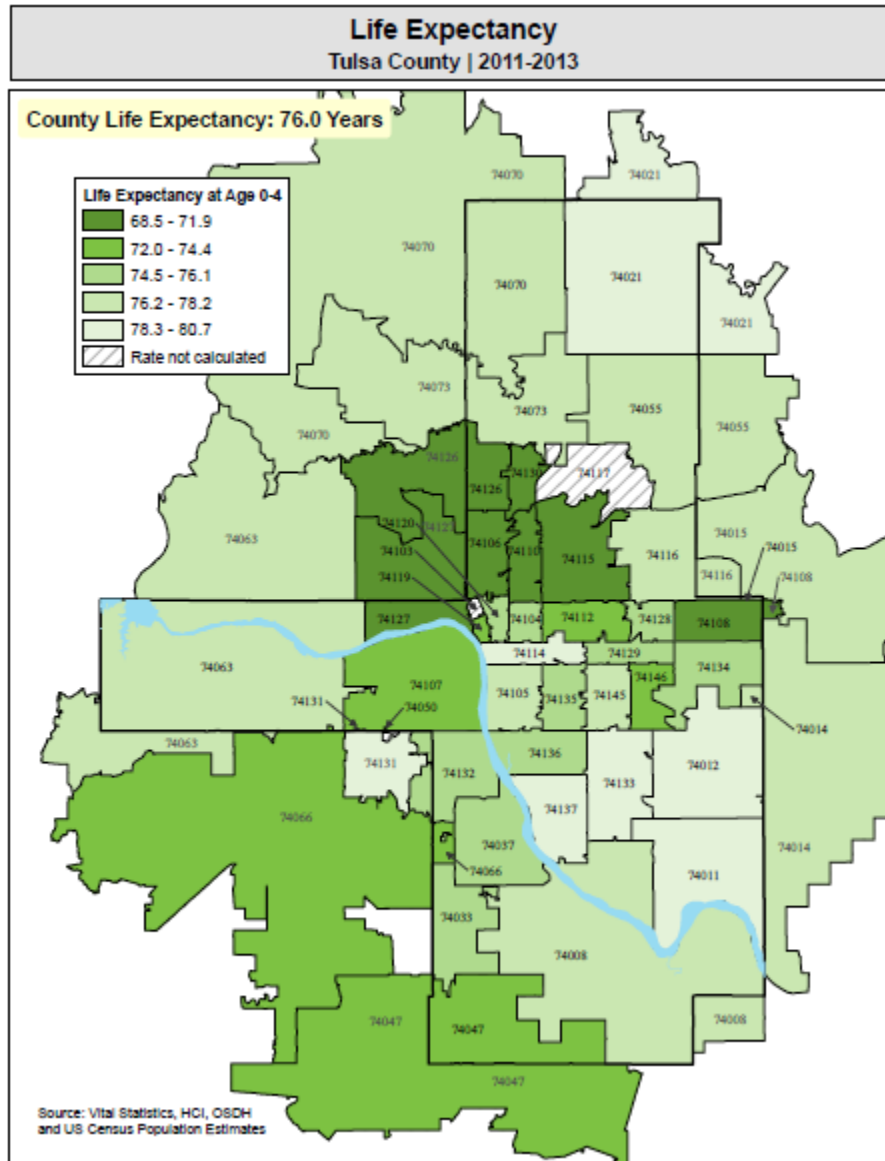
Hospital Utilization

Hospital Utilization

Definition

This indicator is an estimate of the use of acute care hospitals by Tulsa 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 Tulsa County in 2013 was 124.6 discharges per 1,000 population. This was slightly higher than the rate in Oklahoma, which was 119.9 discharges per 1,000 population. Females accounted for the majority of hospital discharges (59.6 percent). By race, whites made up the majority of discharges (70.8 percent), followed by blacks (13.5 percent) (Figure 27).[26]

Figure 27: Hospitalization by Race, Tulsa County 2013
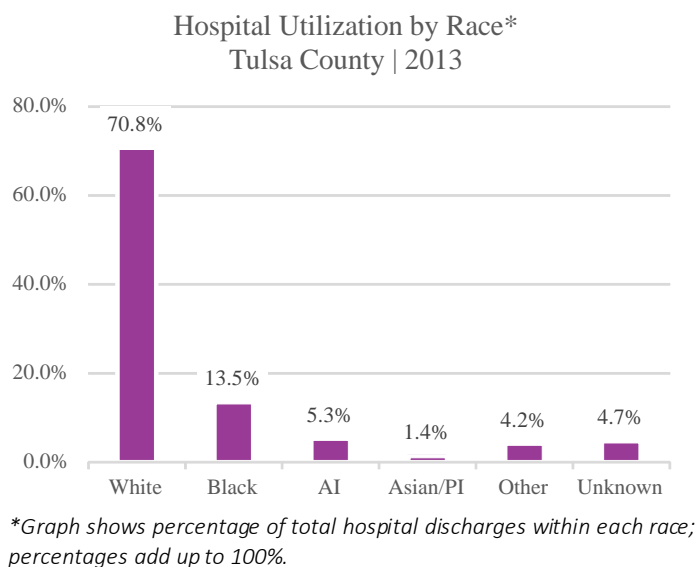
Graph shows percentage of total hospital discharges within each race; percentages add up to 100%.

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The largest percentage of hospital stays were paid for by Medicare (36.9 percent) followed by private insurance (26.6 percent) and Medicaid (25.1 percent) (Figure 28).[19]

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[26] Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information. (2016). Oklahoma Inpatient Data 2013. *Oklahoma Statistics on Health Available for Everyone (OK2SHARE)*. Retrieved from: http://www.health.ok.gov/ok2share.

Figure 28: Primary Payer for Hospital Discharges, Tulsa County 2013

Primary Payer for Hospital Discharges
Tulsa County | 2013

Legend:
- Private Insurance
- Medicare
- Medicaid
- Veterans Affairs/Military
- Workers comp
- Uninsured/self-pay
- Other payers

Values shown: 0.8%, 1.3%, 1.9%, 7.3%, 26.6%, 25.1%, 36.9%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Conditions related to pregnancy, childbirth, and the puerperium made up 12.5 percent of all Tulsa County hospital stays in 2013. The puerperium refers to the six weeks following childbirth. Circulatory conditions were the second most common reason for hospitalization (11.7 percent). This includes heart diseases such as congestive heart failure, heart attack, coronary artery disease, and irregular heartbeat (Figure 29).[19]

The top ten inpatient cases by medical diagnosis code (MDC) for St. John Owasso discharges in FY 2015 were also reviewed (Table 4). Pregnancy, childbirth and puerperium conditions were the most common reason for hospitalization at St. John Owasso.

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Figure 29: Top Ten Major Disease Categories for Hospital Discharges, Tulsa County 2013

Top Ten Major Disease Categories for
Hospital Discharges
Tulsa County | 2013

Category	Percentage
Pregnancy, Childbirth & the Puerperium	12.5%
Circulatory System	11.7%
Conditions Originating in the Perinatal Period	11.1%
Musculoskeletal System & Connective Tissue	10.0%
Respiratory System	9.6%
Digestive System	8.4%
Nervous System	6.2%
Kidney & Urinary Tract	4.7%
Infectious & Parasitic Diseases	4.0%
Mental Diseases & Disorders	2.8%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Table 4: Top 10 Inpatient Cases by Medical Diagnosis Code for St. John Owasso Discharges between 7/1/2014 and 6/30/2015

Medical Diagnosis Code	Total Number of Cases
PREGNANCY, CHILDBIRTH & THE PUERPERIUM	452
NEWBORNS & OTHER NEONATES WITH CONDTN ORIG IN PERINATAL PERIOD	442
DISEASES & DISORDERS OF THE RESPIRATORY SYSTEM	274
INFECTIOUS & PARASITIC DISEASES, SYSTEMIC OR UNSPECIFIED SITES	134
DISEASES & DISORDERS OF THE KIDNEY & URINARY TRACT	134
DISEASES & DISORDERS OF THE MUSCULOSKELETAL SYSTEM & CONN TISSUE	123
DISEASES & DISORDERS OF THE DIGESTIVE SYSTEM	104
DISEASES & DISORDERS OF THE CIRCULATORY SYSTEM	100
DISEASES & DISORDERS OF THE SKIN, SUBCUTANEOUS TISSUE & BREAST	62
DISEASES & DISORDERS OF THE HEPATOBILIARY SYSTEM & PANCREAS	56
GRAND TOTAL	1,881

Hospital discharges were highest in ZIP code 74103 (Figure 30).

Figure 30: Hospital Utilization, Tulsa County 2015 Map

Hospital Utilization

Tulsa County | 2015

Hospital Utilization Rate per 1,000
- 73.3 - 105.7
- 105.8 - 127.5
- 127.6 - 152.9
- 153.0 - 183.8
- 183.9 - 318.2
- Rate not calculated

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015.* Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Chronic Disease

Diabetes

Definition

This indicator is presented as the percentage of Tulsa County residents who had ever been diagnosed with diabetes in 2013. It is important to note that this includes both type 1 and type 2 diabetes.

Why Is This Indicator Important?

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.[27] Few people receive effective preventative care, which makes DM an immense and complex public health challenge.

How Are We Doing?

In 2013, 10.8 percent of Tulsa County residents reported that they had been diagnosed with diabetes. This was similar to the rate in Oklahoma (11.0 percent) and was slightly higher than the rate in the U.S. (9.7 percent). The rate of diabetes in Tulsa County increased from 2011 – 2013 (Figure 31).[28]

Figure 31: Diabetes by Locality, 2004-2013
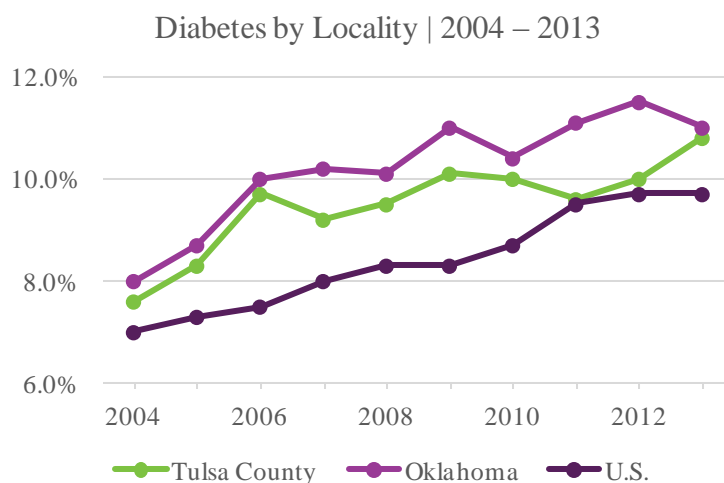
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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 32).[20]

Figure 32: Diabetes by Age and Race/Ethnicity, Tulsa County 2013

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[27].U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2016). *Healthy People 2020: Diabetes.* Retrieved from: http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=8.

[28] Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information. (2016).Diabetes 2013. *Oklahoma Statistics on Health Available for Everyone (OK2SHARE)*. Retrieved from: http://www.health.ok.gov/ok2share.

Diabetes by Age and Race/Ethnicity
Tulsa County | 2013

Values shown: 5.4% (25-34), 6.7% (35-44), 10.7% (45-54), 21.1% (55-64), 20.3% (65+), 10.0% (White, NH), 21.3% (Black, NH), 17.2% (AI/AN, NH), 14.5% (Multi, NH), 3.8% (Hispanic)

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The prevalence of diabetes was variable among income levels, although it was lowest in those individuals who had an income of $75,000 or greater. Additionally, the prevalence of diabetes was highest in individuals who had less than a high school education (Figure 33). [20]

Figure 33: Diabetes by Income and Education, Tulsa County 2013

Diabetes by Income and Education
Tulsa County | 2013

Values shown: 12.3% (<$15,000), 14.7% ($15,000-$24,999), 10.2% ($25,000-$49,999), 11.9% ($50,000-$74,999), 8.3% ($75,000+), 17.3% (less than HS), 9.5% (High School), 8.7% (Some College), 11.8% (College)

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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 Tulsa County was 474.0 with a 95% confidence interval from 466.3 to 481.9 and 2,938 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 Tulsa County trend is falling (Figure 34).[29]

Figure 34: Cancer Incidence Rates for Oklahoma, All Sites, 2008-2012

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[29] Centers for Disease Control and National Cancer Institute. (2016). State Cancer Profiles. Retrieved from: http://statecancerprofiles.cancer.gov.

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Incidence Rates[†] for Oklahoma
All Cancer Sites, 2008 - 2012
All Races (includes Hispanic), Both Sexes, All Ages

Age-Adjusted
Annual Incidence Rate
(Cases per 100,000)

Quantile Interval

■ 354.7 to 413.3
■ 413.3 to 440.5
■ 440.5 to 454.5
■ 454.5 to 470.4
■ 470.4 to 516.3

US (SEER + NPCR)
Rate (95% C.I.)
453.8 (453.5 - 454.1)

Oklahoma
Rate (95% C.I.)
450.8 (447.9 - 453.7)

Notes:
Created by statecancerprofiles.cancer.gov on 05/31/2016 7:36 pm.
Data for the United States does not include data from Nevada.
State Cancer Registries may provide more current or more local data.
Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).
† Incidence rates (cases per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). Rates are for invasive cancer only (except for bladder which is invasive and in situ) or unless otherwise specified. Rates calculated using SEER*Stat. Population counts for denominators are based on Census populations as modified by NCI. The 1969-2013 US Population Data File is used for SEER and NPCR incidence rates.

Source: Courtesy of the Centers for Disease Control and National Cancer Institute. (2016). State Cancer Profiles. Retrieved from: http://statecancerprofiles.cancer.gov.

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 Tulsa 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, 19,139, or 4.3 percent of Tulsa 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 35 and Figure 36). 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 37).[30]

Figure 35: Percent of Adults with Heart Disease, 2011-2012

Report Area	Survey Population (Adults Age 18)	Total Adults with Heart Disease	Percent Adults with Heart Disease
Tulsa County, OK	443,384	19,139	4.3%
Oklahoma	2,825,960	143,494	5.1%
United States	236,406,904	10,407,185	4.4%

Data Source: Centers for Disease Control and Prevention. (2016). *Behavioral Risk Factor Surveillance System.* Additional data analysis by CARES, 2011-12.

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

Percent Adults with Heart Disease

■ **Tulsa County, OK (4.3%)**

■ **Oklahoma (5.1%)**

■ **United States (4.4%)**

Figure 36: Heart Disease (Diagnosed), Percent of Adults Age 18 by County, BRFSS 2011-2012
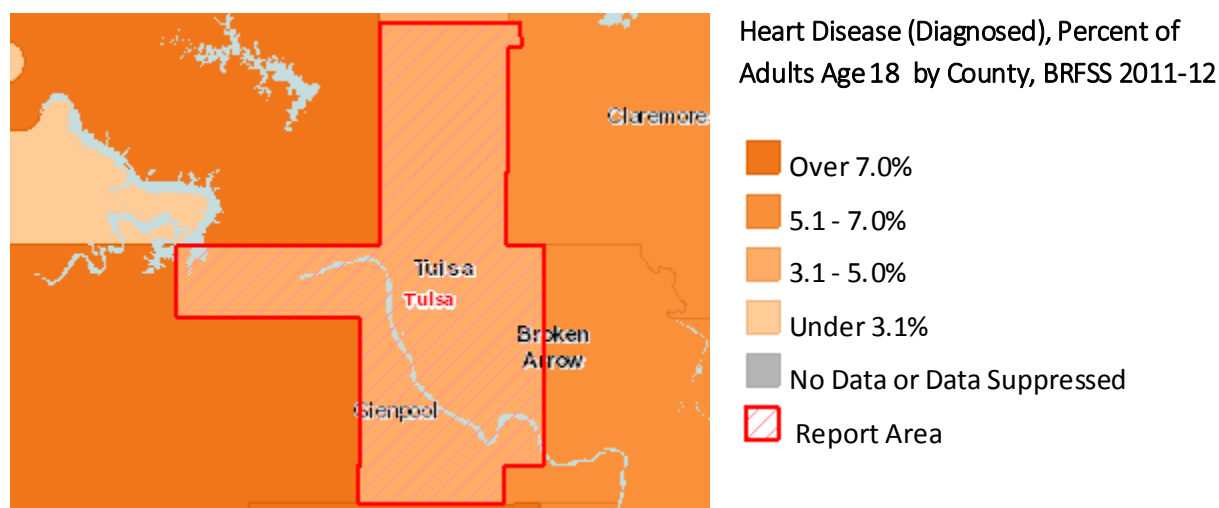
Heart Disease (Diagnosed), Percent of Adults Age 18 by County, BRFSS 2011-12

■ Over 7.0%
■ 5.1 - 7.0%
■ 3.1 - 5.0%
■ Under 3.1%
■ 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.

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[30] Centers for Disease Control and Prevention. (2016). *Behavioral Risk Factor Surveillance System 2011-2012.*

Figure 37: Adults Ever Diagnosed with Heart Disease, Percent by Race / Ethnicity
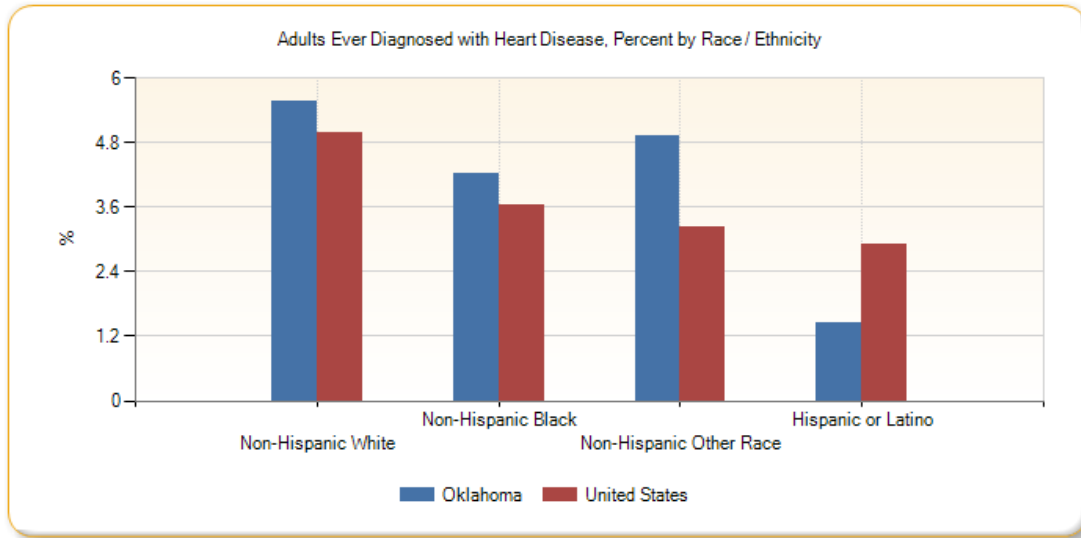
Report Area	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other Race	Hispanic or Latino
Oklahoma	5.56%	4.22%	4.92%	1.44%
United States	4.99%	3.63%	3.23%	2.92%

Data Source: Same as above

Source: Courtesy of Community Commons. Retrieved from: 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, 59,598, or 13.4 percent of Tulsa 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 38 and Figure 39). 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 40).[22]

Figure 38: Percent of Adults with Asthma, 2011-2012

Report Area	Survey Population (Adults Age 18)	Total Adults with Asthma	Percent Adults with Asthma
Tulsa County, OK	444,627	59,598	13.4%
Oklahoma	2,840,351	403,172	14.2%
United States	237,197,465	31,697,608	13.4%

Data Source: Centers for Disease Control and Prevention. (2016). *Behavioral Risk Factor Surveillance System.* Additional data analysis by CARES, 2011-12.

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

Percent Adults with Asthma

0   25%
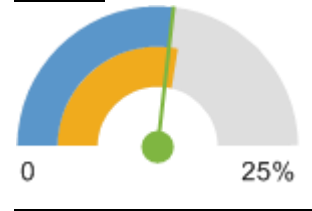
■ **Tulsa County, OK (13.4%)**
■ **Oklahoma (14.2%)**
■ **United States (13.4%)**

Figure 39: Percent of Adults Age 18 Diagnosed with Asthma by County, BRFSS, 2011-2012
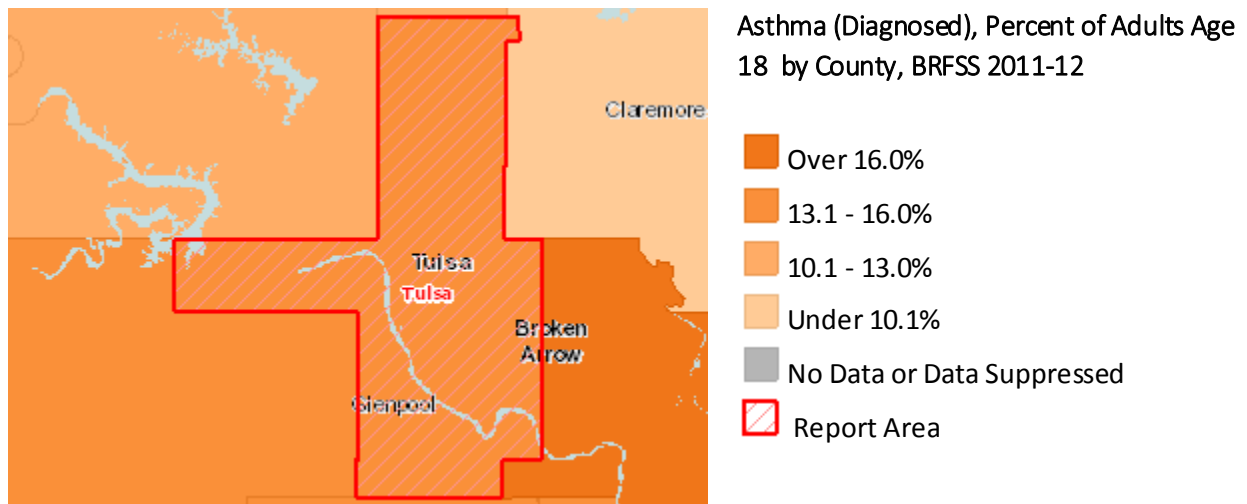
Asthma (Diagnosed), Percent of Adults Age 18 by County, BRFSS 2011-12

■ Over 16.0%
■ 13.1 - 16.0%
■ 10.1 - 13.0%
■ Under 10.1%
■ 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.

Figure 40: Adults Ever Diagnosed with Asthma by Race / Ethnicity, Percent
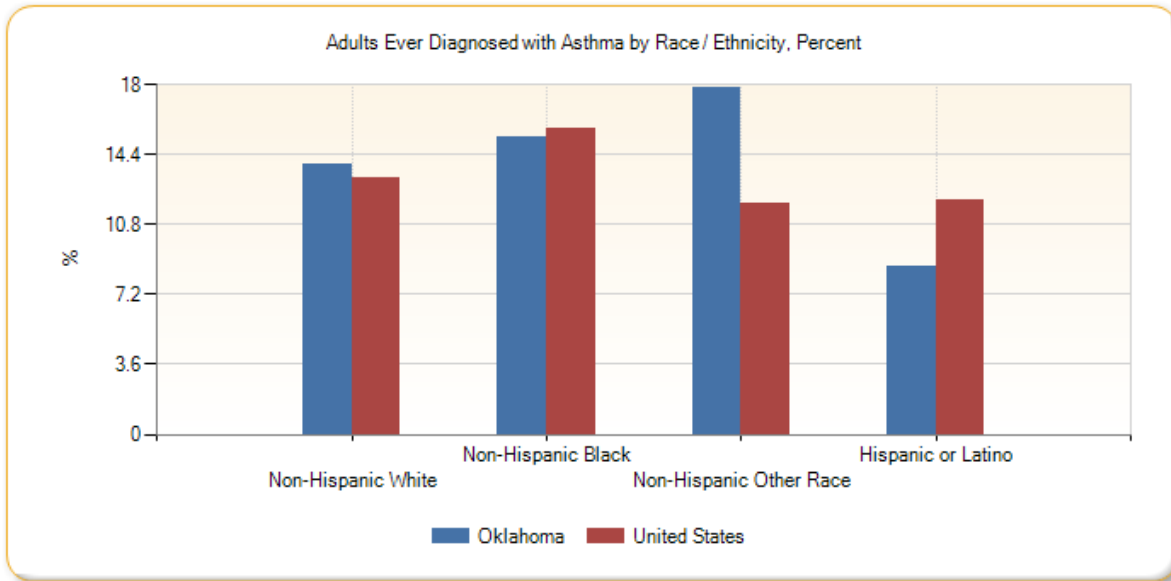
Adults Ever Diagnosed with Asthma by Race / Ethnicity, Percent

Report Area	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other Race	Hispanic or Latino
Oklahoma	13.88%	15.32%	17.85%	8.66%
United States	13.19%	15.75%	11.9%	12.02%

Data Source: Same as above

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

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.

How Are We Doing?

Tulsa County residents reported on average 4.0 mentally unhealthy days in the past 30 days (age-adjusted) in 2014. This number was slightly lower 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 5).[7]

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Table 5: Age-Adjusted Number of Self-Reported Mentally Unhealthy Days by Locality, 2014

Locality	Number of Self-Reported Mentally Unhealthy Days (Age-Adjusted)
United States	2.8
Oklahoma	4.1
Tulsa County	4.0

Data Source: University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

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).[31]

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). [23] SMI includes individuals with diagnoses resulting in serious functional impairment. The value s 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?

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?

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

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[31] Kaiser Family Foundation. (2016). *State Health Facts.* Retrieved from: http://kff.org/other/state-indicator/.

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average U.S. reported percentages (18.3% for any mental illness and 4.2% for a serious mental illness within the past year) (Table 6).[32]

Table 6: Adults Reporting Mental Illness by Locality, 2013- 2014

Location	Adults Reporting Any Mental Illness in the Past Year	Adults Reporting Serious Mental Illness in the Past Year
United States	18.3%	4.2%
Oklahoma	19.0%	4.3%

Data Source: Kaiser Family Foundation. (2016). *State Health Facts*. Retrieved from: http://kff.org/other/state-indicator/.

Mental Health Visits

Definition

This indicator is presented as the number of adults age 18 and older who received outpatient mental health services funded by Medicaid or Oklahoma Department of Mental Health and Substance Abuse Services per 1,000 population. Demographic data is presented for unique clients only, while ZIP code data is presented for all clients. It is important to note that this indicator does not include any mental health visits that were paid for through private insurance, self-pay, Veteran's Affairs, tribal healthcare, etc.

Why Is This Indicator Important?

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[33]. 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.[34]

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.

From 2011 – 2013, there were a total of 44,148 unduplicated individuals who received outpatient mental health services in Tulsa County, which is a rate of 32.8 mental health visits per 1,000 population age 18 and older. When taking multiple visits into account (duplicate clients), there was a rate of 772.3

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[32] Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality. (2016). *National Survey on Drug Use and Health (NSDUH), 2013 and 2014*. Retrieved from: http://www.samhsa.gov/data/population-data-nsduh/reports.

[33] World Health Organization. (2016). *Mental Health: Strengthening Our Response*. Retrieved from: http://www.who.int/mediacentre/factsheets/fs220/en/.

[34] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2016).*Healthy People 2020: Mental Health and Mental Disorders.* Retrieved from: http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=28.

visits per 1,000 population. Females accounted for the majority of mental health visits (60.2 percent). Adults ages 25 − 34 made up one-quarter of mental health visits (Figure 41).[35]

Figure 41: Mental Health Visits by Age, Tulsa County 2011-2013
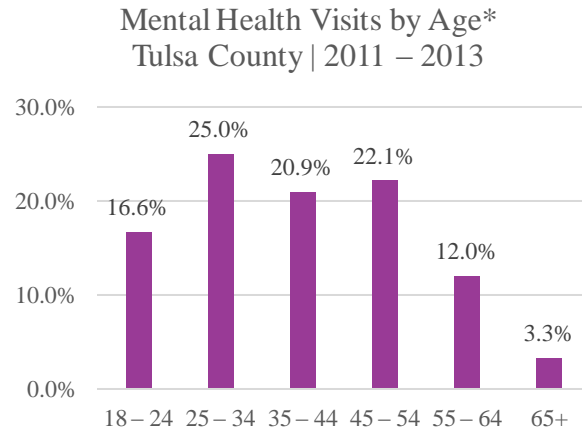
*Graph shows percentage of total cases within each age group; percentages add up to 100%.

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015.* Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

With regard to race, about 70 percent of mental health visits were white individuals (70.2 percent). Non-Hispanics accounted for 97.8 percent of visits (Figure 42).[25]

Figure 42: Mental Health Visits by Race/Ethnicity, Tulsa County 2011-2013
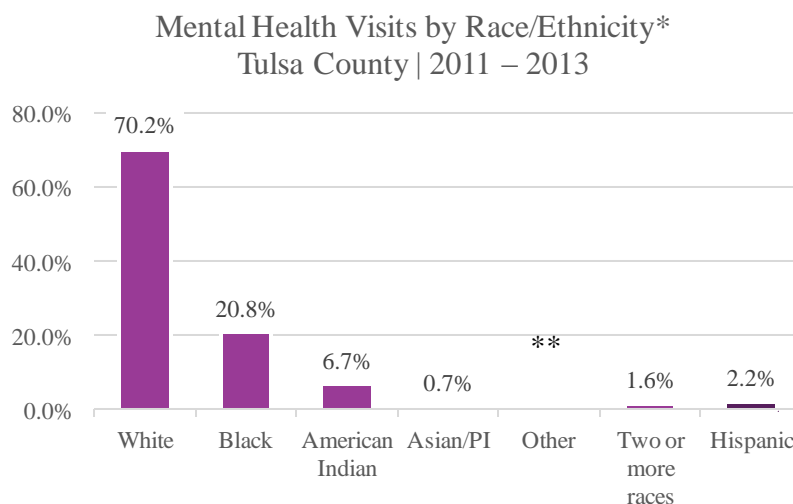
[35] Oklahoma Department of Mental Health and Substance Abuse Services. (2015). *Outpatient Mental Health Services 2011 − 2013.*

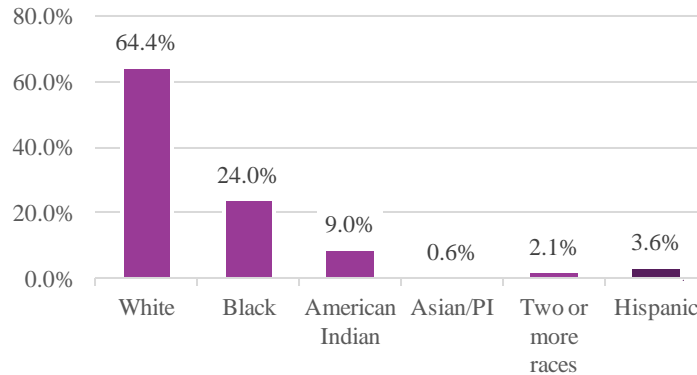2016 Community Health Needs Assessment, St. John Owasso

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP code with the highest number of mental health visits was 74103. [25] It is important to note that these rates include duplicate clients.

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 2011 – 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?

Suicide was the ninth leading cause of death in Tulsa County from 2011 – 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 interventions and support for help seeking.[36] Prevention aims to address all levels of influence (individual, relationship, community, and societal).

How Are We Doing?

From 2011 – 2013, 317 Tulsa County residents committed suicide, which is an age-adjusted death rate of 18.7 deaths per 100,000 individuals. The suicide death rate was highest among whites (20.5 per 100,000). The rate was more than three times higher in non-Hispanics compared to Hispanics (20.2 compared to 5.9) (Figure 43).[17][18] In 2014, males had the highest percentage of suicide deaths (79%), the vast majority by gun. [17][18]

Figure 43: Age-Adjusted Suicide Death Rate by Race/Ethnicity, Tulsa County 2011-2013

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[36] Centers for Disease Control and Prevention, Injury Prevention and Control. (2016). *Suicide: Risk and Protective Factors*. Retrieved from: http://www.cdc.gov/violenceprevention/suicide/riskprotectivefactors.html.
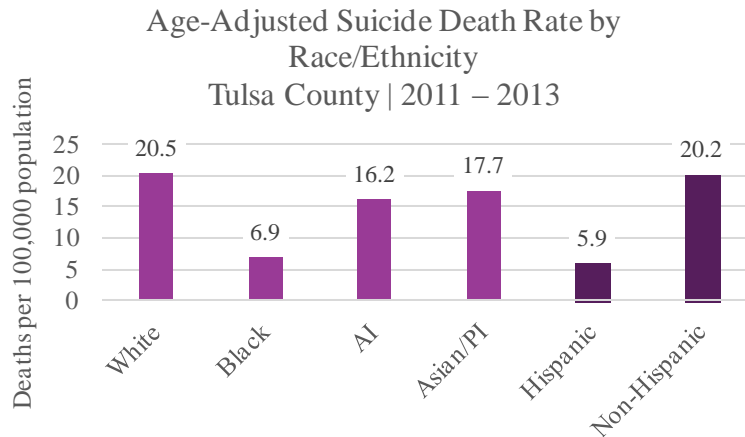
Age-Adjusted Suicide Death Rate by Race/Ethnicity
Tulsa County | 2011 – 2013

Deaths per 100,000 population

- White: 20.5
- Black: 6.9
- AI: 16.2
- Asian/PI: 17.7
- Hispanic: 5.9
- Non-Hispanic: 20.2

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Tulsa County ranks 15th in the nation in suicide and Oklahoma ranks 13th in the nation. In 2013, Tulsa County had a suicide death rate of 16.8, which was lower than that of Oklahoma (17.5) but higher than the United States (12.6) (Figure 44). [17] [18] None of these regions met the Healthy People 2020 goal of 10.2 deaths from suicide per 100,000 population.[24]

Figure 44: Age Adjusted Suicide Death Rate by Locality, 2013
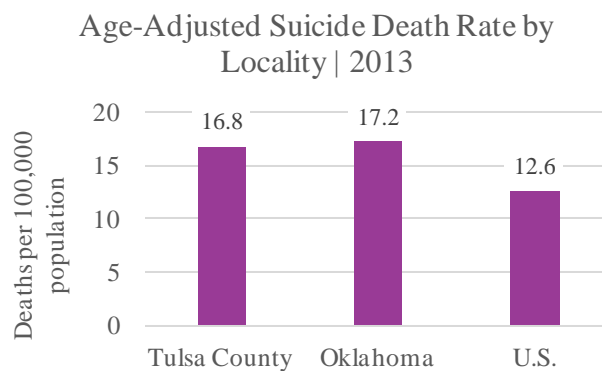
Age-Adjusted Suicide Death Rate by Locality | 2013

Deaths per 100,000 population

- Tulsa County: 16.8
- Oklahoma: 17.2
- U.S.: 12.6

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest overall suicide death rates were 74116 (East Tulsa), 74120 (Downtown), and 74145 (Central Tulsa).

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).[23] The value s 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.

How Are We Doing?

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 7 and Table 8).[24] According to the Oklahoma Department of Mental Health and Substance Abuse Services, Oklahoma ranks 2nd highest in the nation with substance abuse disorders. Oklahoma ranks 43rd in the nation in alcohol and drug abuse according to Mental Health America.

Table 7: 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%

Data Source: Kaiser Family Foundation. (2016). *State Health Facts*. Retrieved from: http://kff.org/other/state-indicator/.

Table 8: 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%

Data Source: Kaiser Family Foundation. (2016). *State Health Facts*. Retrieved from: http://kff.org/other/state-indicator/.

Substance Abuse Visits

Definition

This indicator is presented as the number of adults age 18 and older who received outpatient substance abuse services funded by Medicaid or Oklahoma Department of Mental Health and Substance Abuse Services per 1,000 population. Outpatient services does not include social support groups such as

Alcoholics Anonymous or Narcotics Anonymous, or inpatient rehab services. Demographic data is presented for unique clients only, while ZIP code data is presented for all clients.

Why Is This Indicator Important?

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. Addressing the impact of substance use alone is estimated to cost Americans more than $600 billion each year.[37]

How Are We Doing?

From 2011 – 2013, there were a total of 10,212 unduplicated individuals who received outpatient substance abuse services in Tulsa County, which is a rate of 7.6 substance abuse visits per 1,000 population age 18 and older. When taking multiple visits into account (duplicate clients), there was a rate of 179.5 visits per 1,000 population (Figure 45).[25]

Figure 45: Substance Abuse Visits by Age, Tulsa County 2011-2013
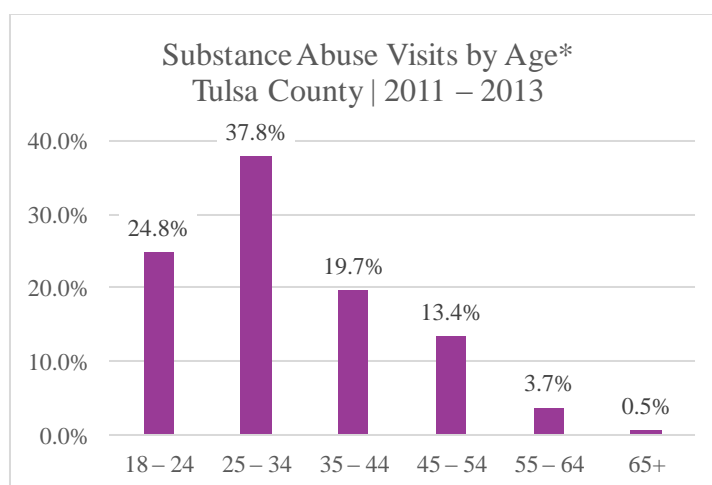
*Graph shows percentage of total cases within each age group; percentages add up to 100%.

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Females accounted for the majority of substance abuse visits (54.7 percent). Adults ages 25 – 34 made up over one-third of substance abuse visits (37.8 percent). With regard to race, almost two-thirds of mental health visits were white individuals (64.4 percent). Non-Hispanics accounted for 96.4 percent of visits (Figure 46). [25]

Figure 46: Substance Abuse Visits by Race/Ethnicity, Tulsa County 2011-2013

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[37]Substance Abuse and Mental Health Services Administration. *Prevention of Substance Abuse and Mental Illness*. Retrieved from: http://www.samhsa.gov/prevention.

Substance Abuse Visits by Race/Ethnicity*
Tulsa County | 2011 – 2013

The ZIP codes with the highest number of substance abuse visits were 74117 and 74050. It is important to note that these rates include duplicate clients. [25]

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 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. [7]

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.[7]

How Are We Doing?

Tulsa County had on an estimated 19 all drug overdose deaths per 100,000 population (361 deaths total) in 2012-2014. This number was slightly lower than the number of all drug overdose death rate per 100,000 population in Oklahoma overall (20) and significantly higher than the number of all drug overdose deaths rate per 100,000 reported among the top U.S. performers, or the counties in the 90th

percentile (8).[7] 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 9).[38]

Table 9: Drug Overdose Deaths by Locality, 2012-2014

Location	Opioid Overdose Death Rate (Age-Adjusted)	All Drug Overdose Death Rate (Age-Adjusted)
United States	**9.0**	**8.0**
Oklahoma	13.0	20.0

Data Source: Kaiser Family Foundation. (2016). *State Health Facts*. Retrieved from: http://kff.org/other/state-indicator/. University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

Maternal and Child Health

Infant Mortality Rate

Definition

Infant mortality is defined as the death of a child in the first year of life. [39] The infant mortality rate is presented as the number of infant deaths per 1,000 live births, over the years $2011 - 2013$.

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.[29][40]

How Are We Doing?

Between 2011 and 2013, 205 Tulsa County infants died before the age of one, which was a rate of 7.4 deaths per 1,000 live births. Black infant mortality was three times higher than that of whites (16.5 deaths per 1,000 live births compared to 5.5 deaths per 1,000 live births). The infant mortality rate was slightly higher among non-Hispanics than Hispanics (7.5 compared to 6.7) (Figure 47).[17]

Figure 47: Infant Mortality Rate by Race/Ethnicity of Mother, Tulsa County 2011-2013

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[38] Kaiser Family Foundation analysis of Centers for Disease Control and Prevention (CDC), National Center for Health Statistics. (2016). *Multiple Cause of Death 1999-2014 on CDC WONDER Online Database, 2015.* Retrieved from: http://wonder.cdc.gov/mcd-icd10.html.

[39] Centers for Disease Control and Prevention (2016). Reproductive Health: Infant Mortality. Retrieved from: http://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm

[40] Kochanek KD, Murphy SL, Xu JQ, Arias E. (2014). Mortality in the United States, 2013. *NCHS Data Brief, no 178*. Hyattsville, MD: National Center for Health Statistics.
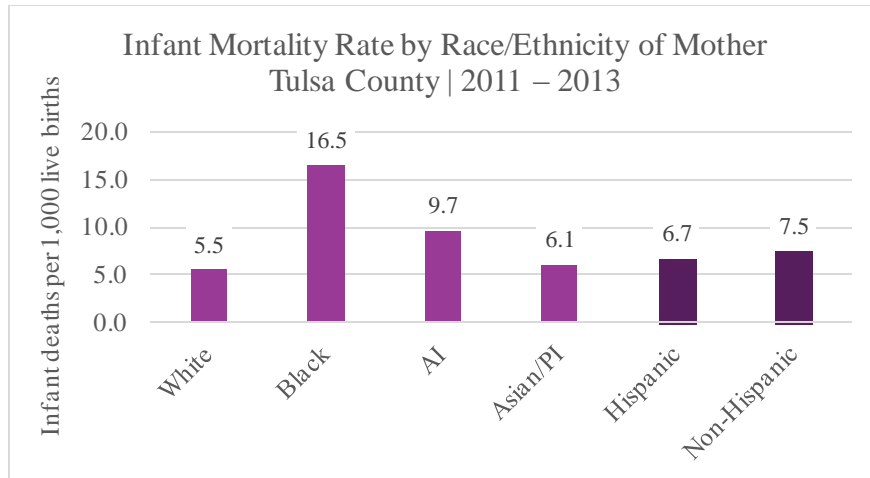
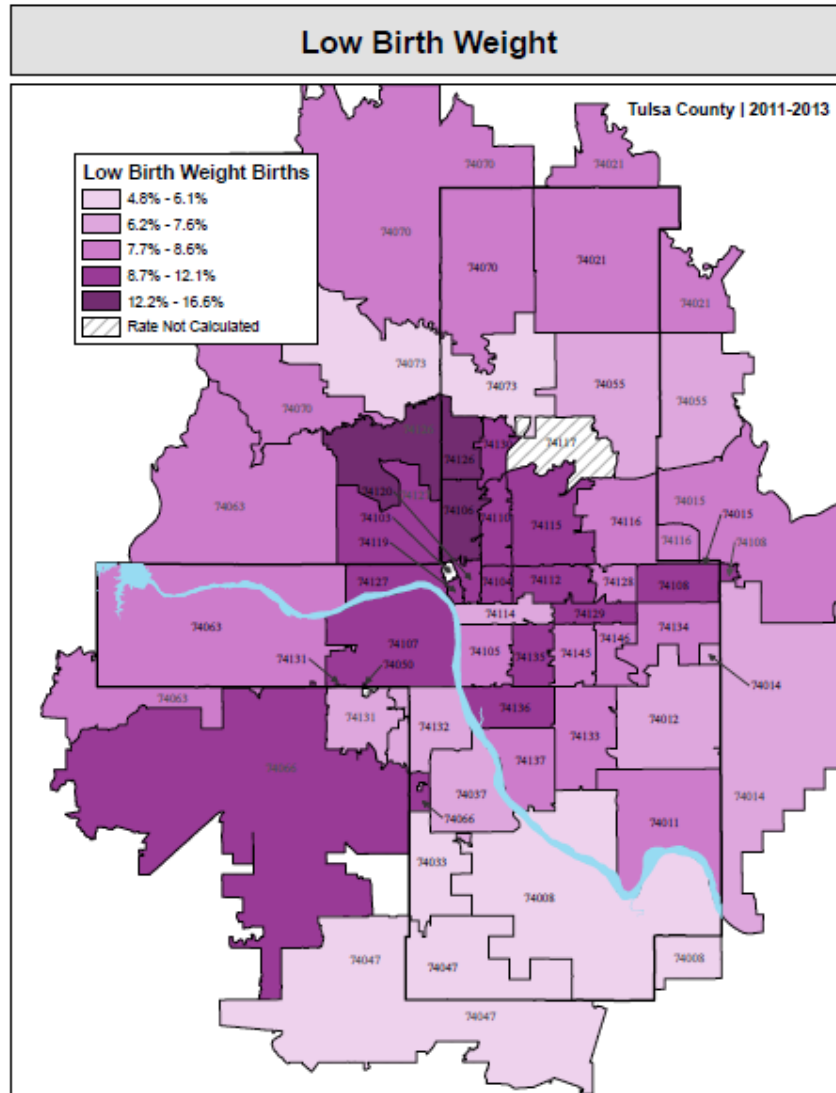Infant Mortality Rate by Race/Ethnicity of Mother
Tulsa County | 2011 – 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The infant mortality rate in Tulsa County in 2013 was 7.2 deaths per 1,000 live births. This was higher than Oklahoma (6.8) and the U.S. (6.0) (Figure 48). [17] 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.[41]

Figure 48: Infant Mortality Rate by Locality, 2013
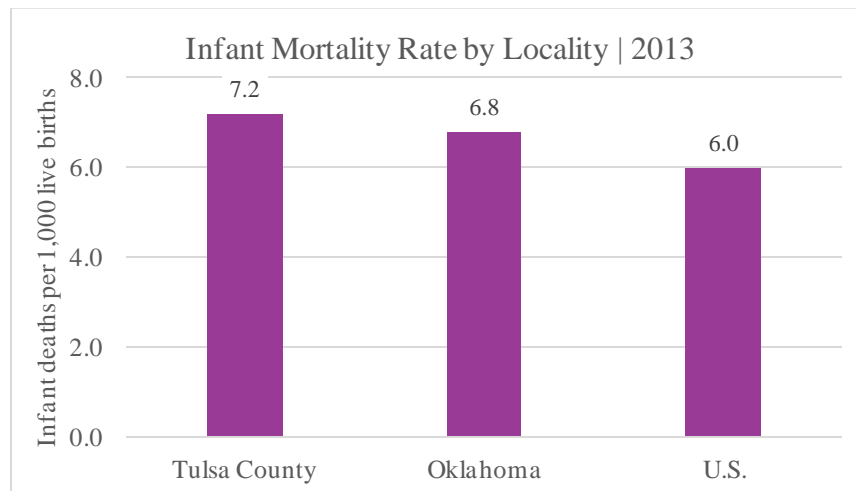
Infant Mortality Rate by Locality | 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest rates of infant mortality were 74108, 74135, and 74127. [17]

Low Birth Weight

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[41] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2015). *Healthy People 2020: Maternal and Child Health*. Retrieved from: http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=26.

2016 Community Health Needs Assessment, St. John Owasso

Definition

Low birth weight is defined as infants who weigh less than 2,500 grams (5 pounds, 8 ounces) at birth. Very low birth weight is defined as infants, who weigh less than 1,500 grams (3 pounds, 4 ounces).[42] This indicator is expressed as a percentage of all births to Tulsa County mothers, over the years 2011 – 2013.

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.[43]

How Are We Doing?

Overall, 9.1 percent of Tulsa County infants were born weighing less than 2,500 grams from 2011 – 2013. The percentage of very low birth weight (less than 1,500 grams) was 1.5 percent. Racial disparity was evident with black mothers having almost twice the percentage of low birth weight infants as white mothers (15.3 percent compared to 8.1 percent). The percentage of low birth weight infants was higher among non-Hispanic mothers (9.5 percent) (Figure 49).[17]

Figure 49: Low Birth Weight Births by Race/Ethnicity of Mother, Tulsa County 2011-2013
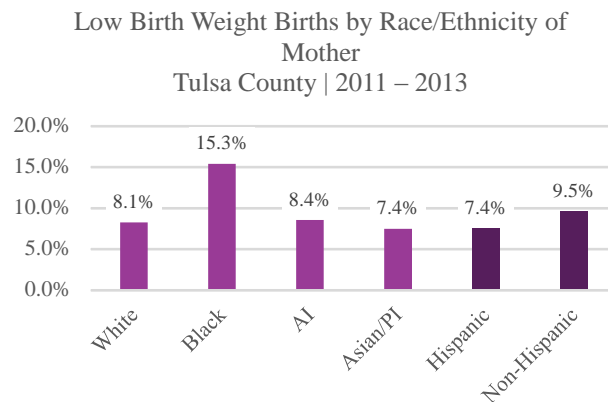
Low Birth Weight Births by Race/Ethnicity of Mother
Tulsa County | 2011 – 2013

White 8.1%, Black 15.3%, AI 8.4%, Asian/PI 7.4%, Hispanic 7.4%, Non-Hispanic 9.5%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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[42]. Centers for Disease Control and Prevention, Pediatric and Pregnancy Nutrition Surveillance System. (2015). *Is Low Birth Weight a Health Problem?* Retrieved from: http://www.cdc.gov/pednss/how_to/interpret_data/case_studies/low_birthweight/what.htm.

[43] Centers for Disease Control and Prevention. (2015). *Low Birth Weight and the Environment*. Retrieved from: http://ephtracking.cdc.gov/showRbLBWGrowthRetardationEnv.action.

In 2013, 8.6 percent of infants in Tulsa County weighed less than 2,500 grams at birth. [17] This was higher than both Oklahoma and the United States (8.1 percent and 8.0 percent, respectively) (Figure 50). [44] None of these regions met the Healthy People 2020 target of 7.8 percent. [30]
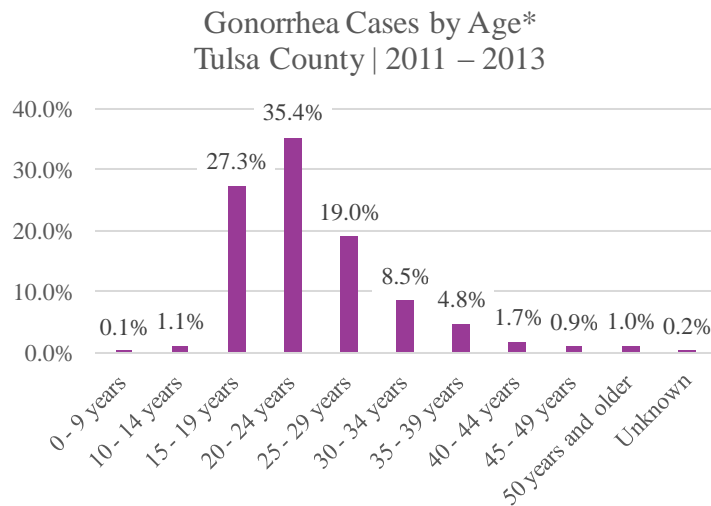
Figure 50: Low Birth Weight Births by Locality, 2013
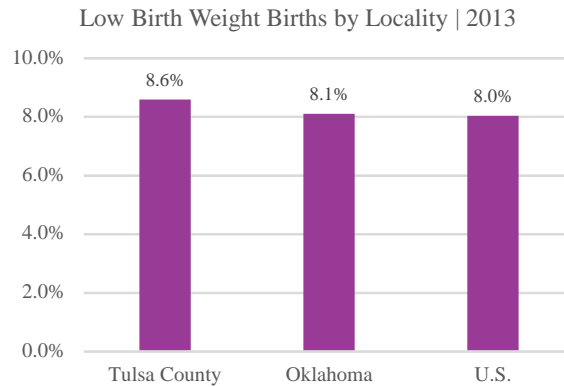
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Additionally, 1.3 percent of infants in Tulsa County weighed less 1,500 grams at birth in 2013. [17] This was very similar to both Oklahoma and the United States (1.4 percent each) (Figure 51). [33] All of these regions met the Healthy People 2020 target of 1.4 percent. [30]

Figure 51: Very Low Birth Weight Births by Locality, 2013
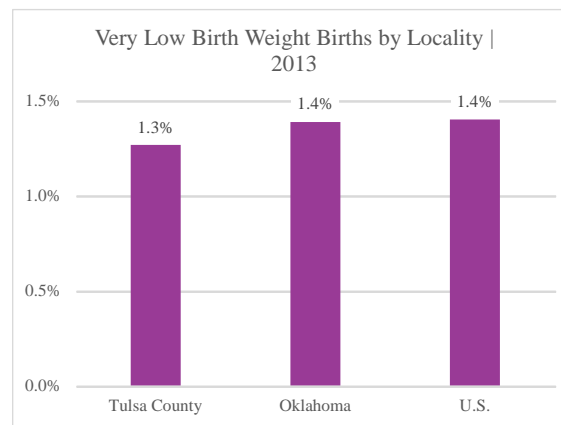
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest rates of low birth weight infants were 74106 and 74126 (Figure 52). [17]

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[44] Martin JA, Hamilton BE, Osterman MJK, et al. (2015). Births: Final Data for 2013. *National Vital Statistics Reports (64)*1. Hyattsville, MD: National Center for Health Statistics.

Figure 52: Low Birth Weight, Tulsa County 2011-2013 Map

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?

Chlamydia is a sexually transmitted disease (STD) caused by the bacterium *Chlamydia trachomatis*. It is the most commonly reported STD in Tulsa 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.[45]

How Are We Doing?

In 2013, there were 3,395 new cases of Chlamydia reported in Tulsa County, which is a rate of 545.5 cases per 100,000 population.[46] The Chlamydia incidence rate in Tulsa County was higher than the rate in Oklahoma (474.7 cases per 100,000 population) and in the United States (446.6 cases per 100,000 population) (Figure 53).[47]

Figure 53: Chlamydia Incidence Rates by Locality, 2004-2013
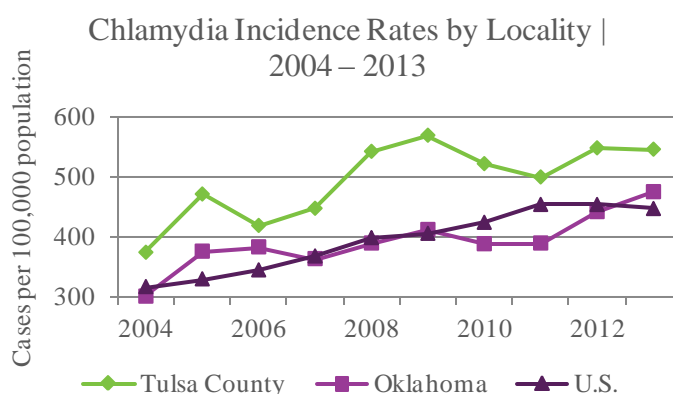
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

From 2011 – 2013, the greatest percentage of new Chlamydia cases were reported in adults ages 20 – 24 years (39.3 percent). The majority of cases were female (74.1 percent). With regard to race/ethnicity, the greatest percentage of new Chlamydia cases were black (38.6 percent) (Figure 54).[35]

Figure 54: Chlamydia Cases by Age, Tulsa County 2011-2013

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[45] Oklahoma State Department of Health. (2013). *Chlamydia Fact Sheet 2013*. Retrieved from: http://www.ok.gov/health2/documents/Chlamydia%20DX%202013.pdf
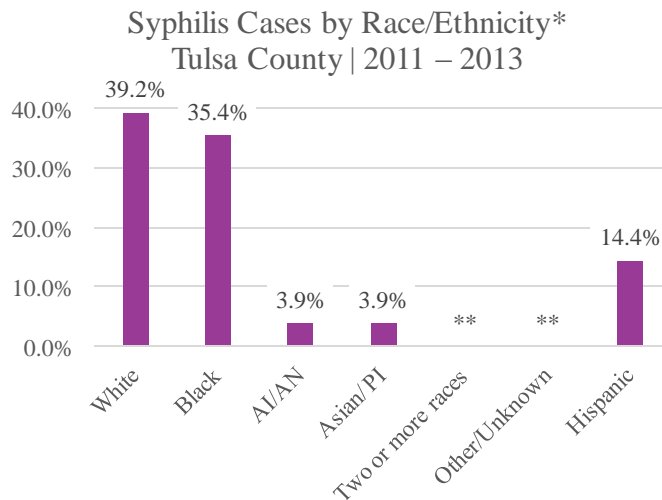[46] Oklahoma State Department of Health. (2016). *HIV/STD Service*.
[47] Centers for Disease Control and Prevention. (2016). *STD Surveillance.*
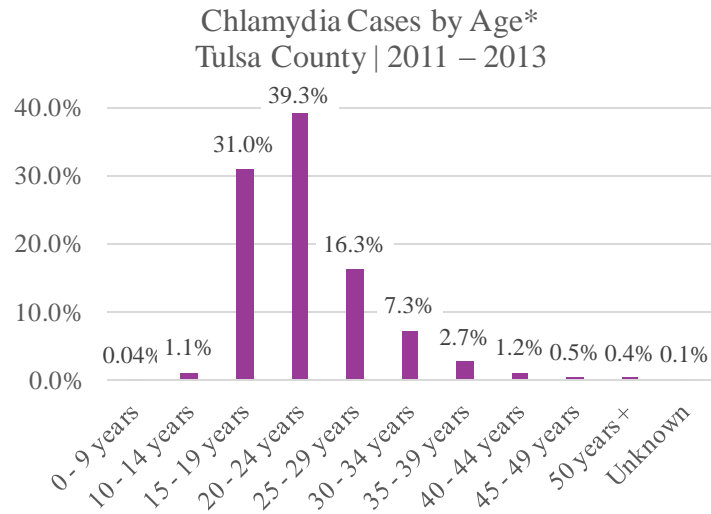
Chlamydia Cases by Age*
Tulsa County | 2011 − 2013

*Graph shows percentage of total cases within each age group; percentages add up to 100%.

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest rates of new Chlamydia infection were 74106 and 74126. [35]

Gonorrhea

Definition

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

Why Is This Indicator Important?

Gonorrhea is a sexually transmitted disease (STD) caused by Neisseria gonorrhoeae. It is the second most commonly reported STD in Tulsa 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.[48]

How Are We Doing?

In 2013, Tulsa County reported an incidence rate of 200.5 cases of gonorrhea per 100,000 population (1,248 total cases). This was an increase from the rate in 2012.[35] In 2013, Tulsa County's gonorrhea incidence rate was higher than Oklahoma (137.7 cases per 100,000 population) and the United States (106.1 cases per 100,000 population) (Figure 55).[36]

Figure 55: Gonorrhea Incidence Rate by Locality, 2004-2013

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[48]Oklahoma State Department of Health. (2013). *Gonorrhea Fact Sheet 2013*. Retrieved from: http://www.ok.gov/health2/documents/Gonorrhea%20DX%202013.pdf.
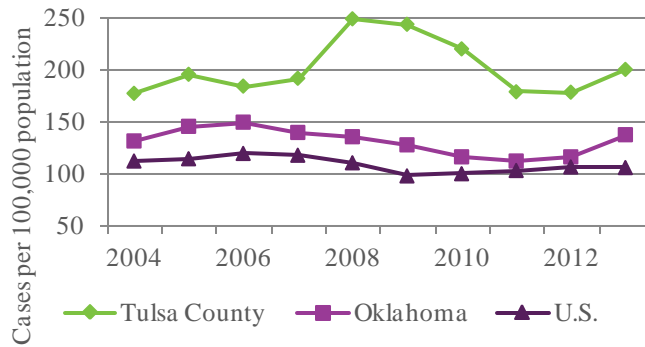
Gonorrhea Incidence Rate by Locality |
2004 – 2013

— Tulsa County — Oklahoma — U.S.

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

From 2011 – 2013, the greatest percentage of new gonorrhea cases were reported in adults ages 20 – 24 years (35.4 percent) (Figure 56). The majority of cases were female (60.1 percent). With regard to race/ethnicity, the majority of new gonorrhea cases were black (57.5 percent) (Figure 57). [35]

Figure 56: Gonorrhea Cases by Age, Tulsa County 2011-2013

Gonorrhea Cases by Age*
Tulsa County | 2011 – 2013

*Graph shows percentage of total cases within each age group; percentages add up to 100%
.

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 57: Gonorrhea Cases by Race/Ethnicity, Tulsa County 2011-2013

Gonorrhea Cases by Race/Ethnicity
Tulsa County | 2011 − 2013

Legend:
- White — 23.8%
- Black — 57.5%
- AI/AN — 5.3%
- Asian/PI — 0.4%
- Two or more races — 2.8%
- Other/Unknown — 5.6%
- Hispanic — 4.6%
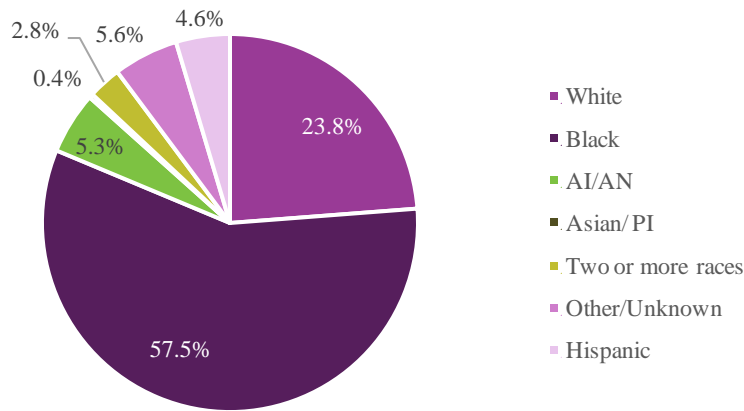
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest rates of new gonorrhea infection were 74106, 74126, and 74103. [35]

Syphilis

Definition

This indicator is presented as the number of newly reported cases of syphilis per 100,000 population. ZIP code and demographic data is reported for syphilis, all stages, while locality comparisons are reported for primary and secondary syphilis only.

Why Is This Indicator Important?

Syphilis is a sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. Syphilis is transmitted by direct contact with a syphilis sore or lesion (called a chancre). The primary stage of syphilis is generally characterized by a chancre that appears about 2 − 6 weeks after exposure. These sores typically disappear after a few weeks without treatment. However, without treatment, the infection can progress to the secondary stage, which generally starts with a rash anywhere on the body. Again, the symptoms will go away on their own, but without treatment infection can progress to latent and late stages of syphilis. Late stages of syphilis may result in damage to internal organs, muscle movement difficulty, paralysis, blindness, and dementia. This damage may cause death. Pregnant females who are infected may have miscarriages, premature births, stillbirths, or death of their newborns. Without treatment, infected babies can die or having lasting complications such as cataracts, deafness, or seizures.[49][50]

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[49] Oklahoma State Department of Health. (2013). *Syphilis Fact Sheet 2013*. Retrieved from: http://www.ok.gov/health2/documents/Primary%20and%20Secondary%20Syphilis%202013.pdf

[50] Syphilis- CDC Fact Sheet. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov/std/syphilis/stdfact-syphilis-detailed.htm.

How Are We Doing?

In 2013, there were 22 new cases of primary or secondary syphilis reported in Tulsa County, which is a rate of 3.5 cases per 100,000 population.[35] The syphilis incidence rate in Tulsa County was higher than the rate in Oklahoma (3.1 cases per 100,000 population) but lower than the United States (5.5 cases per 100,000 population).[36]

From 2011 – 2013, the greatest percentage of new syphilis cases (all stages) were reported in adults ages 25 – 29 years (19.9 percent) (Figure 58). The majority of cases were male (80.1 percent). With regard to race/ethnicity, the greatest percentage were white (39.2 percent) (Figure 59). Almost half of the cases reported from 2011 – 2013 were men who have sex with men (MSM) (Figure 60). [35]

Figure 58: Syphilis Cases by Age, Tulsa County 2011-2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 59: Syphilis Cases by Race/Ethnicity, Tulsa County 2011-2013

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Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 60: Syphilis Cases by Reported Risk, Tulsa County 2011-2013

Syphilis Cases by Reported Risk
Tulsa County | 2011 − 2013

Bisexual, 5.0%
No Reported Risk, 16.0%
Heterosexual, 30.4%
MSM, 48.6%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP code with the highest rates of new syphilis infections (all stages) was 74106. [35]

HIV/AIDS

Definition

This indicator is presented as the number of newly reported cases of HIV infection or AIDS per 100,000 population.

Why Is This Indicator Important?

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.[51] 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

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[51] Oklahoma State Department of Health. (2013). *Newly Diagnosed HIV/AIDS Fact Sheet 2013*. Retrieved from: http://www.ok.gov/health2/documents/Newly%20Diagnosed%20HIV%202013.pdf

infected. Certain racial/ethnic groups, such as blacks, American Indians/Alaskan Natives, Asians and Hispanics/Latinos, are disproportionately affected compared to the general population. [52]

How Are We Doing?

 In 2013, there were 115 new cases of HIV/AIDS reported in Tulsa County, which is a rate of 18.5 cases per 100,000 population. [35] The HIV/AIDS incidence rate in Tulsa County was higher than the rate in Oklahoma (11.3 cases per 100,000 population). [36]

 From 2011 – 2013, the greatest percentage of new HIV/AIDS cases were reported in adults ages 20 – 29 years (39.6 percent) (Figure 61). The majority of cases were male (85.2 percent). With regard to race, the majority of new HIV/AIDS cases were white (50.6 percent) (Figure 62). Over half of the cases reported from 2011 – 2013 were men who have sex with men (MSM) (Figure 63). [35]

Figure 61: HIV/AIDS Cases by Age, Tulsa County 2011-2013
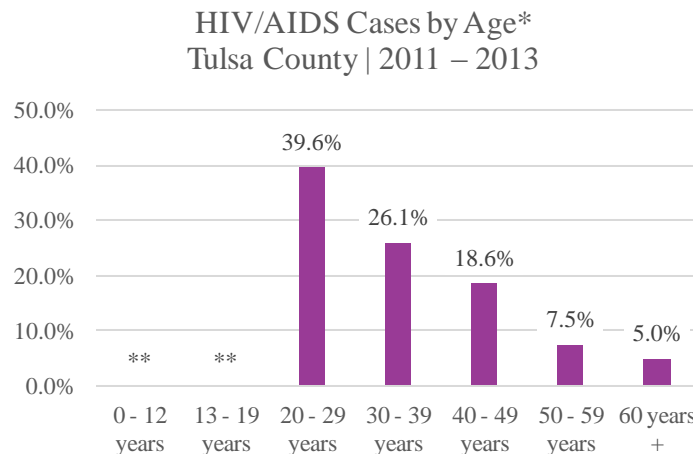
*Graph shows percentage of total cases within each category; percentages add up to 100%.
**Data suppressed due to confidentiality concerns

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 62: HIV/AIDS Cases by Race/Ethnicity, Tulsa County 2011-2013

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[52] Centers for Disease Control and Prevention. (2016). HIV Basics. Retrieved from: http://www.cdc.gov/hiv/basics/index.html.
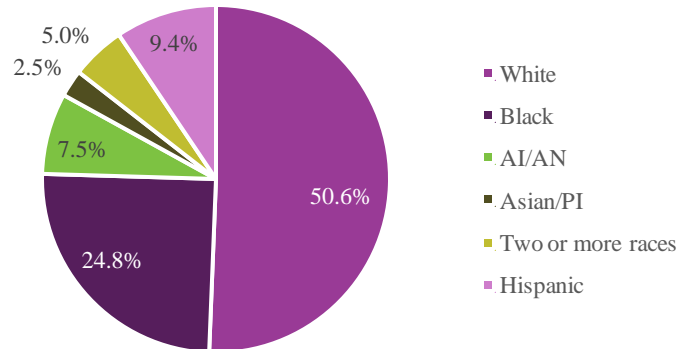
HIV/AIDS Cases by Race/Ethnicity
Tulsa County | 2011 − 2013

- White
- Black
- AI/AN
- Asian/PI
- Two or more races
- Hispanic

50.6%
24.8%
7.5%
2.5%
5.0%
9.4%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 63: HIV/AIDS Cases by Risk Factor, Tulsa County 2011-2013

HIV/AIDS Cases by Risk Factor
Tulsa County | 2011 − 2013
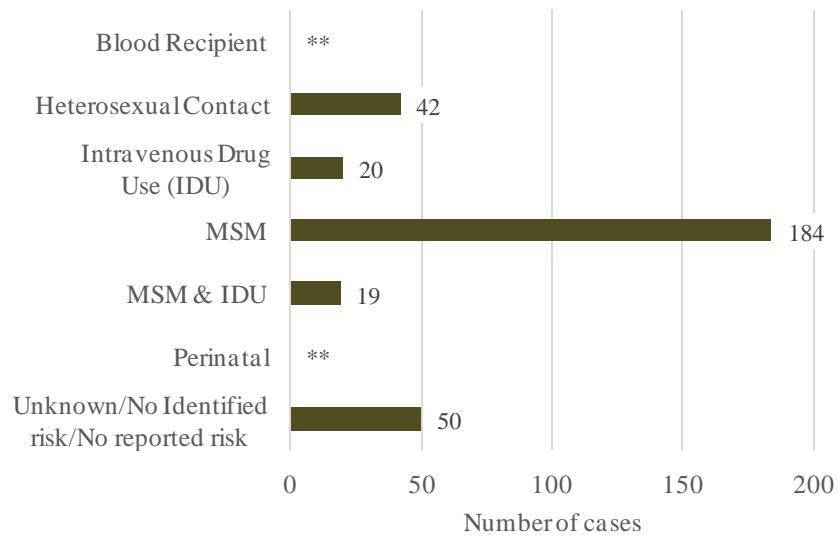
Risk Factor	Number of cases
Blood Recipient	**
Heterosexual Contact	42
Intravenous Drug Use (IDU)	20
MSM	184
MSM & IDU	19
Perinatal	**
Unknown/No Identified risk/No reported risk	50

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest rates of new HIV/AIDS infection were 74135, 74105, and 74104. [35]

Tuberculosis

Definition

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

Why Is This Indicator Important?

Tuberculosis (TB) is a disease caused by a bacterium called Mycobacterium tuberculosis. It usually affects the lungs, but can also attack other parts of the body such as the kidneys, spine, and brain. It is spread through the air when someone with TB of the lungs or throat coughs, sneezes, speaks, or sings. Individuals with TB are treated by taking several drugs for 6 − 12 months. It is very important to take the drugs exactly as prescribed, in order to lower the risk of becoming sick again or developing resistance to the drugs. Worldwide, over nine million individuals become sick with TB each year.[53]

How Are We Doing?

In 2013, the incidence rate of tuberculosis in Tulsa County was 2.0 new cases per 100,000 population. This was slightly higher than the rate in Oklahoma (1.9 new cases per 100,000).[54] These regions did not meet the Healthy People 2020 goal of 1.0 new cases of tuberculosis per 100,000 individuals.[55] The incidence of TB in Tulsa County decreased in 2013 after increasing from 2010 − 2012 (Figure 64).[43]

Figure 64: Tuberculosis Incidence Rate by Locality, 2004-2013
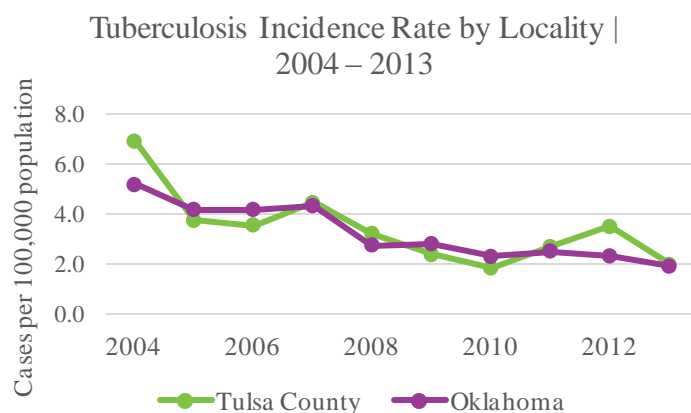
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

From 2011 − 2013, the greatest percentage of new TB cases were reported in adults ages 55 − 64 (22.4 percent) (Figure 65). The majority of cases were male (57.1 percent). Additionally, the largest percentage were Asian (36.7 percent) and non-Hispanic (81.6 percent) (Figure 66).[43]

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[53] Centers for Disease Control and Prevention. (2016). *Tuberculosis Fact Sheet*. Retrieved from: http://www.cdc.gov/tb/publications/factsheets/general/tb.htm.

[54] Oklahoma State Department of Health. (2015). *Tuberculosis Case Rates, 2009 − 2014*. Retrieved from: http://www.ok.gov/health2/documents/TB%20Race%20Age%20Special%20Population%20Numbers%20Report%20 2003-2011%20Rates.pdf.

[55]. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2016). *Healthy People 2020: Immunization and Infectious Disease*. Retrieved from: http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=23.

Figure 65: Tuberculosis Cases by Age, Tulsa County, 2011-2013
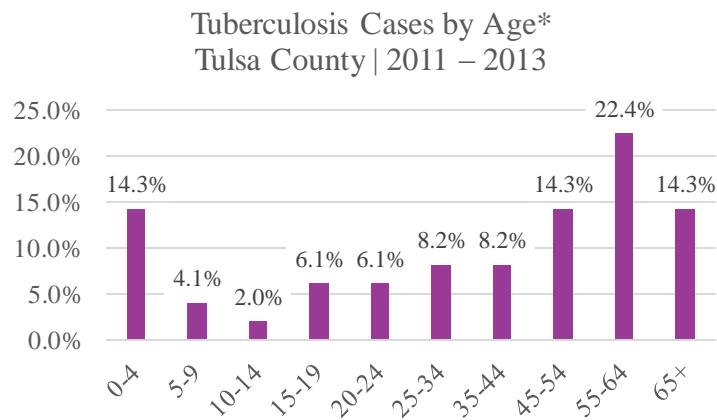
Tuberculosis Cases by Age*
Tulsa County | 2011 − 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 66: Tuberculosis Cases by Race, Tulsa County 2011-2013
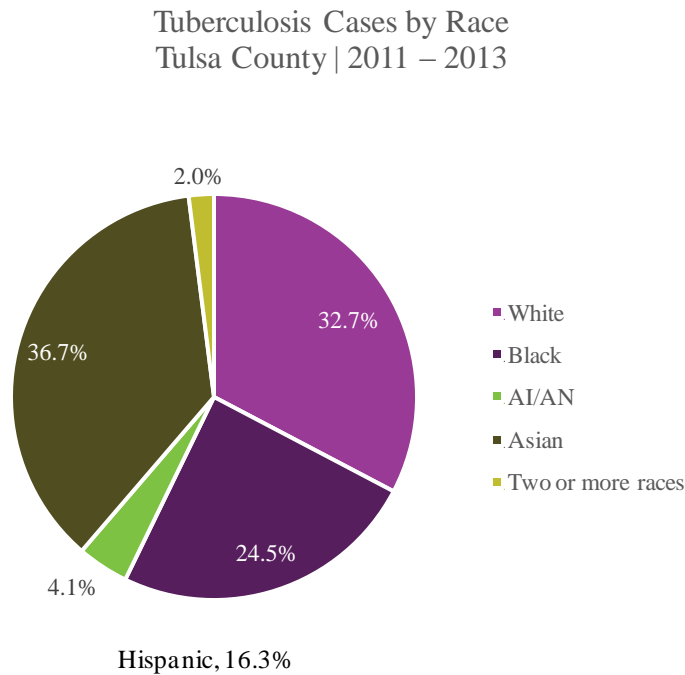
Tuberculosis Cases by Race
Tulsa County | 2011 − 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Because of confidentiality concerns due to a small number of cases in each ZIP code, cases were not mapped.

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, 77,211, or 17.6 percent of Tulsa County adults aged 18 and older reported having poor dental health. This was lower than percentage of adults with poor dental health Oklahoma (21.8%), but was the higher than the percentage of adults with poor dental health in the U.S. (15.7%) (Figure 67 and Figure 68). 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%). Hispanics/Latinos had the lowest percentages of asthma than other races/ethnicities (8.36%) (Figure 69).[22]

Figure 67: Percent Adults with Poor Dental Health, 2006-2010

Report Area	Total Population (Age 18)	Total Adults with Poor Dental Health	Percent Adults with Poor Dental Health
Tulsa County, OK	439,019	77,211	17.6%
Oklahoma	2,793,624	608,605	21.8%
United States	235,375,690	36,842,620	15.7%

Percent Adults with Poor Dental Health

■ **Tulsa County, OK (17.6%)**
■ **Oklahoma (21.8%)**
■ **United States (15.7%)**

Data Source: Centers for Disease Control and Prevention. (2016). *Behavioral Risk Factor Surveillance System.* Additional data analysis by CARES, 2006-2010.

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

Figure 68: Adults Age 18 without a Dental Exam in the Past 12 Months, Percent by County, BRFSS 2006-2010
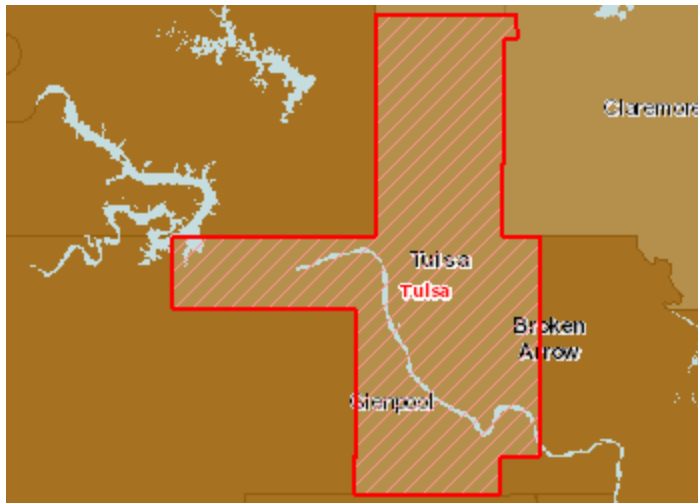
Adults Age 18 Without Dental Exam in Past 12 Months, Percent by County, BRFSS 2006-10
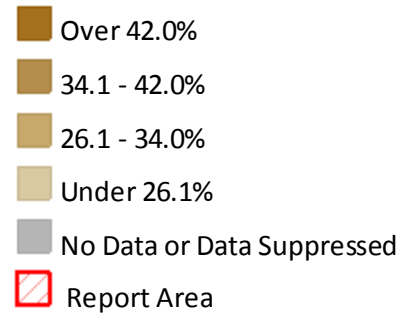
■ Over 42.0%
■ 34.1 - 42.0%
■ 26.1 - 34.0%
□ Under 26.1%
■ No Data or Data Suppressed
▨ Report Area

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

Figure 69: Adults with Poor Dental Health (6 Teeth Removed), Percent by Race/Ethnicity
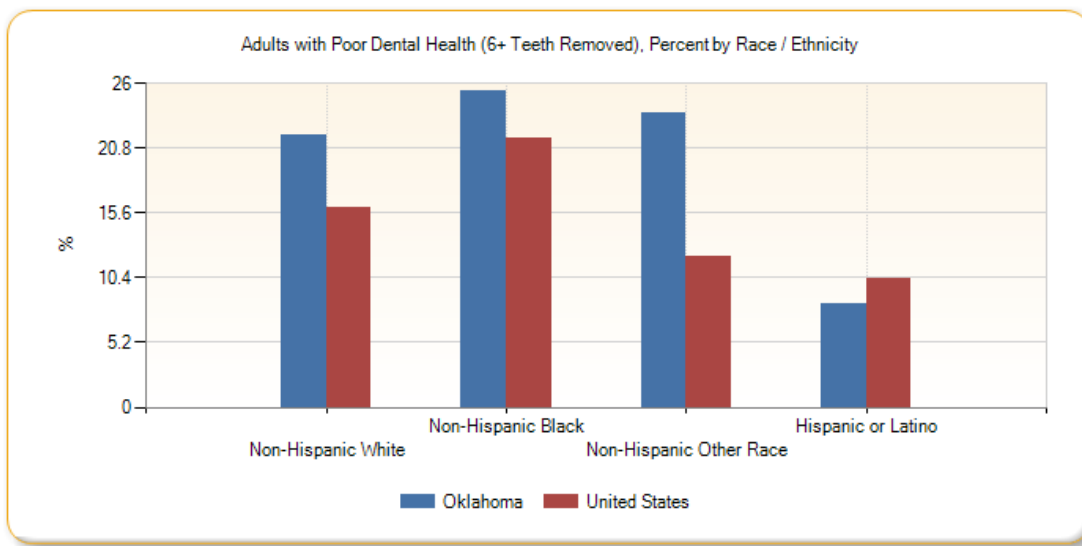
Report Area	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other Race	Hispanic or Latino
Oklahoma	21.86%	25.44%	23.66%	8.3%
United States	16.04%	21.6%	12.11%	10.31%

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

HEALTH FACTORS

2016 Community Health Needs Assessment, St. John Owasso

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, Tulsa County ranked 17th out of 77 counties in Oklahoma in regard to health factors (Figure 70 and Table 10). [7]

Figure 70: 2016 Oklahoma Health Factors Map
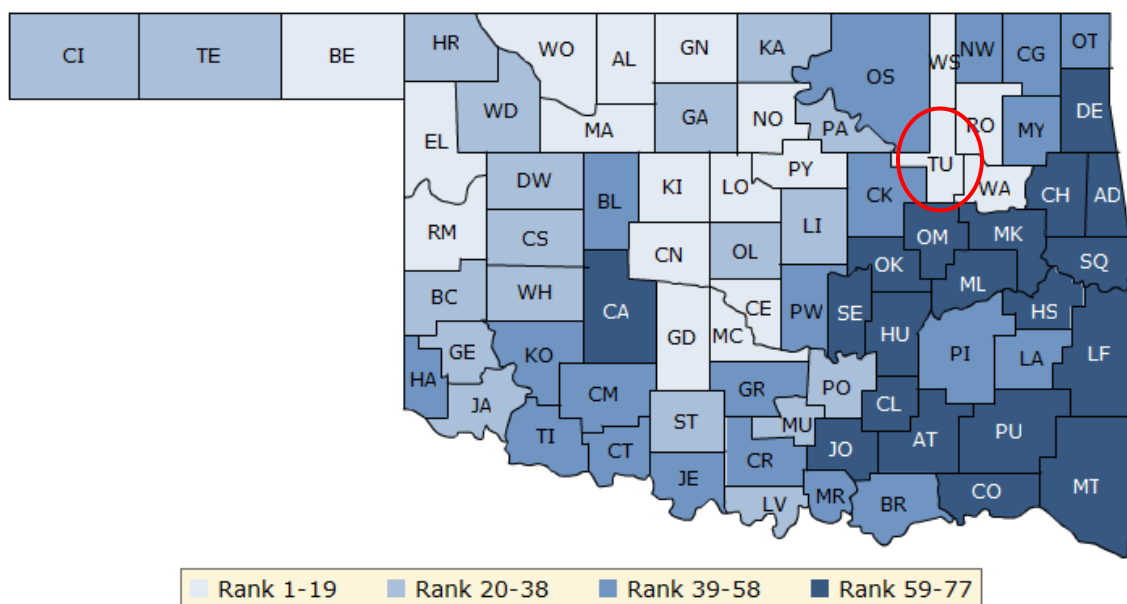
Source: Courtesy of University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

Table 10: 2016 Oklahoma Health Factors Table

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County	Rank	County	Rank	County	Rank	County	Rank
Adair	77	Delaware	60	Lincoln	37	Pittsburg	53
Alfalfa	15	Dewey	21	Logan	16	Pontotoc	34
Atoka	75	Ellis	10	Love	27	Pottawatomie	43
Beaver	11	Garfield	20	Major	9	Pushmataha	69
Beckham	25	Garvin	50	Marshall	48	Roger Mills	13
Blaine	40	Grady	19	Mayes	51	Rogers	6
Bryan	54	Grant	3	McClain	5	Seminole	72
Caddo	62	Greer	33	McCurtain	67	Sequoyah	74
Canadian	1	Harmon	57	McIntosh	65	Stephens	28
Carter	46	Harper	22	Murray	35	Texas	36
Cherokee	59	Haskell	63	Muskogee	61	Tillman	52
Choctaw	76	Hughes	73	Noble	12	Tulsa	17
Cimarron	30	Jackson	26	Nowata	41	Wagoner	14
Cleveland	4	Jefferson	58	Okfuskee	66	Washington	8
Coal	68	Johnston	71	Oklahoma	23	Washita	31
Comanche	39	Kay	38	Okmulgee	64	Woods	7
Cotton	45	Kingfisher	2	Osage	49	Woodward	29
Craig	42	Kiowa	47	Ottawa	56		
Creek	44	Latimer	55	Pawnee	32		
Custer	24	Le Flore	70	Payne	18		

Source: Courtesy of University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

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.

Median Household Income

Definition
The median household income is the mid-point in the range of reported household incomes. Half of households reported incomes above the median income and half of households reported incomes below the median income. Per capita income is the average income of each individual. These measures are both based on 2013 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.[56]

How Are We Doing?

The estimated median household income for Tulsa County in 2013 was $48,181. There was clear racial inequality among median household incomes, with white and Asian households having a median income of greater than $50,000, while black households had a median income of less than $30,000 (Figure 71). Hispanic households had a median income of $37,775 (Figure 71).[13]

Figure 71: Median Household Income in the Past 12 Months by Race/Ethnicity, Tulsa County 2013
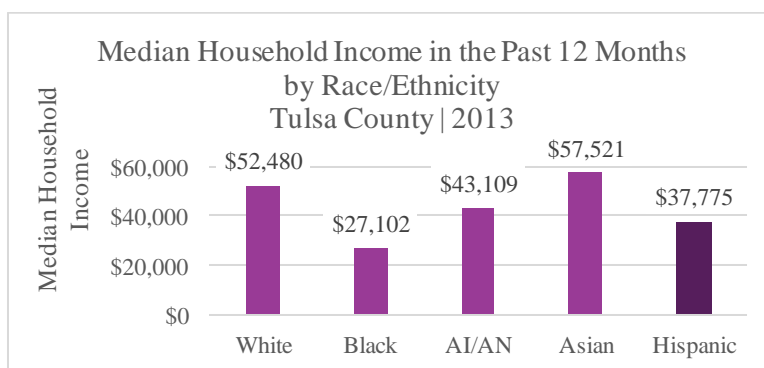
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Additionally, median household incomes increased with age until the 65 and older age group (Figure 72).[13] This is most likely attributable to lower incomes after retirement.

Figure 72: Median Household Income in the Past 12 Months by Age, Tulsa County 2013

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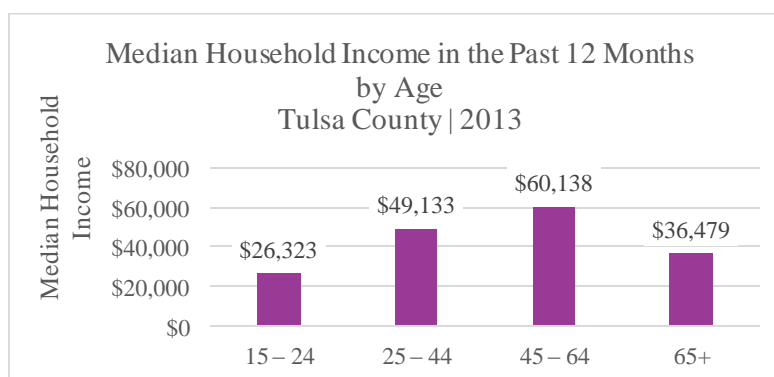
[56] Centers for Disease Control and Prevention, National Center for Health Statistics. (2015). *Healthy People 2010*: *General Data Issues*. Retrieved from: http://www.cdc.gov/nchs/data/hpdata2010/hp2010_general_data_issues.pdf.

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Another measure of economic health, per capita income, showed that Tulsa County had a higher per capita income than Oklahoma in 2013 ($27,676 compared to $24,208). It was slightly lower than the per capita income of the United States as a whole ($28,155) (Figure 73). [13]

Figure 73: Per Capita Income in the Past 12 Months by Locality, 2013
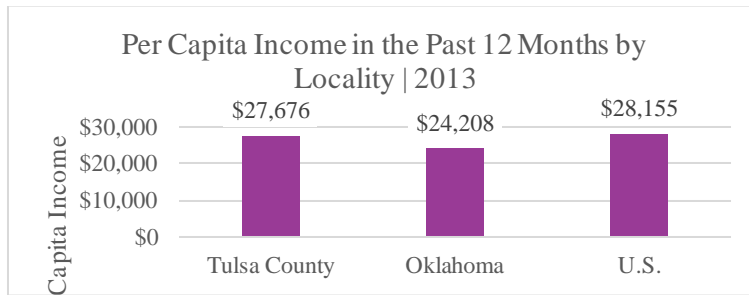
The ZIP codes with the highest median household incomes were 74037, 74137, 74011, 74014, 74055, 74114, 74008, and 74021 (Figure 74). [13]

Figure 74: Median Household Income, Tulsa County Map
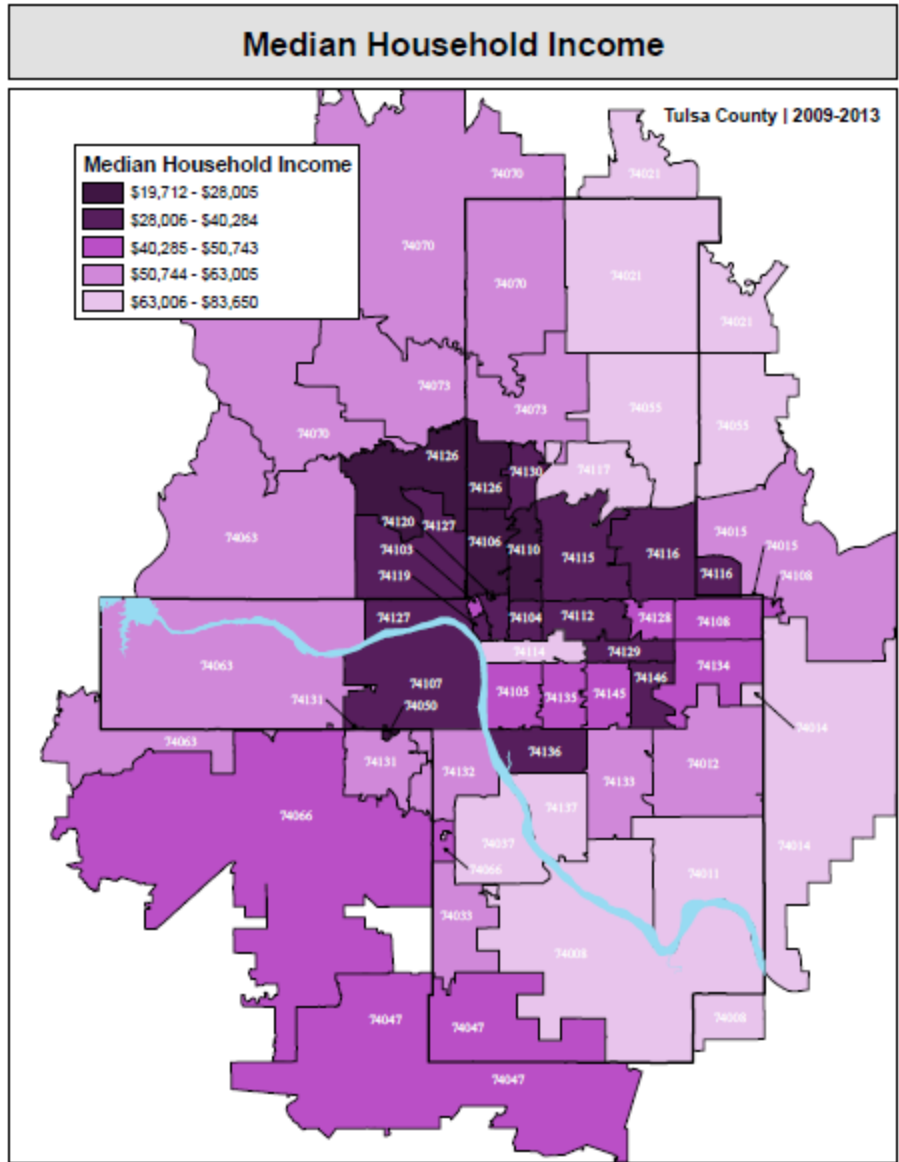
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Population below Poverty

Definition

   This indicator is the percentage of persons living below the federal poverty level in the past 12 months and is taken from the 2013 American Community Survey. The Census Bureau determines poverty levels using a set of income thresholds that vary by family size and composition. In 2013, the Census Bureau designated that the weighted average poverty threshold for a family of four was $23,824.[57]

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[57] U.S. Census Bureau. (2013). *Poverty Thresholds 2013*. Retrieved from: https://www.census.gov/hhes/www/poverty/index.html

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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.[58]

How Are We Doing?

   Estimates for 2013 stated that the poverty rate for Tulsa County was 15.9 percent. Racial disparity among those living in poverty was evident in Tulsa County. The 2013 American Community Survey showed that more than 30 percent of the black population lived below the poverty line, which was almost three times as great as the percentage of the white population. About twenty-eight percent of the Hispanic population lived below the poverty level (Figure 75). [13]

Figure 75: Population below Poverty in the Past 12 Months by Race/Ethnicity, Tulsa County 2013
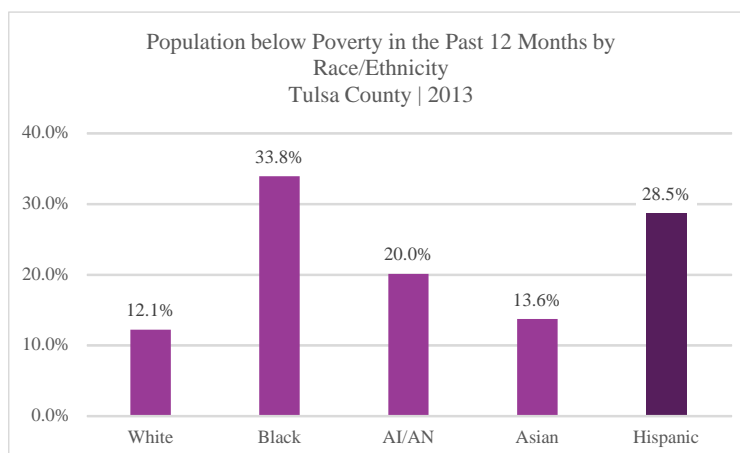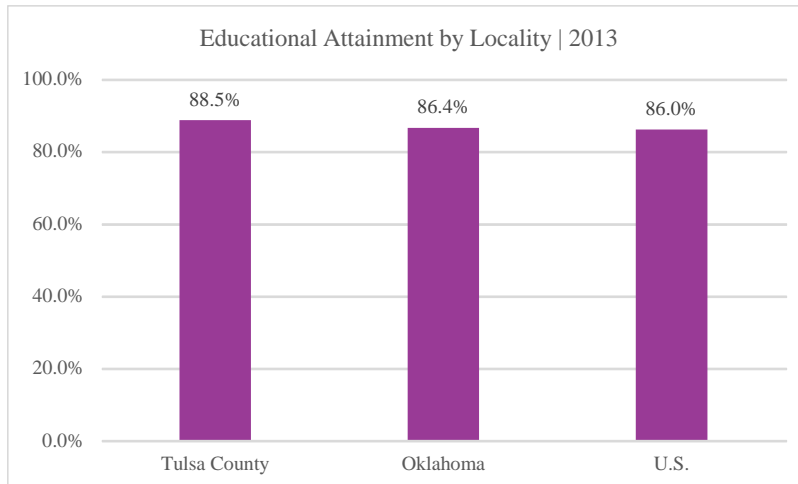

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

   With regard to age, the proportion of the population in poverty decreased as age increased. A total of 23.8 percent of Tulsa County residents under the age of 18 lived below the poverty level (Figure 76).[13]

Figure 76: Population below Poverty in Past 12 Months by Age, Tulsa County 2013

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[58] United States Government Accountability Office. (2007). *Poverty in America: Economic Research Shows Adverse Impacts on Health Status and Other Social Conditions as well as the Economic Growth Rate*. Retrieved from: http://www.gao.gov/new.items/d07344.pdf.
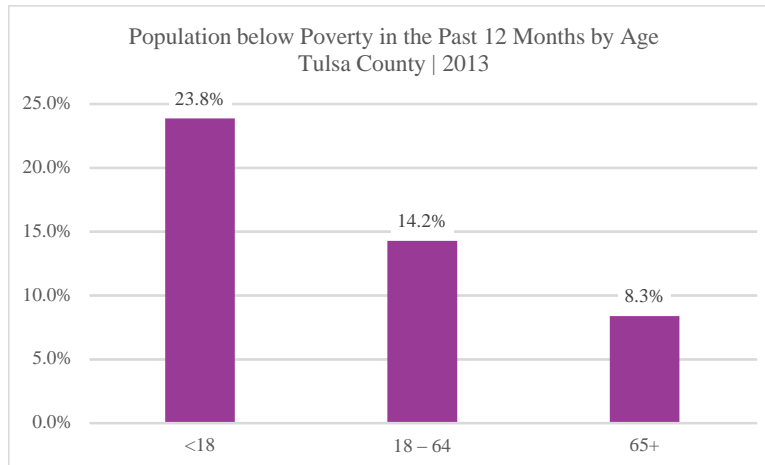
Population below Poverty in the Past 12 Months by Age
Tulsa County | 2013

In 2013, the estimated poverty rate in Tulsa County (15.9 percent) was lower than Oklahoma (16.9 percent) but above the national rate (15.4 percent) (Figure 77).[13]

Figure 77: Population below Poverty in the Past 12 Months by Locality, 2013
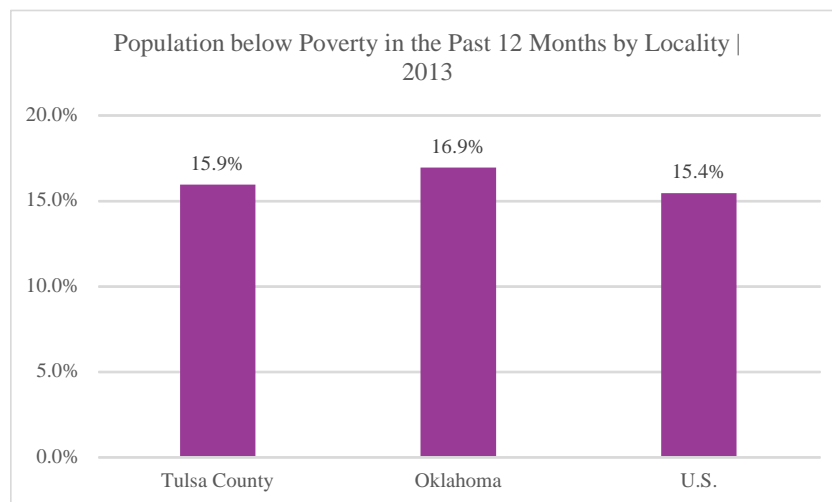
Population below Poverty in the Past 12 Months by Locality | 2013

The ZIP codes with the highest percentages of residents living in poverty were primarily concentrated in north and downtown Tulsa (Figure 78).[13]

Figure 78: Population below Poverty, Tulsa County 2009-2013 Map
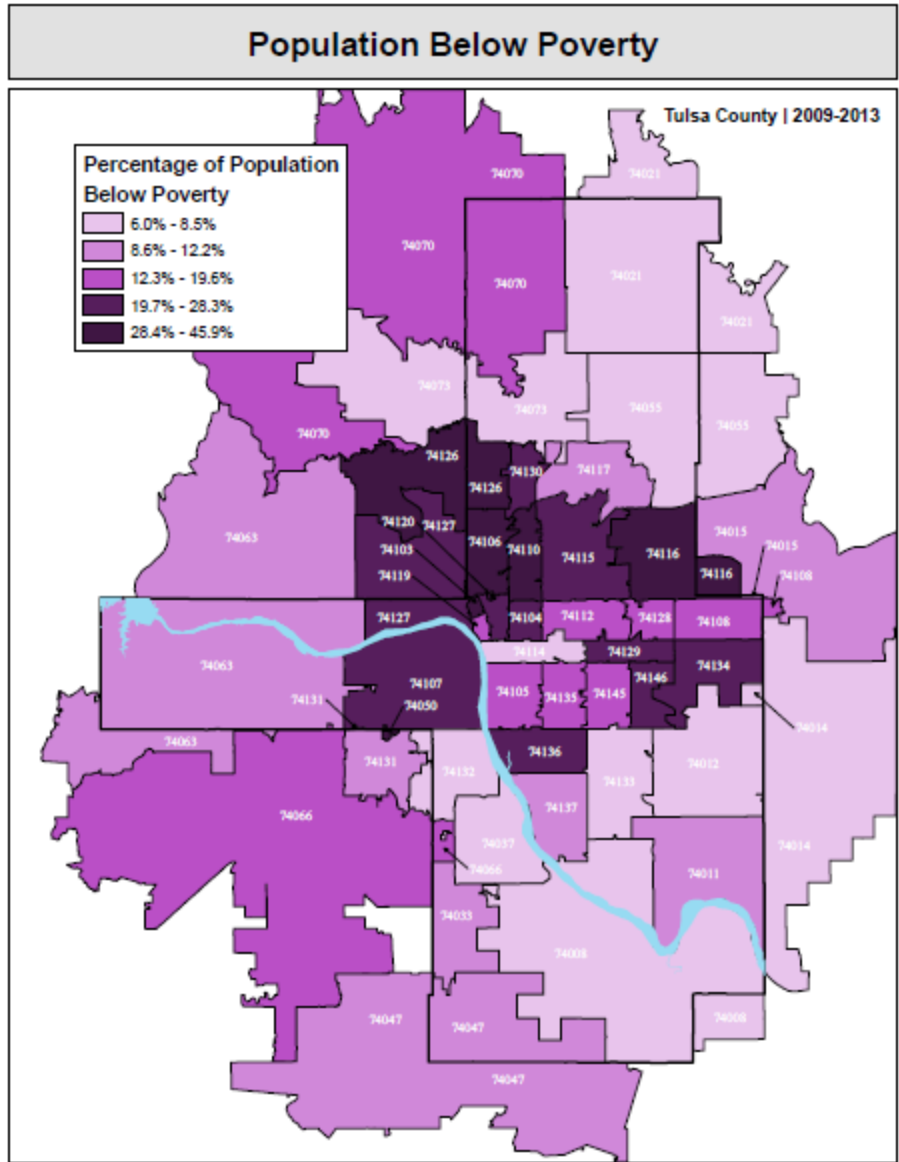
Population Below Poverty

Tulsa County | 2009-2013

Percentage of Population Below Poverty

- 6.0% - 8.5%
- 8.6% - 12.2%
- 12.3% - 19.6%
- 19.7% - 28.3%
- 28.4% - 45.9%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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 2013 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.[59]

How Are We Doing?

Tulsa County was estimated to have an overall educational attainment of 88.5 percent in 2013, according to the American Community Survey.[13] This was highest in whites (90.3 percent), followed by blacks (87.9 percent). About 57 percent of Hispanics had a high school education or higher. With regard to gender, females had a higher educational attainment (89.3 percent) as compared to males (87.7 percent) (Figure 79).

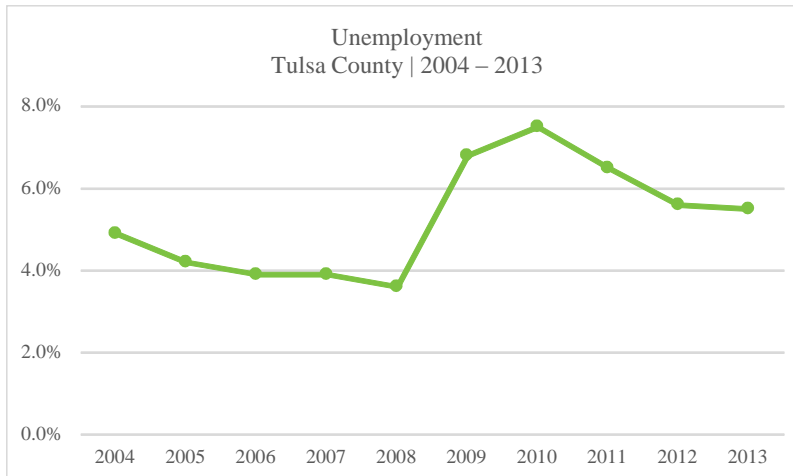**Figure 79: Educational Attainment by Race/Ethnicity, Tulsa County 2013**
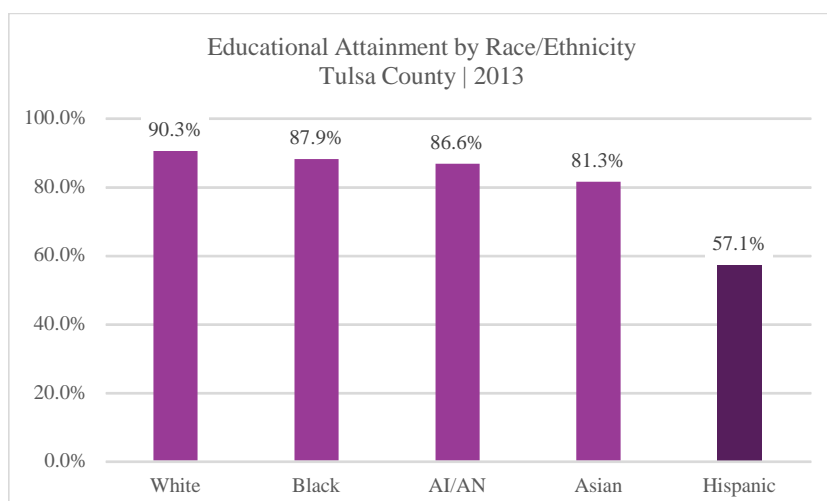
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The 2013 estimates stated that the educational attainment for Tulsa County was 88.5 percent, which was higher than both Oklahoma (86.4 percent) and the U.S. (86.0 percent) (Figure 80). [13]

Figure 80: Educational Attainment by Locality, 2013

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[59] Telfair, J. & Shelton, T. (2012). Educational Attainment as a Social Determinant of Health. *North Carolina Medical Journal* 73(5). Retrieved from: https://libres.uncg.edu/ir/uncg/f/J_Telfair_Educational_2012.pdf.

Educational Attainment by Locality | 2013

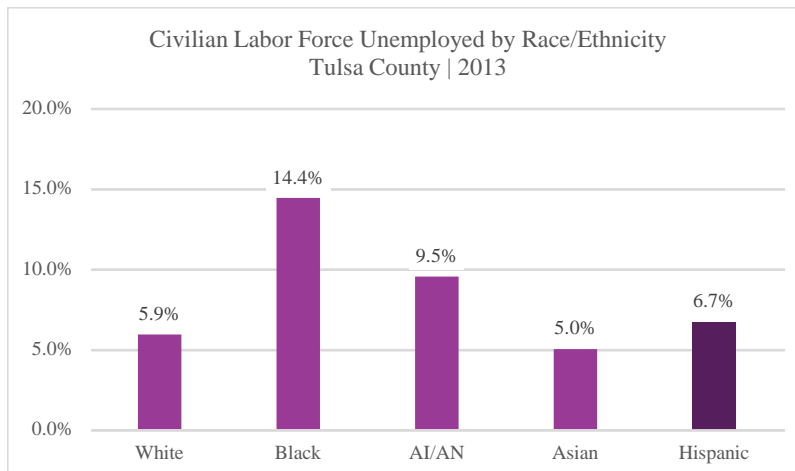| Tulsa County	Oklahoma	U.S.
88.5%	86.4%	86.0%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest educational attainment are concentrated in the midtown area and south Tulsa, including the south suburbs (Figure 81).[13]

Figure 81: Educational Attainment, Tulsa County 2009-2013 Map
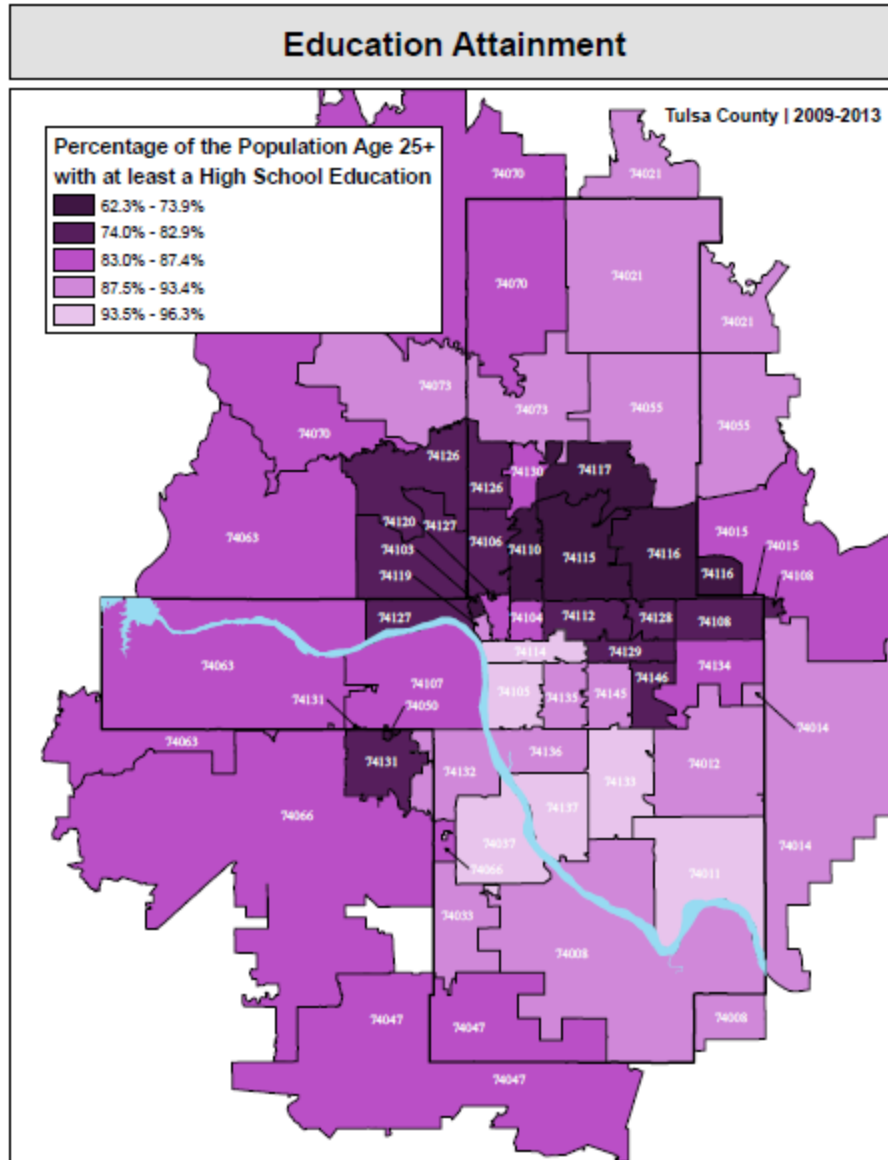
Education Attainment

Tulsa County | 2009-2013

Percentage of the Population Age 25+ with at least a High School Education
- 62.3% - 73.9%
- 74.0% - 82.9%
- 83.0% - 87.4%
- 87.5% - 93.4%
- 93.5% - 96.3%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Unemployment Rate

Definition

This indicator is presented as the percentage of the total civilian labor force (age 16 and older) that was unemployed in 2013, based on American Community Survey 5-year estimates (zip code and race/ethnicity data). Regional data (Tulsa County, Oklahoma, and U.S.) are 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?

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.[60]

How Are We Doing?

The overall unemployment rate in 2013 for Tulsa County was 5.5 percent. This was slightly higher than Oklahoma (5.4 percent) but significantly lower than the United States (7.4 percent) (Figure 82). The unemployment rate in Tulsa County has been decreasing each year since peaking in 2010 (Figure 83).[61]

Figure 82: Unemployment by Locality, 2013
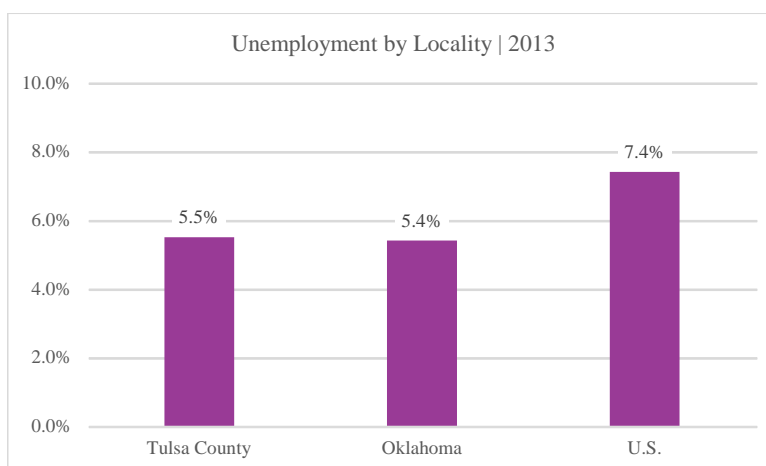
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 83: Unemployment, Tulsa County 2004-2013

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[60] Centers for Disease Control and Prevention, National Center for Health Statistics. (2015*). Health and Access to Care among Employed and Unemployed Adults: United States, 2009–2010*. Retrieved from: http://www.cdc.gov/nchs/data/databriefs/db83.htm.

[61] U.S. Department of Labor, Bureau of Labor Statistics (BLS). (2015). *Local Area Unemployment Statistics (LAUS)*. Retrieved from: www.bls.gov.

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Unemployment
Tulsa County | 2004 – 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

   With regard to race, blacks in Tulsa County had an unemployment rate that was more than two times that of whites (14.4 percent compared to 5.9 percent). Asians had the lowest unemployment rate with 5.0 percent. The unemployment rate of Hispanics was 6.7 percent (Figure 84).[13]

Figure 84: Civilian Labor Force Unemployed by Race/Ethnicity, Tulsa County

Civilian Labor Force Unemployed by Race/Ethnicity
Tulsa County | 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest rates of unemployment were primarily concentrated in north Tulsa (Figure 85).[13]

Figure 85: Unemployment Rate. Tulsa County 2009-2013 Map
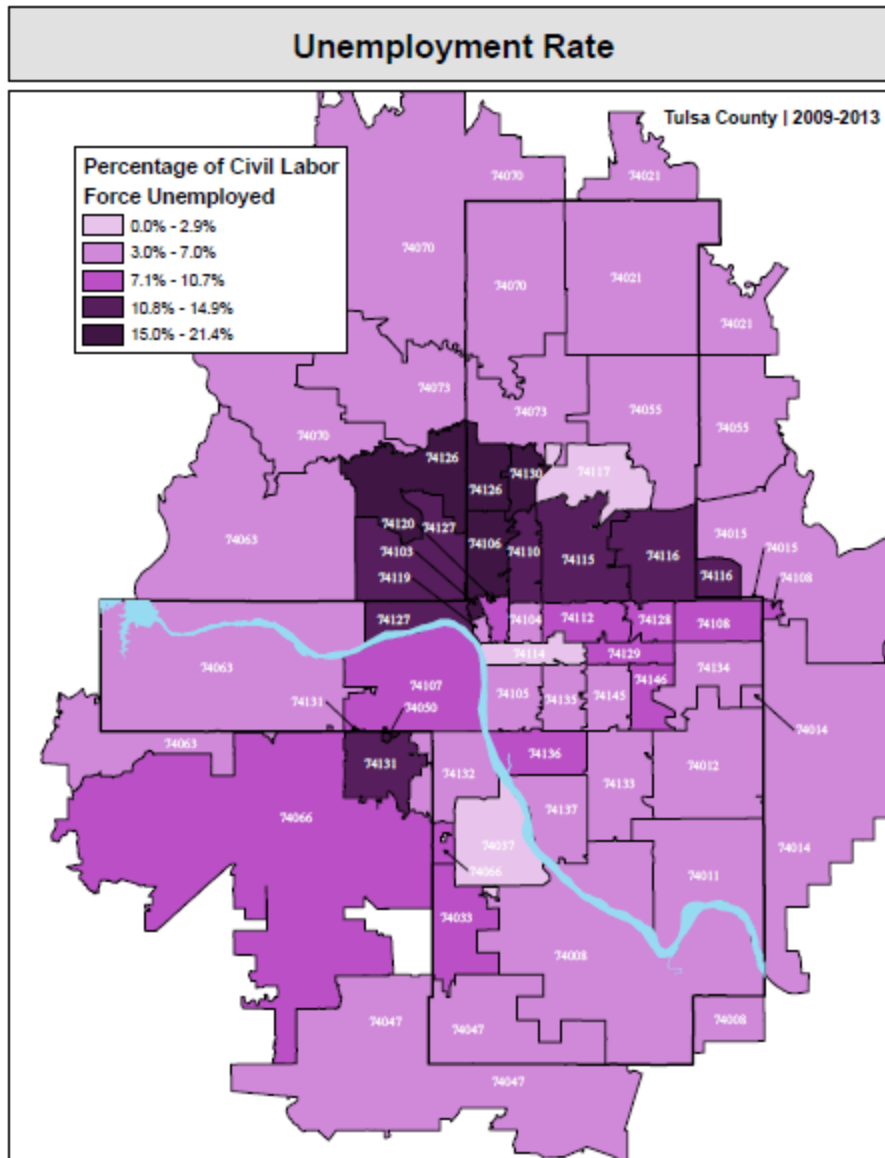
Unemployment Rate

Tulsa County | 2009-2013

Percentage of Civil Labor Force Unemployed
- 0.0% - 2.9%
- 3.0% - 7.0%
- 7.1% - 10.7%
- 10.8% - 14.9%
- 15.0% - 21.4%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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.[62] Exposure to chronic stress also contributes to the increased prevalence of certain illnesses.[63]

How Are We Doing?

The violent crime rate in 2010-2012 for Tulsa County was 753.7 per 100,000 population. This was higher than Oklahoma (470.9) and the United States (395.5) rates per 100,000 population (Figure 86 and Figure 87).[64][65][66]

Figure 86: 2010-2012 Tulsa County Violent Crime Rate per 100,000 Population

Report Area	Total Population	Violent Crimes	Violent Crime Rate (Per 100,000 Pop.)
Tulsa County, OK	609,206	4,591	753.7
Oklahoma	3,783,867	17,820	470.9
United States	306,859,354	1,213,859	395.5

Data Source: Federal Bureau of Investigation. *(2016). FBI Uniform Crime Reports. Retrieved from:* http://www.fbi.gov/about-us/cjis/ucr/ucr.

 National Archive of Criminal Justice Data. *(2016). Inter-university Consortium for Political and Social Research. 2010-12. Retrieved from:* http://www.icpsr.umich.edu/icpsrweb/ICPSR/series/57.

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

Violent Crime Rate (Per 100,000 Pop.)
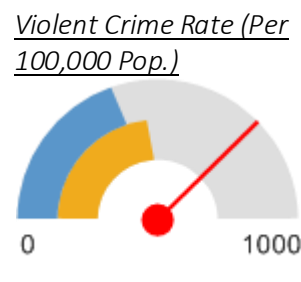
🟥 *Tulsa County, OK (753.7)*
🟧 *Oklahoma (470.9)*
🟦 *United States (395.5)*

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[62] Ellen IG, Mijanovich T, Dillman KN. (2001). Neighborhood effects on health: Exploring the links and assessing the evidence. *Journal of Urban Affairs, 23*:391-408.

[63] Johnson SL, Solomon BS, Shields WC, McDonald EM, McKenzie LB, Gielen AC. (2009). Neighborhood violence and its association with mothers' health: Assessing the relative importance of perceived safety and exposure to violence. *J Urban Health, 86*:538-550.

[64] Community Commons. (2016). *Community Health Needs Assessment: Tulsa County*. Retrieved from www.communitycommons.org on April 1, 2016.

[65] Federal Bureau of Investigation. *(2016). FBI Uniform Crime Reports. Retrieved from:* http://www.fbi.gov/about-us/cjis/ucr/ucr.

[66] National Archive of Criminal Justice Data. *(2016). Inter-university Consortium for Political and Social Research. 2010-12. Retrieved from:* http://www.icpsr.umich.edu/icpsrweb/ICPSR/series/57

Figure 87: 2010-2012 Violent Crimes, All Rate per 100,000 by County
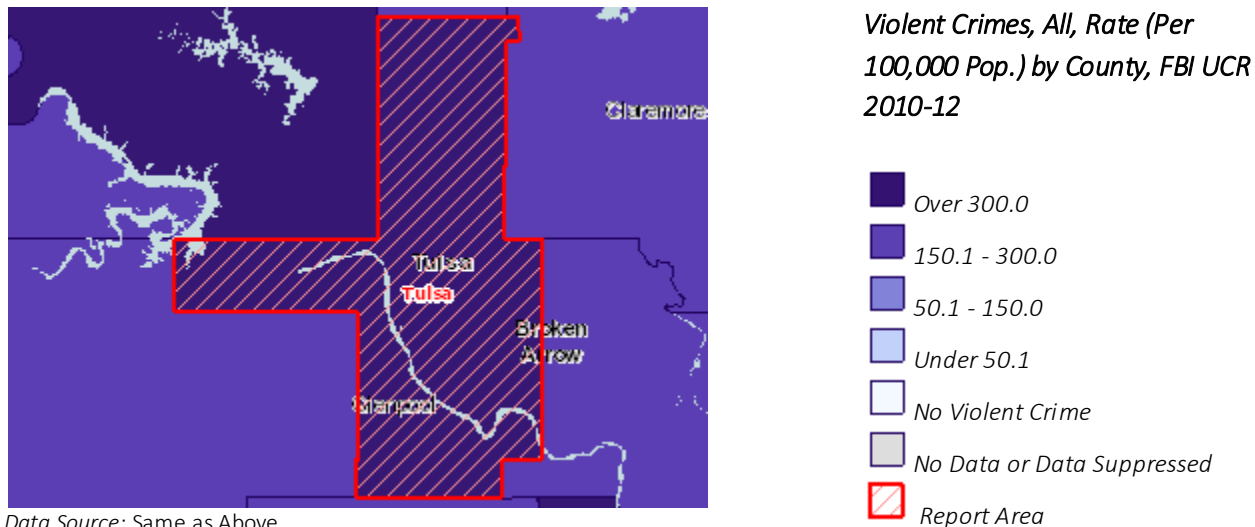
Violent Crimes, All, Rate (Per 100,000 Pop.) by County, FBI UCR 2010-12

■ *Over 300.0*
■ *150.1 - 300.0*
■ *50.1 - 150.0*
□ *Under 50.1*
□ *No Violent Crime*
□ *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.

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 2011 − 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?

Over three-quarters of the total homicides during 2011 − 2013 were caused by assault with firearms.[67] 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.[68] Additionally, homicide is tied with suicide as the second leading cause of death for 15 − 24 year olds in Tulsa County.

How Are We Doing?

From 2011 − 2013, 164 Tulsa County residents were victims of homicide, which is an age-adjusted death rate of 8.9 deaths per 100,000 individuals. There was clear racial disparity, with blacks dying from homicide at a rate six times that of whites (33.4 compared to 5.5). The homicide death rate for non-Hispanics was about twice that of Hispanics (9.4 compared to 4.5). The age-adjusted rate for

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[67] Centers for Disease Control and Prevention. (2016). *Injury Prevention and Control: Key Data and Statistics*. Retrieved from: http://www.cdc.gov/injury/overview/data.html.
[68] Centers for Disease Control and Prevention. (2016). *Health Disparities in Homicides Fact Sheet*. Retrieved from: http://www.cdc.gov/minorityhealth/reports/CHDIR11/FactSheets/Homicide.pdf.

Asians/Pacific Islanders is not shown because it is based on a relatively small number of deaths (Figure 88).[17] [18]

Figure 88: Age-Adjusted Homicide Death Rate by Race/Ethnicity, Tulsa County 2011-2013
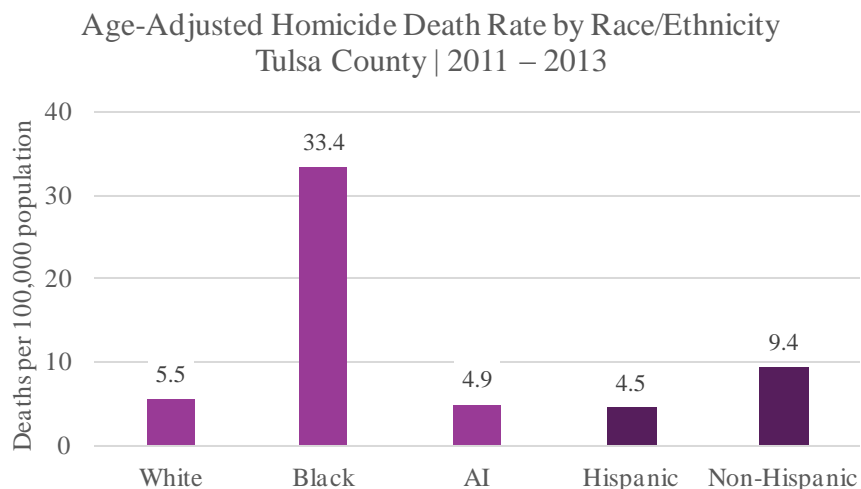
Age-Adjusted Homicide Death Rate by Race/Ethnicity
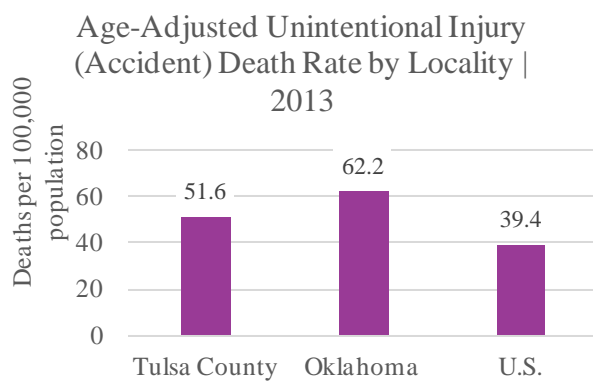Tulsa County | 2011 – 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

In 2013, Tulsa County had a homicide death rate of 10.0, which was higher than that of Oklahoma (6.8) and the United States (5.2) (Figure 89). [17] [18] The Healthy People 2020 national goal is to reduce the homicide death rate to 5.5 deaths per 100,000 population.[69] The United States overall met this target, but Tulsa County and Oklahoma did not.

Figure 89: Age-Adjusted Homicide Death Rate by Locality, 2013
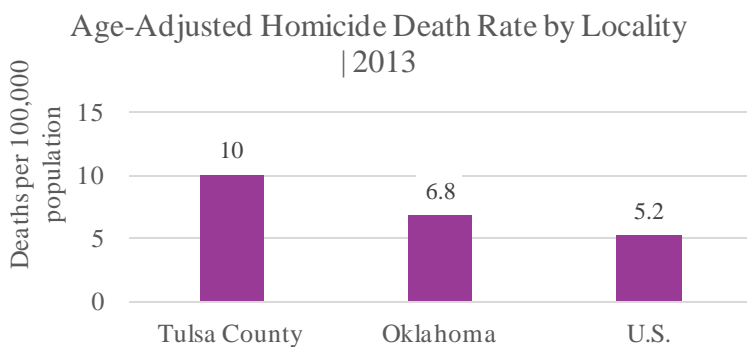
Age-Adjusted Homicide Death Rate by Locality
| 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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[69] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. *Healthy People 2020: Injury and Violence Prevention*. Retrieved from: http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=24 .

The ZIP codes with the highest overall homicide death rates were 74126, 74106, and 74110. [17] [18]

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 2011 – 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?

Accidents were the fourth leading cause of death in Tulsa County from 2011 – 2013. However, accidents were the number one cause of death among all age groups under 45 with the exception of infants under 1. Motor vehicle accidents accounted for one quarter of all accident 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. [70]

How Are We Doing?

Accidents killed 973 Tulsa County residents from 2011 to 2013, for a death rate of 52.1 deaths per 100,000 individuals. With regard to race, the death rate was highest among American Indians (86.4 deaths per 100,000 population). The unintentional injury death rate was higher among non-Hispanics than Hispanics (53.5 compared to 31.2) (Figure 90). [17] [18]

Figure 90: Age-Adjusted Unintentional Injury (Accident) Death Rate by Race/Ethnicity, Tulsa County
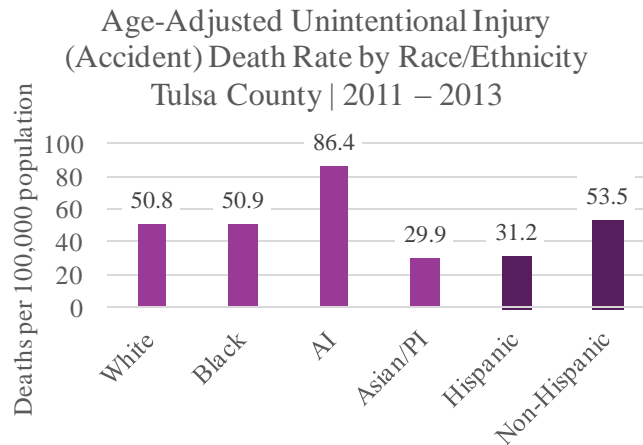
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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[70]Centers for Disease Control and Prevention. (2016). Motor Vehicle Safety. Retrieved from: http://www.cdc.gov/motorvehiclesafety/

In 2013, Tulsa County had an age-adjusted unintentional injury death rate of 51.6. This was lower than Oklahoma (62.2) but higher than the US (39.4) (Figure 91). [17] [18] None of these regions met the Healthy People 2020 target of 36.0 deaths from unintentional injuries per 100,000 population. [61]

Figure 91: Age-Adjusted Unintentional Injury (Accident) Death Rate by Locality, 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest overall unintentional injury death rates were 74103, 74110, and 74115. [17] [18]

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.[71] 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 overeating and smoking in adults, and obesity in children and adolescents.[72] Social and emotional support is also linked to educational achievement and economic stability.

How Are We Doing?

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[71] House J.S. (2001). Social isolation kills, but how and why? *Psychosomatic Medicine, 63*:273-274.Retrieved from: http://www.psychosomaticmedicine.org/content/63/2/273.x.

[72] Egerter S., Braveman P., Barclay C. (2011). *Stress and health*. Princeton: Robert Wood Johnson Foundation (RWJF). Exploring the Social Determinants of Health Issue Brief No. 3. Retrieved from: http://www.rwjf.org/en/research-publications/find-rwjf-research/2011/03/how-social-factors-shape-health.html.

The age-adjusted percent of adults self-reporting inadequate social/emotional support in 2006-2012 in Tulsa County was 20.3 percent. This was higher than percentages in Oklahoma (20.1) and the United States (20.7) (Figure 92 and Figure 93). [73]

Figure 92: Percent of Adults without Adequate Social/Emotional Support (Age-Adjusted), Tulsa County

Report Area	Total Population Age 18	Estimated Population Without Adequate Social / Emotional Support	Crude Percentage	Age-Adjusted Percentage
Tulsa County, OK	444,484	90,230	20.3%	20.3%
Oklahoma	2,793,624	561,518	20.1%	20.1%
United States	232,556,016	48,104,656	20.7%	20.7%

Percent Adults Without Adequate Social /Emotional Support (Age-Adjusted)

🟥 **Tulsa County, OK (20.3%)**

🟧 **Oklahoma (20.1%)**

🟦 **United States (20.7%)**

Data Source: Centers for Disease Control and Prevention. (2016). *Behavioral Risk Factor Surveillance System 2006-2012.* Accessed via the US Department of Health and Human Services, Health Indicators Warehouse.

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

Figure 93: Inadequate Social/Emotional Support, Percent of Adults Age 18 by County, BRFSS 2006-2012

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[73] Centers for Disease Control and Prevention. (2016). *Behavioral Risk Factor Surveillance System 2006-2012*. Accessed via the US Department of Health and Human Services, Health Indicators Warehouse.

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Inadequate Social/Emotional Support, Percent of Adults Age 18 by County, BRFSS 2006-12

- Over 23.0%
- 19.1 - 23.0%
- 15.1 - 19.0%
- Under 15.1%
- No Data or Data Suppressed
- Report Area
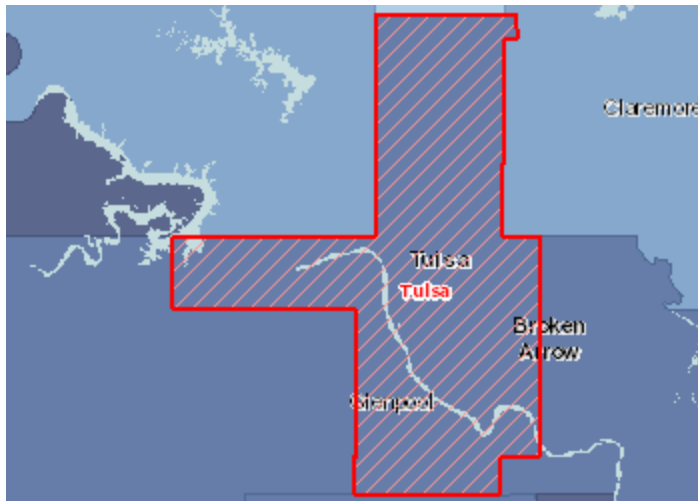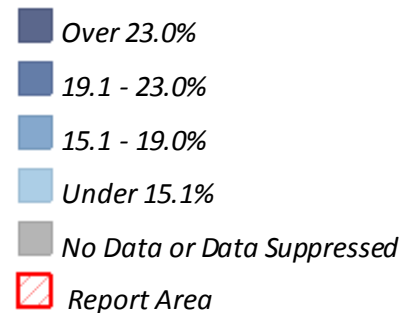
Data Source: Same as Above
Source: Courtesy of Community Commons. Retrieved from
www.communitycommons.org on April 1, 2016

Child Abuse and Neglect

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 confirmed cases of child abuse or neglect per 1,000 children. 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.[74]

How Are We Doing?

From July 1, 2012 – June 30, 2013 (fiscal year 2013), there were a total of 11,702 reports of child abuse or neglect received in Tulsa County. After screening, 6,768 referrals were accepted for assessment or investigation.[75]

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[74] U.S. Department of Health and Human Services. (2016). *Child Welfare Information Gateway: Long-Term Consequences of Child Abuse and Neglect Fact Sheet.* Retrieved from: https://www.childwelfare.gov/pubs/factsheets/long_term_consequences.pdf.

[75] Oklahoma Department of Human Services. Child Abuse and Neglect Statistics.

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Overall, there were 10.7 confirmed cases of child abuse or neglect per 1,000 children in Tulsa County during the 2013 fiscal year. The rate has been increasing since fiscal year 2011 when there were 6.7 confirmed cases per 1,000 children. During fiscal year 2013, Tulsa County had a lower rate of confirmed child abuse cases compared to Oklahoma (12.2 confirmed cases per 1,000 children) but higher than the United States (9.1 confirmed cases per 1,000 children) (Figure 94).[76]

Figure 94: Confirmed Child Abuse Rate by Locality, FY 2009-2013
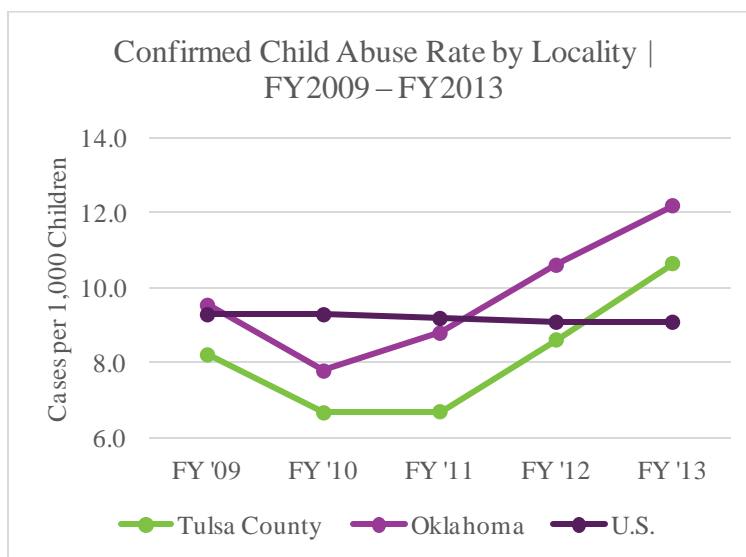
Confirmed Child Abuse Rate by Locality | FY2009 – FY2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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.[77] [78] 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: Tulsa County 2015*. Oklahoma and Tulsa County ACE rankings data was sourced from the

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[76] U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2015). *Child maltreatment 2013*. Retrieved from: http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment.
[77] Centers for Disease Control and Prevention. (2016). *Adverse Childhood Experiences*. Retrieved from: https://www.cdc.gov/violenceprevention/acestudy/.
[78] Community Service Council, supported by the Metropolitan Human Services Commission in Tulsa. (2014). *Community Profile: Tulsa County 2015*. Retrieved from: www.csctulsa.org.

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. [69]

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 95). 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. [68 69 79]

Figure 95: The Adverse Childhood Experiences (ACE) Study Pyramid
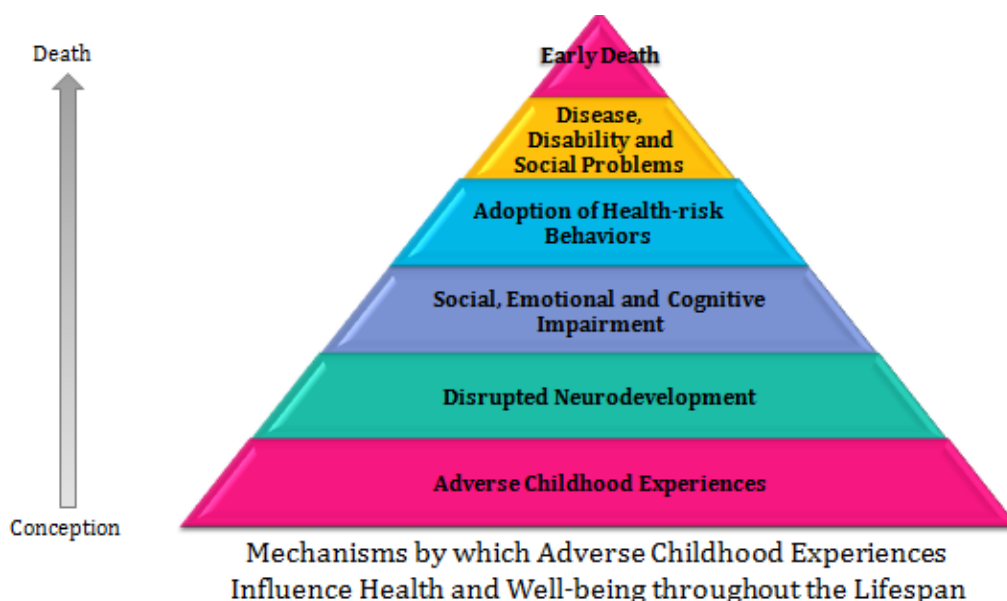
Data Source: Felitti, V.J. et al. (1998).Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. *American Journal of Preventive Medicine (14)*4, 245 – 258.
Centers for Disease Control and Prevention. (2016). *Adverse Childhood Experiences.* Retrieved from: https://www.cdc.gov/violenceprevention/acestudy/.
*Source:* Courtesy of the Community Service Council, supported by the Metropolitan Human Services Commission in Tulsa. (2014). *Community Profile: Tulsa County 2015*. Retrieved from: www.csctulsa.org.

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

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[79] Felitti, V.J. et al. (1998).Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. *American Journal of Preventive Medicine (14)*4, 245 – 258.

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. [68 69 70]

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 96). [68 69 70]

Figure 96: Adverse Childhood Experiences (ACEs)
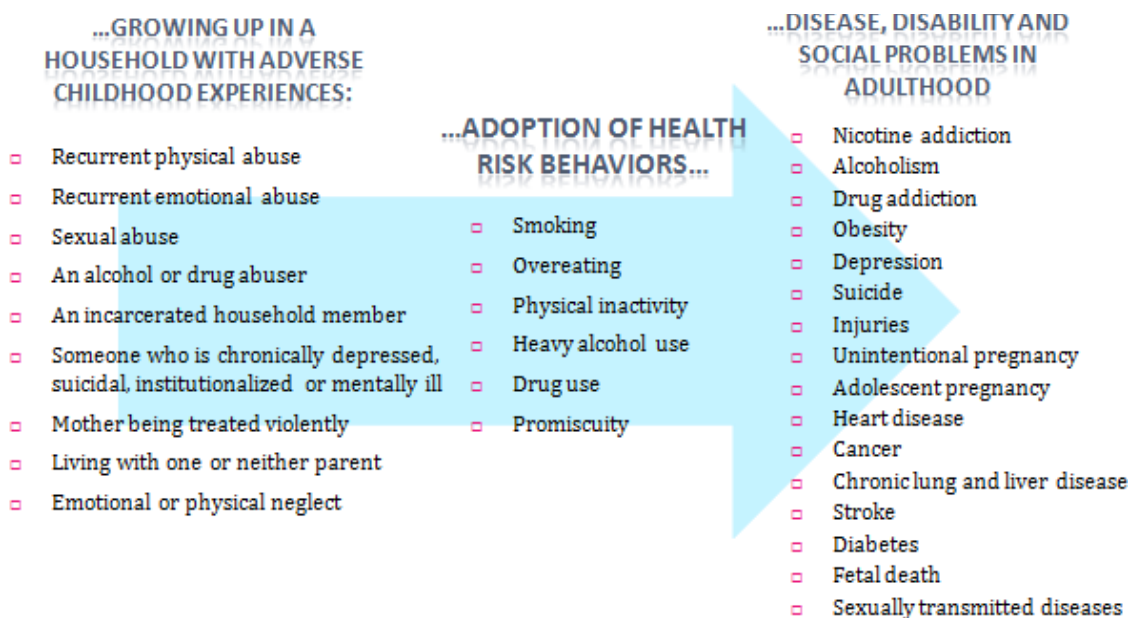
Data Source: Felitti, V.J. et al. (1998). Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. *American Journal of Preventive Medicine (14)*4, 245 – 258.
Centers for Disease Control and Prevention. (2016). *Adverse Childhood Experiences.* Retrieved from: https://www.cdc.gov/violenceprevention/acestudy/.

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.[80]

Figure 97: Percent of Children Experiencing Adverse Childhood Experiences (ACEs) by Number
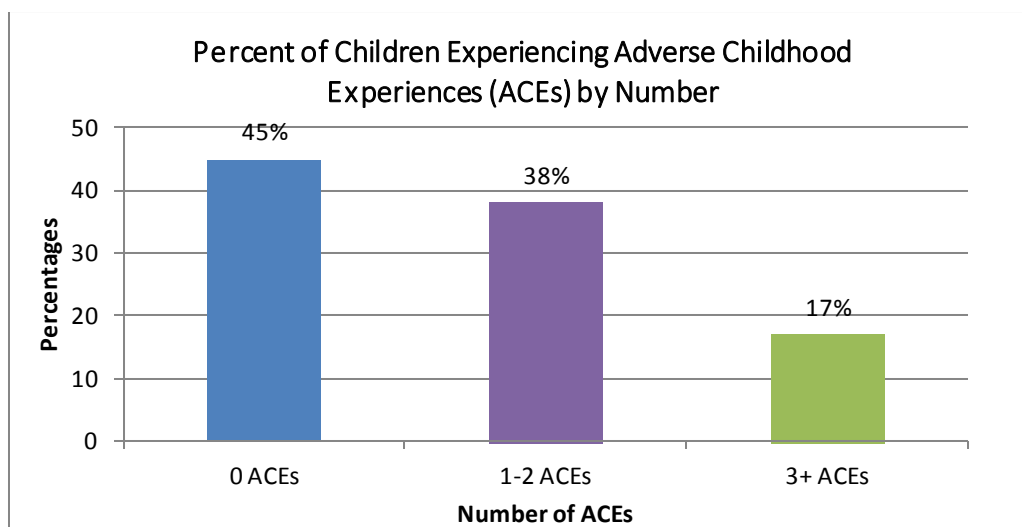
Data Source: Oklahoma Institute for Child Advocacy. (2014). *The State of Children in Oklahoma 2014 Fact Sheet*. Retrieved from http://oica.org/wp-content/uploads/2014/07/2014-OK-Fact-Sheet2.pdf.

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 10).[81] 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. Tulsa County had a slightly higher than average 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. Tulsa County ranked 42 out of Oklahoma's 77 counties in terms of overall child well-being in 2014 (Table 11).[82]

Table 11: Overall Child Well-Being by Locality, 2014-2015

Locality	Overall Rank	Economic Well-	Education Rank	Health Rank	Family and

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[80] Oklahoma Institute for Child Advocacy. (2014). *The State of Children in Oklahoma 2014 Fact Sheet*. Retrieved from http://oica.org/wp-content/uploads/2014/07/2014-OK-Fact-Sheet2.pdf.

[81] Annie E. Casey Foundation. (2015). *2015 KIDS COUNT Profile: Oklahoma*. Retrieved from: http://oica.org/wp-content/uploads/2014/11/2015KC_profile2_OK.pdf.

[82] Oklahoma Institute for Child Advocacy. (2014). *Oklahoma KIDS COUNT Databook 2014*. Retreived from: http://oica.org/wp-content/uploads/2014/11/2014-KC-Data-Book.pdf.

	Being Rank				Community Rank
Oklahoma	39	30	42	39	41
Tulsa County	42	23	70	44	40

Data Source: Oklahoma Institute for Child Advocacy. (2014). *Oklahoma KIDS COUNT Databook 2014.* Retrieved from: http://oica.org/wp-content/uploads/2014/11/2014-KC-Data-Book.pdf.

Annie E. Casey Foundation. (2015). *2015 KIDS COUNT Profile: Oklahoma*. Retrieved from: http://oica.org/wp-content/uploads/2014/11/2015KC_profile2_OK.pdf.

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.[83]

   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.[84] 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 12). Oklahoma also had the highest rate nationally of justice-

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[83] Oklahoma Watch. (2016). Growth in Prison Population Persists. Retrieved from: http://oklahomawatch.org/2016/01/07/number-of-prison-inmates-surges-again/.

[84] Oklahoma Department of Corrections (2015). Annual Report 2014. Retrieved from: https://www.ok.gov/doc/documents/annual%20report%202014.final%20copy.website.pdf.

involved persons housed in in-state private prison facilities, including halfway houses, according to Bureau of Justice Statistics data for 2014.[85]

Table 12: Number of Incarcerated Justice-Involved Persons Per 100,000 Population by Locality, 2014

Locality	Number of Incarcerated Justice-Involved Persons Per 100,000 Population
United States	471
Oklahoma	700

Data Source: Bureau of Justice Statistics. (2014). National Prisoner Statistics Program. Retrieved from: http://www.bjs.gov/index.cfm?ty=dcdetail&iid=269.

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. [76] 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. [76]

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 [76]– 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 13).

Table 13: Female Incarceration Rates per 100,000 Population by Locality, 2014

Locality	Female Incarceration Rates Per 100,000 Population
United States	65
Oklahoma	143

Data Source: Bureau of Justice Statistics. (2014). National Prisoner Statistics Program. Retrieved from: http://www.bjs.gov/index.cfm?ty=dcdetail&iid=269.

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). [76] 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. [76]

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[85] Bureau of Justice Statistics. (2014). National Prisoner Statistics Program. Retrieved from: http://www.bjs.gov/index.cfm?ty=dcdetail&iid=269.

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." A backup of around 1,700 justice-involved persons at the end of 2013 was decreased down to 313 by the end of 2014.[75] However, the backup number has since more than doubled to 795 individuals, according to 2015 Corrections Department data.[74][75]

Homelessness

Definition

Each January, the agencies of the Tulsa City-County Continuum of Care and Homeless Services Network, in cooperation with the cities of Tulsa and Broken Arrow, conduct a one-night survey of homelessness (point-in-time survey). This 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. Starting in 2012, a local soup kitchen's breakfast (Iron Gate) was also added as a survey point for those who had not already completed the survey and stated that they had spent the prior night in an abandoned building, vehicle, outside, or other public place. This indicator presents results from the 2013 point-in-time survey as sourced from the Tulsa Health Department's *2015 Tulsa County Health Profile* with some updates from the 2014 and 2015 point-in time surveys (limited public data availability from 2015 survey at this time).

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.[86]

How Are We Doing?

On January 30, 2013, there were 1,211 persons experiencing homelessness in Tulsa County, 124 of which were children under 18. A total of 1,054 of these individuals were surveyed (1,039 adults and 15 unaccompanied children).[87] Tulsa has had a three-year decline in its number of persons experiencing chronic homelessness, according to the Tulsa City-County Continuum of Care Point-in-Time Survey completed in 2015. Meanwhile, the number of persons experiencing situational homelessness has continued to increase, up 50 percent from the count done in 2008, the latest study found. Additionally, the number of veterans experiencing homelessness decreased for the third year in a row; 95 veterans were homeless in 2015, 114 in 2014, and 149 in 2013.[88]

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

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[86]. National Coalition for the Homeless. (2016). *Health Care and Homelessness*. Retrieved from: http://www.nationalhomeless.org/factsheets/health.html.

[87] Tulsa City- County Continuum of Care. (2013). Point-in-Time Survey. Retrieved from www.csc.org.

[88] Community Service Council. (2016). *Homelessness Data and Documents*. Retrieved from www.csc.org.

within the past three years and has a disability, surveyed during the 2015 count was 89, down from 99 2014 and 114 two years ago, a 22 percent decrease. [79]

The majority of adults experiencing homelessness in 2013 were male (70.4 percent). Of the female respondents, 2.9 percent were pregnant at the time of the survey. The majority were also white (63.0 percent) and non-Hispanic (95.4 percent) (Figure 98). The primary age group reported was $51 - 65$ (33.3 percent). The 'under 18' age group includes children that were with families (not surveyed) as well as unaccompanied children under 18 (Figure 99). When asked about length of homelessness, the largest percentage of individuals reported that they had experienced homelessness for $1 - 6$ months (28.7 percent), followed by $1 - 2$ years (23.3 percent) (Figure 100). [78]

Figure 98: Persons Experiencing Homelessness by Race/Ethnicity, Tulsa County January 30, 2013
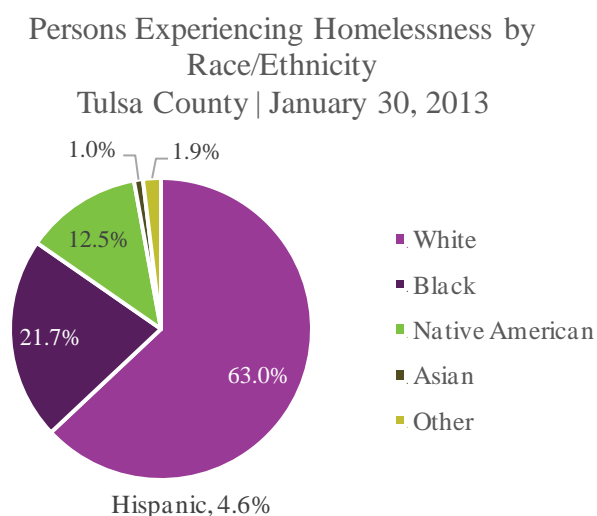
Persons Experiencing Homelessness by Race/Ethnicity
Tulsa County | January 30, 2013

- White
- Black
- Native American
- Asian
- Other

1.0% 1.9%
12.5%
21.7%
63.0%
Hispanic, 4.6%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 99: Persons Experiencing Homelessness by Age, Tulsa County, January 30, 2013

Persons Experiencing Homelessness by Age*
Tulsa County | January 30, 2013

Age	Percent
Under 18	10.8%
18 – 20	3.9%
21 – 30	13.5%
31 – 40	15.9%
41 – 50	24.4%
51 – 65	30.1%
66 +	1.4%
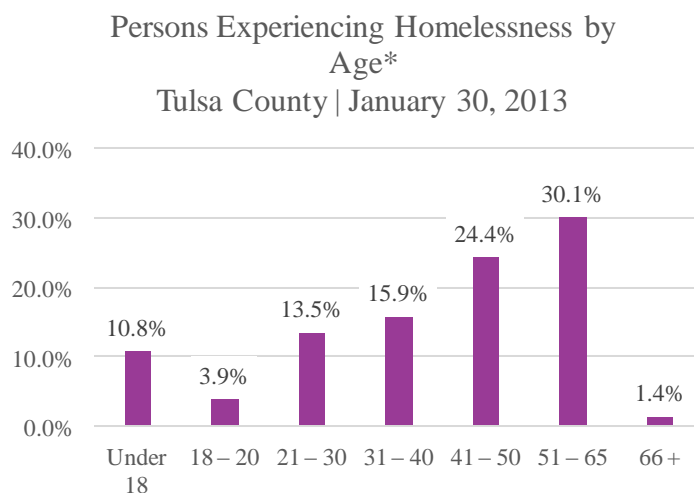
*Graph shows percentage of total homeless persons within each group (age group or time interval); percentages add up to 100%.

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Figure 100: Length of Homelessness, Tulsa County, January 30, 2013
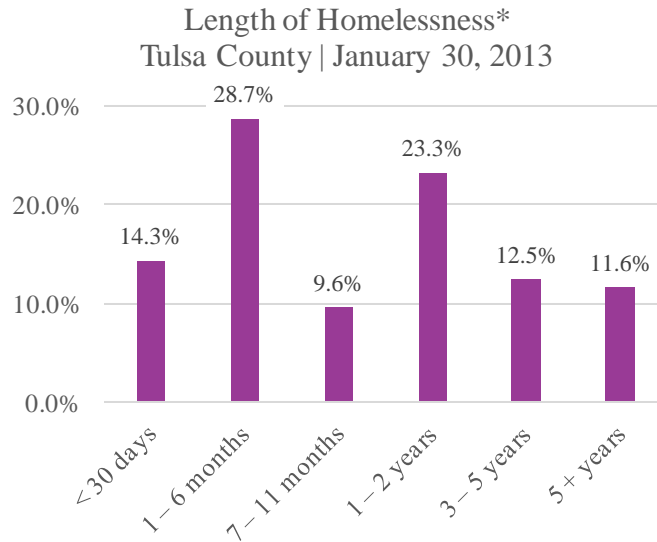
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Respondents were asked about types of health conditions that they had experienced. The top responses were mental health diagnosis (526 individuals), physical disability (279 individuals), chronic illness (255 individuals), and substance abuse (251 individuals).[78]

Survey respondents were asked to report the condition(s) that contributed to their homelessness. The top three reported conditions were job loss, asked to leave by family/friends, and mental health diagnosis. Respondents were also asked to report their top needed services. Housing placement was the top service needed, followed by transportation, dental services, and health care.[78]

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 30.56%. This percentage was slightly higher than in Oklahoma overall (27%), but lower than in the U.S. overall (34.86%) (Figure 101 and 102).[89]

Figure 101: Percentage of Households where Housing Costs Exceed 30% of Income by Locality, 2010-2014

Report Area	Total Households	Cost Burdened Households (Housing Costs Exceed 30% of Income)	Percentage of Cost Burdened Households (Over 30% of Income)
Tulsa County, OK	243,509	74,420	30.56%
Oklahoma	1,450,117	391,510	27%
United States	116,211,096	40,509,856	34.86%

Percentage of Households where Housing Costs Exceed 30% of Income

■ Tulsa County, OK (30.56%)
■ Oklahoma (27%)
■ United States (34.86%)

Data Source: U.S. Census Bureau. (2015). *American Community Survey 2010-2014 Estimates*. Retrieved from: https://www.census.gov/ programs-surveys/acs/data.html.

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

Figure 102: Cost Burdened Households Percent by Tract, ACS, 2010-2014

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[89] U.S. Census Bureau. (2015). *American Community Survey 2010-2014 Estimates*. Retrieved from: https://www.census.gov/ programs-surveys/acs/data.html.
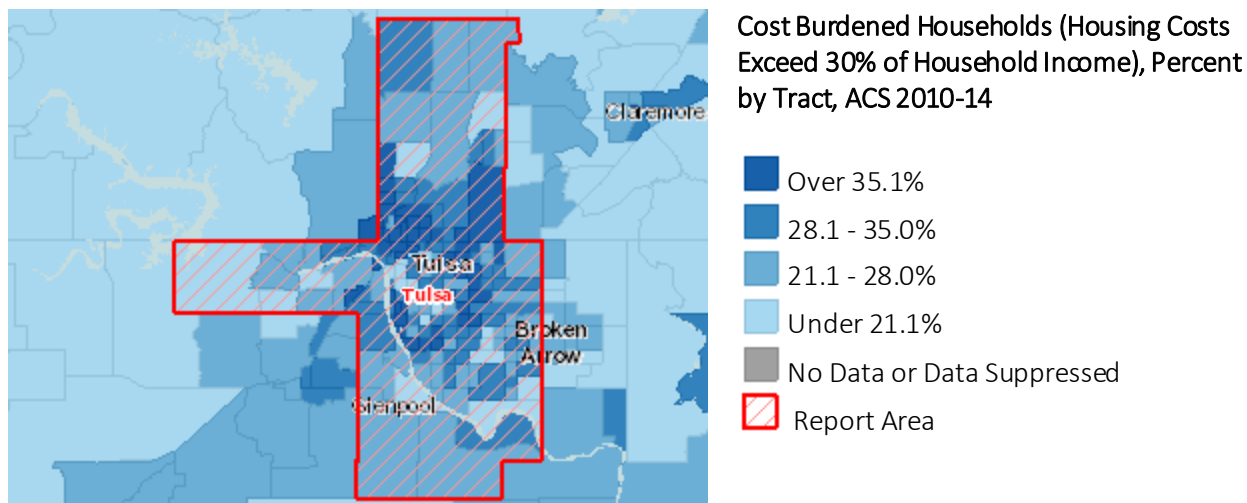
Cost Burdened Households (Housing Costs Exceed 30% of Household Income), Percent by Tract, ACS 2010-14

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

Data Source: Same as above

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

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 Tulsa County with experiencing food insecurity was 16.93%. This was similar to the percentage in Oklahoma (17%), but lower slightly lower than the percentage in the U.S. (15.21%) (Figure 103 and Figure 104).[90] The child food insecurity rate in Tulsa County was 24.45% which was slightly lower than the rate in Oklahoma (25.64%), but higher than the rate in the U.S. (23.49%) (Table 14). [81] The percentages of the total population and children experiencing food insecurity ineligible for food assistance in Tulsa County were 35% and 36% respectively. [81] These percentages were significantly higher than percentages in Oklahoma and the U.S. overall (Figure 105).

Figure 103: Percentage of the Population Experiencing Food Insecurity by Locality, 2013

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[90] Feeding America. (2013). *Hunger and Food Insecurity in America*. Retrieved from: www.feedingamerica.org.

Report Area	Total Population	Food Insecure Population, Total	Food Insecurity Rate
Tulsa County, OK	609,610	103,190	16.93%
Oklahoma	3,850,568	654,640	17%
United States	320,750,757	48,770,990	15.21%

Data Source: Feeding America (2013). *Hunger and Food Insecurity in America*. Retrieved from: www.feedingamerica.org.

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

Percentage of the Population with Food Insecurity
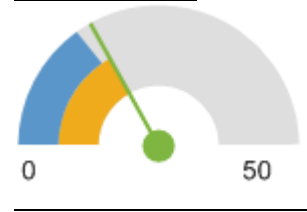
■ Tulsa County, OK (16.93)
■ Oklahoma (17)
■ United States (15.21)

Figure 104: Population Experiencing Food Insecurity, Percent by County, Feeding American 2013
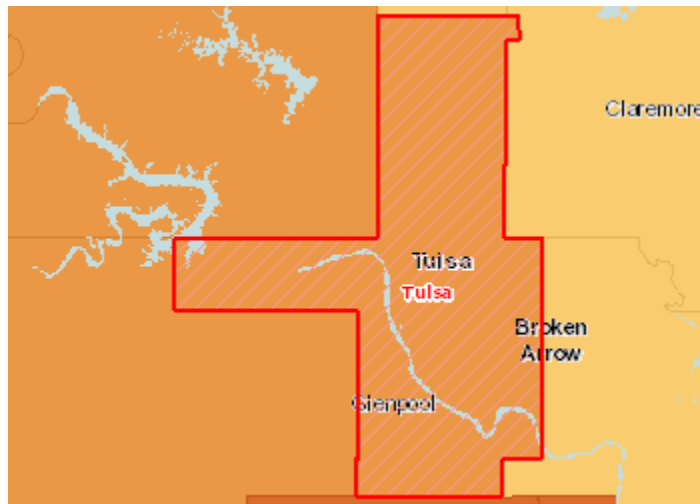
Food Insecure Population, Percent by County, Feeding America 2013

■ Over 18.0%
■ 15.1 - 18.0%
■ 12.1 - 15.0%
■ Under 12.1%
▨ Report Area

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

Table 14: Children Experiencing Food Insecurity by Locality, 2013

Report Area	Population Under Age 18	Food Insecure Children, Total	Child Food Insecurity Rate
Tulsa County, OK	155,470	38,010	24.45%
Oklahoma	947,832	242,990	25.64%
United States	73,580,326	17,284,530	23.49%

Figure 105: Population Experiencing Food Insecurity, Ineligible for Assistance by Locality, 2013

Food Insecurity - Food Insecure Population Ineligible for Assistance
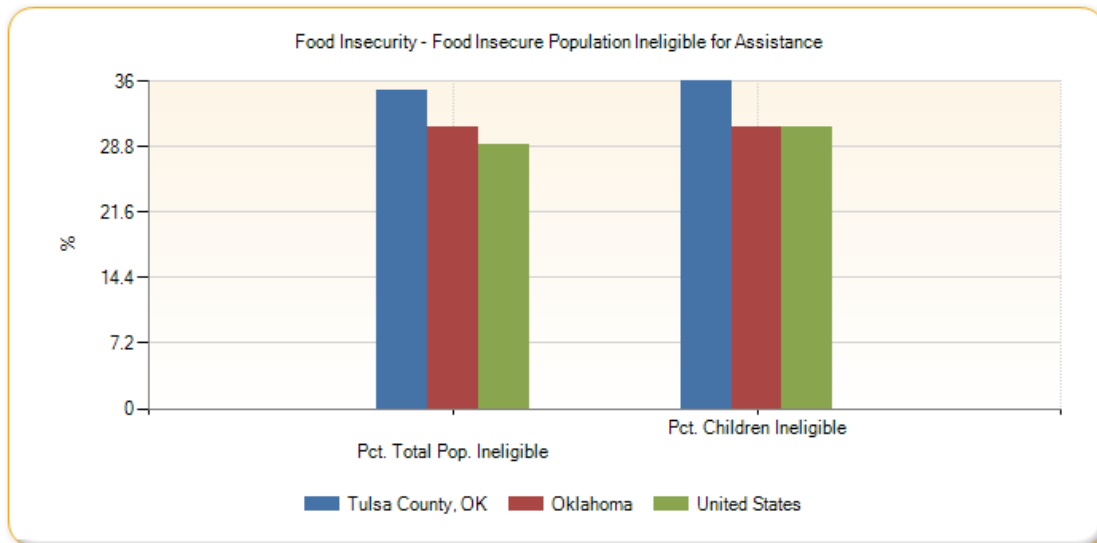
Report Area	Food Insecure Population, Total	Percentage of Food Insecure Population Ineligible for Assistance	Food Insecure Children, Total	Percentage of Food Insecure Children Ineligible for Assistance
Tulsa County, OK	103,190	35%	38,010	36%
Oklahoma	654,640	31%	242,990	31%
United States	48,770,990	29%	17,284,530	31%

Data Source: Same as above.

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

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 Tulsa 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 Tulsa County for which socioeconomic needs and quality of life issues are of greater concern (Figure 106). The Index shows that zip codes 74110, 74106, 74115, 74126, 74127, 74146, 74116, 74130, 74107, and 74128 are the ten geographic areas with the highest socioeconomic

needs within Tulsa County and are more likely to be affected by poor health outcomes (Table 15).[91] 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 106: HCI SocioNeeds Index ® by ZIP Code in Tulsa County
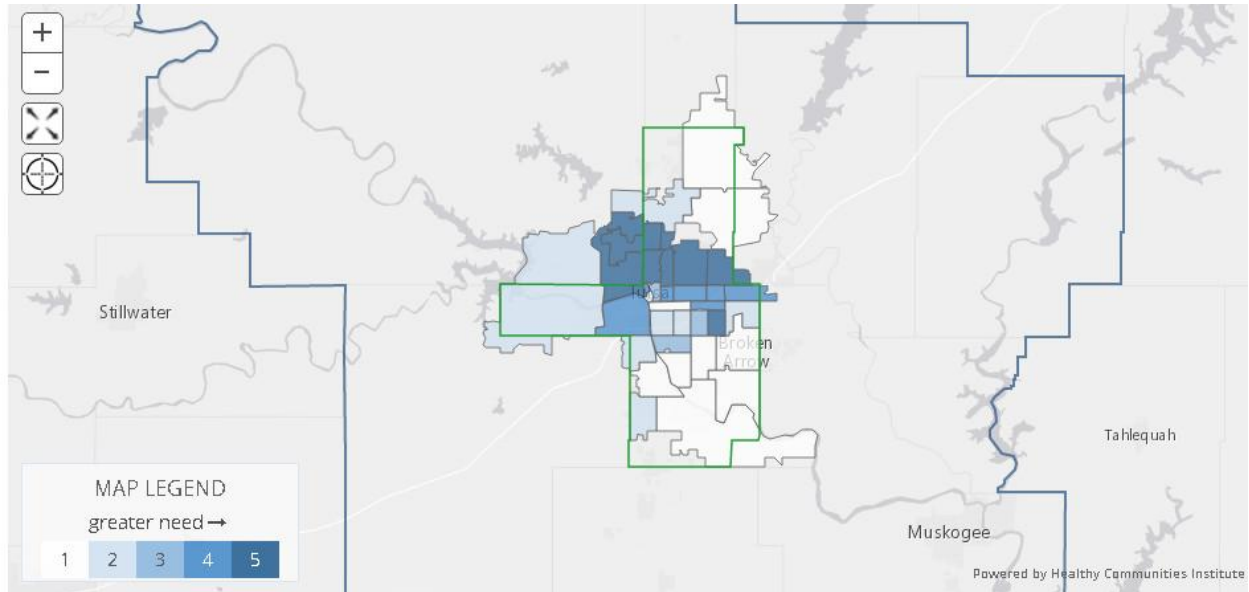
Source: Courtesy of Xerox Community Health Solutions. (2016). *Healthy Communities Institute SocioNeeds Index ®.* Retrieved from: http://ascension.thehcn.net/.

Table 15: Top 10 Tulsa County ZIP Codes with Highest Socioeconomic Need, HCI SocioNeeds Index ® Values and Rankings by ZIP Code, Tulsa County

Zip Code	Index ▲	Rank
74110	97.9	5
74106	96.4	5
74115	95.8	5
74126	95.5	5
74127	91.9	5
74146	91.9	5
74116	89.8	5
74130	88.8	5
74107	82.3	4
74128	80.8	4

Source: Courtesy of Xerox Community Health Solutions. (2016). *Healthy Communities Institute SocioNeeds Index ®.* Retrieved from: http://ascension.thehcn.net/.

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[91] Xerox Community Health Solutions. (2016). *Healthy Communities Institute SocioNeeds Index ®.* Retrieved from: http://ascension.thehcn.net/.

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.

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.

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 nine (three primary care, three mental health care, and three dental health care) facilities designated as HPSA facilities in Tulsa County according to the U.S .Health Resources and Services Administration (HRSA) (Table 16 and Figure 107).[93]

Table 16: Facilities Designated as Health Professional Shortage Areas, Tulsa County 2016

Report Area	Primary Care Facilities	Mental Health Care Facilities	Dental Health Care Facilities	Total HPSA Facility Designations
Tulsa County, OK	3	3	3	9
Oklahoma	106	103	96	305
United States	3,599	3,171	3,071	9,836

Data Source: U.S. Department of Health and Human Services, Health Resources and Services Administration. (2016). GIS Warehouse.

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[92] U.S. Department of Health and Human Services, Health Resources and Services Administration. (2016). Data Warehouse.
[93] U.S. Department of Health and Human Services, Health Resources and Services Administration. (2016). GIS Warehouse.

Figure 107: Facilities Designated as HPSAs, HRSA HPSA Database April 2016
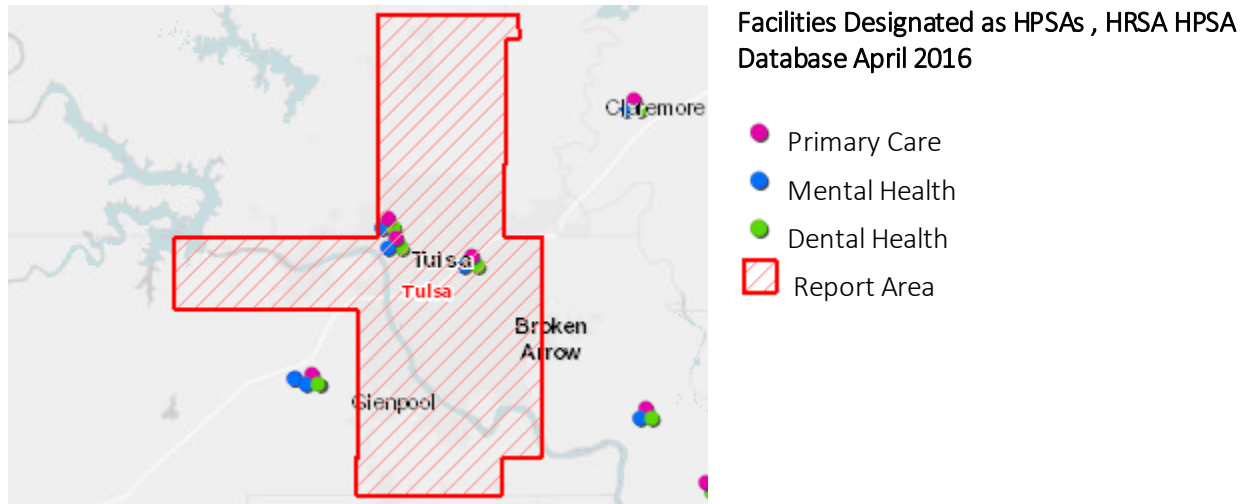
Facilities Designated as HPSAs , HRSA HPSA
Database April 2016

- 🟣 Primary Care
- 🔵 Mental Health
- 🟢 Dental Health
- ▨ Report Area

Data Source: U.S. Department of Health and Human Services, Health Resources and Services Administration. (2016). GIS Warehouse.
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 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 are three areas, Northeast Tulsa, West Riverside, and Riverside designated as Medically Underserved Areas in Tulsa County in 2016 (Figure 108).[85]

Figure 108: Areas Designated as Medically Underserved Areas HRSA MUA Database, Tulsa County 2016
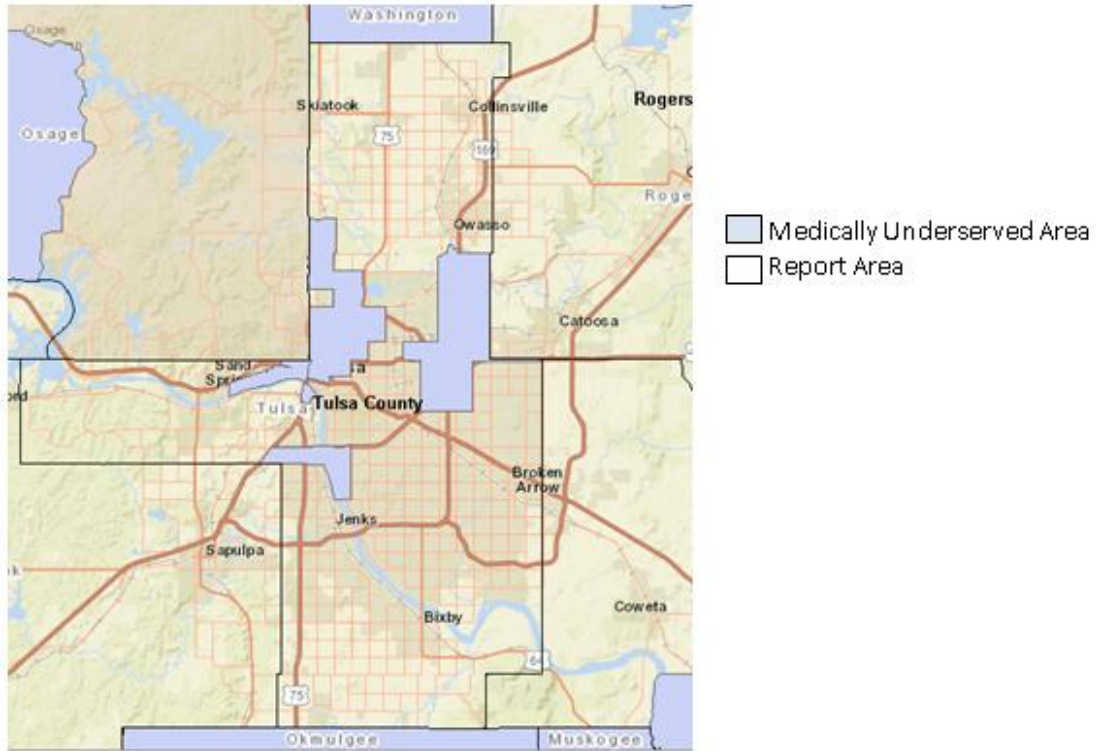
Data Source: U.S. Department of Health and Human Services, Health Resources and Services Administration. (2016). Data Warehouse.

Access to Physicians and Dentists

Definition

A list of Tulsa County physicians and dentists and their location of practice was obtained from the database ReferenceUSA. Reference USA is an internet-based reference service that compiles data from a number of sources including state licensing information.

Why Is This Indicator Important?

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.[94]

How Are We Doing?

In 2015, there was a rate of 4.7 physicians and dentists per 1,000 population in Tulsa County. Address mapping of these physicians and dentists showed that the largest numbers of providers were located in

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[94] Boccuti, C, Swoope, C, Damico, A, & Neuman, P. (2013). *Medicare Patients' Access to Physicians: A Synthesis of the Evidence.* The Henry J. Kaiser Family Foundation. Retrieved from: http://kaiserfamilyfoundation.files.wordpress.com/2013/12/8526-medicare-patients-access-to-physicians2.pdf.

ZIP codes 74136 and 74104. Many of these physicians and dentists were located in the complexes near Saint Francis Hospital (ZIP code 74136) and near Hillcrest Medical Center and St. John Owasso (ZIP code 74104).[95]

Within Tulsa County, 86.0 percent of providers were physicians or surgeons, while 14.0 percent were dentists. The top specialties among providers were Family Practice (15.4 percent), General Dentistry (14.0 percent) and Internal Medicine (10.0 percent) (Figure 109).[88]

Figure 109: Top 10 Provider Specialties, Tulsa County 2015
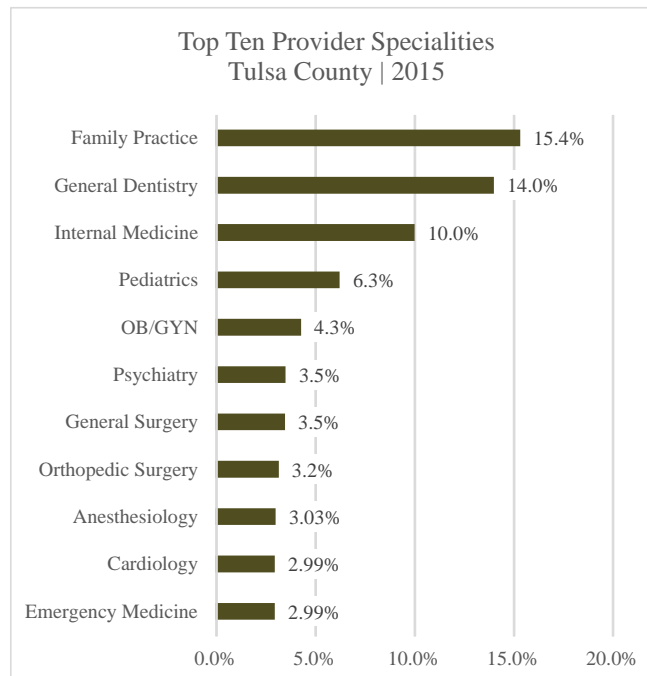
Top Ten Provider Specialities
Tulsa County | 2015

Specialty	Percent
Family Practice	15.4%
General Dentistry	14.0%
Internal Medicine	10.0%
Pediatrics	6.3%
OB/GYN	4.3%
Psychiatry	3.5%
General Surgery	3.5%
Orthopedic Surgery	3.2%
Anesthesiology	3.03%
Cardiology	2.99%
Emergency Medicine	2.99%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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 American Medical Association 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?

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[95] Reference USA. (2015). *Physicians in Tulsa County.*

This indicator is relevant because a shortage of health professionals contributes to access and health status issues. 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 2012, there was a rate of 110.3 primary care physicians per 100,000 population in Tulsa 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 Tulsa County than in Oklahoma (63.8) and the U.S. (74.5) (Figure 110).[96]

Figure 110: Primary Care Physicians, Rate per 100,000 Population, by Locality 2013-2014

Report Area	Total Population, 2012	Primary Care Physicians, 2012	Primary Care Physicians, Rate per 100,000 Pop.
Tulsa County	613,816	677	110.3
Oklahoma	3,814,820	2,435	63.8
United States	313,914,040	233,862	74.5

Data Source: U.S. Department of Health Human Services, Health Resources and Services Administration. (2015). *2013 and 2014 Area Health Resource File.*

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

Primary Care Physicians, Rate per 100,000 Pop.
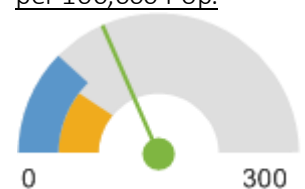
- Tulsa County (110.3)
- Oklahoma (63.8)
- United States (74.5)
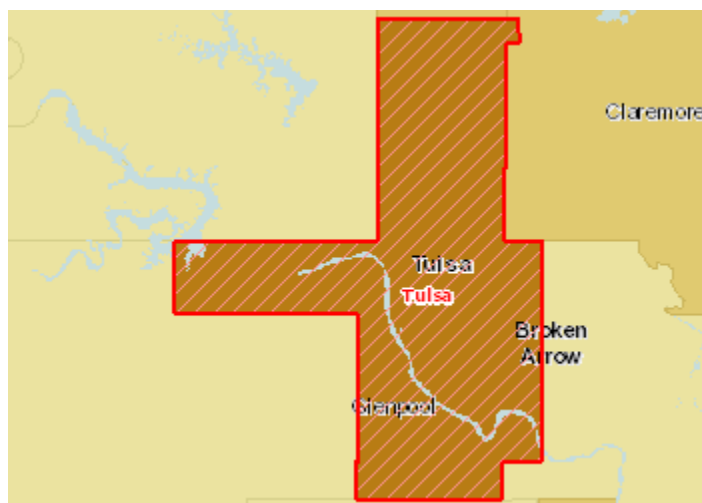
Access to Primary Care Physicians, Rate per 100,000 Pop. by County, AHRF 2012

- Over 80.0
- 60.1 - 80.0
- 40.1 - 60.0
- Under 40.1
- No Primary Care Physicians or No Data
- Report Area

[96] U.S. Department of Health Human Services, Health Resources and Services Administration. (2015). *2013 and 2014 Area Health Resource File.*

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 the 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 Tulsa County was 25.04 percent which was higher than in Oklahoma (24.13%) and the U.S. (22.07%) (Figure 111 and Figure 112).[66]

Figure 111: Percentage of Adults Without Any Regular Doctor by Locality, 2011-2012
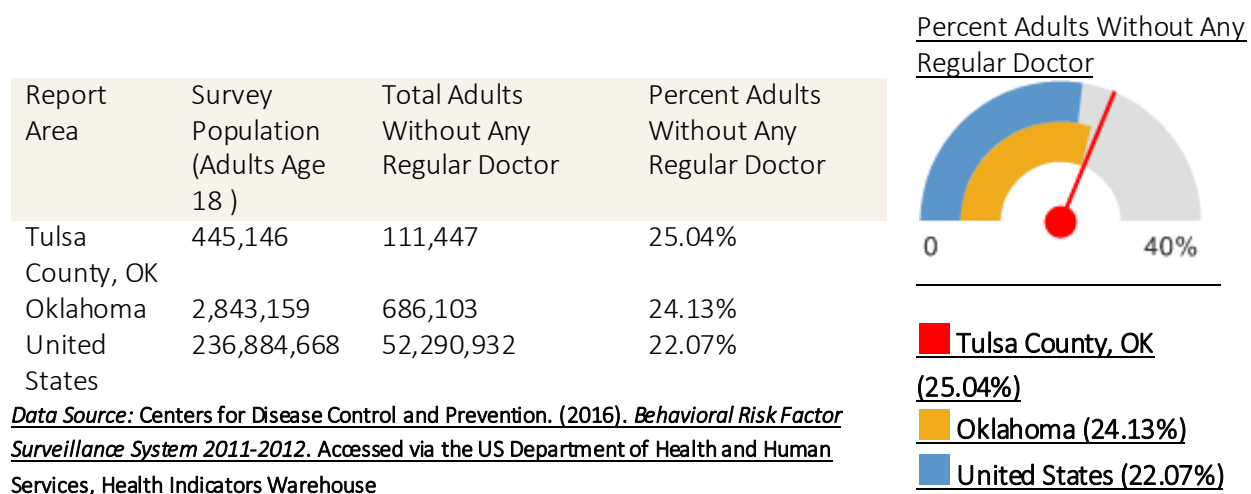
Percent Adults Without Any Regular Doctor

Tulsa County, OK (25.04%)

Oklahoma (24.13%)

United States (22.07%)

Report Area	Survey Population (Adults Age 18)	Total Adults Without Any Regular Doctor	Percent Adults Without Any Regular Doctor
Tulsa County, OK	445,146	111,447	25.04%
Oklahoma	2,843,159	686,103	24.13%
United States	236,884,668	52,290,932	22.07%

Figure 112: No Consistent Source of Primary Care, Percent of Adults Age 18 by County, BRFSS 2011-2012

2016 Community Health Needs Assessment, St. John Owasso
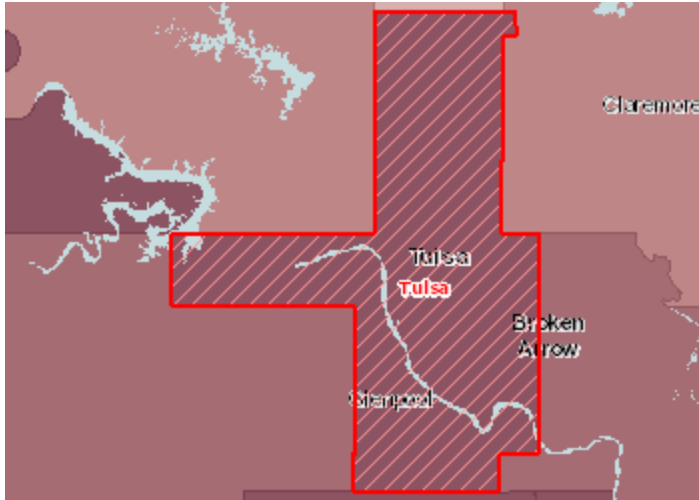
No Consistent Source of Primary Care, Percent of Adults Age 18 by County, BRFSS 2011-12

- Over 25.0%
- 19.1 - 25.0%
- 13.1 - 19.0%
- Under 13.1%
- 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.

The percentage of Hispanic or Latinos reporting no consistent source of primary care in Oklahoma in 2011-2012 was at 48.74 percent which was higher than non-Hispanic s. 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 113). [66]

Figure 113: Adults without a Consistent Source of Primary Care, Percent by Race/Ethnicity
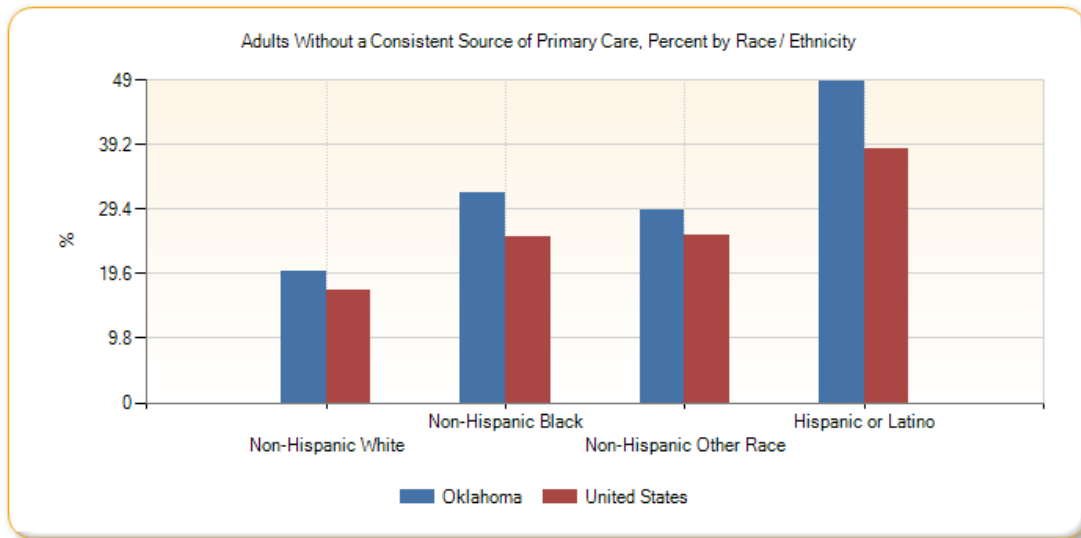
Report Area	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other Race	Hispanic or Latino
Oklahoma	19.98%	31.78%	29.33%	48.74%
United States	17.15%	25.28%	25.47%	38.58%

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

Access to Mental Health Providers

Definition

This indicator reports the rate of the county population to the number of mental health providers including psychiatrists, psychologists, clinical social workers, and counselors that specialize in mental health care.

Why Is This Indicator Important?

This indicator is relevant because a shortage of mental 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?

In 2014, Tulsa County had a mental health provider rate of 234.9 (per 100,000) which was higher than the rates for Oklahoma (231.1) and the U.S. (134.1) (Figure 114 and Figure 115).[7]

Figure 114: Mental Health Care Provider Rate Per 100,000 Population by Locality, 2014
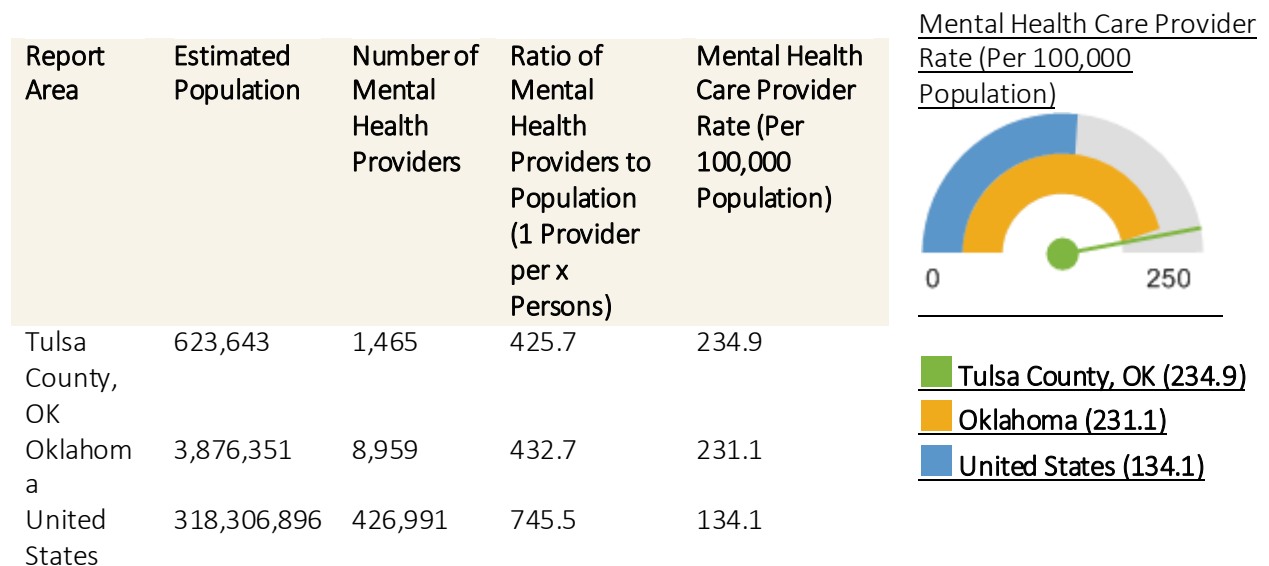
Report Area	Estimated Population	Number of Mental Health Providers	Ratio of Mental Health Providers to Population (1 Provider per x Persons)	Mental Health Care Provider Rate (Per 100,000 Population)
Tulsa County, OK	623,643	1,465	425.7	234.9
Oklahoma	3,876,351	8,959	432.7	231.1
United States	318,306,896	426,991	745.5	134.1

Mental Health Care Provider Rate (Per 100,000 Population)

0   250

Tulsa County, OK (234.9)
Oklahoma (231.1)
United States (134.1)

Data Source: University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

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

Figure 115: Access to Mental Health Care Providers, Rank by County, CHR, 2014
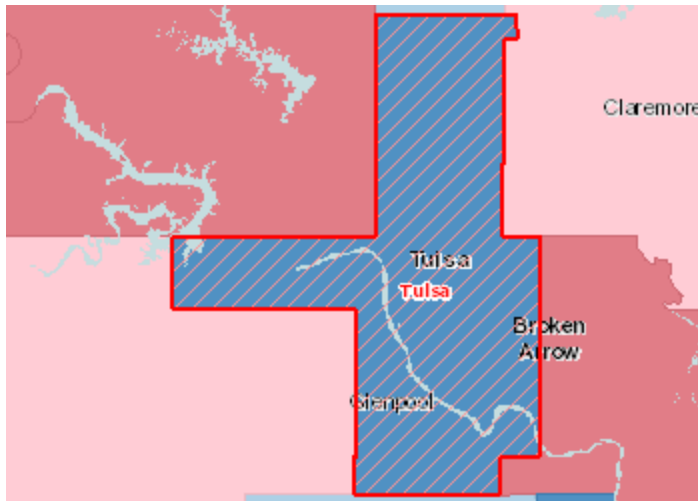
Access to Mental Health Care Providers, Rank by County, CHR 2014

■ 1st Quartile (Top 25%)
□ 2nd Quartile
□ 3rd Quartile
■ 4th Quartile (Bottom 25%)
■ Bottom Quintile (Rhode Island Only)
■ No Data or Data Suppressed; -1
▨ Report Area

Data Source: University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.

Number of Psychiatrists

Definition
   This indicator reports the number of psychiatrists (D.O. and M.D.) in the county and the rate of the county population to the number of psychiatrists.

Why Is This Indicator Important?
   This indicator is relevant because a shortage of psychiatrists 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 psychiatrists in Tulsa County and Oklahoma. In 2015, Tulsa County had 101 psychiatrists and a rate of 1.62 psychiatrists per 10,000 population. Oklahoma had 341 psychiatrists and a rate of .89 psychiatrists per 10,000 population (Table 117).[97] 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. T o put the shortage of psychiatrists in Oklahoma in better perspective: to get to the national average, Oklahoma would need to add **321** new psychiatrists.[98]

Table 17: Psychiatrists by Locality, 2015

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[97] Oklahoma State Department Of Health Center For Health Innovation And Effectiveness, Office Of Primary Care And Rural Health Development. (2015). *Oklahoma Health Workforce Data Book 2014-2015.* Retrieved from: https://www.ok.gov/health2/documents/Oklahoma%20Health%20Workforce%20Databook%20V2.pdf.
[98] Clancy, G. (2016*). Leadership Tulsa: Building Better Healthcare Systems.* University of Tulsa, The Oxley College of Health Sciences.

Report Area	Number of Psychiatrists	Rate of Psychiatrists per 10,000 Population
Tulsa County, OK	101	1.62
Oklahoma	341	.89

Data Source: Oklahoma State Department Of Health Center For Health Innovation And Effectiveness, Office of Primary Care And Rural Health Development. (2015). *Oklahoma Health Workforce Data Book 2014-2015.* Retrieved from: https://www.ok.gov/health2/documents/Oklahoma%20Health%20_Workforce%20Databook%20V2.pdf.

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 10 adults reported not receiving treatment and four out 10 youth did not receive treatment in 2015**.[28]

   Inpatient psychiatric beds are in Tulsa (463 total) and Oklahoma are full all of the time because the outpatient system is not able to prevent and limit psychiatric emergencies.[91] In fact, the number of inpatient psychiatric beds in Tulsa (47.2 beds per 100,000 population) is not far from the ideal number of beds, 50 per 100,000 beds.[91] 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.[91] 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 16 general medical/surgical hospitals, two Federally Qualified Health Centers (FQHCs), 19 free clinics, one Federal Indian Health Services facility, three Veterans Affairs facilities, 22 urgent care centers, four inpatient mental health centers, 12 community health centers, two adult crisis centers, and 160 retail pharmacies in Tulsa County. Additionally, there were an estimated 3,467 hospital beds and 2,880 nursing home beds (Table 18).[90]

Table 18: Number of Healthcare Facilities and Beds, Tulsa County 2015

Type of Facility	Number
General Medical/Surgical Hospitals	16
Critical Access Hospitals	0
Rural Health Clinics	0
Federally Qualified Health Centers	6
Free Clinics	19
Indian Health Services (Federal)	1
Indian Health Services (Tribal)	0
Veterans Affairs Facilities	3
Urgent Care Centers	22
Inpatient Mental Health Centers	4
Community Mental Health Centers	12
Adult Crisis Centers	2
Retail Pharmacies	160
Number of Hospital Beds	3467
Number of Nursing Home Beds	2880

Data Source: Oklahoma State Department Of Health Center For Health Innovation And Effectiveness, Office of Primary Care And Rural Health Development. (2015). *Oklahoma Health Workforce Data Book 2014-2015.* Retrieved from: https://www.ok.gov/ health2/documents/Oklahoma%20Health%20_Workforce%20Databook%20V2.pdf.

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.
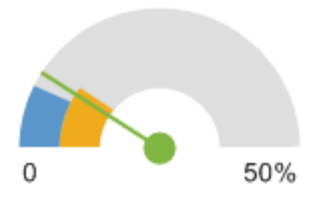
How Are We Doing?

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 116).[99]

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 116: National Map: 2015 Uninsured Rates by State and County
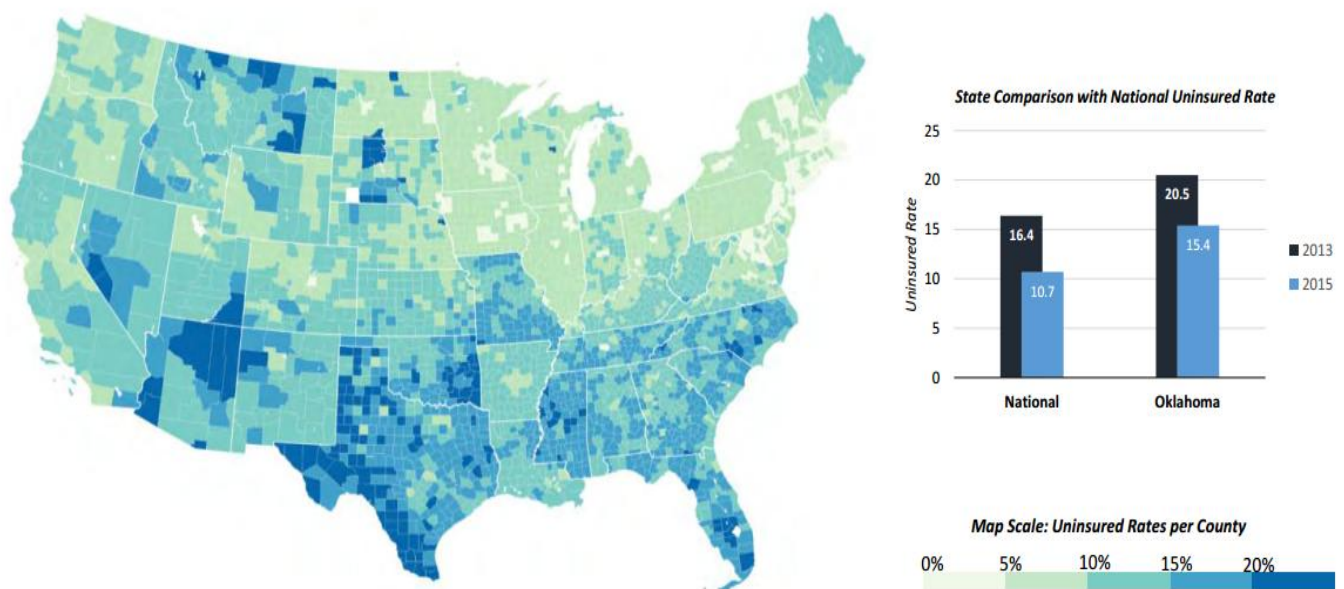
Source: Courtesy of Enroll America. (2015). Oklahoma State Snapshot. Retrieved from
https://s3.amazonaws.com/assets.enrollamerica.org/wp-content/uploads/2015/11/OK_snapshot.pdf

In 2015, the uninsured rate for Tulsa County was 13 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 117). [92]

Figure 117: Oklahoma Map: 2015 Uninsured Rates by County

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[99] Enroll America. (2015). Oklahoma State Snapshot. Retrieved from
https://s3.amazonaws.com/assets.enrollamerica.org/wp-content/uploads/2015/11/OK_snapshot.pdf

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Map Scale: Uninsured Rates per County

5%   10%   15%   20%
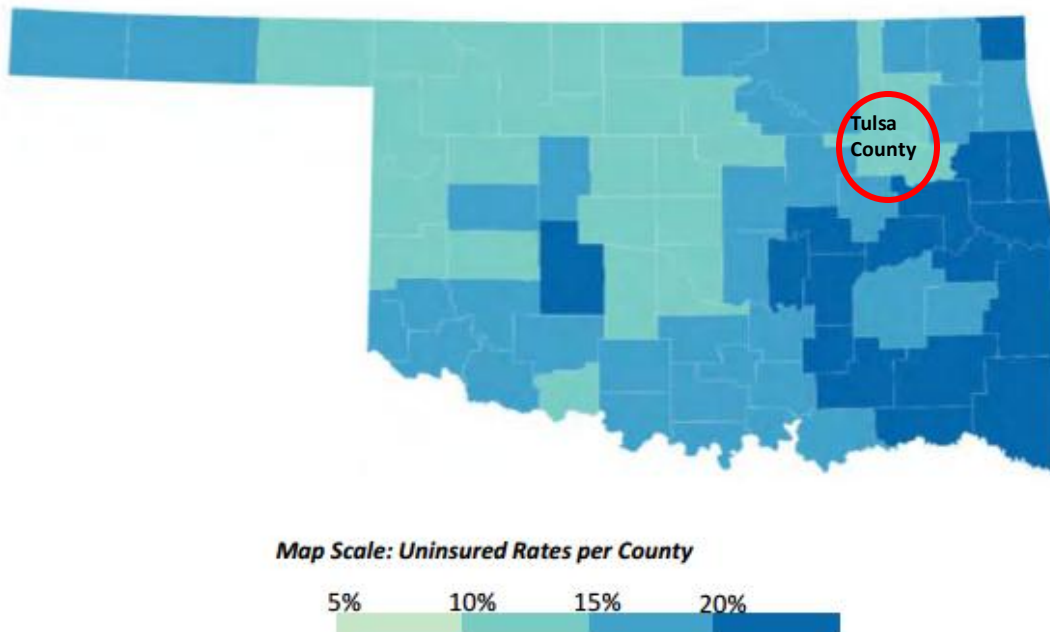
Source: Courtesy of Enroll America. (2015). Oklahoma State Snapshot. Retrieved from
https://s3.amazonaws.com/assets.enrollamerica.org/wp-content/uploads/2015/11/OK_snapshot.pdf

Uninsured Adults (18-64)

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.[92] 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 118).[92]

Figure 118: Rate of Uninsured by Race/Ethnicity, Gender, and Age - Change from 2013-2015
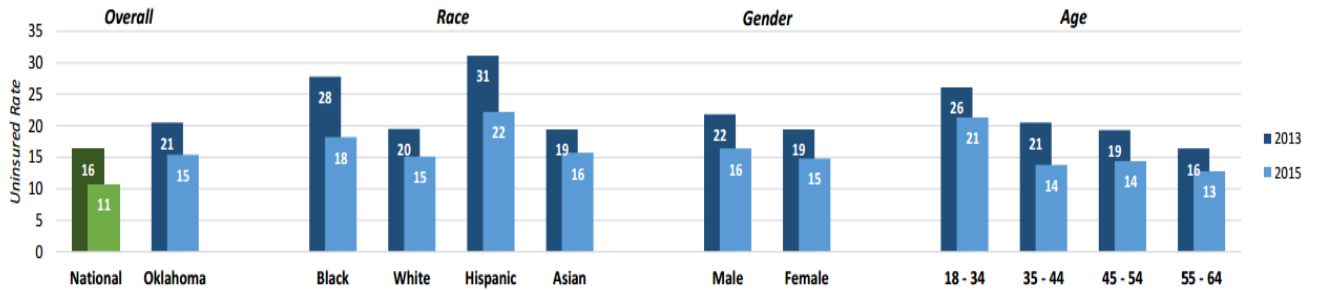
Distribution of Uninsured Population, Ages 18 to 64	Black	White	Hispanic	Asian	Male	Female	18 - 34	35 - 44	45 - 54	55 - 64
% 2013 Uninsured Population in Oklahoma	6.3%	84.4%	7.9%	1.4%	49.7%	50.3%	31.2%	21.2%	27.9%	19.7%
% 2015 Uninsured Population in Oklahoma	4.9%	86.1%	7.5%	1.4%	49.4%	50.6%	33.4%	18.4%	26.0%	22.1%
Change from 2013 to 2015	-1.4%	1.7%	-0.4%	0.0%	-0.3%	0.3%	2.2%	-2.8%	-1.9%	2.4%

Source: Courtesy of Enroll America. (2015). Oklahoma State Snapshot. Retrieved from: https://s3.amazonaws.com/assets. enrollamerica.org/wp-content/uploads/2015/11/OK_snapshot.pdf

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 Tulsa County without health insurance was 9.13 percent, which was lower than in Oklahoma overall (10.63%), but higher than in the U.S. overall (7.51%) (Figure 119 and Figure 120).[100]

Figure 119: Percentage of Population Under Age 19 Without Health Insurance by Locality, 2013

Report Area	Total Population Under Age 19	Population with Medical Insurance	Percent Population With Medical	Population Without Medical Insurance	Percent Population Without Medical	Percent Population Without Medical Insurance

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[100] U.S. Census Bureau. (2013). *Small Area Health Insurance Estimates.*

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			Insurance		Insurance
Tulsa County, OK	163,672	148,723	90.87%	14,949	9.13%
Oklahoma	980,187	875,973	89.37%	104,214	10.63%
United States	76,195,402	70,470,743	92.49%	5,724,663	7.51%

Data Source: U.S. Census Bureau. (2013). *Small Area Health Insurance Estimates.*

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

■ Tulsa County, OK (9.13%)
■ Oklahoma (10.63%)
■ United States (7.51%)

Figure 120: Uninsured Population, Age 0-18, Percent by County, SAHIE 2013
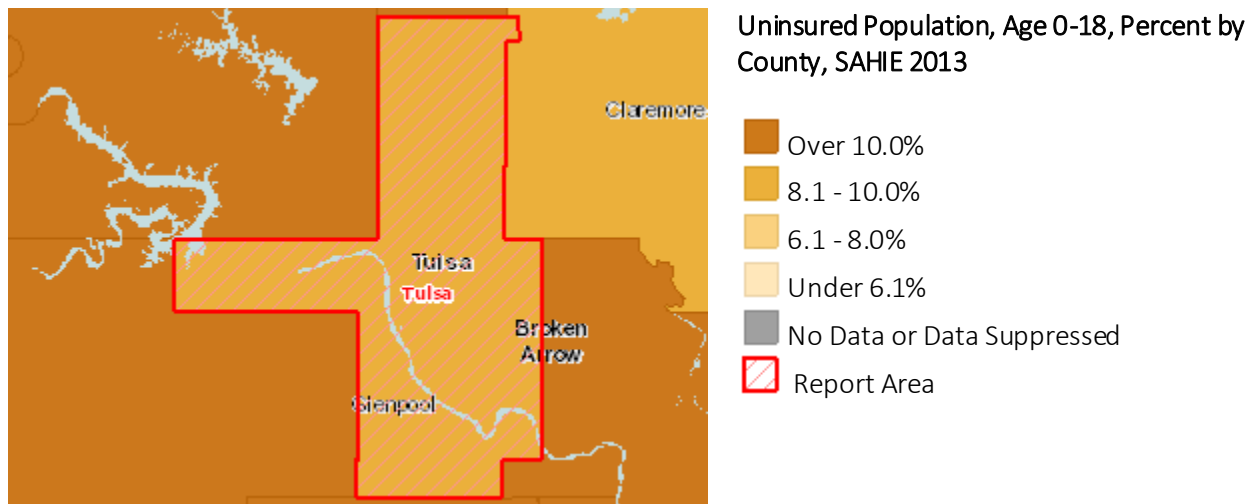
Uninsured Population, Age 0-18, Percent by County, SAHIE 2013

- Over 10.0%
- 8.1 - 10.0%
- 6.1 - 8.0%
- Under 6.1%
- No Data or Data Suppressed
- Report Area

Data Source: U.S. Census Bureau. (2013). *Small Area Health Insurance Estimates.*
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.

Medicaid Enrollment

Definition

Medicaid is an entitlement program that provides medical benefits to low-income individuals and families who have inadequate or no health insurance. This indicator is presented as the percentage of the population enrolled in Medicaid in 2013.

Why Is This Indicator Important?

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.[101]

How Are We Doing?

Tulsa County had 157,240 unduplicated Medicaid enrollees during 2013 which represents 25.8 percent of the total population. This was the same as the percentage of Oklahoma residents (25.8 %).[102] In December 2014, an estimated 22.0 percent of the U.S. population was enrolled in Medicaid (Figure 121). [103] U.S. data was not available for 2013 due to changes in Medicaid eligibility and enrollment during the Health Insurance Marketplace open enrollment period from October 2013 – February 2014. 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 121: Medicaid Enrollees by Locality

Medicaid Enrollees by Locality*

	Tulsa County	Oklahoma	U.S.
	25.8%	26.3%	22.0%
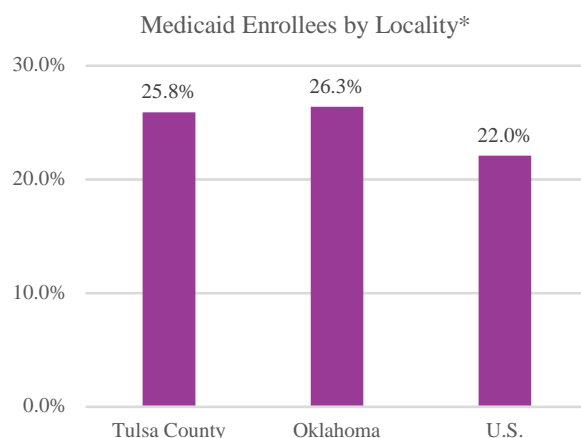
*Tulsa County and Oklahoma data is for 2013; U.S. data is for 2014

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

In 2013, the majority of Medicaid enrollees were white (60.8 percent), followed by 22.4 percent who were black (Figure 122). [95]

Figure 122: Medicaid Enrollees by Race, Tulsa County 2013

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[101] The Kaiser Commission on Medicaid and the Uninsured. (2010). *Medicaid: A Primer.* Retrieved from http://kaiserfamilyfoundation.files.wordpress.com/2010/06/7334-05.pdf.

[102] Oklahoma Health Care Authority (OHCA) (2013). *Medicaid Enrollment.*

[103] Centers for Medicare & Medicaid Services. (2015). *Medicaid & CHIP: December 2014 Monthly Applications, Eligibility Determinations and Enrollment Report.*

Medicaid Enrollees by Race
Tulsa County | 2013
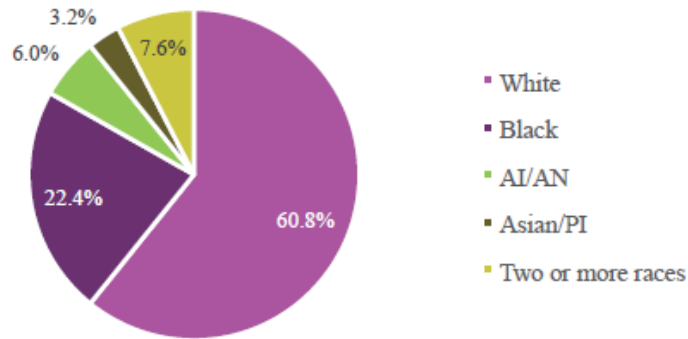
3.2%
6.0%
7.6%
22.4%
60.8%

- White
- Black
- AI/AN
- Asian/PI
- Two or more races

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The ZIP codes with the highest percentages of Medicaid enrollees were 74106, 74126, 74110, 74127, 74146, and 74115 (Figure 123). [95]

Figure 123: Percentage of Population Enrolled in Medicaid, Tulsa County 2013 Map
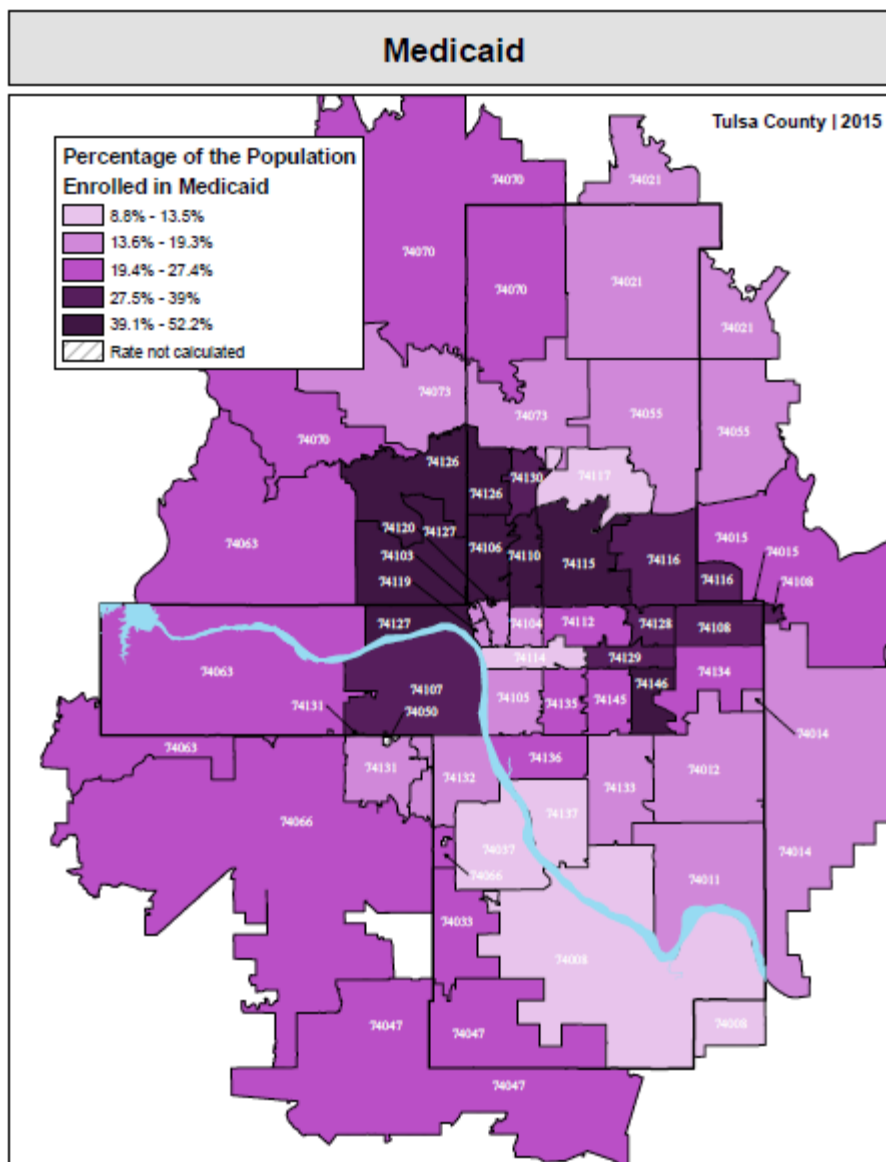
Medicaid

Tulsa County | 2015

Percentage of the Population
Enrolled in Medicaid

- 8.8% - 13.5%
- 13.6% - 19.3%
- 19.4% - 27.4%
- 27.5% - 39%
- 39.1% - 52.2%
- Rate not calculated

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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 118,389 individuals enrolled in Medicare (68% Original Medicare and 32% Medicare Advantage plans) in Tulsa County in April 2016. 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 19).[104] 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 19: Total Number of Oklahoma Medicare Beneficiaries in April 2016

Location	Total Medicare Beneficiaries
Tulsa County	118,389
Oklahoma	687,156
United States	56,459,538

Data Source: Centers for Medicare & Medicaid Services (CMS). (2016). *CMS Program Statistics: Medicare Enrollment Dashboard*. Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Dashboard/Medicare-Enrollment/Enrollment%20Dashboard.html.

Emergency Room Visits

Definition

This indicator is the number of emergency room (ER) visits to the nine Tulsa County hospitals by Tulsa County residents in 2013. It is presented as a rate per 1,000 population. It is important to note that while all of the hospitals are in Tulsa County, there may be patients from outside counties. Demographic and locality rates reflect these additional individuals. ZIP code rates are calculated using only those individuals who reside in that ZIP code.

Why Is This Indicator Important?

Lack of access to adequate and timely health care services can lead to increased use of the hospital ER as a source of primary care. According to the CDC, uninsured adults were more likely than those with

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[104] Centers for Medicare & Medicaid Services (CMS). (2016). *CMS Program Statistics: Medicare Enrollment Dashboard*. Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Dashboard/Medicare-Enrollment/Enrollment%20Dashboard.html.

private health insurance or a public health plan to visit the emergency room due to having no other place to go.[105] This can place unnecessary strain on the hospital ER.

How Are We Doing?

In 2013, almost 298,000 visits were made to the nine Tulsa County ERs for an approximate overall rate of 489 visits per 1,000 population. This is likely an overestimate for county residents for two reasons: ZIP code information was unknown for almost 11 percent of visits, and at least seven percent of visits were from individuals who lived in ZIP codes that are not within Tulsa County. Adults ages $24 - 34$ accounted for the largest percentage of emergency room visits (19.1 percent), followed by adults age 65+ (15.3 percent) (Figure 124).[106]

Figure 124: Emergency Rooms by Visits by Age, Tulsa County 2013
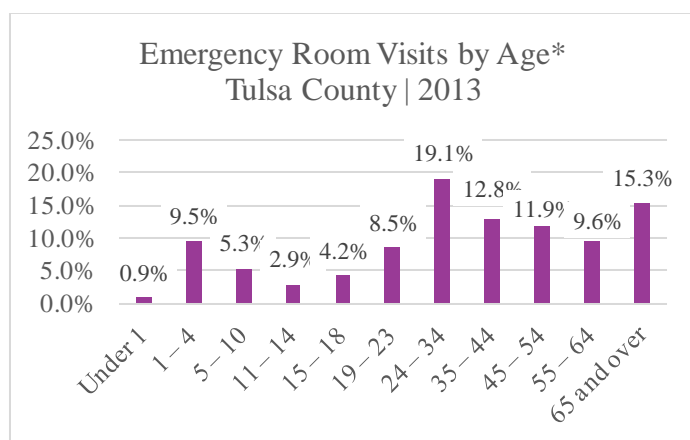
*Graph shows percentage of total emergency room visits within each age group; percentages add up to 100%.

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Tulsa County's rate of 489 visits per 1,000 population was higher than both Oklahoma and the Unites States. ER visit rates were 486 and 423 per 1,000 population for Oklahoma and the United States, respectively (Figure 125).[107]

Figure 125: Emergency Room Visit Rate by Locality, 2013

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[105] Gindi RM, Cohen RA, Kirzinger WK. (2012*). Emergency room use among adults aged 18 − 64. Early release of estimates from the National Health Interview Survey, January − June 2011.* National Center for Health Statistics.. Retrieved from: http://www.cdc.gov/nchs/data/nhis/earlyrelease/emergency_room_use_january-june_2011.pdf.

[106] Tulsa Health Department. (2015). *Tulsa Area Syndromic Surveillance System (TASSS).*

[107] Kaiser Family Foundation. (2013). *Hospital Emergency Room Visits per 1,000 Population*. Retrieved from: http://kff.org/other/state-indicator/emergency-room-visits/.
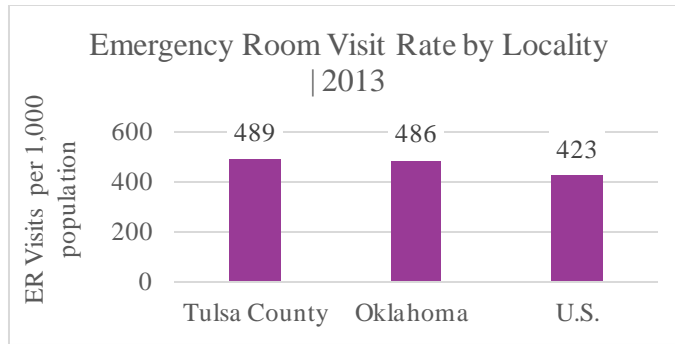
Emergency Room Visit Rate by Locality | 2013

Locality	ER Visits per 1,000 population
Tulsa County	489
Oklahoma	486
U.S.	423

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The highest rate of emergency room visits was in the ZIP code 74103 (Figure 126). [99]

Figure 126: Emergency Room Visits, Tulsa County Map
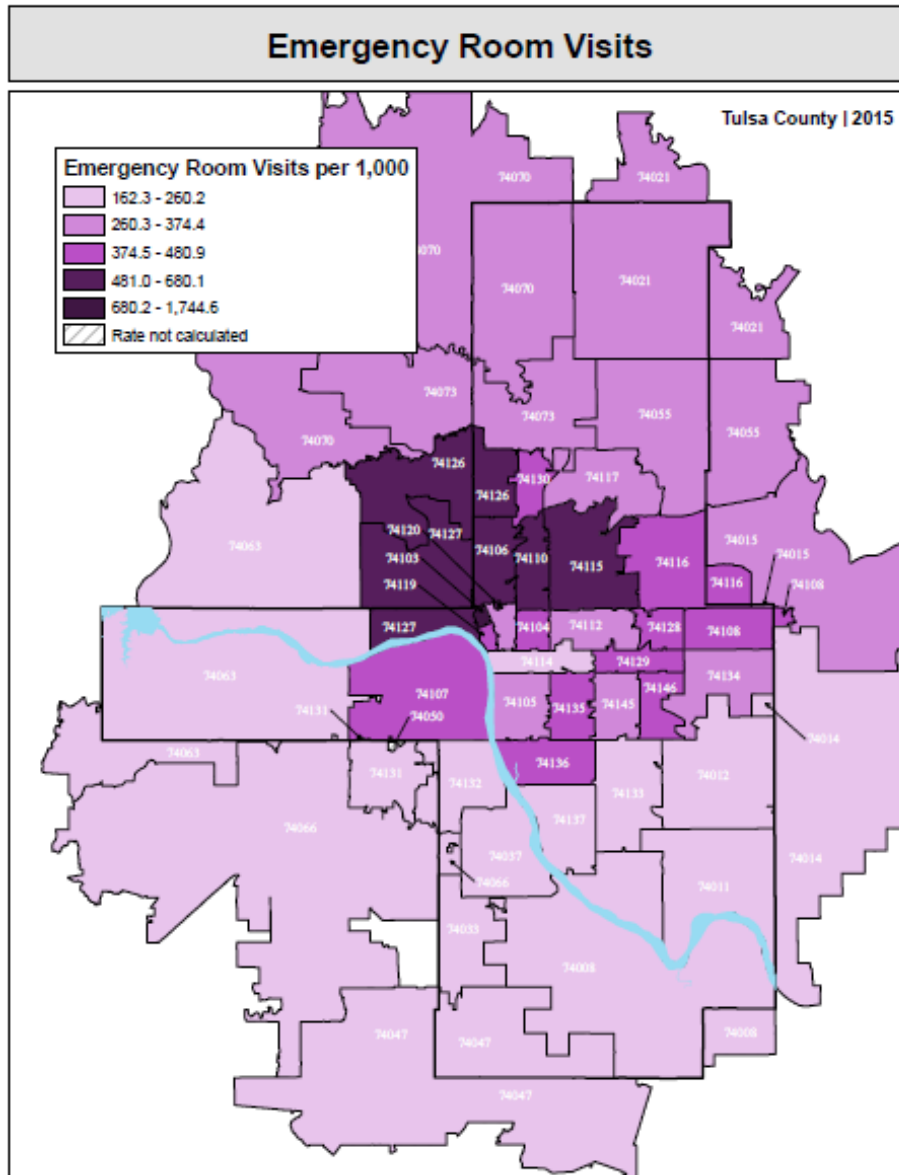
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Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Late or No Prenatal Care

Definition

This indicator is defined as births to Tulsa 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, over the years 2011 – 2013.

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.[108] 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. [101] 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?

From 2011 – 2013, a total of 36.8 percent of Tulsa County mothers did not receive prenatal care or received delayed prenatal care (after the first trimester). Asian/Pacific Islanders had the highest percentage of late or no prenatal care (49.7 percent), followed by blacks (44.3 percent). Late or no prenatal care was lowest among white mothers (34.4 percent). Additionally, the percentage of late or no prenatal care for Hispanic mothers compared to non-Hispanic mothers was very similar (37.8 percent compared to 36.6 percent) (Figure 127).[17] [18]

Figure 127: Births with No First Trimester Prenatal Care by Race/Ethnicity of Mother, Tulsa County, 2011-2013

Births with No First Trimester Prenatal Care by Race/Ethnicity of Mother
Tulsa County | 2011 – 2013

White 34.4% | Black 44.3% | AI 39.1% | Asian/PI 49.7% | Hispanic 37.8% | Non-.. 36.6%
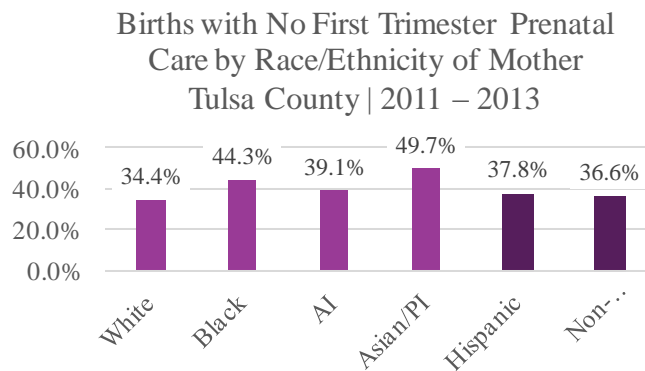
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

In 2013, 63.2 percent of Tulsa County mothers received prenatal care during the first trimester. This was lower than the rate of prenatal care in both Oklahoma (68.5 percent) and the United States (64.1 percent) (Figure 128).[109] Tulsa County, Oklahoma, and the U.S. all fell short of the Healthy People 2020 first trimester prenatal care goal of 77.9 percent.[34]

Figure 128: Births with First Trimester Prenatal Care by Locality, 2013

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[108] U.S. Department of Health and Human Services, Health Resources and Services Administration. (2015). Maternal and Child Health: Prenatal Services. Retrieved from: http://mchb.hrsa.gov/programs/womeninfants/ prenatal.html.

[109] United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics. (2015). *Natality public-use data 2007-2013*, on CDC WONDER Online Database. Retrieved from: http://wonder.cdc.gov/natality-current.html.
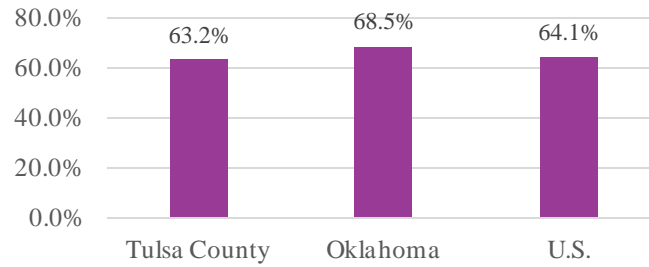
Births with First Trimester Prenatal Care by Locality | 2013

Tulsa County: 63.2%
Oklahoma: 68.5%
U.S.: 64.1%

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

The highest rates of late or no prenatal care were in ZIP codes 74103, 74106, and 74126 (Figure 129). [17] [18]

Figure 129: Late or No Prenatal Care, Tulsa County 2013 Map
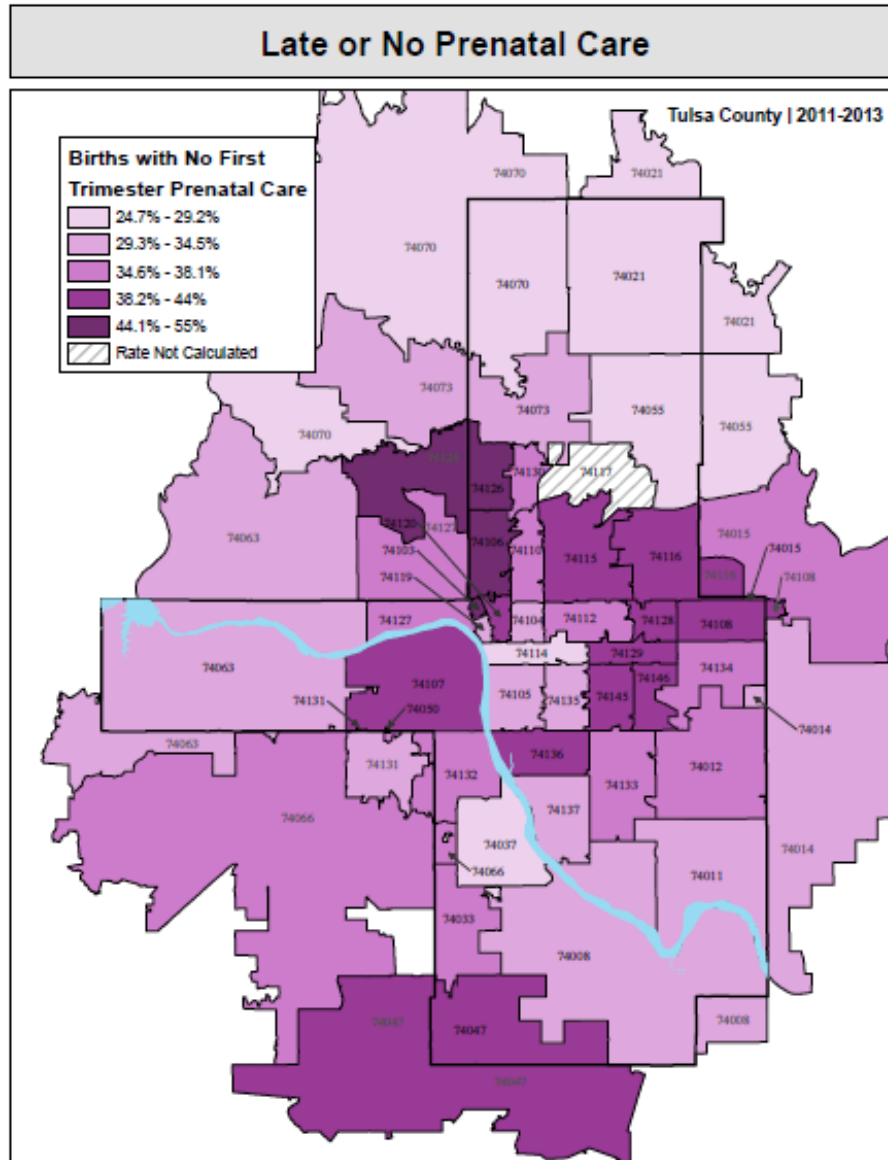
Late or No Prenatal Care

Tulsa County | 2011-2013

Births with No First Trimester Prenatal Care
- 24.7% - 29.2%
- 29.3% - 34.5%
- 34.6% - 38.1%
- 38.2% - 44%
- 44.1% - 55%
- Rate Not Calculated

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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.[7]

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.

How Are We Doing?

In 2013, the age-adjusted ambulatory care sensitive condition discharge rate per 1,000 Medicare enrollees was 59 in Tulsa County, 71.4 in Oklahoma, and 59.2 in the U.S.[110]

Figure 130: Preventable Hospital Events, Age-Adjusted Discharge Rate by Locality, 2013

Report Area	Total Medicare Part A Enrollees	Ambulatory Care Sensitive Condition Hospital Discharges	Ambulatory Care Sensitive Condition Discharge Rate
Tulsa County, OK	53,168	3,138	59
Oklahoma	418,626	29,878	71.4
United States	58,209,898	3,448,111	59.2

Preventable Hospital Events, Age-Adjusted Discharge Rate (Per 1,000 Medicare Enrollees)
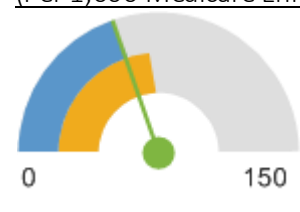
■ Tulsa County, OK (59)
■ Oklahoma (71.4)
■ United States (59.2)

Data Source: Dartmouth College Institute for Health Policy Clinical Practice. (2012). *Dartmouth Atlas of Health Care.*

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

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[110] Dartmouth College Institute for Health Policy Clinical Practice. (2012). *Dartmouth Atlas of Health Care.*

Ambulatory Care Sensitive Conditions, Rate (Per 1,000 Medicare Enrollees) by County, DA 2012

- Over 100.0
- 80.1 - 100.0
- 60.1 - 80.0
- Under 60.1
- No Data or Data Suppressed
- Report Area
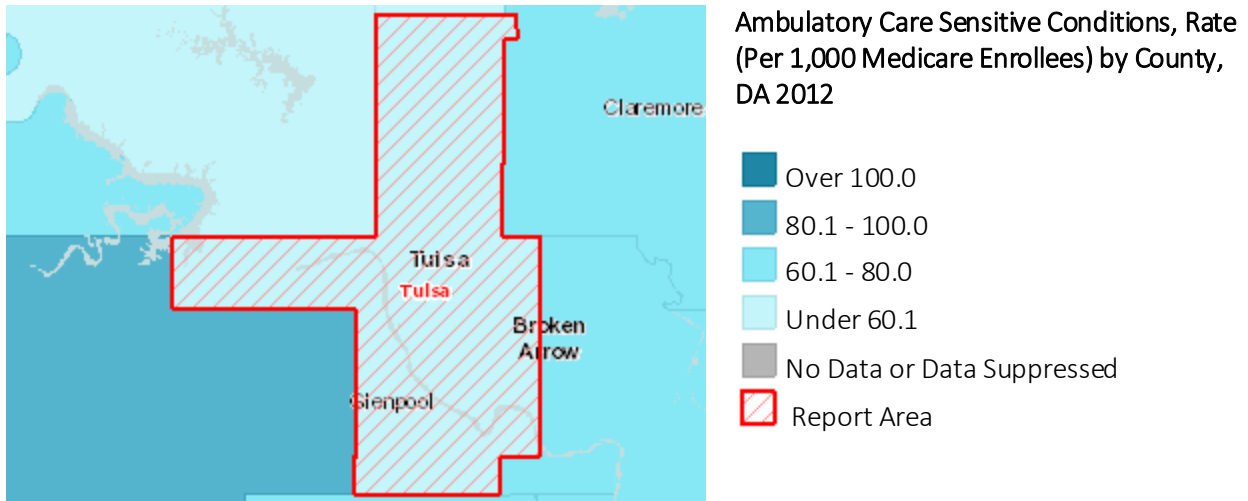
Data Source: Dartmouth College Institute for Health Policy Clinical Practice. (2012). *Dartmouth Atlas of Health Care.*
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.

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 Tulsa County, 55 percent in Oklahoma, and 63 percent in the U.S. (90th percentile or top 10 percent was 71%) (Table 20).[7] The percentage of female Medicare enrollees who have received one or more mammograms in the past two years has worsened over recent years in Tulsa County.

Table 20: Percent Female Medicare Enrollees with Mammogram in Past 2 Years by Locality, 2013

Report Area	Percent Female Medicare Enrollees with Mammogram in Past 2 Years
Tulsa County, OK	58%
Oklahoma	55%
United States	63%

Data Source: University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from:
 www.countyhealthrankings.org.

Diabetes Monitoring - Hemoglobin A1c Test

Definition

This indicator reports the percentage of Medicare patients with diabetes who have had 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 who have had a hemoglobin A1c (hA1c) test in the past year was 83 percent in Tulsa County, 78 percent in Oklahoma, and 85 percent in the U.S. (90th percentile or top 10 percent was 90%) (Table 20).[7]

Table 21: Percentage of Medicare Enrollees with Diabetes with Annual Exam by Locality, 2013

Report Area	Percent Medicare Enrollees with Diabetes with Annual Exam
Tulsa County, OK	83%
Oklahoma	78%
United States	85%

Data Source: University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

Health Behaviors and Risk Factors

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 Tulsa County residents who reported that they consumed less than one serving of fruit and vegetables daily in 2013.

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 2013, 50.3 percent of Tulsa County residents reported that they consumed less than one serving of fruit daily. This was similar to Oklahoma (50.7 percent) but higher than the United States (39.2 percent).[17][24]

In 2013, 24.6 percent of Tulsa County residents reported that they consumed less than one serving of vegetables daily. This was lower than Oklahoma (26.3 percent) but higher than the United States (22.9 percent).[17][24]

Men were more likely to report low fruit consumption than women (56.1 percent compared to 44.7 percent). Adults ages 25 – 34 were most likely to report that they consumed less than one serving of fruit daily (Figure 131).[17][24] Additionally, this was more likely to be reported among black, non-Hispanics and American Indian/Alaskan Native, non-Hispanics.

Figure 131: Consume <1 Serving of Fruit Daily by Age and Race/Ethnicity, Tulsa County, 2013

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[111] Centers for Disease Control and Prevention. (2016). Fruits *and Vegetables*. Retrieved from: http://www.cdc.gov/healthyweight/healthy_eating/fruits_vegetables.html.
[112] United States Department of Agriculture. (2016). *Choose My Plate: Food Groups*. Retrieved from http://www.choosemyplate.gov/food-groups/.

Consume <1 Serving of Fruit Daily by Age
and Race/Ethnicity
Tulsa County | 2013
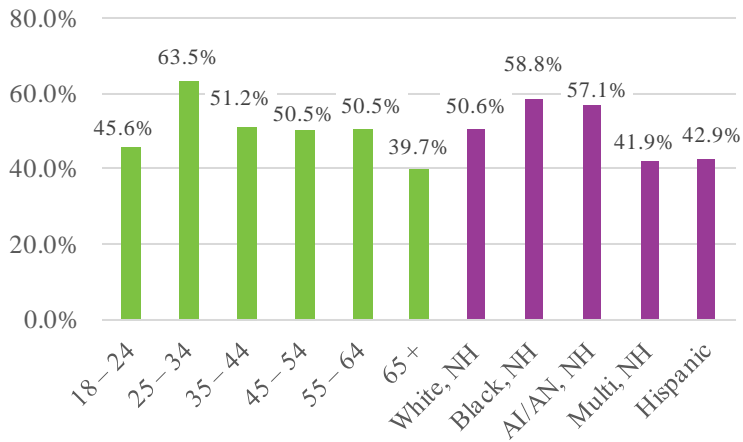
Men were more likely to report low vegetable consumption than women (27.3 percent compared to 22.1 percent). Adults ages 18 – 24 were most likely to report that they consumed less than one serving of vegetables daily (Figure 132). [17] [24] Additionally, this was more likely to be reported among black, non-Hispanics.

Figure 132: Consume <1 Serving of Vegetables Daily by Age and Race/Ethnicity, Tulsa County, 2013
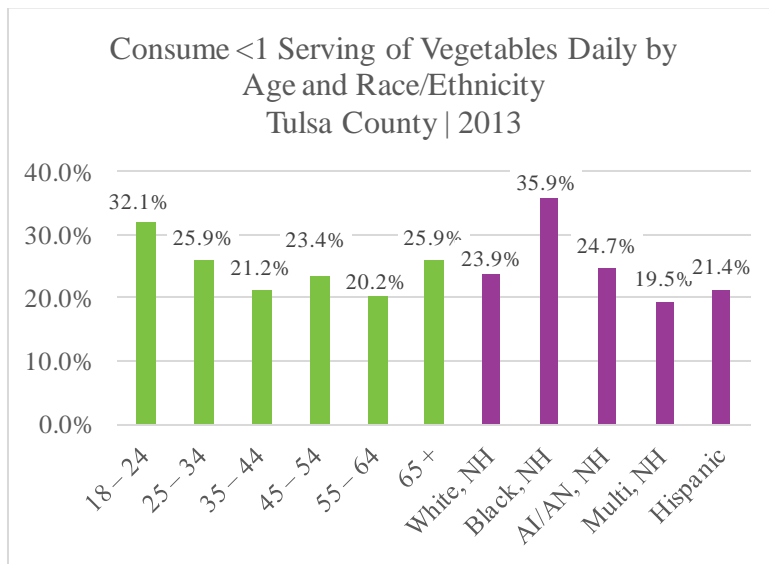
Consume <1 Serving of Vegetables Daily by
Age and Race/Ethnicity
Tulsa County | 2013

With regard to socioeconomic factors, low fruit consumption was highest among adults who had an income of less than $15,000 (Figure 133). [17] [18] Low fruit consumption decreased as education levels increased.

Figure 133: Consume <1 Serving of Fruit Daily by Income and Education, Tulsa County 2013
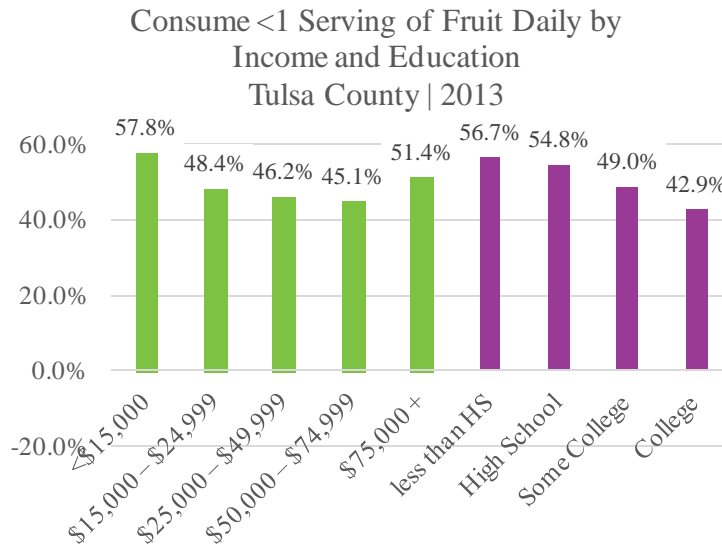
Consume <1 Serving of Fruit Daily by Income and Education Tulsa County | 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Low vegetable consumption was highest among adults who had an income of less than $15,000 (Figure 134). [17] [24] Low vegetable consumption decreased as education levels increased.

Figure 134: Consume <1 Serving of Vegetables Daily by Income and Education, Tulsa County 2013
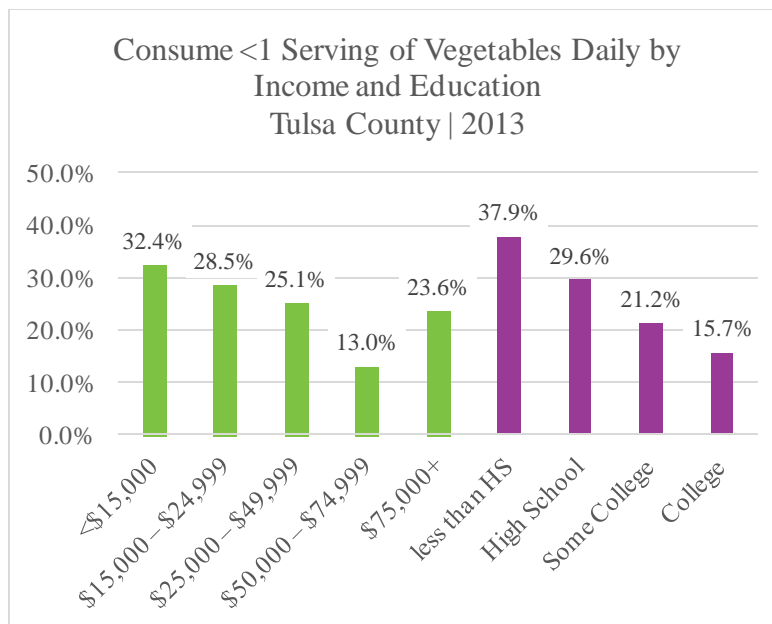
Consume <1 Serving of Vegetables Daily by Income and Education Tulsa County | 2013

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Physical Activity

Definition

This indicator is presented as the percentage of adults in 2013 who reported no physical activity in the past month, other than their regular job.

Why Is This Indicator Important?

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

How Are We Doing?

Overall, 32.4 percent of Tulsa County adults reported no leisure time physical activity in the previous month in 2013. This was lower than in Oklahoma (33.0 percent), but higher than the United States (25.3 percent). [17] [24] All of these regions met the Healthy People 2020 national target of 32.6 percent of adults reporting no leisure time physical activity. [113] The prevalence of 'no physical activity' increased in Tulsa County from 2010 – 2013 (Figure 135). [17] [24]

Figure 135: No Leisure Time Physical Activity in the Past Month by Locality, 2004-2013
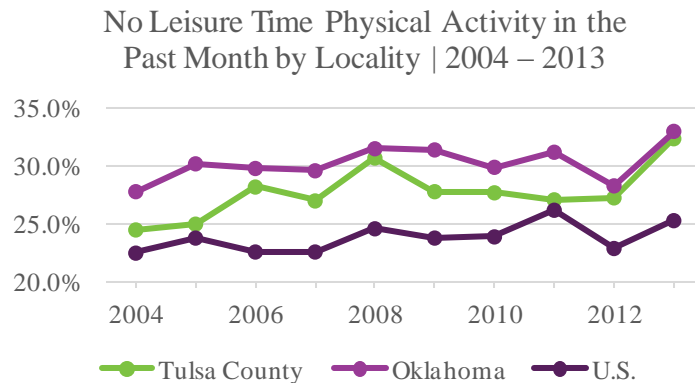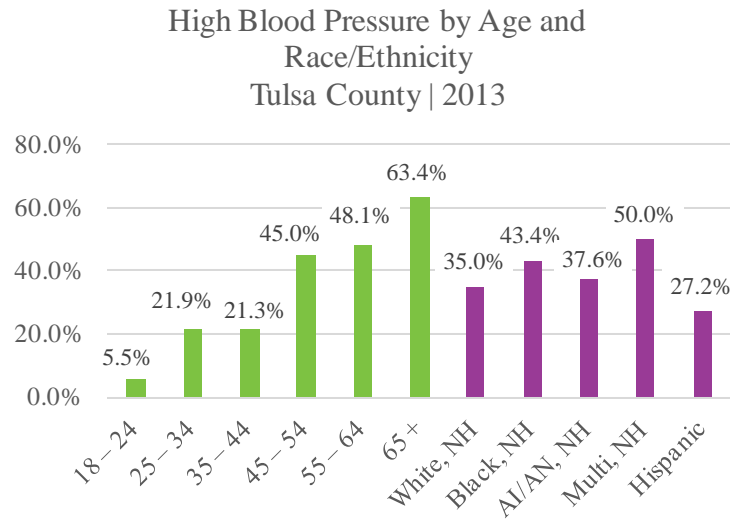

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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[113] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2016). *Healthy People 2020: Physical Activity*. Retrieved from: http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicId=33

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Females were more likely than males to have no leisure time physical activity (34.5 percent compared to 30.1 percent). [17] [24] Additionally, adults age 65+ had higher rates of no leisure time physical activity. With regard to race and ethnicity, multiracial, non-Hispanic individuals had the lowest rate of no leisure time physical activity (Figure 136).

Figure 136: No Leisure Time Physical Activity in the Past Month by Age and Race/Ethnicity
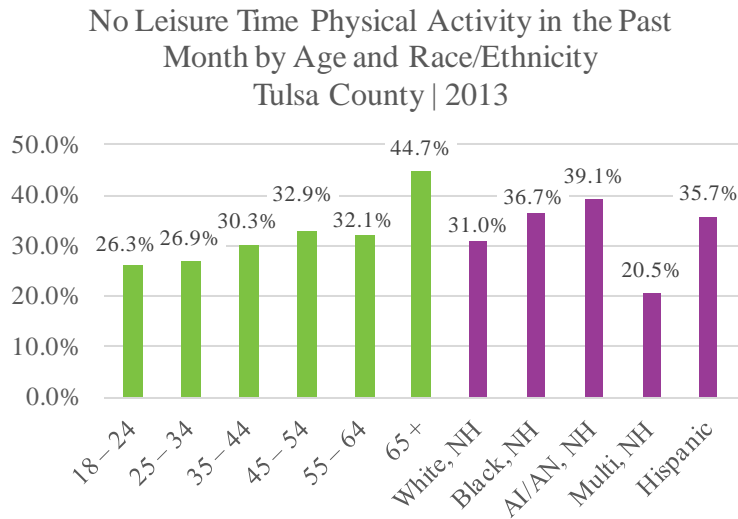
No Leisure Time Physical Activity in the Past Month by Age and Race/Ethnicity
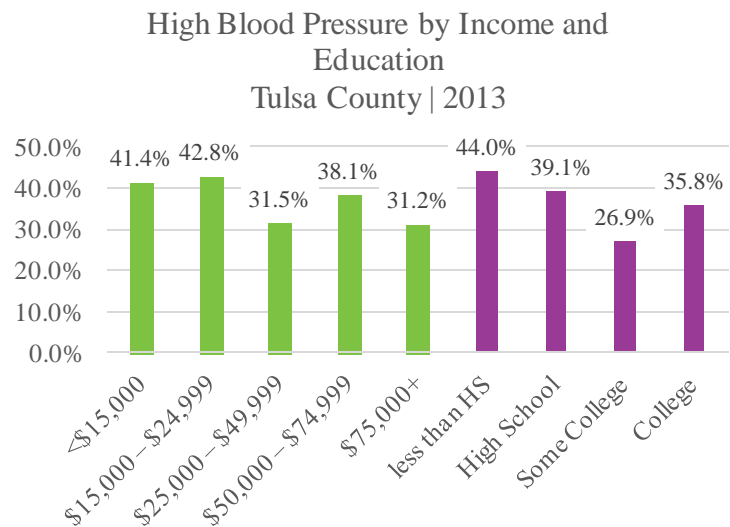Tulsa County | 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Adults who had an income of less than $50,000 were almost twice as likely to have no physical activity, other than their regular job, in the past month compared to adults who made more than $50,000. [17] [24] Adults who had a high school education or less were also almost twice as likely to have no physical activity, other than their regular job, in the past month compared to adults who had a college education (Figure 137).

Figure 137: No Leisure Time Physical Activity in the Past Month by Income and Education

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No Leisure Time Physical Activity in the Past Month by Income and Education
Tulsa County | 2013
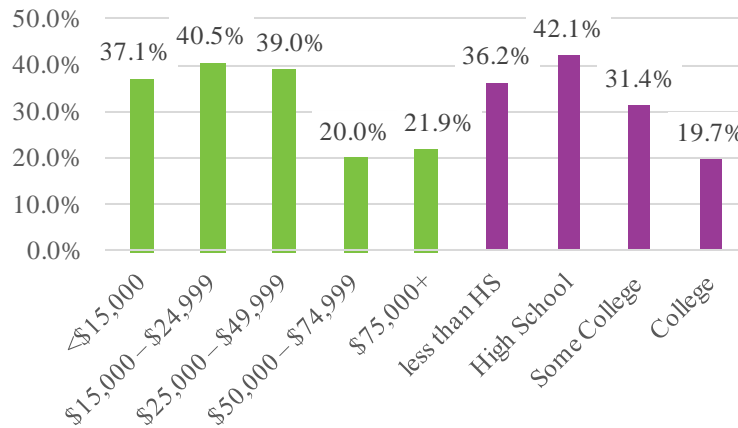
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Weight Status

Overweight and Obese

Definition

   This indicator is the percentage of Tulsa County residents who were overweight or obese (total overweight) in 2013. 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?

   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.[114]

How Are We Doing?

   In 2010, 63.7 percent of Tulsa County residents were overweight or obese (35.2 percent overweight; 28.5 percent obese), compared to 67.9 percent of Oklahomans and 63.5 percent of residents of the United States. [17] [24]

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[114] Centers for Disease Control and Prevention. (2016). *Overweight and Obesity: Causes and Consequences.* Retrieved from: http://www.cdc.gov/obesity/adult/causes/index.html .

Men were more likely to be overweight/obese than women (70.1 percent compared to 57.3 percent). The prevalence of total overweight was also highest among middle-age individuals (35-64) (Figure 138). [17] [24] Additionally, total overweight was most prevalent among black, non-Hispanic (NH) and Hispanic individuals.

Figure 138: Total Overweight by Age and Race/Ethnicity, Tulsa County 2013
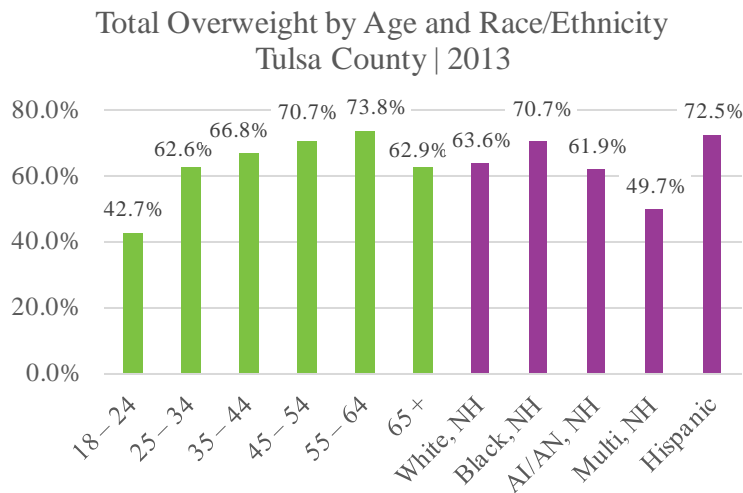
Total Overweight by Age and Race/Ethnicity
Tulsa County | 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

With regard to socioeconomic factors, total overweight was relatively stable across income groups, although it was slightly lower about adults who had an income of greater than $75,000 (Figure 139). [17] [24] It was also slightly lower among adults who had less than a high school education.

Figure 139: Total Overweight by Income and Education, Tulsa County 2013
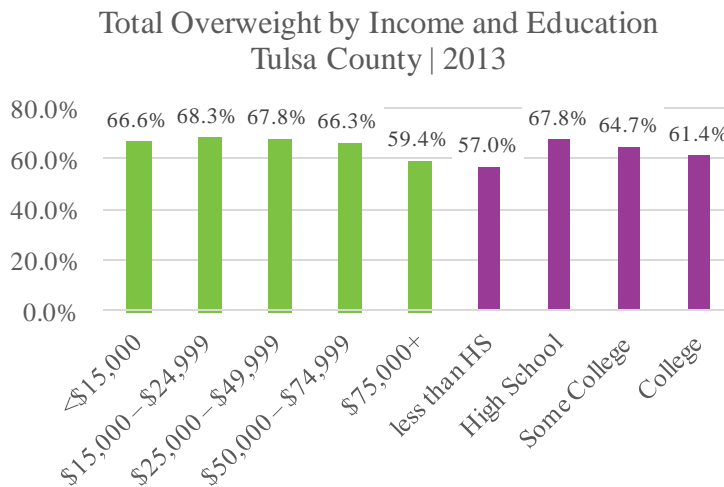
Total Overweight by Income and Education
Tulsa County | 2013

Hypertension

High Blood Pressure

Definition

This indicator is presented as the percentage of Tulsa County residents who had ever been diagnosed with high blood pressure in 2013.

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.[115]

How Are We Doing?

In 2013, 34.8 percent of Tulsa County residents reported having high blood pressure. This was lower than in Oklahoma (37.5 percent) but higher than the United States (31.4 percent) (Figure 140). [17][24] 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.[116]

Figure 140: High Blood Pressure by Locality, 2005-2013
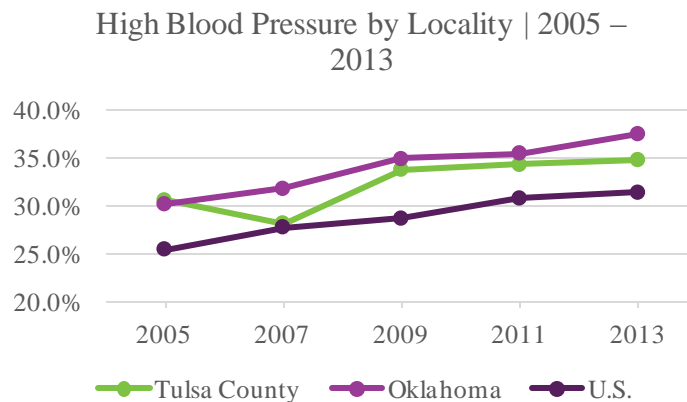
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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[115]American Heart Association. (2015). *High Blood Pressure.* Retrieved from: http://www.heart.org/ HEARTORG/Conditions/HighBloodPressure/High-Blood-Pressure-or-Hypertension_UCM _002020_SubHomePage.jsp.

[116] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. *Healthy People 2020: Heart Disease and Stroke*. Retrieved from: http://www.healthypeople.gov/2020/topicsobjectives 2020/objectiveslist.aspx?topicId=21.

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Males in Tulsa County had a slightly higher prevalence of high blood pressure compared to women (35.4 percent compared to 34.3 percent) (Figure 141). [17] [24] Also, high blood pressure prevalence increased with age. Multiracial, non-Hispanic individuals had a higher prevalence of high blood pressure than other race/ethnic groups.

Figure 141: High Blood Pressure by Age and Race/Ethnicity, Tulsa County 2013

High Blood Pressure by Age and
Race/Ethnicity
Tulsa County | 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

With regard to income, individuals who had an income of less than $25,000 had a higher prevalence of high blood pressure (Figure 142). [17] [24] Additionally, the prevalence was higher in individuals who had less than a high school education.

Figure 142: High Blood Pressure by Income and Education, Tulsa County 2013

High Blood Pressure by Income and
Education
Tulsa County | 2013

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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, 21.4 percent of adults, or 93,939, 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%), but slightly lower than in the U.S. (21.7%) (Figure 143 and Figure 144).[24]

Figure 143: Percent Adults with High Blood Pressure Not Taking Medication by Locality, 2006-2010

Percent Adults with High Blood Pressure Not Taking Medication

Report Area	Total Population (Age 18)	Total Adults Not Taking Blood Pressure Medication (When Needed)	Percent Adults Not Taking Medication
Tulsa County, OK	439,019	93,939	21.4%
Oklahoma	2,793,624	565,511	20.2%
United States	235,375,690	51,175,402	21.7%

■ **Tulsa County, OK (21.4%)**
■ **Oklahoma (20.2%)**
■ **United States (21.7%)**

Data Source: Centers for Disease Control and Prevention. (2015). *Behavioral Risk Factor Surveillance System 2006-2010.* Additional data analysis by CARES.

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

Figure 144: Adults Age 18 with High Blood Pressure, Not Taking Medication, Percent by County
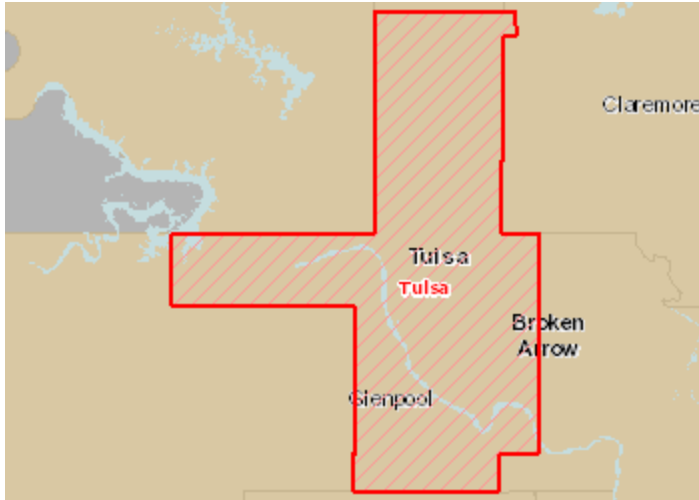
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Adults Age 18 with High Blood Pressure, Not Taking Medication, Percent by County, BRFSS 2006-10

- ▨ Over 85.0%
- ▨ 80.1 - 85.0%
- ▨ 75.1 - 80.0%
- ▨ Under 75.1%
- ▨ No Data or Data Suppressed
- ▨ Report Area
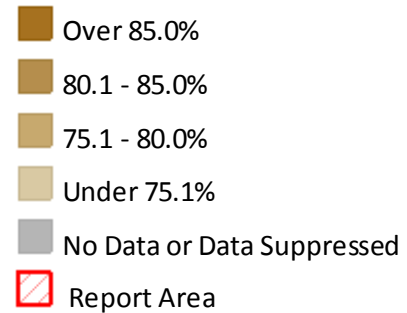
Data Source: Same as above.
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.

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 for high blood pressure (22.92%) (Figure 145). [24]

Figure 145: Adults Not Taking Medicine for High Blood Pressure, Percent by Race/Ethnicity
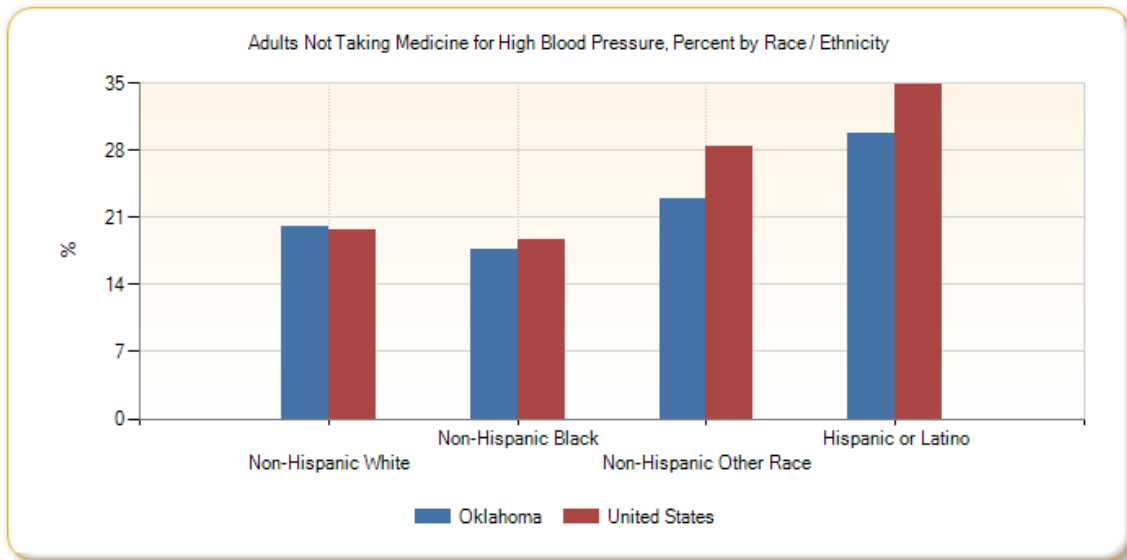
Report Area	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other Race	Hispanic or Latino
Oklahoma	20.01%	17.71%	22.92%	29.77%
United States	19.66%	18.65%	28.31%	34.86%

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

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, 40.4 percent of adults, or 177,543, 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 lower than in Oklahoma (42.3%), but significantly higher than in the U.S. (30.2%) (Figure 146). [24]

   Males were more likely to be without a recent dental exam than females (44.82 % compared to 39.92 %). With regard to race and ethnicity, Non-Hispanic blacks were the most likely to report not having had a recent dental exam compared to other race/ethnic groups (50.89%). Hispanic or Latinos were the second most likely to report no recent dental exam (50.29%). Non-Hispanic whites were the least likely to report no recent dental exam (39.63%). [24]

Figure 146: Percentage of Adults without a Recent Dental Exam by Locality, 2006-2010

Percent Adults Without Recent Dental Exam

Tulsa County, OK (40.4%)
Oklahoma (42.3%)
United States (30.2%)

Report Area	Total Population (Age 18)	Total Adults Without Recent Dental Exam	Percent Adults with No Dental Exam
Tulsa County, OK	439,019	177,543	40.4%
Oklahoma	2,793,624	1,181,932	42.3%
United States	235,375,690	70,965,788	30.2%

Data Source: Centers for Disease Control and Prevention. (2015). *Behavioral Risk Factor Surveillance System 2006-2010.* Additional data analysis by CARES.

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

Teen Births

Teen Birth Rate Ages 15 – 19

Definition

This indicator is presented as the number of live births to Tulsa County teenagers ages 15 – 19 per 1,000 females in this age group, over the years 2011 – 2013.

Why Is This Indicator Important?

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.[117]

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 adolescence, have more health problems, give birth as a teenager, and face unemployment as a young adult.[118] The children of teens are also more likely to depend on publicly provided healthcare. [109]

How Are We Doing?

There were 2,563 births to Tulsa County teens ages 15 – 19 from 2011 – 2013, for a birth rate of 43.7 live births per 1,000 females ages 15 – 19. Blacks had the highest birth rate for teenagers ages 15 – 19 (62.0). Asian/Pacific Islanders had the lowest birth rate with 19.0 live births per 1,000 females ages 15 – 19. Additionally, the birth rate for Hispanic women in this age group was higher than that of non-Hispanic women (68.2 compared to 39.7) (Figure 147). [17] [24]

Figure 147: Teen Birth Rates (Ages 15-19) by Race/Ethnicity of Mother, Tulsa County 2011-2013

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[117] The National Campaign to Prevent Teen and Unplanned Pregnancy. (2016). *Teen Pregnancy and Other Health Issues*. Retrieved from: http://www.thenationalcampaign.org/why-it-matters/pdf/health.pdf.
[118] Centers for Disease Control and Prevention. (2016). *Teen Pregnancy: About Teen Pregnancy*. Retrieved from: http://www.cdc.gov/TeenPregnancy/AboutTeenPreg.htm.
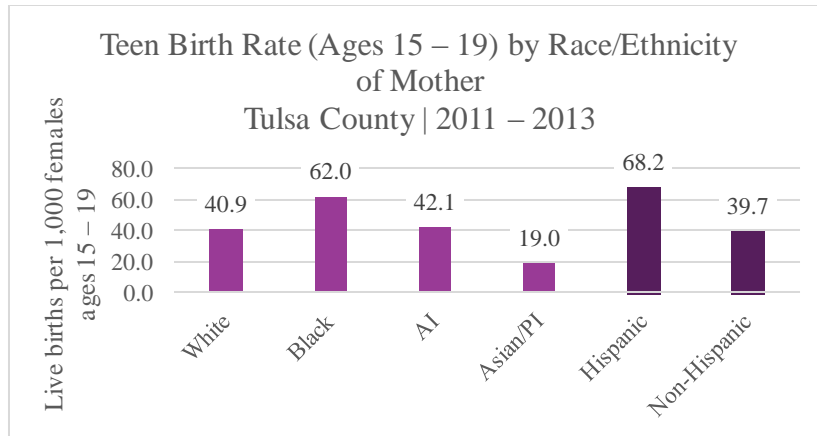
Teen Birth Rate (Ages 15 – 19) by Race/Ethnicity of Mother
Tulsa County | 2011 – 2013

In 2013, the teen birth rate (ages 15 – 19) in Tulsa County was 37.3 live births per 1,000 females ages 15 – 19. [17] [24] This was lower than Oklahoma (42.9) but higher than the United States (26.5) (Figure 148). [119]

Figure 148: Teen Birth Rates (Ages 15-19) by Locality, 2013
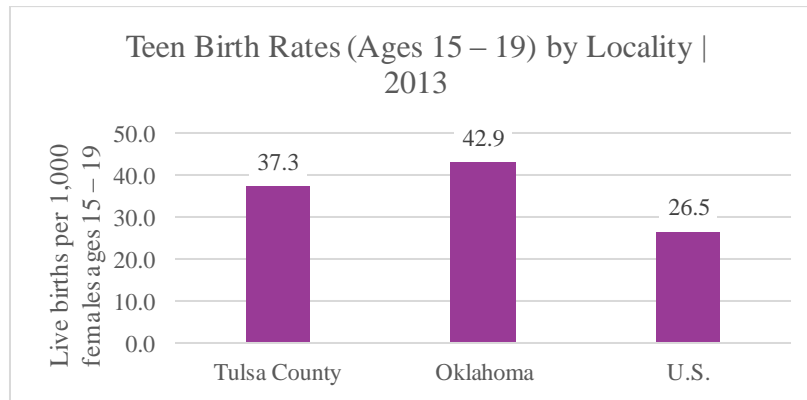
Teen Birth Rates (Ages 15 – 19) by Locality | 2013

The ZIP codes with the highest teen birth rate (ages 15 – 19) were 74116, 74131, 74146, 74129, 74115, 74110, 74128, and 74106 (Figure 149). [17] [24]

Figure 149: Births to Teens 15-19, Tulsa County 2013 Map

[119] Martin JA, Hamilton BE, Osterman MJK, et al. (2015). Births: Final Data for 2013. *National Vital Statistics Reports (64)*1. Hyattsville, MD: National Center for Health Statistics.

Births to Teens 15 - 19

Tulsa County | 2011-2013

Teen Birth Rate (Ages 15 – 19)
- 9.4 - 20.6
- 20.7 - 33.5
- 33.6 - 46.9
- 47.0 - 68.5
- 68.6 - 121.6
- Rate Not Calculated
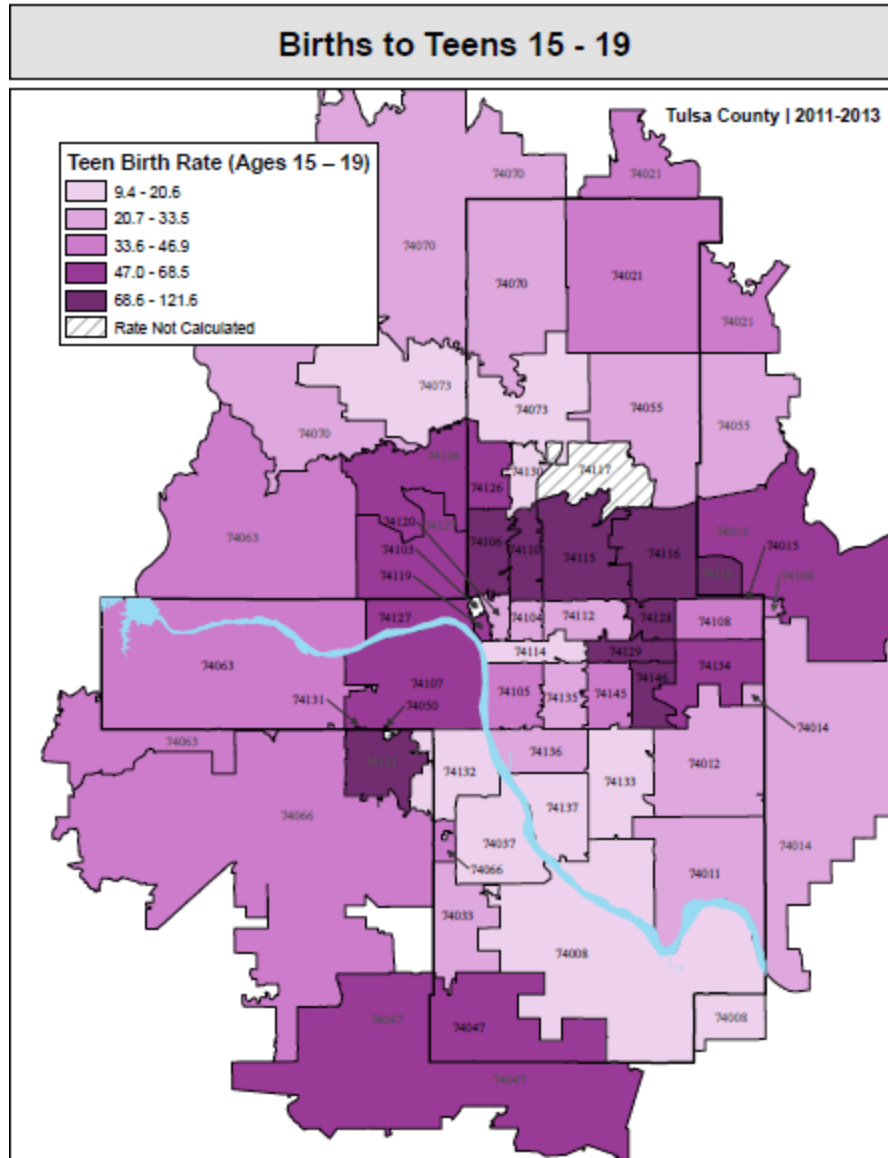
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Tobacco Use

Tobacco Use among Current Smokers

Definition

This indicator is the percentage of Tulsa County residents who smoked cigarettes in 2013.

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

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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 2013, 20.4 percent of Tulsa County residents reported smoking cigarettes on some days or every day (current smokers). This was lower than Oklahoma (23.7 percent) but higher than the United States (19.0 percent). [17] [24] None of these regions met the Healthy People 2020 national goal of reducing smoking prevalence to 12.0 percent. [120] The prevalence of cigarette smoking has fluctuated over time, but overall, there was an 11.6 percent decrease in the prevalence in Tulsa County from 2004 – 2013 (Figure 150).

Figure 150: Current Smokers by Locality, 2004-2013
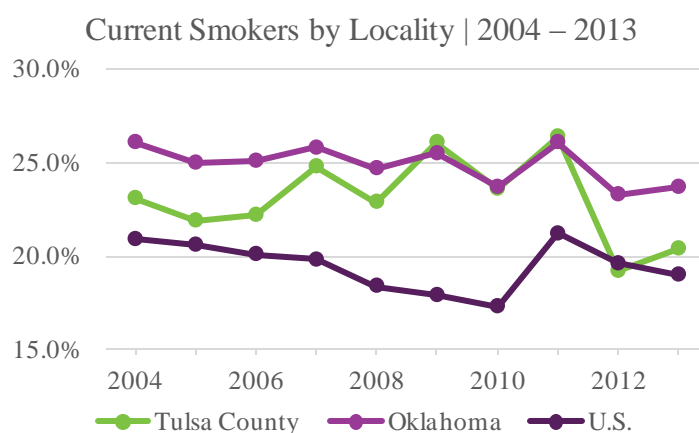
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Males in Tulsa County were more likely to smoke cigarettes than females (22.6 percent compared to 18.4 percent). Also, adults ages 45 – 54 had a higher prevalence of cigarette smoking. With regard to race and ethnicity, Hispanics had a lower prevalence of cigarette smoking compared to other race/ethnic groups (Figure 151). [17] [24]

Figure 151: Current Smokers by Age and Race/Ethnicity, Tulsa County 2004-2013

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[120] U.S. Department of Health and Human Services. (2016). *Healthy People 2020: Tobacco Use*. Retrieved from: http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=41.

Current Smokers by Age and Race/Ethnicity
Tulsa County | 2013

Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

Although the price of cigarettes has continuously increased over time, adults who had an income of less than $15,000 were about twice as likely to be current smokers compared to other income levels. This was even higher when compared to individuals who had an income of greater than $50,000 (Figure 152). [17] [24] The prevalence of current smokers among individuals with a college education was about three times lower than individuals with other education levels.

Figure 152: Current Smokers by Income and Education, Tulsa County 2013

Current Smokers by Income and Education
Tulsa County | 2013
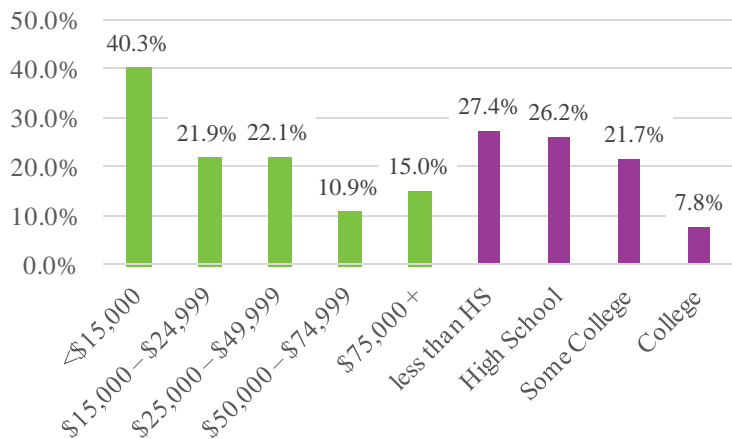
Source: Courtesy of the Tulsa Health Department. (2015). *Tulsa County Health Profile 2015*. Retrieved from: http://www.tulsa-health.org/sites/default/files/page_attachments/_health-profile-2015-web.pdf .

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.

How Are We Doing?

In Tulsa County, an estimated 15 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 lower than in the U.S. (16.9%) (Figure 153).[24]

Figure 153: Estimated Adults Drinking Excessively (Age-Adjusted Percentage) by Locality, 2006-2010

Report Area	Total Population Age 18	Estimated Adults Drinking Excessively	Estimated Adults Drinking Excessively (Crude Percentage)	Estimated Adults Drinking Excessively (Age-Adjusted Percentage)
Tulsa County, OK	444,484	64,006	14.4%	15%
Oklahoma	2,793,624	368,758	13.2%	13.9%
United States	232,556,016	38,248,349	16.4%	16.9%

Estimated Adults Drinking Excessively (Age-Adjusted Percentage)

■ Tulsa County, OK (15%)
■ Oklahoma (13.9%)
■ United States (16.9%)

Data Source: Centers for Disease Control and Prevention. (2015). *Behavioral Risk Factor Surveillance System 2006-2010.* Additional data analysis by CARES.

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

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, 11.90, or 3.31 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 154).[121]

Figure 154: Percentage of Days Exceeding Standards, Population-Adjusted Average by Locality, 2012

Report Area	Total Population	Average Daily Ambient Ozone Concentration	Number of Days Exceeding Emissions Standards	Percentage of Days Exceeding Standards, Crude Average	Percentage of Days Exceeding Standards, Pop. Adjusted Average
Tulsa County, OK	603,403	44.83	11.90	3.26%	3.31%
Oklahoma	3,751,351	45.05	8.35	2.29%	2.27%
United States	312,471,327	38.95	4.46	1.22%	1.24%

Percentage of Days Exceeding Standards, Pop. Adjusted Average

■ **Tulsa County, OK (3.31%)**
■ **Oklahoma (2.27%)**
■ **United States (1.24%)**

Data Source: Centers for Disease Control and Prevention. (2012). *National Environmental Public Health Tracking Network.*

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

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[121] Centers for Disease Control and Prevention. (2012). *National Environmental Public Health Tracking Network.*

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.

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.[7]

How Are We Doing?

The average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) in Tulsa County was 10.4 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).[114]

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?

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Recent studies estimate that contaminants in drinking water sicken 1.1 million people each year. [7] 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.[7]

How Are We Doing?

Tulsa County measured positive ("Yes") for drinking water violations in 2016. [122]

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 Tulsa County was 16 percent in 2008-2012. This was higher than in Oklahoma (14%) and the top 90th percentile, or top 10 percent of the counties in the U.S. (9%) (Figure 155). [123]

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[122] Environmental Protection Agency. (2016). The Safe Drinking Water Information System (SDWIS).

[123] The U.S. Department of Housing and Urban Development (HUD) (2016). *Comprehensive Housing Affordability Strategy Data 2008-2012.*

BEST ▬▬▬▬▬▬▬▬▬ WORST   MISSING
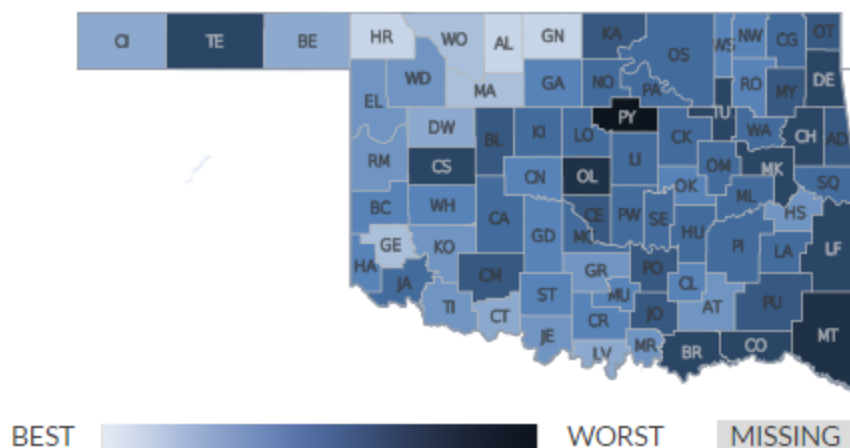
Data Source: The U.S. Department of Housing and Urban Development (HUD) (2016). *Comprehensive Housing Affordability Strategy Data 2008-2012.*
Source: Courtesy of University of Wisconsin Population Health Institute. (2016). *County Health Rankings & Roadmaps.* Retrieved from: www.countyhealthrankings.org.

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.[7]

How Are We Doing?

The percentage of the population in Tulsa County using public transit for commuting to work was .77 percent in 2010-2014. This was higher than in Oklahoma (.48%), significantly lower than in the U.S. (5.06%) (Figure 155 and Figure 156).[13]

Figure 155: Percentage of the Population Using Public Transit for Commute to Work by Locality

Report Area	Total Population Employed Age 16	Population Using Public Transit for Commute to Work	Percent Population Using Public Transit for Commute to Work	Percent Population Using Public Transit for Commute to Work
Tulsa County,	290,778	2,235	0.77%	

OK
| Oklahoma | 1,686,185 | 8,100 | 0.48% |
| United States | 141,337,152 | 7,157,671 | 5.06% |

Data Source: U.S. Census Bureau. (2015). *American Community Survey 2010-14.*

Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.
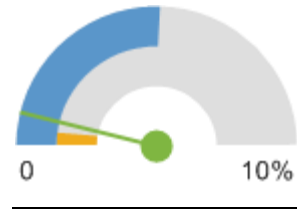
■ **Tulsa County, OK (0.77%)**

■ **Oklahoma (0.48%)**

■ **United States (5.06%)**

Figure 156: Workers Traveling to Work Using Public Transit, Percent by Tract, ACS 2010-2014
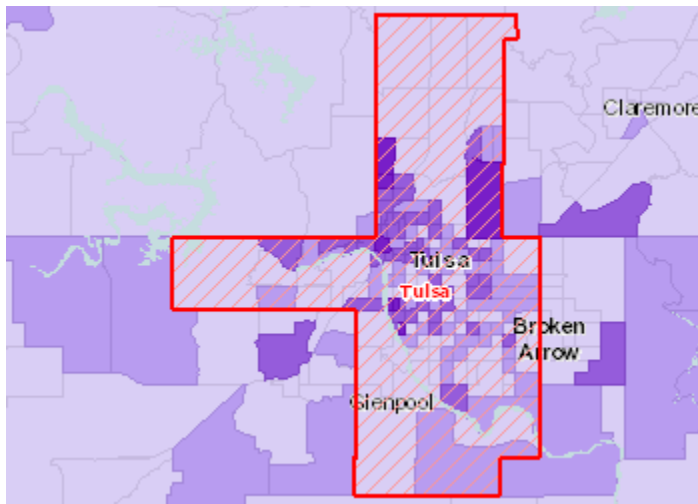
Workers Traveling to Work Using Public Transit, Percent by Tract, ACS 2010-14

■ Over 4.0%

■ 1.1 - 4.0%

■ 0.1 - 1.0%

□ No Workers Using Public Transit

■ No Data or Data Suppressed

▨ Report Area

Data Source: U.S. Census Bureau. (2015). *American Community Survey 2010-14.*
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.

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 Tulsa County with low food access was 27.57 percent in 2010. This was slightly lower than in Oklahoma (28.66%), but significantly higher than in the U.S. (23.61%) (Figure 157).[124] The disparities in food access are evident by the population map below (Figure 158).

Figure 157: Percentage of Population with Low Food Access by Locality, 2010

Report Area	Total Population	Population with Low Food Access	Percent Population with Low Food Access
Tulsa County, OK	603,403	166,372	27.57%
Oklahoma	3,751,351	1,075,089	28.66%
United States	308,745,538	72,905,540	23.61%

Data Source: U.S. Department of Agriculture, Economic Research Service. (2010). *USDA - Food Access Research Atlas*.
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.

Percent Population with Low Food Access
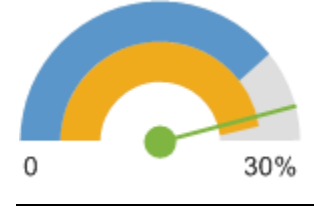
■ **Tulsa County, OK (27.57%)**
■ **Oklahoma (28.66%)**
■ **United States (23.61%)**

Figure 158: Population with Limited Food Access, Percent by Tract, FARA 2010
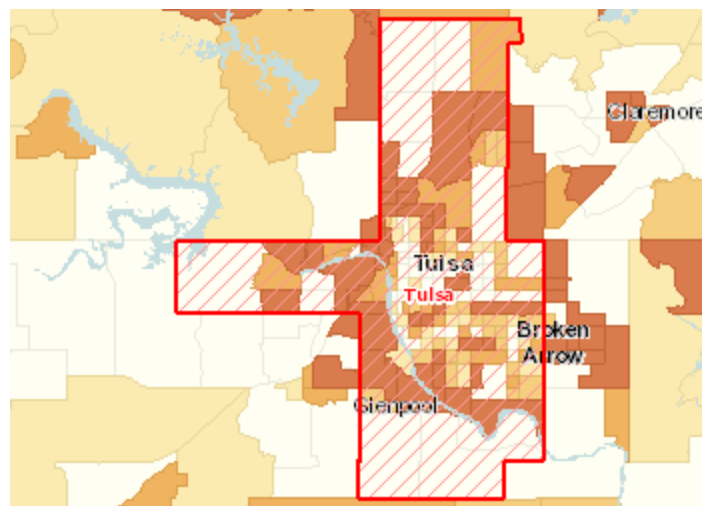
Population with Limited Food Access, Percent by Tract, FARA 2010

■ Over 50.0%
■ 20.1 - 50.0%
■ 5.1 - 20.0%
■ Under 5.1%
□ No Low Food Access
▨ Report Area

Data Source: U.S. Department of Agriculture, Economic Research Service. (2010).

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[124] U.S. Department of Agriculture, Economic Research Service. (2010). *USDA - Food Access Research Atlas*.

2016 Community Health Needs Assessment, St. John Owasso

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. [7]

How Are We Doing?

In 2011, the percentage of the population in tracts with no healthy food outlet was 30.65%. This was lower than in Oklahoma (37.41%), but significantly higher than in the U.S. (18.63%) (Table 22). Only .85 percent of the population in Tulsa County resides in tracts with high healthy food access which is lower than in Oklahoma (3.51%) and in the U.S. (5.02%). [125]The disparities in healthy food access are evident by the population map below (Figure 159).

Table 22: Percentage of Population with Healthy Food Access by Locality, 2010

Report Area	Total Population	Percent Population in Tracts with No Food Outlet	Percent Population in Tracts with No Healthy Food Outlet	Percent Population in Tracts with Low Healthy Food Access	Percent Population in Tracts with Moderate Healthy Food Access	Percent Population in Tracts with High Healthy Food Access
Tulsa County, OK	603,403	0%	30.65%	46.61%	21.92%	0.82%
Oklahoma	3,751,351	1.96%	37.41%	30.39%	26.74%	3.51%
United States	312,474,470	0.99%	18.63%	30.89%	43.28%	5.02%

Data Source: Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. (2011).
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.

Figure 159: Modified Retail Food Environmental Index Score by Tract, DNPAO, 2011

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[125] Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. (2011).

Modified Retail Food Environmental Index Score by Tract, DNPAO 2011

■ Index Score Over 30 (High Access)

■ Index Score 15 - 30 (Moderate Access)

■ Index Score 5 - 15 (Low Access)

■ Index Score Under 5 (Poor Access)

■ No Healthy Retail Food Outlet (No Access)

▨ No Retail Food Outlets Present (Food Desert)

▨ Report Area
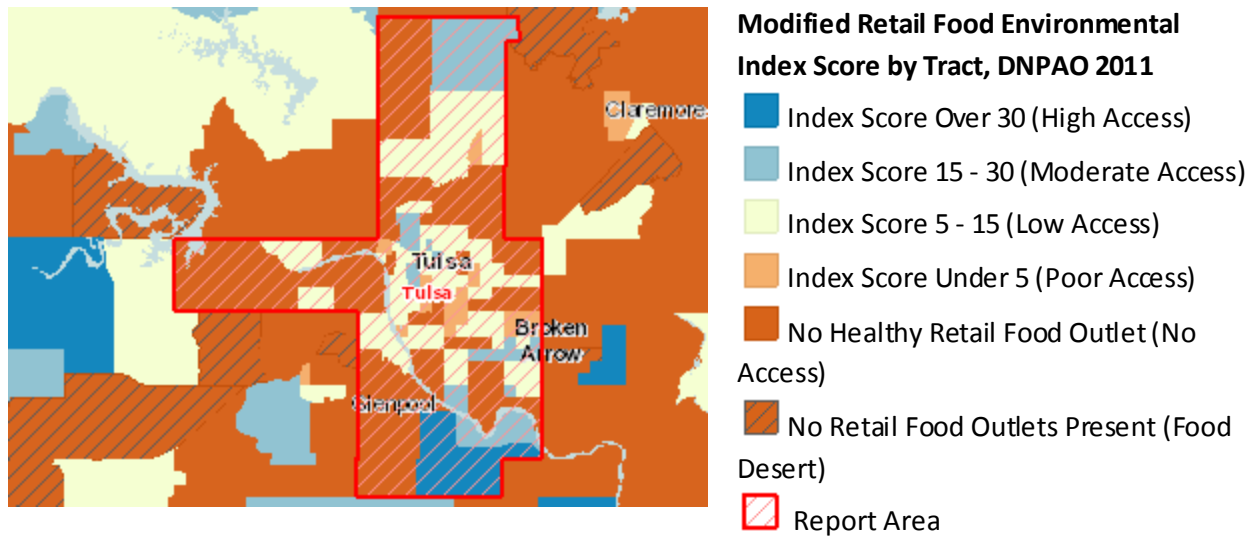
Data Source: Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. (2011).
Source: Courtesy of Community Commons. Retrieved from www.communitycommons.org on April 1, 2016.

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 12.60 which was higher than in the Oklahoma (7.2) and in the U.S. (9.7) (Figure 160).[126]

Figure 160: Recreation and Fitness Facilities, Rate per 100,000, by Locality 2013

Report Area	Total Population	Number of Establishments	Establishments, Rate per 100,000 Population	Recreation and Fitness Facilities, Rate (Per 100,000 Population)
Tulsa County, OK	603,403	76	12.60	

[126] U.S. Census Bureau. (2013). *County Business Patterns*.

2016 Community Health Needs Assessment, St. John Owasso

| Oklahoma | 3,751,351 | 270 | 7.2 |
| United States | 312,732,537 | 30,393 | 9.7 |

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
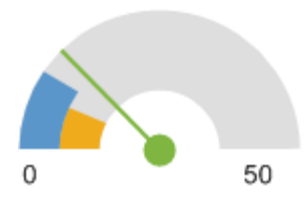
■ **Tulsa County, OK (12.60)**

■ **Oklahoma (7.2)**

■ **United States (9.7)**

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 several methods of community input to yield the desired

results. For the purposes of this assessment, community input was obtained through the following methods:

- Survey of 2,428 Tulsa County residents
- Sixteen focus groups with 119 community members conducted for each of the eight CHNA regions
- Three Tulsa County hospital community input meetings with 55 community 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:

- Tulsa County community members who participated in the *2016 Tulsa County Community Health Needs Assessment (CHNA)* survey and focus groups
- Community leaders and representatives
- Local public health workforce and coalitions/partnerships
- Members and 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, education and academia, non-profit agencies, community-based organizations, private businesses, community developers, faith communities and faith-based organizations, government representatives, safety net service providers, economic and workforce development, mental health/behavioral health services, law enforcement and first responders, 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 constituents who contributed community input throughout this assessment process (Figure 161):

Figure 161: Community Input Sources

Health Service providers
- Health Department, hospital staff, other area service providers etc.

Community members and groups
- Members, leaders, representaives of high-need groups

Other service providers
- Education representatives, law enforcement, first responders, govermental representatives

Organizations that serve communities
- Leaders of community-based and faith-based organizations, private businesses, etc.

Source: Adapted from Ascension Health. (2015). *Community Engagement, Community Input Guide.*

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.

2015-2016 TULSA COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT

St. John Health System and its three Tulsa County hospitals, St. John Owasso, St. John Owasso, and St. John Owasso, partnered with the Tulsa-City County and many other organizations to conduct a collaborative community health needs assessment (CHNA). This work led and primarily performed by the Tulsa City-County Health Department. Central to this community assessment are a survey and focus groups conducted by the Tulsa City-County Health Department, the Oklahoma State University- College of Public Health, and Saxum to obtain direct input from community members. The survey and focus groups are collectively referred to as the *2015-2016 Tulsa County Community Health Needs Assessment (CHNA).* The information gained from this assessment allows the community to identify the areas of greatest concern and develop strategies to effectively target these areas in order to have the best possible community health outcomes.

This collaborative assessment was sponsored by St. John Health System, Saint Francis Health System, Morningcrest Healthcare Foundation, and the Tulsa City-County Health Department. The development of the plan for the assessment was a collaborative effort of the aforementioned partners as well as the

College of Public Health at the University of Oklahoma-Tulsa, Pathways to Health, and other community partners.

TULSA COUNTY COMMUNITY HEALTH NEEDS ASSESSSMENT: SURVEY

This section of the assessment provides a review of the quantitative data derived from one of this assessment's primary data (community input) research methods, the *2015-2016 Tulsa County CHNA* survey.

SURVEY METHODOLOGY

Data Sources

The most current secondary data (other existing health-related data) was used for comparisons at the state and national level. In general, state and national data was available for 2013 or 2014. A variety of secondary data sources were used for benchmark comparisons to Oklahoma and the United States. Specific citations are included throughout the report. *Healthy People 2020* goals were also utilized as indicators for areas for improvement or success.

Survey Instrument

The survey instrument used for the 2015 Tulsa County CHNA survey was created by the Tulsa City-County Health Department, Health Data & Evaluation Division, with input from community partners. Many of the questions from most recent Tulsa County CHNA survey in 2012 were utilized again for comparison purposes; however, data requests since the last report provided insight into which questions were not as useful and which questions should have been asked. This demonstrated what information was most valuable to community partners and explains why certain questions were omitted and others added.

Community Defined for the Survey

As noted previously in this report, the study area for the survey includes all of Tulsa County, Oklahoma. Tulsa County was divided into eight geographical regions based on ZIP codes and associated communities: downtown Tulsa, east Tulsa, Jenks/Bixby/Glenpool/Tulsa Hills, midtown Tulsa, north City of Tulsa (Tulsa North),Owasso/Sperry/Collinsville/Skiatook, Sand Springs/west Tulsa, and south Tulsa/Broken Arrow. All ZIP codes that are fully or partially within Tulsa County were assigned regions, although only Tulsa County residents were able to complete the survey.

Sample Approach and Design

The sample was drawn from the total non-institutionalized adult population residing in Tulsa County, Oklahoma in telephone-equipped dwellings. The study was completed through random digit dialing of both landlines and cell phones by utilizing current area code and prefix combinations and randomly generating the last four digits of the phone number.

Surveys with 2,428 Tulsa County residents were conducted between May 18, 2015 and September 29, 2015. The cell phone frame yielded 715 completed calls, while the landline frame yielded 1,710 completed surveys. Although all participants were initially called, they were also given the option to complete the survey via text or email. The breakdown of mode of completion was 2,273 phone (29 conducted in Spanish), 118 email, and 37 text. The achieved county-wide confidence interval for the survey was 95% +/- 2%.

Once the interviews were completed, they were weighted in proportion to the actual population distribution so as to appropriately represent Tulsa County as a whole. All administration of the surveys and data collection was conducted by the Oklahoma State University College of Public Health. Data analysis was conducted by the Tulsa City-County Health Department, Health Data & Evaluation Division.

Sample Characteristics

The CHNA survey study incorporated a simple random sample (SRS) design, meaning that every member of the target population had an equal probability of selection. However, even though an SRS was conducted, the demographic variables (e.g., gender, age, race, and ethnicity) are unlikely to perfectly match with the demographic makeup of Tulsa County. To account for this gap, the data has been weighted back to the population of interest using age and gender. The sample design and quality control procedures used during data collection ensure that the sample is representative and can be generalized to the total population with a high degree of confidence. The following chart outlines the characteristics of the Tulsa County sample for key demographic variables, compared to actual population characteristics from census data (Figure 161).

Figure 161: Population and Sample Characteristics, Tulsa County
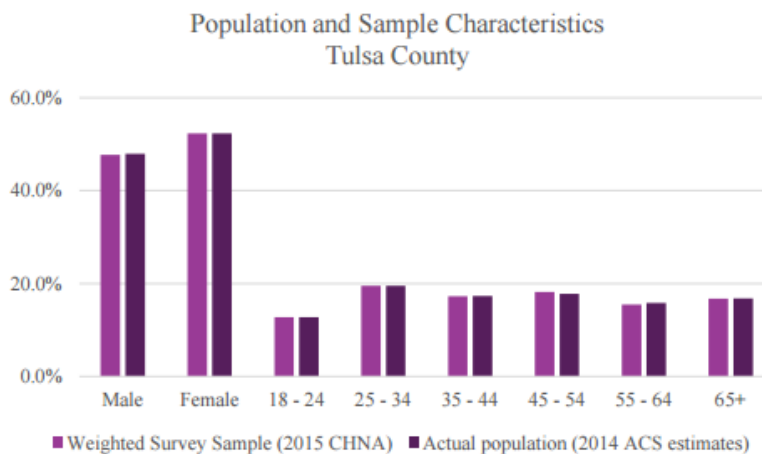
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

SURVEY RESULTS

Cross-tabulations were conducted using IBM SPSS Statistics Version 22.0. For this report, results were tabulated by Tulsa County overall and by regions, which were determined by ZIP codes and associated communities. A total of 15 people responded that they did not live in Tulsa County or refused to answer what county they lived in. These individuals were excluded from the results. Additionally, 130 respondents refused to give their ZIP code or gave a ZIP code that did not correspond to a known ZIP code for Tulsa County. Since they had previously confirmed that they lived in Tulsa County, these individuals were included in the analysis for the county overall, but were not included in any specific regional breakdown.

Although results were not tabulated by any additional demographics (e.g., gender, age category, race/ethnicity, education level, and income level), the demographics section includes a breakdown of each region by these demographics.

Unless otherwise noted, 'don't know' and refusal responses were treated as missing values and were not included in analysis. However, for some survey questions, a response of 'don't know' may be very informative for assessing the needs and perceptions of the community. In these instances, 'don't know' was treated as a valid response.

Information Gaps

Although it is quite comprehensive, this assessment and survey cannot measure all possible aspects of health and also cannot represent every possible population with Tulsa 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 are not represented in the survey data. 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.

DEMOGRAPHICS

Overall, a total of 47.7 percent of survey respondents were male and 52.3 percent were female. The largest percentages of respondents were 25 – 34 years and 45 – 54 years (19.5 percent and 18.2 percent, respectively) (Figure 162). This matched very closely with Tulsa County gender and age percentages from the 2014 American Community Survey (ACS) 5 year estimates.[127]

Figure 162: Age and Gender, Tulsa County 2015

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[127] U.S. Census Bureau. (2014). *American Community Survey 2010-2014 5-Year Estimates.* Retrieved from: https://www.census.gov/ programs-surveys/acs/data.html.
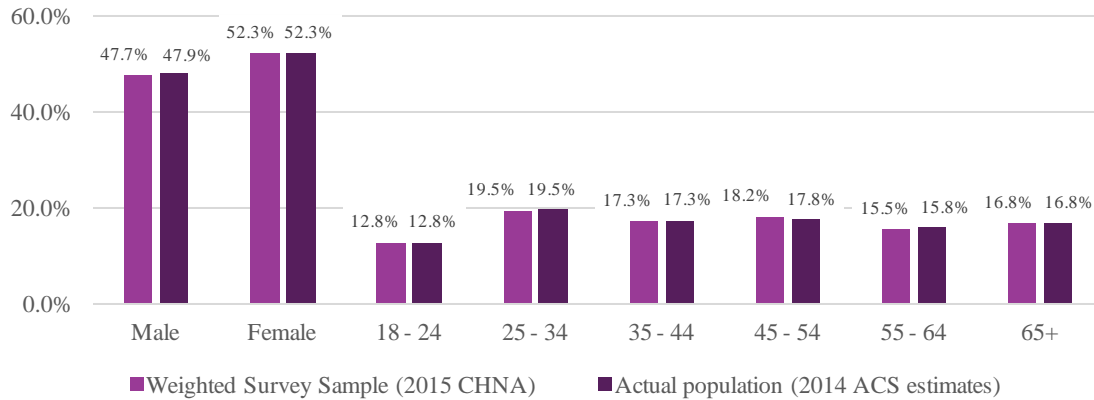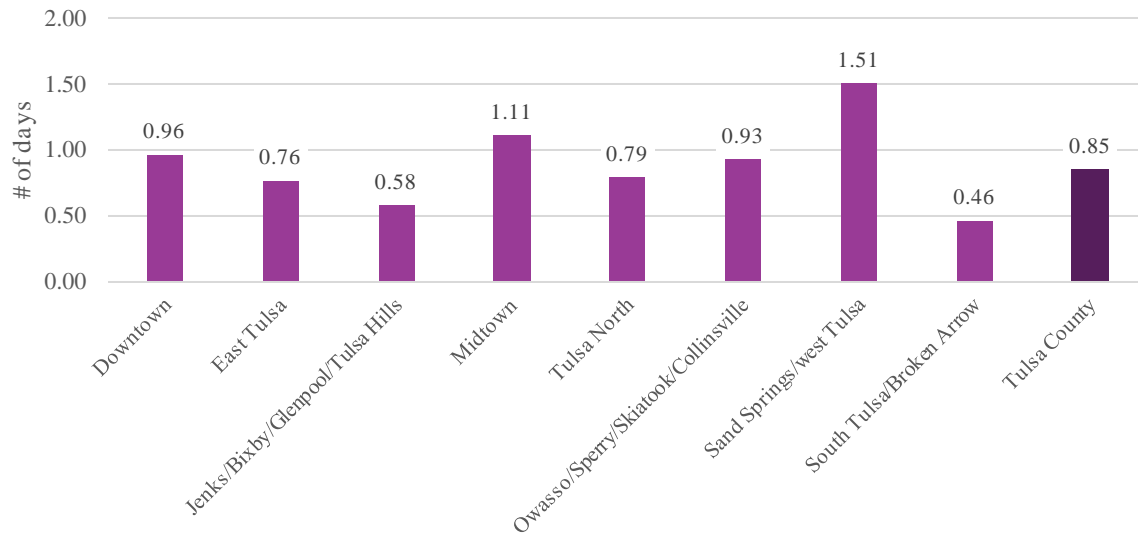
Age and Gender
Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

The majority of Tulsa County CHNA survey respondents were white and non-Hispanic (72.7 percent and 94.2 percent, respectively). Although white and black race matched well with 2014 ACS estimates, American Indian/Alaska Native was over represented while Asian/Native Hawaiian and other/multiple races were under represented. Additionally, Hispanics were underrepresented in the survey sample (5.6 percent of the weighted survey sample, 11.4 percent of the ACS estimates) (Figure 163).

Figure 163: Race and Ethnicity, Tulsa County 2015

Race and Ethnicity
Tulsa County | 2015
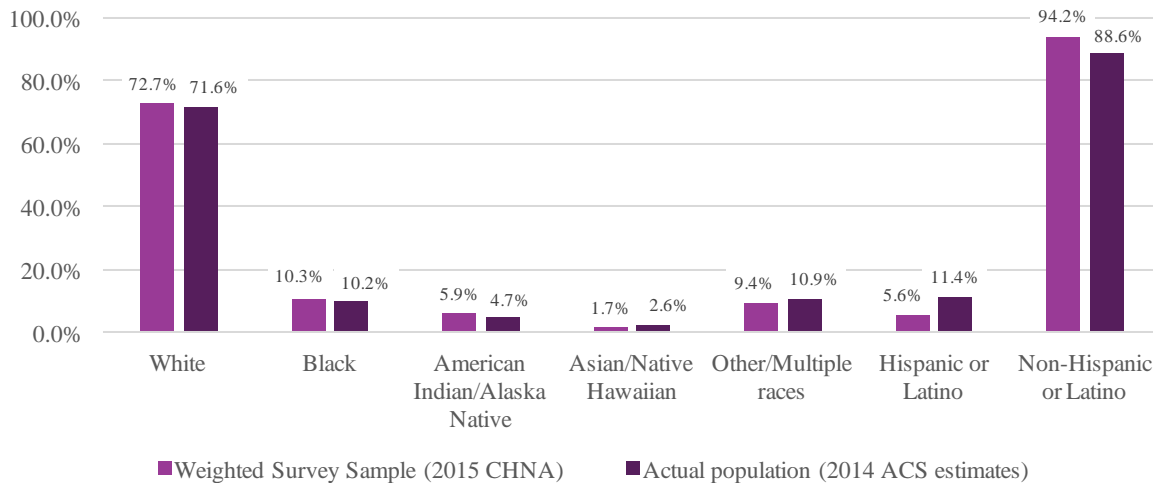
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016*. Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

The largest percentage of Tulsa County survey respondents were college graduates (38.4 percent), followed by individuals who had some college or technical school (35.1 percent) (Figure 164). When comparing the ACS estimates, the CHNA survey sample under represents individuals with less than 12th

grade and high school diploma or equivalent and over represents college graduates.

Figure 164: Education Level, Tulsa County
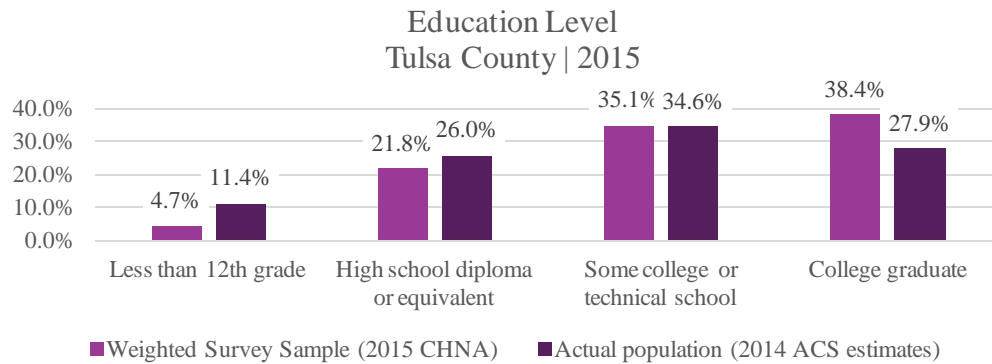
Education Level
Tulsa County | 2015

■Weighted Survey Sample (2015 CHNA)   ■Actual population (2014 ACS estimates)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

The largest percentage of Tulsa County CHNA survey respondents had a household income over $75,000 (34.0 percent) (Figure 165). Compared to ACS estimates, CHNA survey respondents with a household income of less than $15,000 and $50,000 - $74,999 were under represented in the sample, while individuals with all other incomes were over represented.

Figure 165: Income Level, Tulsa County 2015
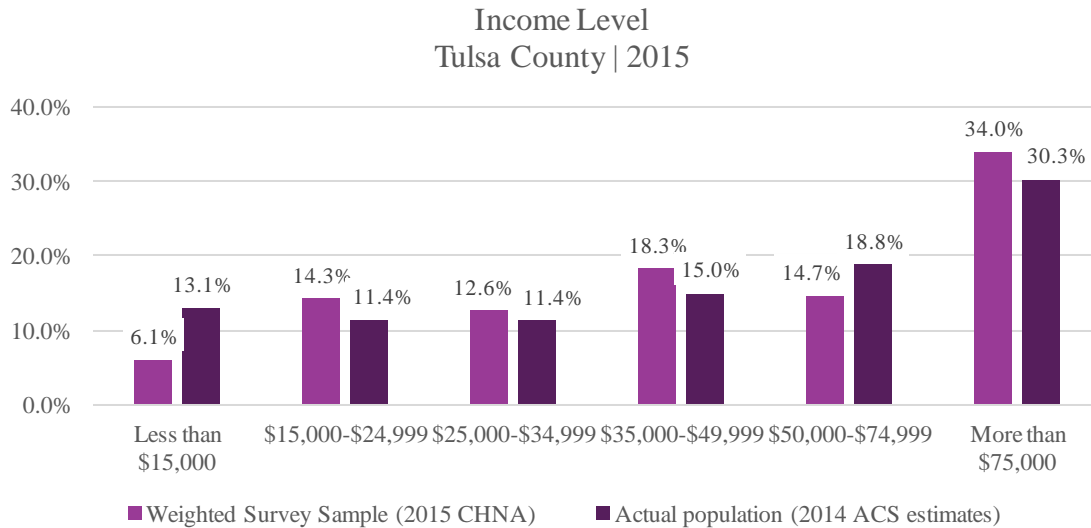
Income Level
Tulsa County | 2015

■Weighted Survey Sample (2015 CHNA)   ■Actual population (2014 ACS estimates)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

The majority of Tulsa County CHNA respondents were employed full time (52.3 percent) (Figure 166). Due to differences in the way employment status is asked in the American Community Survey, the sample population cannot be compared to ACS estimates.

Figure 166: Tulsa County CHNA Survey Respondents by Employment Status, 2015
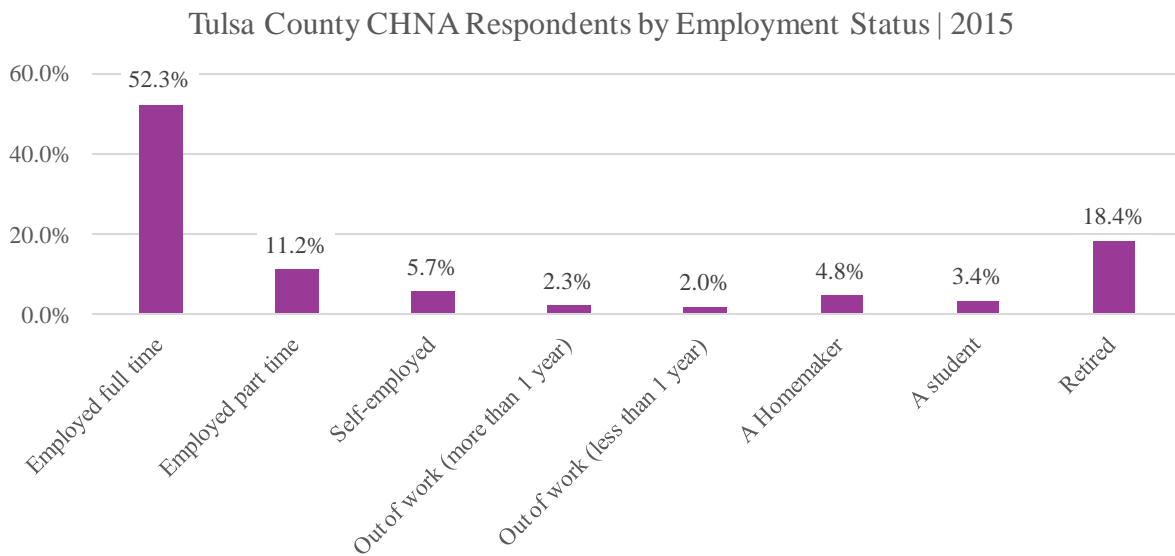
Tulsa County CHNA Respondents by Employment Status | 2015

- Employed full time: 52.3%
- Employed part time: 11.2%
- Self-employed: 5.7%
- Out of work (more than 1 year): 2.3%
- Out of work (less than 1 year): 2.0%
- A Homemaker: 4.8%
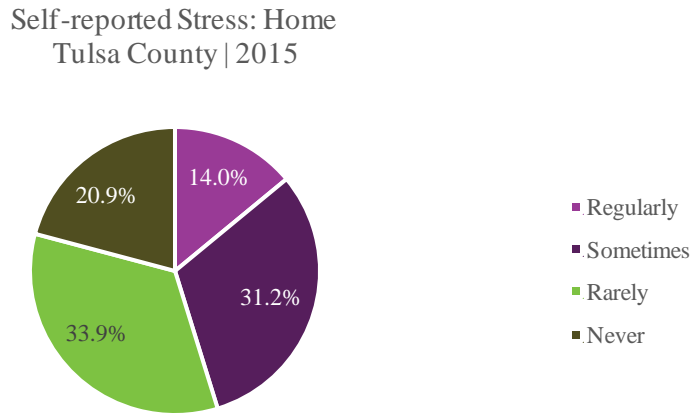- A student: 3.4%
- Retired: 18.4%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

The majority of CHNA survey respondents reported that they were married (52.3 percent). This was followed by 'never married' (23.3 percent) (Figure 167).

Figure 167: Tulsa County CHNA Respondents by Marital Status, 2015

Tulsa County CHNA Respondents by Marital Status | 2015

- Married: 52.5%
- Divorced: 10.6%
- Widowed: 6.9%
- Separated: 1.8%
- Never Married: 23.3%
- A member of an unmarried couple: 5.0%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Overall, about 40 percent of respondents reported that they had at least one child under 18 living in their household. This was much lower in downtown compared to any other region (9.1 percent in downtown) (Figure 168).

Figure 168: Children by Region, Tulsa County 2015
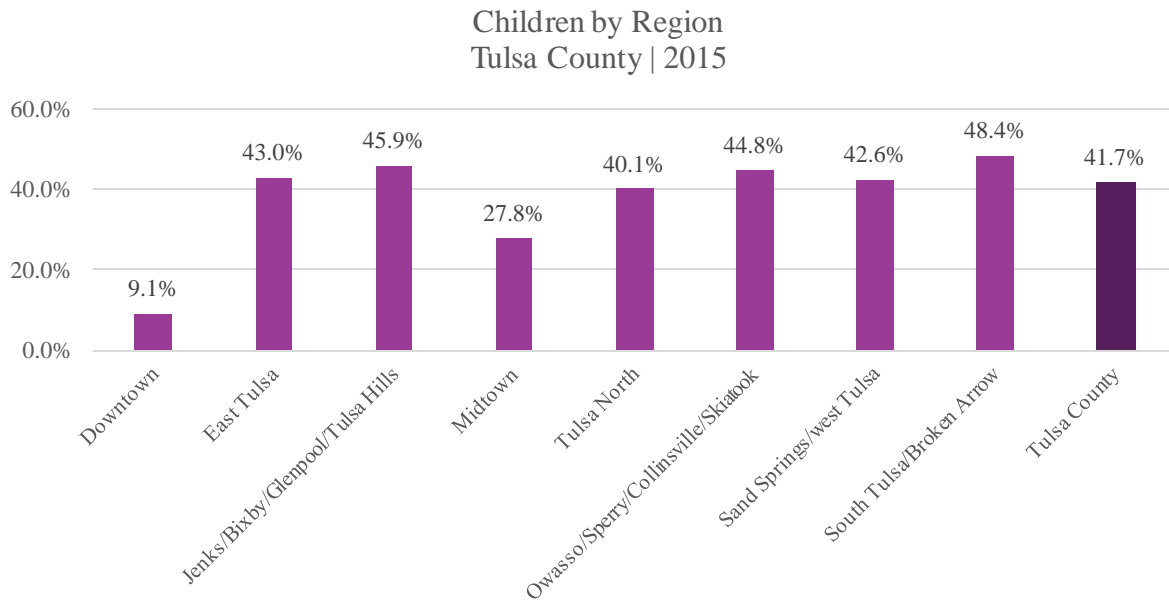
Children by Region
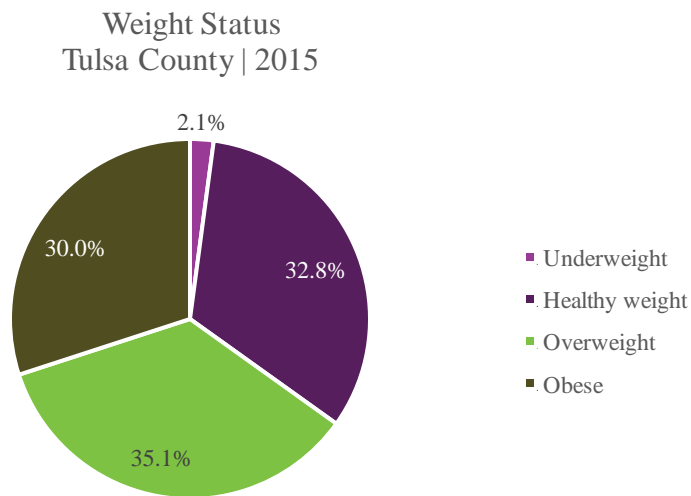**Tulsa County | 2015**

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Additionally, of those individuals with children in their household, the average number was 1.99 children. Again, this was much lower in downtown compared to other regions (1.00 children) (Figure 169).

Figure 169: Average Number of Children, Tulsa County 2015
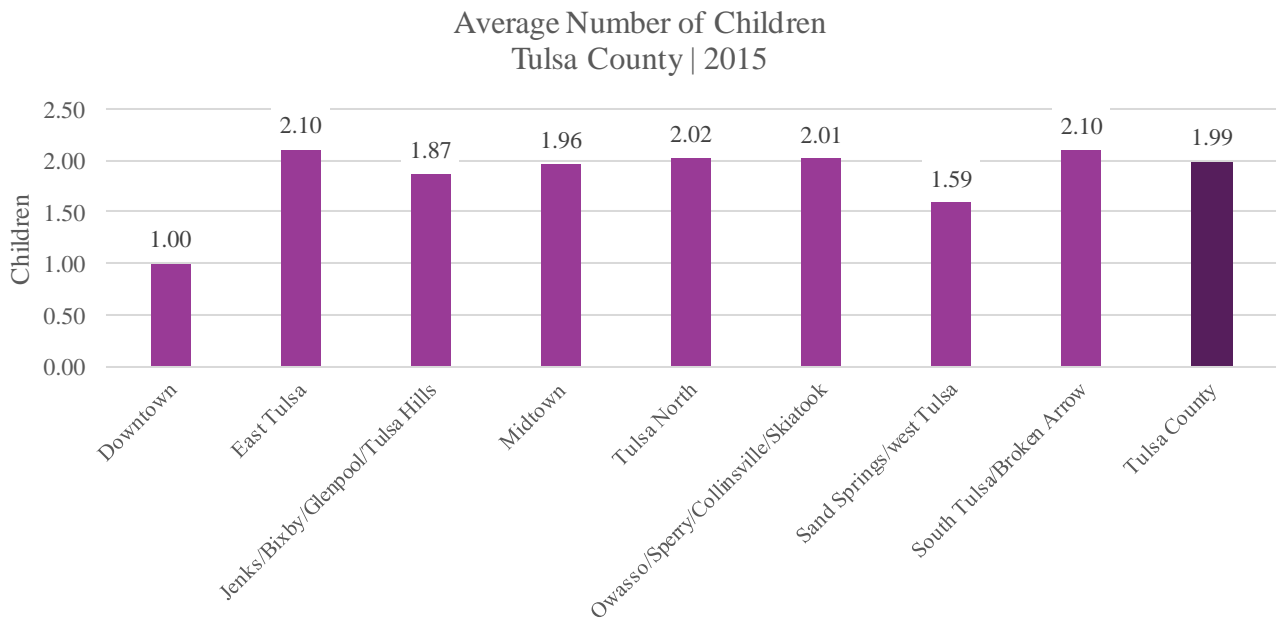
Average Number of Children
Tulsa County | 2015

The following graph shows the percentage of respondents that came from each region (Figure 170).

Figure 170: Tulsa County CHNA Survey Respondents by Region, 2015
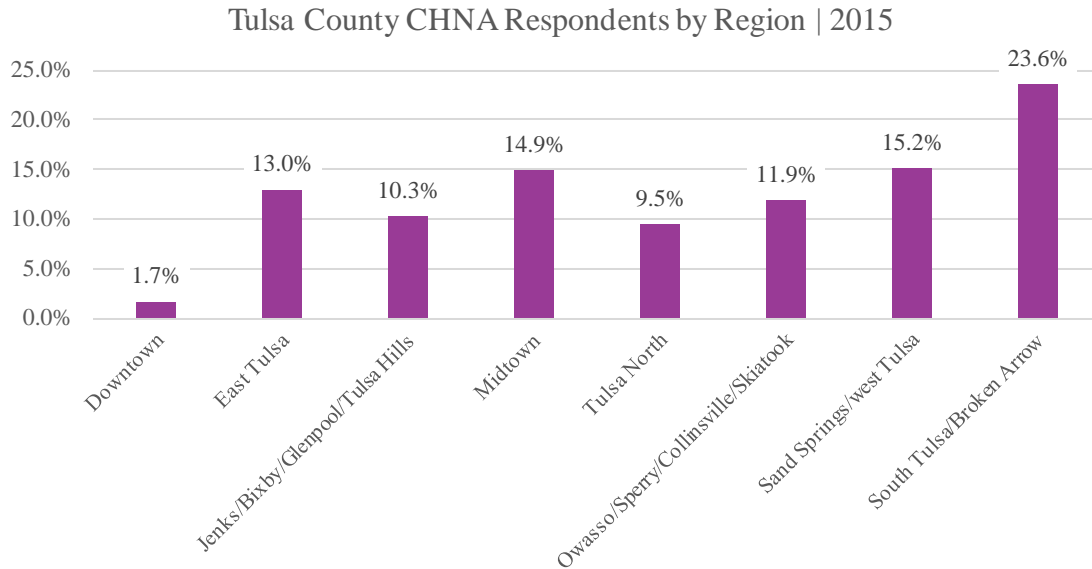
Tulsa County CHNA Respondents by Region | 2015

- Downtown: 1.7%
- East Tulsa: 13.0%
- Jenks/Bixby/Glenpool/Tulsa Hills: 10.3%
- Midtown: 14.9%
- Tulsa North: 9.5%
- Owasso/Sperry/Collinsville/Skiatook: 11.9%
- Sand Springs/west Tulsa: 15.2%
- South Tulsa/Broken Arrow: 23.6%

HEALTHY PEOPLE

General Health Status

Measures of general health are often used as indicators of health-related quality of life. Poor self-reported health status and high self-reported stress can be indicators of poor physical and mental health, which can contribute to a lower quality of life. Chronic diseases, mental health disorders, and other health-related conditions can cause disability and premature death, and can also have economic consequences for the individual as well as a community.[128]

Self-reported Health Status

A total of 49.2 percent of Tulsa County adults rated their overall health as 'excellent' or 'very good.' An additional 33.1 percent rated their health as 'good' (Figure 171).

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[128] U.S. Department of Health and Human Services, Office Disease Prevention and Health Promotion. (2015). *Healthy People: 2020*. Retrieved from: http://www.healthypeople.gov/2020/about/foundation-health-measures/General-Health-Status#top.

Figure 171: Self-Reported Health Status, Tulsa County 2015
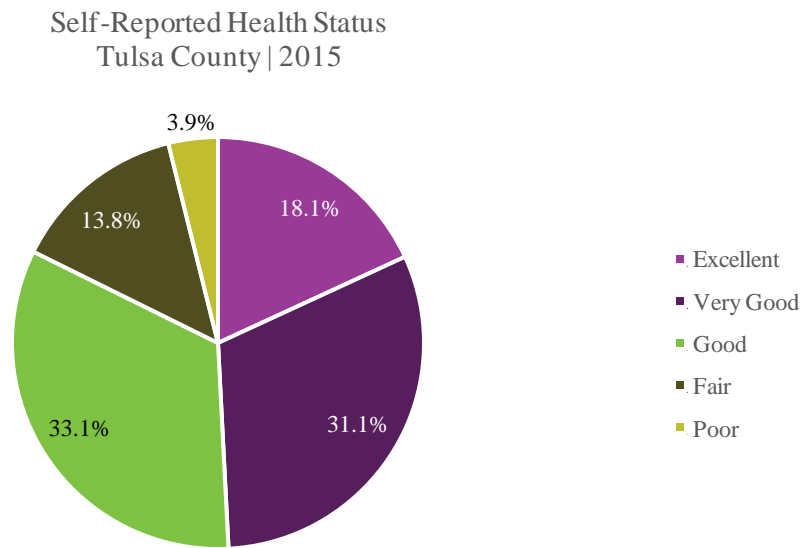
Self-Reported Health Status
Tulsa County | 2015

- Excellent
- Very Good
- Good
- Fair
- Poor

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

However, 17.7 percent of Tulsa County adults rated their health as 'fair' or 'poor.' This was lower than Oklahoma overall, but higher than the United States.[129] [130] The region with the highest percentage of unfavorable self-reported health status was Tulsa North (27.3 percent), while the lowest percentage (most favorable) was Jenks/Bixby/Glenpool/Tulsa Hills (11.0 percent) (Figure 172).

Figure 172: Experienced 'Fair' or 'Poor' Overall Health, Tulsa County

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[129] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2015). *BRFSS Prevalence & Trends Data 2015*. Retrieved from: http://www.cdc.gov/brfss/brfssprevalence/.

[130] Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information. (2014). *Behavioral Risk Factor Surveillance System 2014, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE)*. Retrieved from: http://www.health.ok.gov/ok2share.

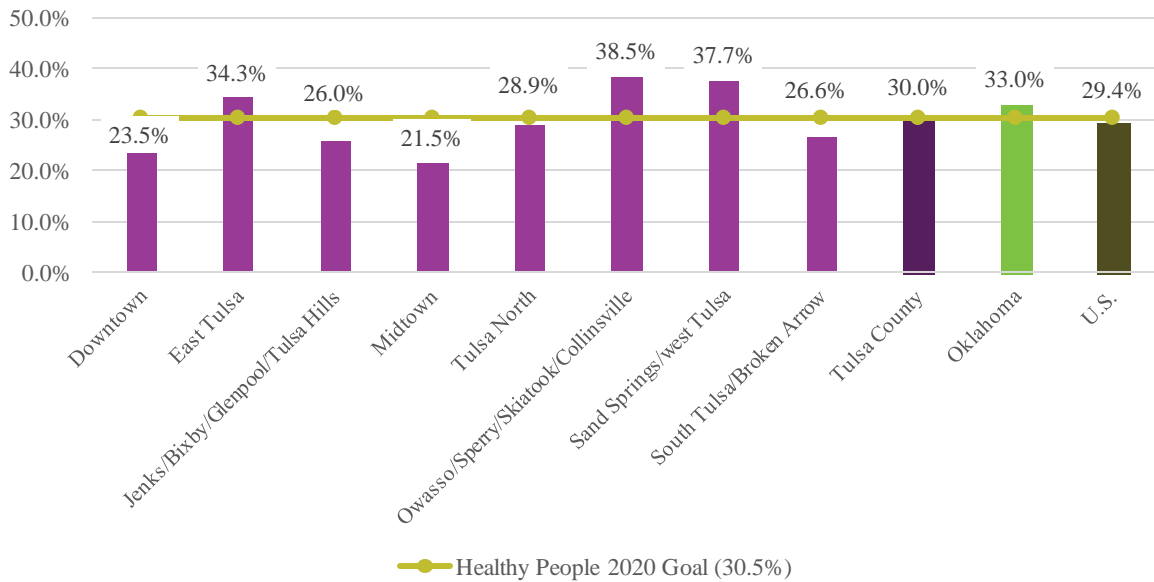## Experienced 'Fair' or 'Poor' Overall Health
Tulsa County | 2015
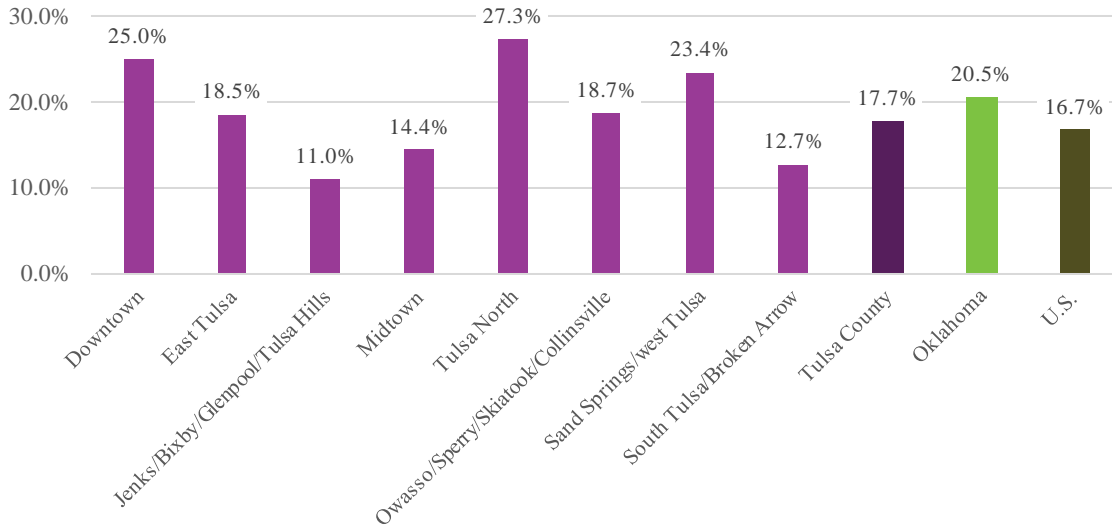
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Number of Days Missed Due to Illness

Overall, Tulsa County adults missed an average of 0.85 days of work or activities in the previous month due to physical illness. The region with the highest average number of days missed was Sand Springs/west Tulsa (1.51 days) and the region with the lowest average was Jenks/Glenpool/Bixby/Tulsa Hills (0.58 days) (Figure 173).

Figure 173: Average Number of Days Missed in the Previous Month due to Illness, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Average Number of Days Missed in the Previous Month Due to Illness
Tulsa County | 2015

Stress

Stress is the body's response to any demand and can be triggered by a variety of things, including change. Although not all stress is bad, chronic stress can lead to suppressed functions for things that aren't needed for survival. For example, immunity is lowered and digestive, excretory, and reproductive systems stop working normally. There are three different types of stress, all of which have physical and mental health risks: routine stress related to work, family and other daily responsibilities, stress brought on by a sudden negative change such as losing a job, divorce or illness, and traumatic stress which is experienced in an event such as a major accident, war, assault or natural disaster where one may be in serious danger of being hurt or killed.[131] Different communities may have different stressors based on type of home and work environments experienced in these areas.

Self-reported Stress: Work

Almost half of Tulsa County adults reported that they were 'rarely' or 'never' stressed at work (48.2 percent). An additional 28.4 percent stated that they were 'sometimes' stressed at work (Figure 174).

Figure 174: Self-Reported Stress: Work, Tulsa County 2015

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[131] National Institutes of Health, National Institute of Mental Health. (2016). *Fact Sheet on Stress*. Retrieved from: http://www.nimh.nih.gov/health/publications/stress/index.shtml.
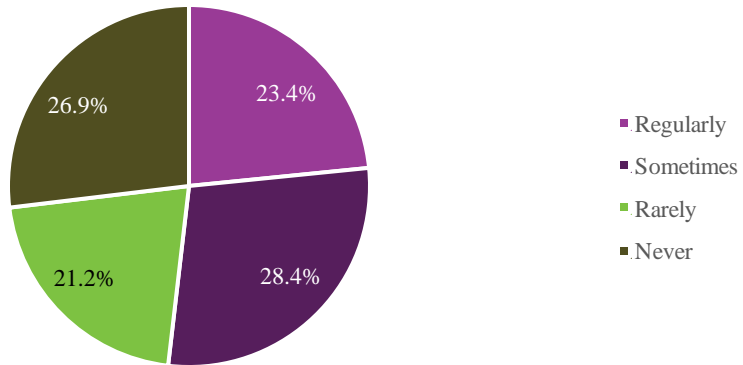
Self-reported Stress: Work
Tulsa County | 2015

- ■ Regularly
- ■ Sometimes
- ■ Rarely
- ■ Never

However, almost one-fourth of Tulsa County adults reported that they were 'regularly' stressed at work (23.4 percent). This was highest in Sand Springs/west Tulsa and south Tulsa/Broken Arrow (27.3 percent and 27.4 percent, respectively). 'Regular' stress at work was lowest in downtown and east Tulsa (13.8 percent and 13.2 percent, respectively) (Figure 175).

Figure 175: 'Regularly' Stressed at Work, Tulsa County 2015
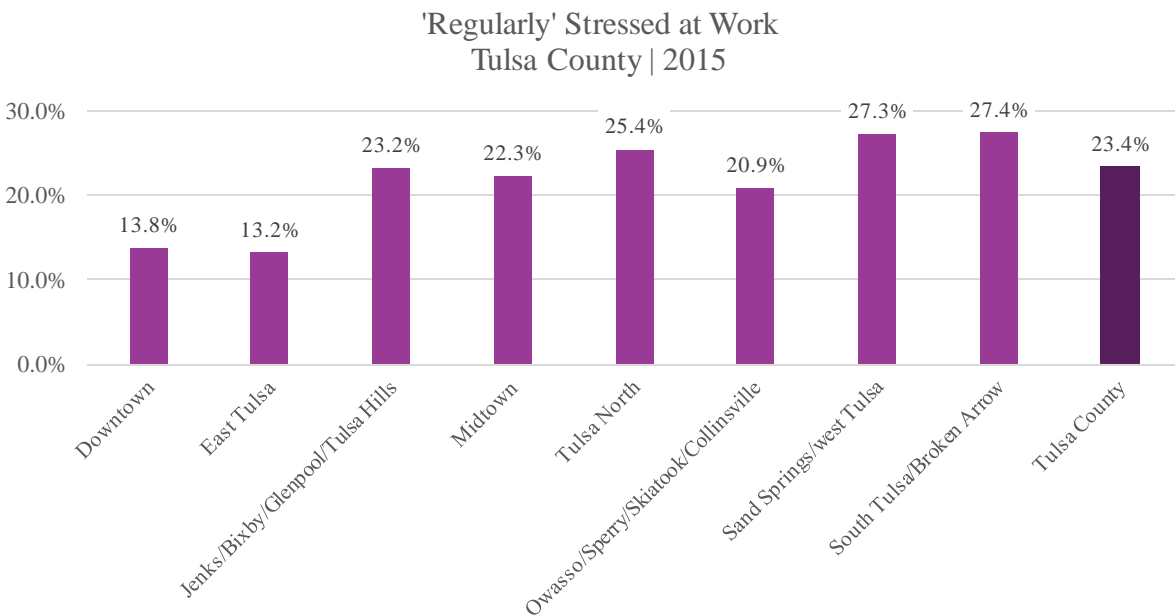
'Regularly' Stressed at Work
Tulsa County | 2015

Self-reported Stress: Home

Over half of Tulsa County adults reported that they were 'rarely' or 'never' stressed at home (54.8 percent). An additional 31.2 percent stated that they were 'sometimes' stressed at home (Figure 176).

Figure 176: Self-Reported Stress: Home, Tulsa County 2015

Self-reported Stress: Home
Tulsa County | 2015

- Regularly: 14.0%
- Sometimes: 31.2%
- Rarely: 33.9%
- Never: 20.9%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

However, 14 percent of Tulsa County adults stated that they were 'regularly' stressed at home. This was highest in Tulsa North (21.2 percent) and lowest in downtown (5.3 percent) (Figure 177).

Figure 177: 'Regularly' Stressed at Home, Tulsa County 2015
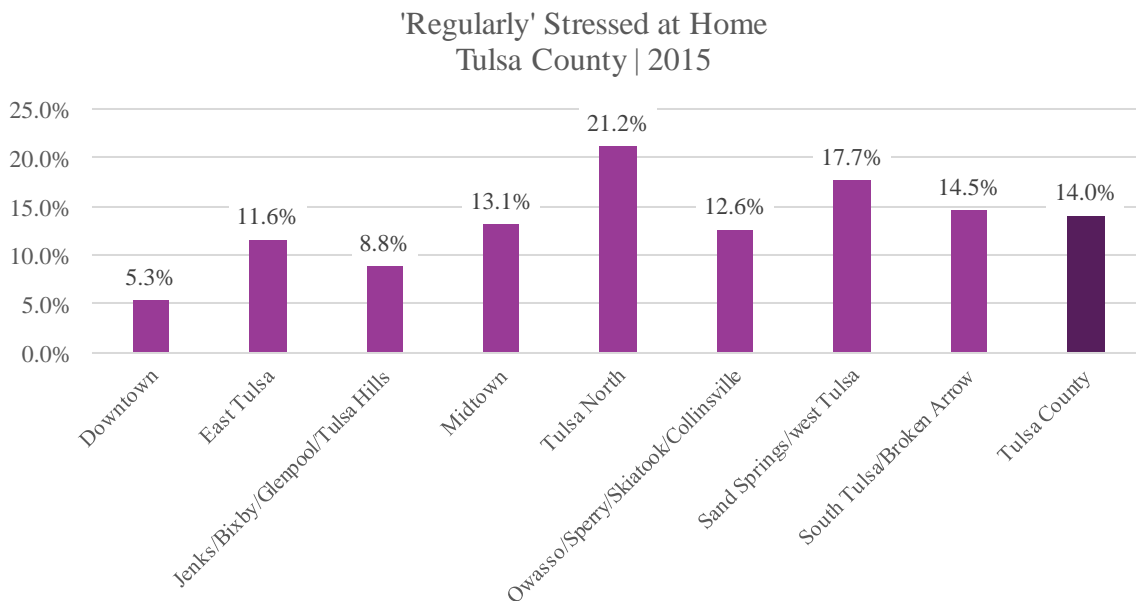
'Regularly' Stressed at Home
Tulsa County | 2015

Region	Percent
Downtown	5.3%
East Tulsa	11.6%
Jenks/Bixby/Glenpool/Tulsa Hills	8.8%
Midtown	13.1%
Tulsa North	21.2%
Owasso/Sperry/Skiatook/Collinsville	12.6%
Sand Springs/west Tulsa	17.7%
South Tulsa/Broken Arrow	14.5%
Tulsa County	14.0%

Weight Status

Self-reported Weight

The following chart shows the breakdown of weight status for Tulsa County adults, based on self-reported height and weight (Figure 178). Weight status was calculated using Body Mass Index (BMI), which is a ratio of weight to height (weight divided by height squared). BMI is broken down into four categories: underweight (BMI less than 18.5), healthy weight (BMI between $18.5 - 24.9$), overweight (BMI between $25.0 - 29.9$), and obese (BMI greater than 30.0).[132]

Figure 178: Weight Status, Tulsa County 2015

Weight Status
Tulsa County | 2015

- 2.1% Underweight
- 32.8% Healthy weight
- 35.1% Overweight
- 30.0% Obese

Healthy Weight

Almost one-third of Tulsa County adults were a healthy weight (32.8 percent). This was slightly higher than Oklahoma (more favorable) and slightly lower than the United States (less favorable). [122] [123] None of these areas met the Healthy People 2020 goal of 33.9 percent of adults at a healthy weight. [121] Jenks/Bixby/Glenpool/Tulsa Hills was the region with the highest percentage of adults at a healthy weight (37.9 percent). Owasso/Sperry/Skiatook/Collinsville and east Tulsa had the lowest percentages (23.5 percent and 26.6 percent, respectively) (Figure 179).

Figure 179: Healthy Weight, Tulsa County 2015

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[132] Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity. (2016). *About Adult BMI*. Retrieved from: http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html.
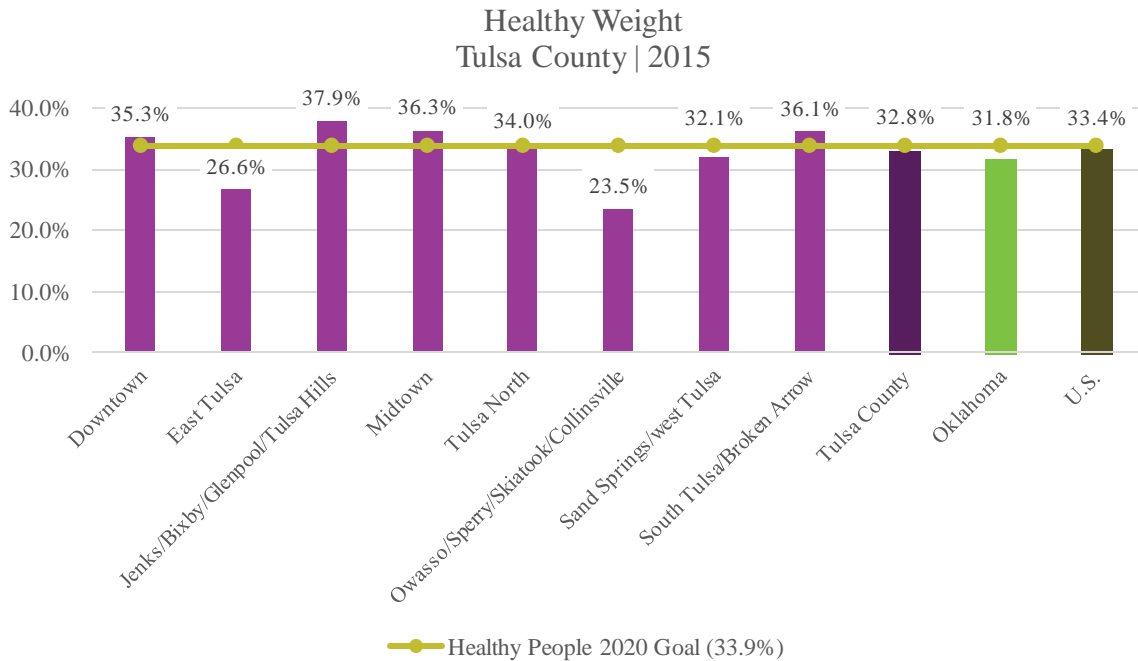
Healthy Weight
Tulsa County | 2015

Source of data:
Location	Value
Downtown	35.3%
East Tulsa	26.6%
Jenks/Bixby/Glenpool/Tulsa Hills	37.9%
Midtown	36.3%
Tulsa North	34.0%
Owasso/Sperry/Skiatook/Collinsville	23.5%
Sand Springs/west Tulsa	32.1%
South Tulsa/Broken Arrow	36.1%
Tulsa County	32.8%
Oklahoma	31.8%
U.S.	33.4%

Healthy People 2020 Goal (33.9%)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Overweight and Obese

However, nearly two-thirds of Tulsa County adults were overweight or obese (65.1 percent). This was lower than Oklahoma (68.2 percent) but higher than the United States (64.8 percent). [122][123] Owasso/Sperry/Skiatook/Collinsville and east Tulsa had the highest percentages of obese or overweight adults (74.5 percent and 72.3 percent, respectively). Downtown Tulsa had the lowest (most favorable) percentage of overweight and obese adults (55.9 percent) (Figure 180).

Figure 180: Overweight and Obese, Tulsa County 2015
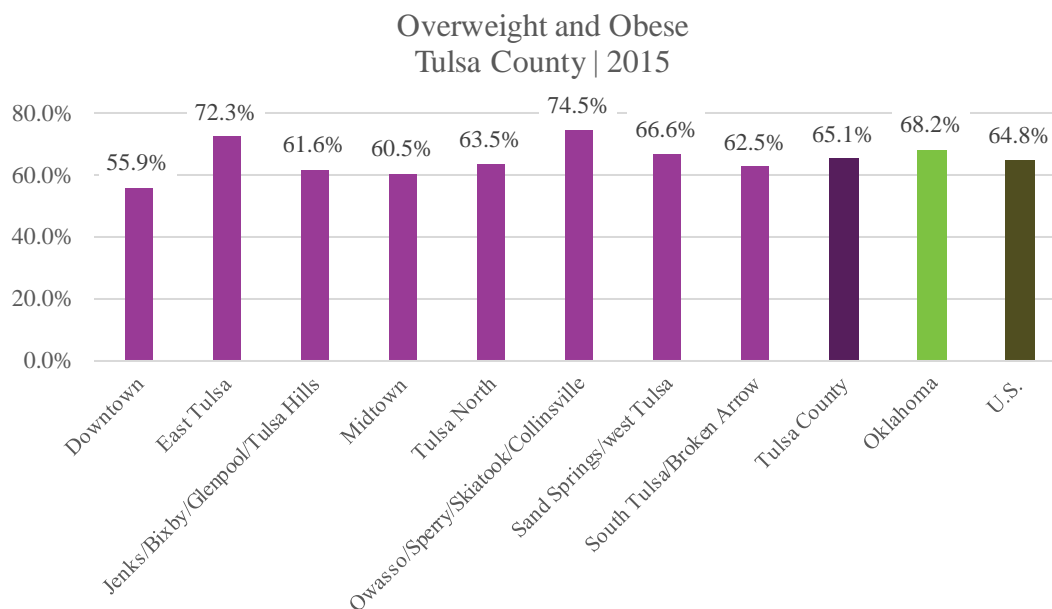
Overweight and Obese
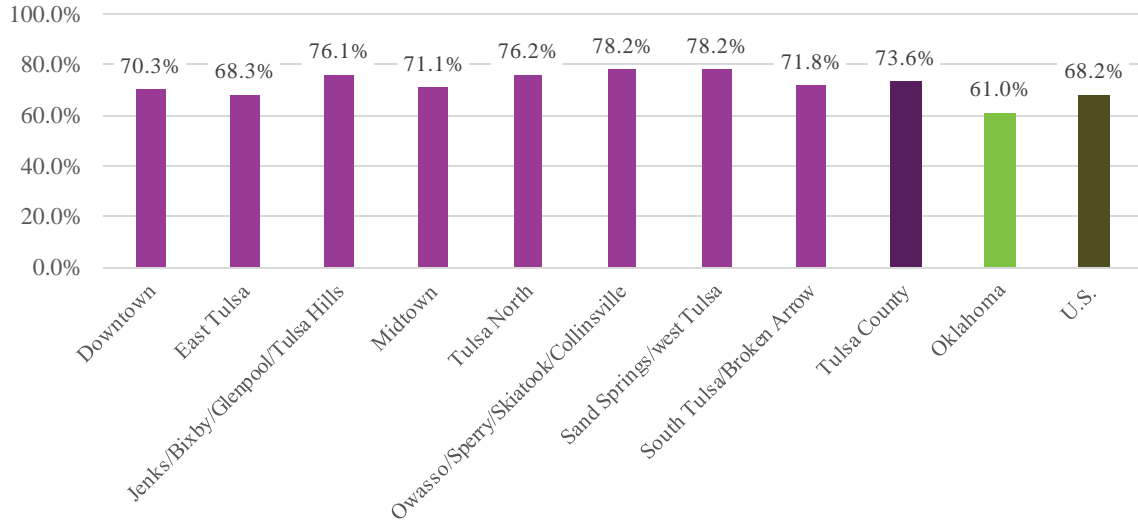## Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Obese

Furthermore, 30 percent of Tulsa County adults reported that they were obese, based on their height and weight. This was lower than the rate in Oklahoma (33.0 percent) and similar to the rate in the U.S. (29.4 percent). [122] [123] Tulsa County and the U.S. both met the Healthy People 2020 goal of 30.5 percent of adults obese. [121] Owasso/Sperry/Skiatook/Collinsville and Sand Springs/west Tulsa had the highest percentages of obese adults (38.5 percent and 37.7 percent, respectively), while downtown and midtown had the lowest percentages (23.5 percent and 21.5 percent, respectively) (Figure 181).

Figure 181: Obese, Tulsa County 2015

Obese
Tulsa County | 2015

Access to Health Services

Access to comprehensive, quality health services is necessary for health equity and a healthy quality of life for individuals in our community. Access to health care can impact physical, social and mental health, disease and disability prevention, and life expectancy, among other things. In order to achieve this, individuals must gain entry into the health care system, find a health care location with their needed services, and find a provider with whom they can communicate and trust. Each of these actions comes with unique barriers that can hinder access to care. [121]

Healthcare Coverage and Barriers to Care

Barriers to services include lack of availability, high cost, and lack of insurance coverage. Uninsured people are less likely to receive medical care, more likely to die early, and more likely to have poor health status. Current policy efforts focus on the provision of insurance coverage as the principal means of ensuring access to health care among the general population.

Healthcare Coverage

Almost two-thirds of Tulsa County adults ages 18 – 64 reported that they had employer provided or private insurance (63.1 percent). An additional 14.3 percent reported insurance through a government sponsored program (Medicaid, Medicare, military benefits, or tribal/Indian health benefits). This age group was defined in order to exclude the Medicare population age 65 and older (Figure 182).

Figure 182: Healthcare Coverage, Tulsa County Ages 18-64, 2015

Healthcare Coverage
Tulsa County Adults Ages 18 – 64 | 2015
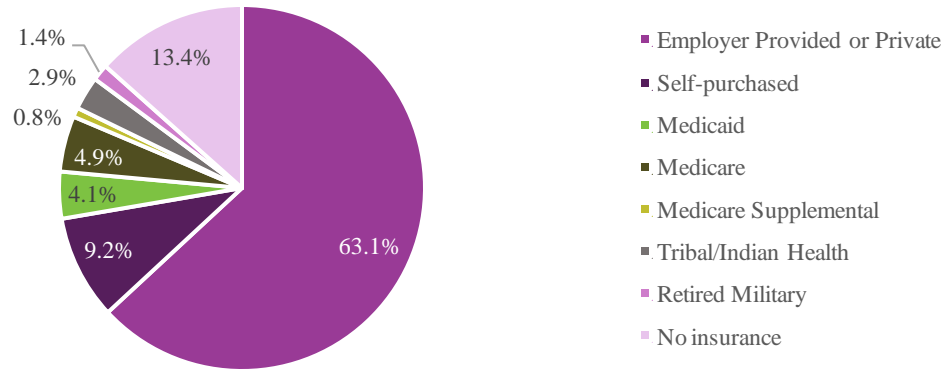
Legend:
- Employer Provided or Private
- Self-purchased
- Medicaid
- Medicare
- Medicare Supplemental
- Tribal/Indian Health
- Retired Military
- No insurance

Pie chart values: 63.1%, 9.2%, 4.1%, 4.9%, 0.8%, 2.9%, 1.4%, 13.4%
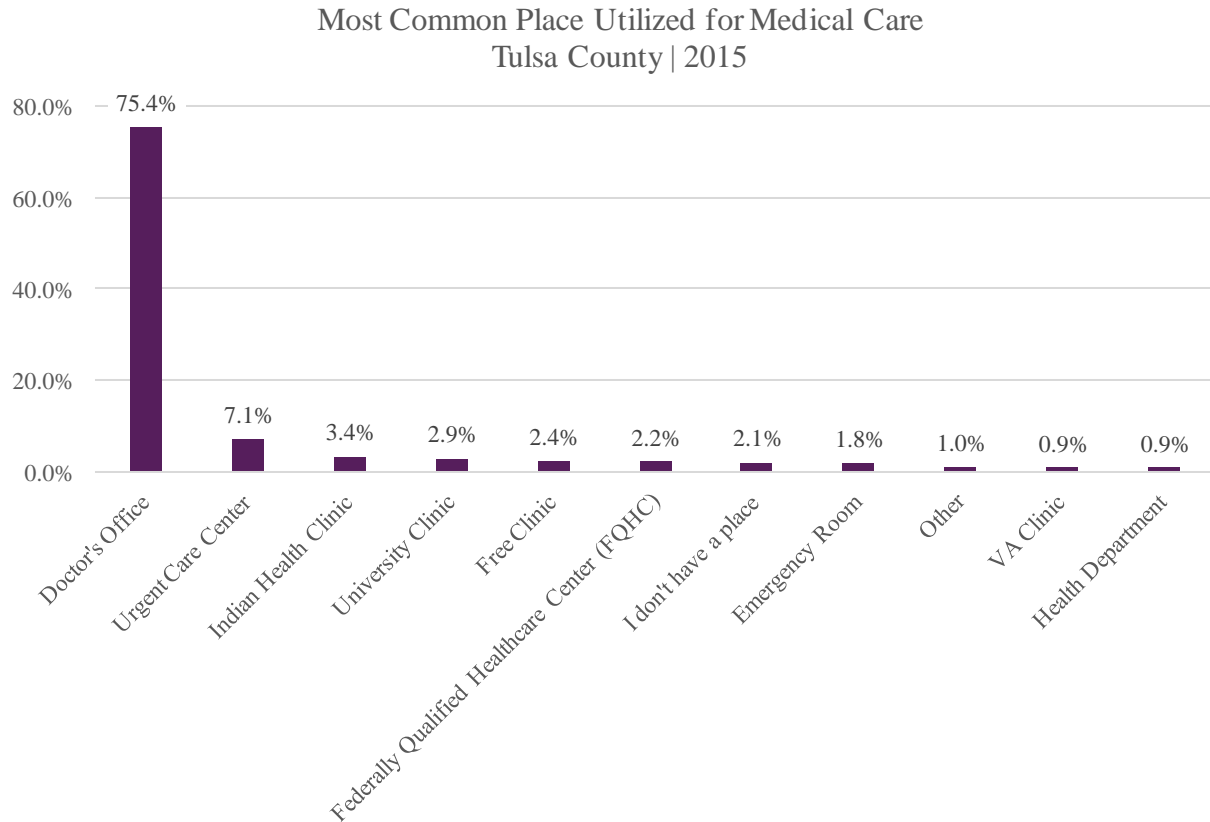
Asked of all respondents ages 18 – 64
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

However, 13.4 percent of Tulsa County adults ages 18 – 64 reported having no health care coverage. This was lower than both Oklahoma (17.2 percent) and the United States (20.0 percent). [122] [123]   None of these regions met the Healthy People 2020 goal of universal coverage (no one without insurance) (Figure 183). [121]

Figure 183: Lack of Healthcare Coverage, Tulsa County Adults Ages 18-64, 2015

Lack of Healthcare Coverage
Tulsa County Adults Ages 18 – 64 | 2015
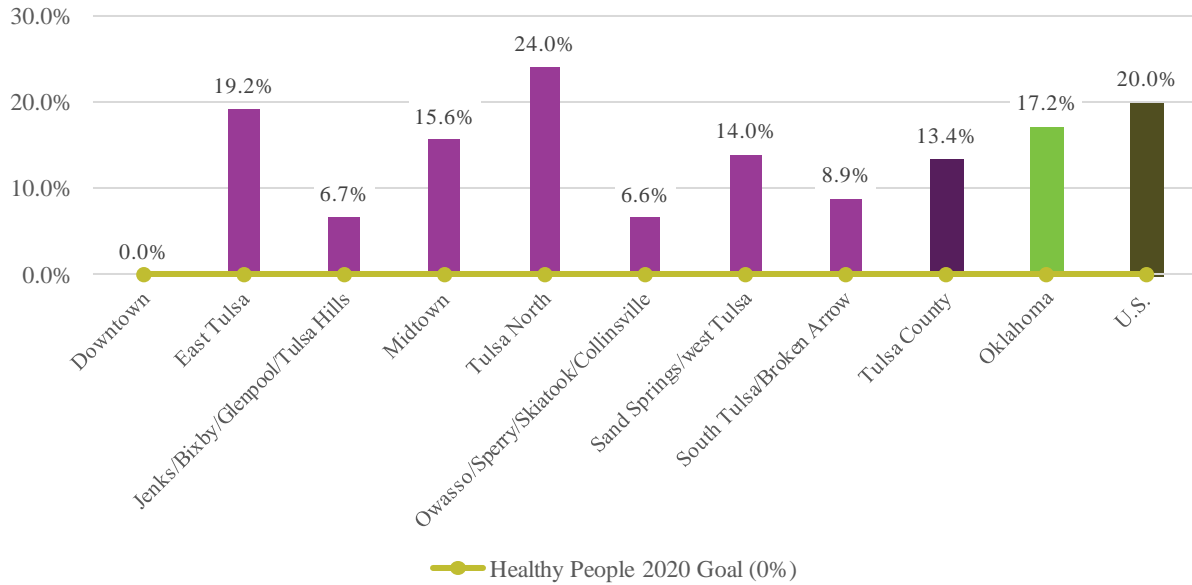
Asked of all respondents ages 18 – 64

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Tulsa County adults who reported no health care coverage were asked the main reason why they did not have coverage. The most common reason for lack of coverage was cost (120 individuals) (Figure 184).

Figure 184: Main Reason for No Healthcare Coverage, Tulsa County Adults Ages 18-64, 2015

Main Reason for No Healthcare Coverage
Tulsa County Adults Ages 18 – 64 | 2015
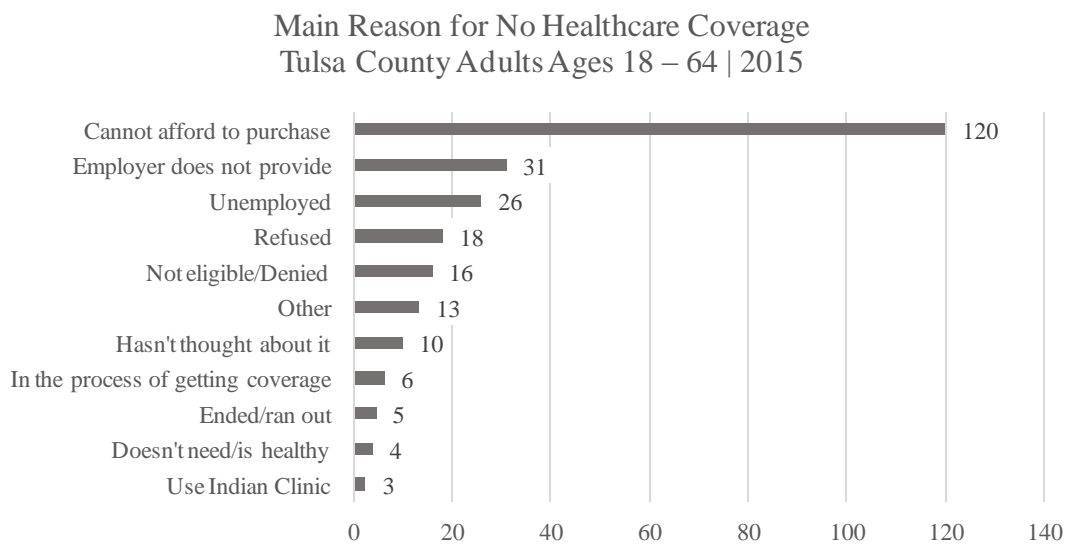
Asked of all respondents ages 18 – 64 who reported that they did not have any type of health care coverage (n=254)

Difficulty Accessing Services

About 15 percent of Tulsa County adults reported difficulty in seeing a health care provider in the past year because of cost (14.8 percent). This was very similar to both Oklahoma and the United States. [122] [123] This was most common in Tulsa North and east Tulsa (22 percent and 19.9 percent, respectively) and least common in Owasso/Sperry/Collinsville/Skiatook (8.4 percent) (Figure 185).

Figure 185: Experienced Difficulty in Receiving Healthcare in the Previous Year, Tulsa County 2015
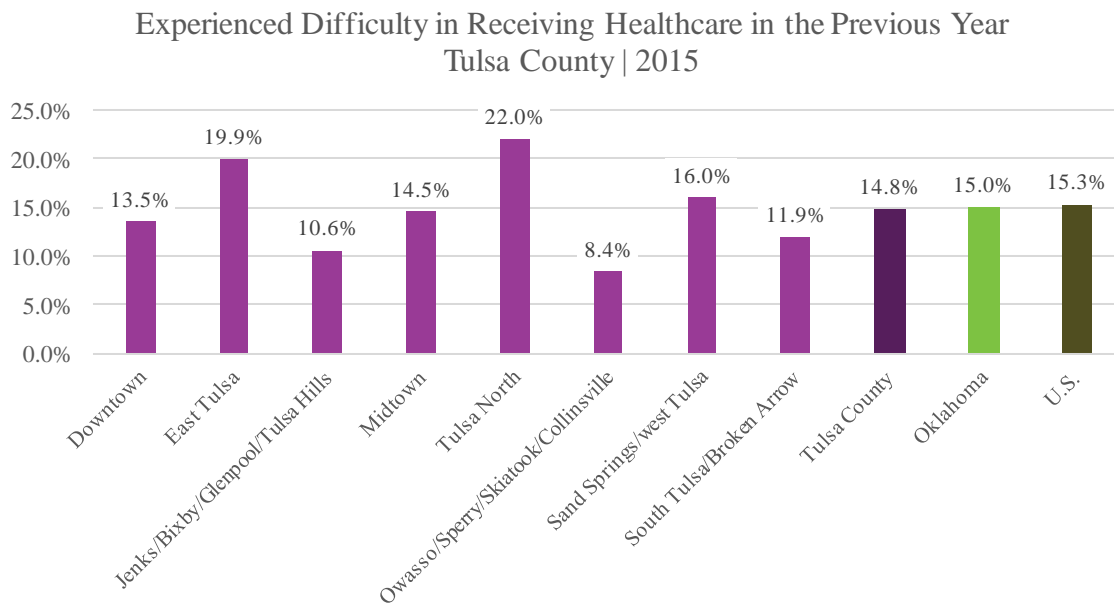
Experienced Difficulty in Receiving Healthcare in the Previous Year
Tulsa County | 2015

Primary Care

Having a primary care provider (PCP) as a usual source of care improves health outcomes, as well as decreases disparities and costs. In general, individuals with a PCP have greater trust and communication with their provider and are more likely to receive appropriate care. Having a PCP can also increase access to clinical preventive services that can detect early warning signs and symptoms in order to detect diseases earlier and at an (often) more treatable stage.

Primary Care Services

A total of 77.5 percent of Tulsa County adults stated that they had at least one person who they think of as their personal doctor or health care provider. This was slightly higher than Oklahoma (75.3 percent) and very similar to the United States (77.1 percent). [122] [123] This was lowest in downtown and Tulsa North (62.2 percent and 60.3 percent, respectively) (Figure 186). The percentages of adults with a personal

doctor were very similar in the other regions.

Figure 186: Had a Primary Care Provider, Tulsa County 2015
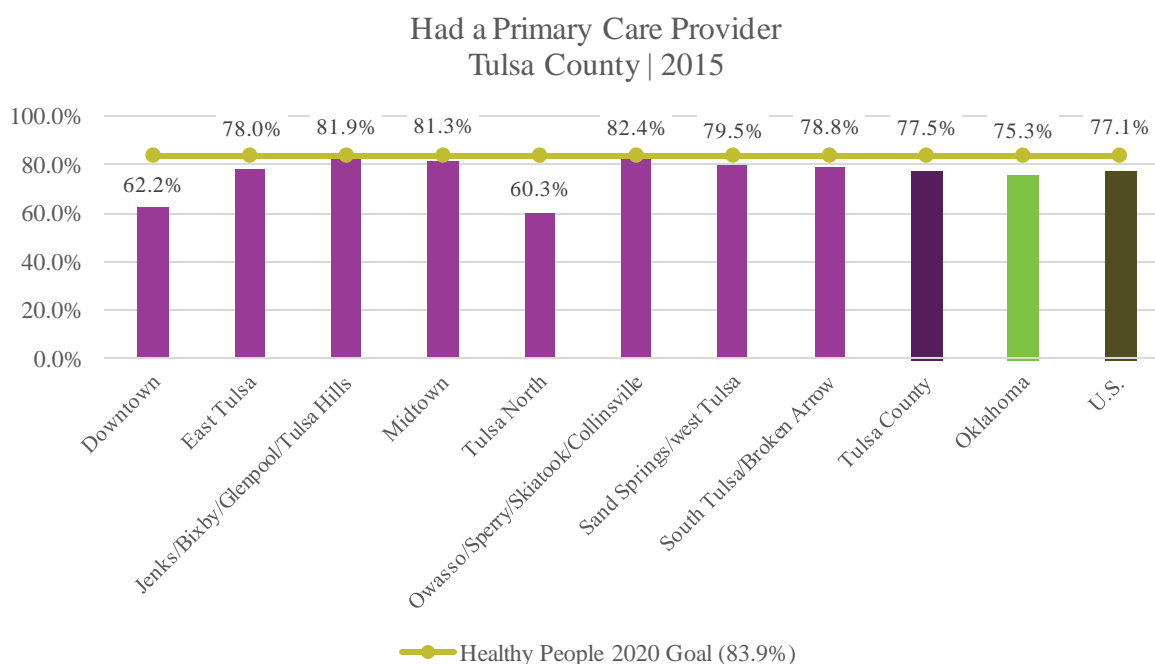
Had a Primary Care Provider
Tulsa County | 2015

Bar chart showing "Had a Primary Care Provider" percentages by region, with Healthy People 2020 Goal line at 83.9%:
- Downtown: 62.2%
- East Tulsa: 78.0%
- Jenks/Bixby/Glenpool/Tulsa Hills: 81.9%
- Midtown: 81.3%
- Tulsa North: 60.3%
- Owasso/Sperry/Skiatook/Collinsville: 82.4%
- Sand Springs/west Tulsa: 79.5%
- South Tulsa/Broken Arrow: 78.8%
- Tulsa County: 77.5%
- Oklahoma: 75.3%
- U.S.: 77.1%

Healthy People 2020 Goal (83.9%)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Routine Check-up

Almost three-quarters of Tulsa County adults reported that they had received a routine physical exam in the past year (73.6 percent). This was higher than both Oklahoma and the United States (61 percent and 68.2 percent, respectively). [122] [123] This percentage was above 75 percent in four regions (Jenks/Bixby/Glenpool/Tulsa Hills, Tulsa North, Owasso/Sperry/Skiatook/Collinsville, and Sand Springs/west Tulsa), but was below 70 percent in east Tulsa (Figure 187).

Figure 187: Routine Check-up in the Previous Year, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Routine Check-up in the Previous Year
Tulsa County | 2015

Downtown	70.3%
East Tulsa	68.3%
Jenks/Bixby/Glenpool/Tulsa Hills	76.1%
Midtown	71.1%
Tulsa North	76.2%
Owasso/Sperry/Skiatook/Collinsville	78.2%
Sand Springs/west Tulsa	78.2%
South Tulsa/Broken Arrow	71.8%
Tulsa County	73.6%
Oklahoma	61.0%
U.S.	68.2%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Tulsa County adults who had not had a routine physical exam in the past year were asked the main reason why not. The most common response was 'not needed/healthy' (235 individuals).

Main Reason for No Routine Check-up in the Previous Year
Tulsa County | 2015

Not needed/healthy	235
No insurance	65
No time	59
No motivation or reason to go	50
Cost/can't afford (non-specific)	49
Seen for other health problems	46
Doesn't like doctors/going to doctors	26
Other	17
Refused	14
Unable to afford co-pay	11
No doctor	9
Insurance does not cover	7
Couldn't get off work	7
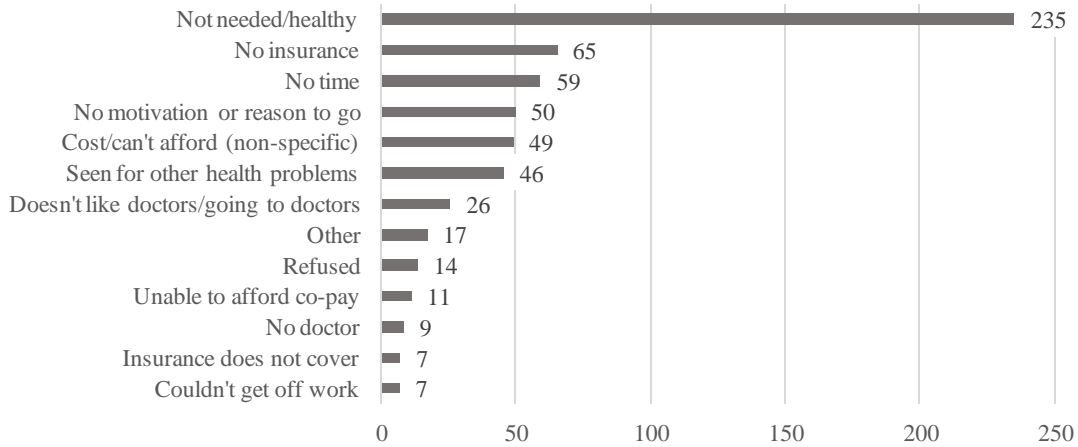
*Asked of all respondents who stated that they had not had a routine check-up in the previous year (n=600)
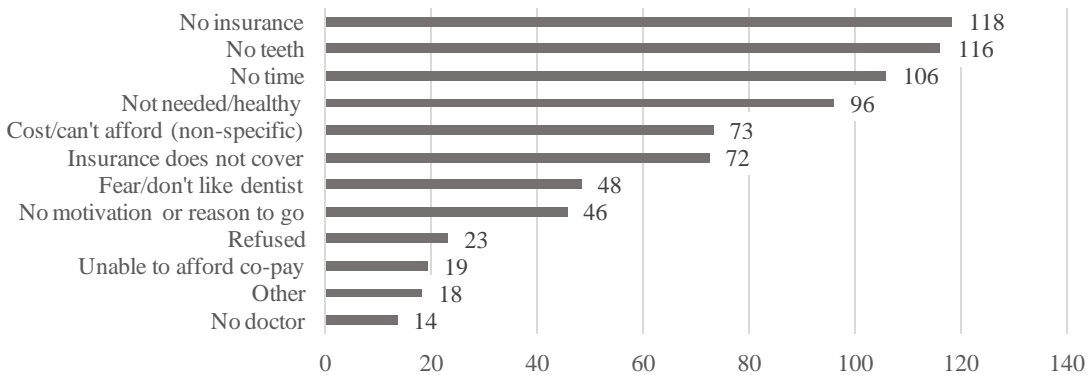
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Particular Place Utilized for Medical Care

The most common location for Tulsa County adults to receive health care services was a doctor's office (75.4 percent), followed by urgent care centers (7.1 percent) (Figure 188). It is interesting to note that although emergency rooms are often thought of as a place for primary care for uninsured individuals, less than 2 percent of the population in Tulsa County reported regularly using this location.

Figure 188: Most Common Place Utilized for Medical Care, Tulsa County 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Approximately three-quarters of Tulsa County residents stated that they generally receive services at these facilities 0 − 3 times per year (75.5 percent) (Figure 189).

Figure 189: Healthcare Services: Times per Year, Tulsa County 2015
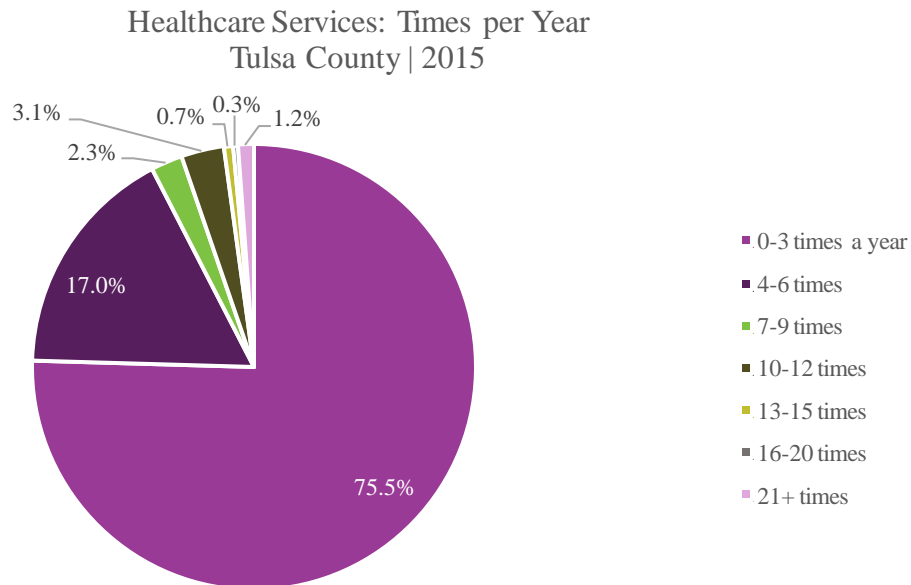
Healthcare Services: Times per Year
Tulsa County | 2015

3.1%   0.7%   0.3%   1.2%
2.3%

17.0%

75.5%

- 0-3 times a year
- 4-6 times
- 7-9 times
- 10-12 times
- 13-15 times
- 16-20 times
- 21+ times

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Mental Health

Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships, 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 a community or society. Mental health and physical health are closely connected. Mental illnesses, such as depression and anxiety, affect an individual's ability to participate in behaviors that promote health. Additionally, problems with physical health, such as chronic diseases, can have a serious impact on mental health and limit an individual's ability to participate in treatment and recovery.[121]

Mental Health Service Utilization

A total of 13.2 percent of Tulsa County adults reported that they had utilized mental health services in the past year. This was highest in downtown (28.6 percent) and lowest in Jenks/Bixby/Glenpool/Tulsa Hills (5.9 percent) (Figure 190).

Figure 190: Accessed Mental Health Services in the Previous Year, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Accessed Mental Health Services in the Previous Year
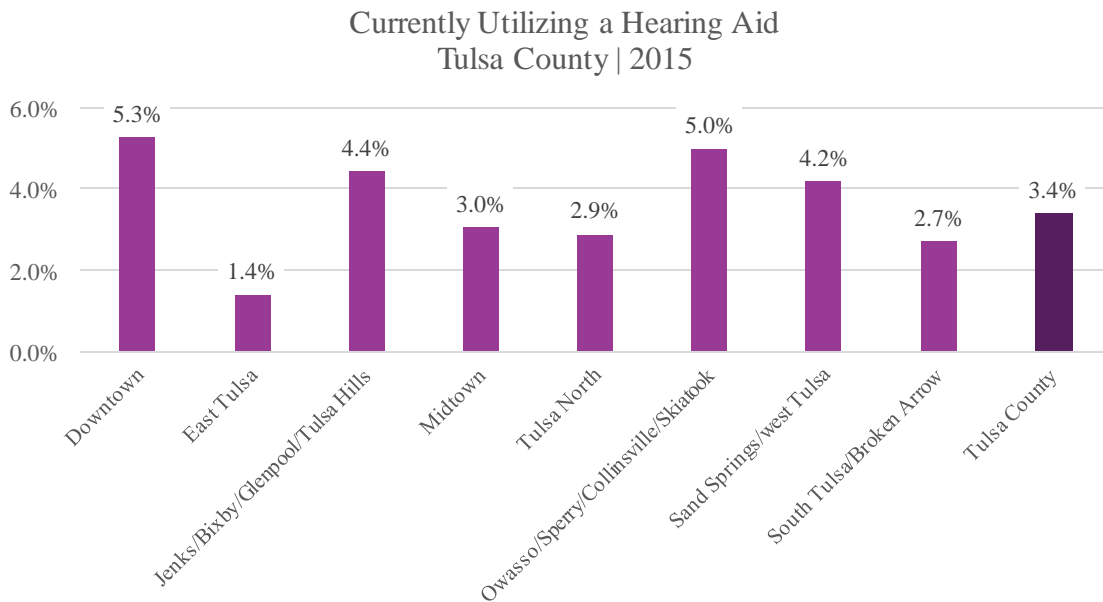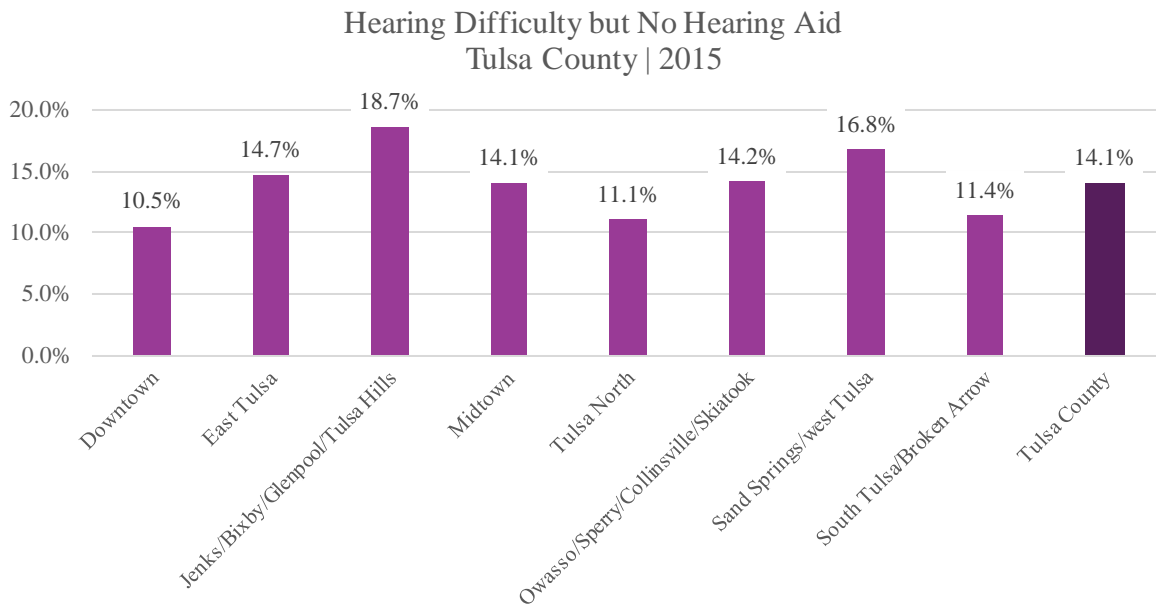## Tulsa County | 2015
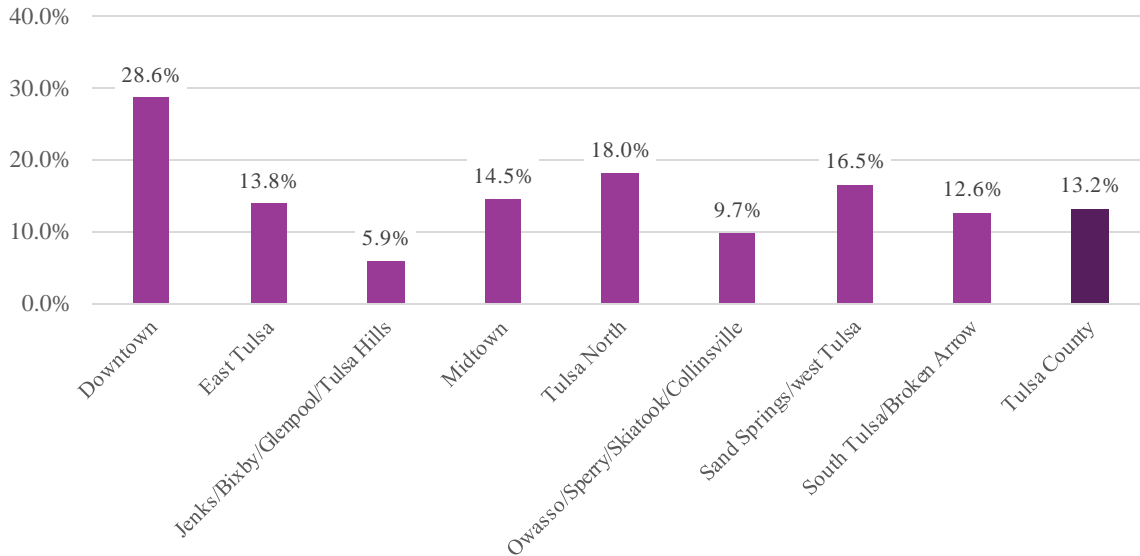
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

These individuals who had utilized mental health services in the past year were asked the reason. The most common reason reported was depression (218 individuals) (Figure 191). Please note that respondents were able to choose multiple reasons for utilizing mental health services in the past year.

Figure 191: Reason for Utilizing Mental Health and Social Support Services in the Previous Year

Reason for Utilizing Mental Health and Social Support Services in the Previous Year
Tulsa County | 2015
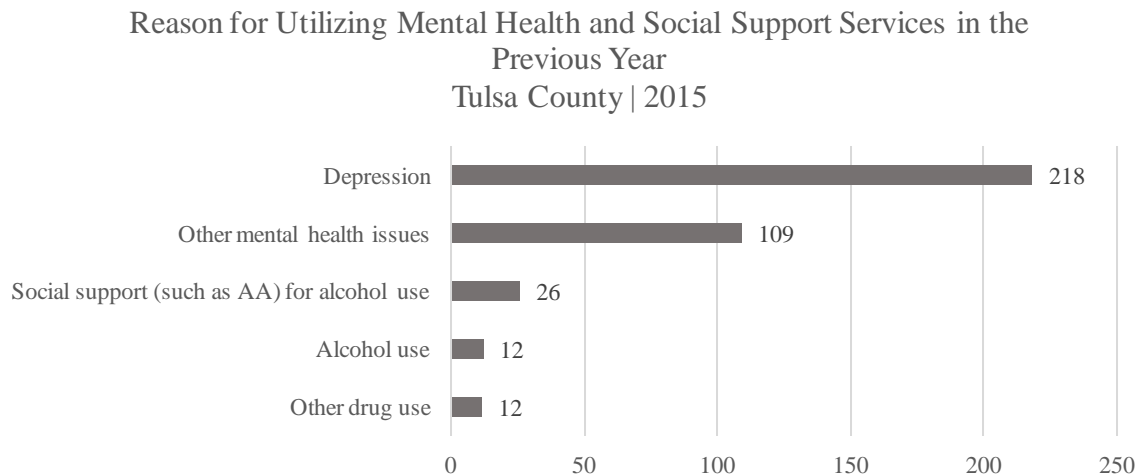
*Asked of all respondents who reported that they had accessed mental health services in the previous year (n=298)
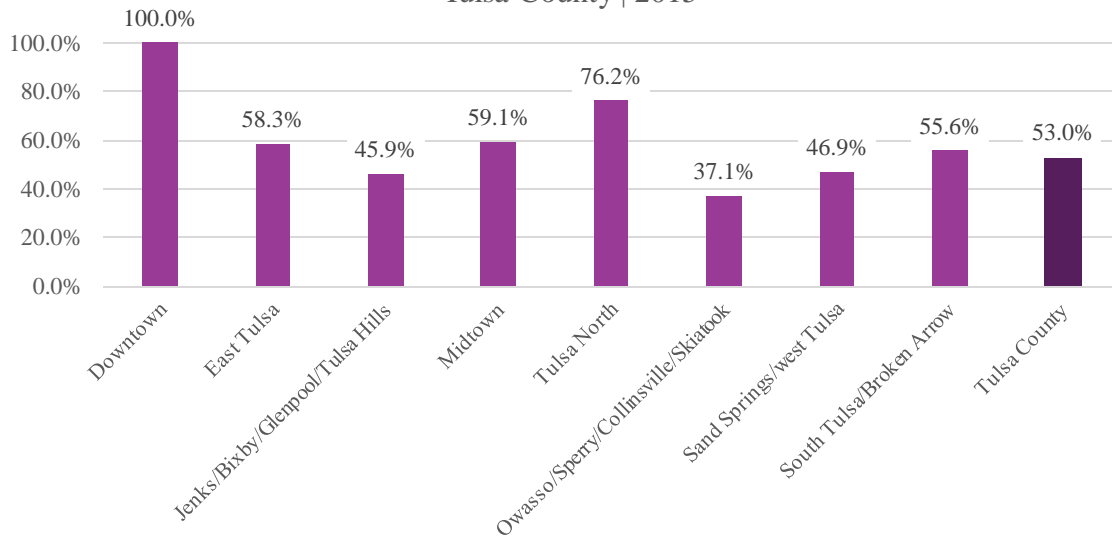**Respondents were able to choose more than one response*
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Those individuals who reported that they had not utilized mental health services in the past year were asked why not. The large majority stated that they were 'not needed/healthy' (1,809 individuals) (Figure 192).

Figure 192: Reason for Not Utilizing Mental Health Services in the Past Year, Tulsa County 2015
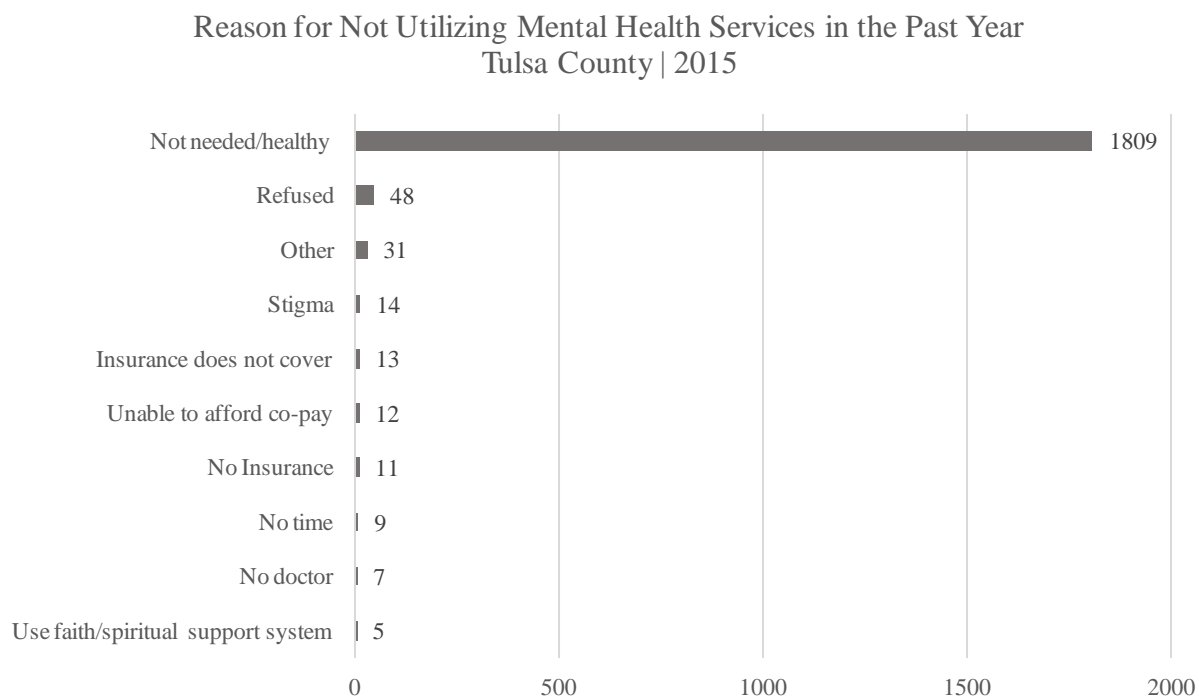
Reason for Not Utilizing Mental Health Services in the Past Year
Tulsa County | 2015

Reason	Value
Not needed/healthy	1809
Refused	48
Other	31
Stigma	14
Insurance does not cover	13
Unable to afford co-pay	12
No Insurance	11
No time	9
No doctor	7
Use faith/spiritual support system	5

Asked of all respondents who reported that they had not utilized mental health services in the past year (n=1962)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016*. Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Oral Health

Good oral health improves an individual's ability to speak, smile, smell, taste, touch, chew, swallow, and make facial expressions to show feelings and emotions. However, oral diseases, such as cavities or oral cancer, cause pain and disability for many Americans. Good self-care such as brushing, flossing, and regular dental exams are important to oral health. People who do not have access to preventive dental services and treatment have greater rates of oral diseases. Additionally, certain health behaviors such as tobacco use, excessive alcohol use, and poor dietary choices can lead to poor oral health. Barriers to good oral health can include limited access, availability or awareness of dental services, cost, and fear, as well as social determinants such as lower levels of education and income and specific racial/ethnic groups. [121]

Routine Teeth Cleaning

Overall, 66.8 percent of Tulsa County residents reported that they had a routine teeth cleaning in the

previous year. This was higher than in Oklahoma (56.8 percent) and very similar to the United States (67.2 percent). [122] [123] The regions with the highest percentages of individuals who reported a routine teeth cleaning in the past year were Jenks/Bixby/Glenpool/Tulsa Hills, Owasso/Sperry/Skiatook/Collinsville, and south Tulsa/Broken Arrow (71.2 percent, 74.8 percent and 74.7 percent, respectively). Tulsa North had the lowest percentage (46.5 percent) (Figure 193).

Figure 193: Routine Teeth Cleaning in the Previous Year, Tulsa County 2015
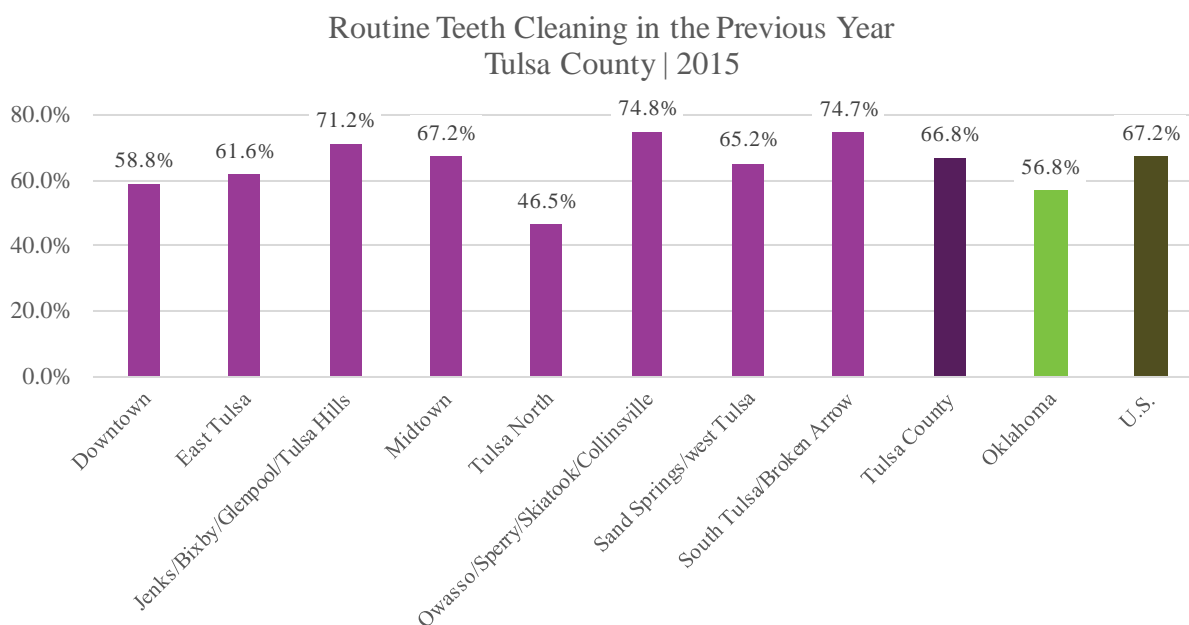
Routine Teeth Cleaning in the Previous Year
Tulsa County | 2015

Downtown	58.8%
East Tulsa	61.6%
Jenks/Bixby/Glenpool/Tulsa Hills	71.2%
Midtown	67.2%
Tulsa North	46.5%
Owasso/Sperry/Skiatook/Collinsville	74.8%
Sand Springs/west Tulsa	65.2%
South Tulsa/Broken Arrow	74.7%
Tulsa County	66.8%
Oklahoma	56.8%
U.S.	67.2%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Tulsa County adults who reported that they had not had a routine teeth cleaning in the previous year were asked for the reason. The most common response was 'no insurance' (131 individuals), followed by 'no teeth' (124 individuals) (Figure 194).

Figure 194: Main Reason for No Routine Teeth Cleaning in the Previous Year

2016 Community Health Needs Assessment, St. John Owasso

Main Reason for No Routine Teeth Cleaning in the Previous Year
Tulsa County | 2015

Reason	Value
No insurance	118
No teeth	116
No time	106
Not needed/healthy	96
Cost/can't afford (non-specific)	73
Insurance does not cover	72
Fear/don't like dentist	48
No motivation or reason to go	46
Refused	23
Unable to afford co-pay	19
Other	18
No doctor	14

*Asked of all respondents who reported that they had not had a routine teeth cleaning in the previous year (n=751)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Auditory Health

Sensory or communication impairments or disorders can affect physical and mental health, even when they are mild. Difficulty or an inability to communicate can lead people to feel socially isolated, have unmet health needs, and have less success in school or at work. Biological determinants such as genetics, infections, drug or other medication sensitivity, injuries, and aging can influence hearing loss and other sensory or communication disorders. Additionally, other factors such as income level, perceived stigmas, cost, and unhealthy lifestyle choices can influence access to early preventive services. In infants and children, early intervention can help improve social, emotional, cognitive, and academic growth. [121]

Hearing Aid Utilization

Overall, a total of 82.5 percent of Tulsa County adults did not have difficulty hearing. However, 3.4 percent of adults were currently utilizing a hearing aid due to hearing difficulty and 14.1 percent had hearing difficulty but were not currently utilizing a hearing aid (Figure 195).

Figure 195: Hearing Difficulty, Tulsa County 2015

Hearing Difficulty
Tulsa County | 2015
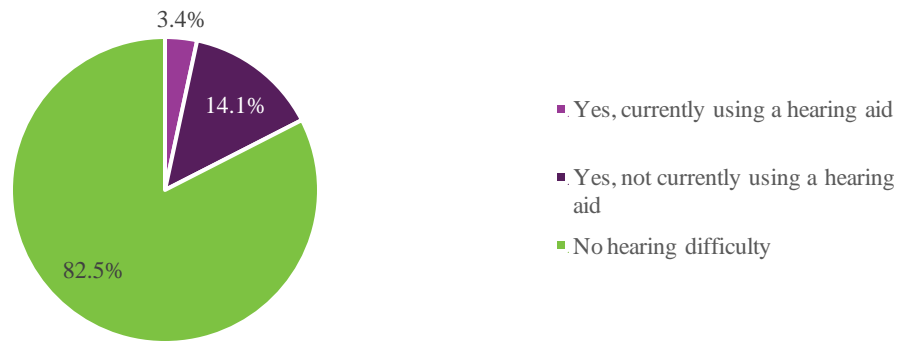
- Yes, currently using a hearing aid
- Yes, not currently using a hearing aid
- No hearing difficulty

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

The regions with the highest percentages of individuals using a hearing aid were downtown and Owasso/Sperry/Collinsville/Skiatook (5.3 percent and 5.0 percent, respectively). Hearing aid utilization was lowest in east Tulsa (1.4 percent) (Figure 196).

Figure 196: Currently Utilizing a Hearing Aid, Tulsa County 2015

Currently Utilizing a Hearing Aid
Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Hearing Aid Need

As stated previously, 14.1 percent of Tulsa County adults reported that they had hearing problems but were not currently use a hearing aid. This was highest in Jenks/Bixby/Glenpool/Tulsa Hills (18.7 percent) and lowest in downtown (10.5 percent) (Figure 197).

Figure 197: Hearing Difficulty but No Hearing Aid, Tulsa County 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Of those individuals who reported that they had hearing difficulty but did not use a hearing aid, 53 percent reported that they would benefit from a hearing aid. This was highest in downtown (100 percent) and lowest in Owasso/Sperry/Collinsville/Skiatook (37.1 percent) (Figure 198).

Figure 198: Would Benefit from a Hearing Aid, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Would Benefit from a Hearing Aid
Tulsa County | 2015

*Asked of all respondents who reported hearing difficulty but were not currently using a hearing aid
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Specialty Care

Ensuring access to specialty services is important to providing comprehensive quality care to all individuals. However, provider shortages and low provider participation in Medicaid, especially among specialists, are a major concern, especially as more individuals have access to health care coverage through the Affordable Care Act. [133]

Specialty Care Referrals

Overall, a total of 31.5 percent of Tulsa County adults reported that they had been referred to specialty health care for some health condition. This was highest in Jenks/Bixby/Glenpool/Tulsa Hills (40.3 percent) and lowest in downtown (21.6 percent) (Figure 199).

Figure 199: Received a Specialty Care Referral in the Previous Year

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[133] The Henry J. Kaiser Family Foundation, Kaiser Commission on Medicaid and the Uninsured. (2016*). Medicaid: A Primer.* Retrieved from: https://kaiserfamilyfoundation.files.wordpress.com/2010/06/7334-05.pdf.

Received a Specialty Care Referral in the Previous Year
Tulsa County | 2015
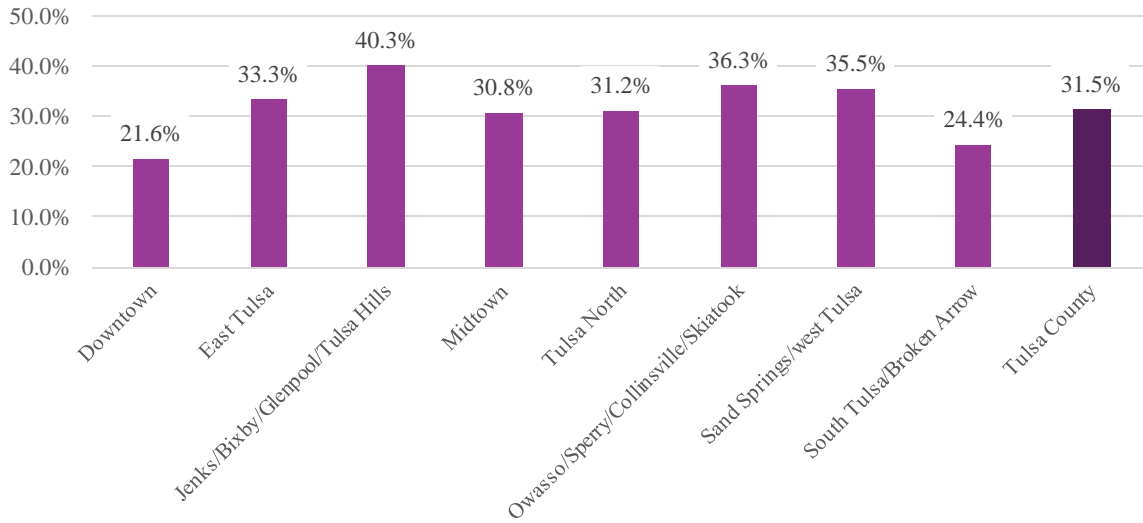
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

The primary reason for specialty care was 'other health issues,' followed by diabetes (Figure 200). Respondents were able to choose multiple health reasons.

Figure 200: Reason for Specialty Care Referrals in the Previous Year, Tulsa County 2015

Reason for Specialty Care Referrals in the Previous Year
Tulsa County | 2015
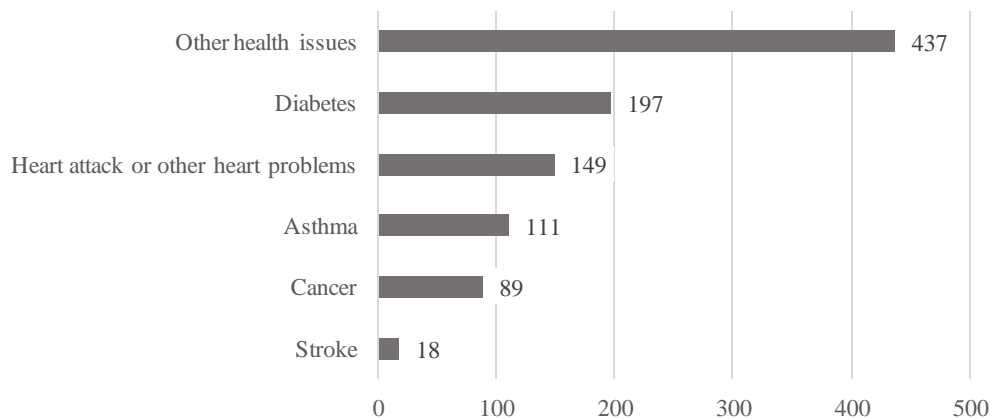
*Asked of all respondents who stated that they had received a specialty care referral in the previous year (n=726)
**Respondents were able to choose more than one response

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Difficulty Accessing Specialty Care

Of those 31.5 percent of Tulsa County adults who reported receiving a specialty care referral in the past year, 12.1 percent had difficulty accessing specialty services. This was highest in downtown Tulsa (25 percent) and lowest in Jenks/Bixby/Glenpool/Tulsa Hills (4.4 percent). It is interesting to note that Jenks/Bixby/Glenpool/Tulsa Hills had the highest specialty care referrals and the least difficulty accessing that specialty care (Figure 201).

Figure 201: Difficulty Obtaining Specialty Services in the Previous Year, Tulsa County 2015
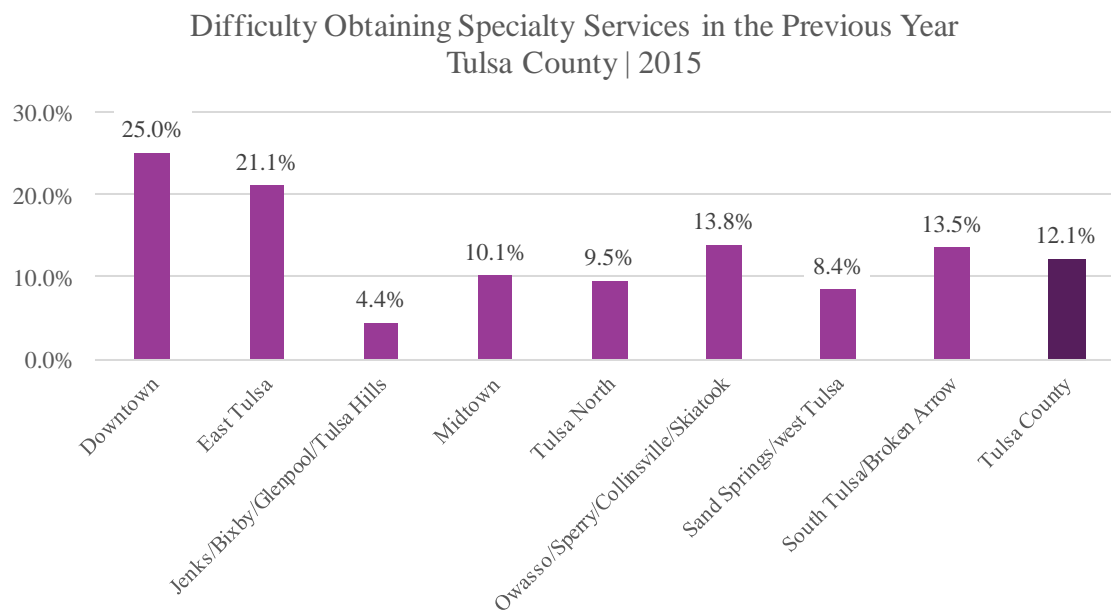
Difficulty Obtaining Specialty Services in the Previous Year
Tulsa County | 2015

Asked of all respondents who stated that they had received a specialty care referral in the previous year
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Tulsa County adults were asked what challenges they faced to obtaining specialty services. The most common responses were cost and insurance approval (32 individuals each) (Figure 202). Respondents were able to choose more than one option.

Figure 202: Challenges to Obtaining Specialty Services in the Previous Year, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Challenges to Obtaining Specialty Services in the Previous Year
Tulsa County | 2015
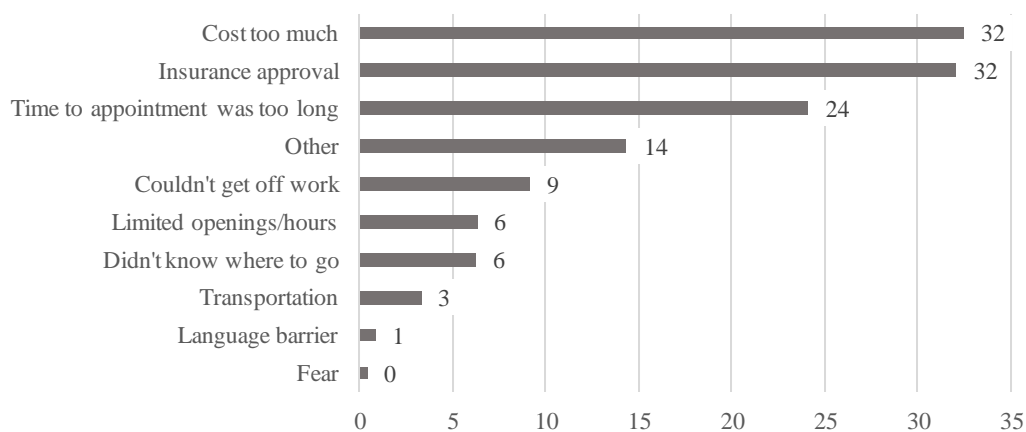
*Asked of all respondents who stated that they had difficulty obtaining specialty services (n=88)
**Respondents were able to choose more than one response
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Healthy Behaviors

Identifying healthy (and unhealthy) behaviors in a population allows for interventions that promote prevention activities. All of these health behaviors may have long lasting health and economic consequences with regard to chronic disease and potential death, which is information that the health department and its partners can use to target high risk populations.

Sugar-Sweetened Beverages

Sugar-sweetened beverages are drinks with added sugar including (but not limited to) non-diet soft drinks, flavored juice drinks, sports drinks, and energy drinks. The calories in sugar-sweetened beverages can contribute to weight gain and provide very little nutritional value. Those extra calories can lead to increased risk of other health conditions such as obesity, tooth decay, heart disease, and type 2 diabetes.[134]

Sugar-Sweetened Beverage Consumption

Overall, 30.5 percent of Tulsa County residents reported that they did not consume sugar-sweetened beverages on any days in a week, on average. Of those individuals who did report sugar-sweetened beverage consumption, the average number of days when they consumed them per week was 4.52. This was highest in Tulsa North (4.86 days per week) and lowest in Jenks/Bixby/Glenpool/Tulsa Hills (4.26 days per week) (Figure 203).

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[134] State of Rhode Island, Department of Health (2015). *Sugar-Sweetened Beverages*. Retrieved from: http://www.health.ri.gov/healthrisks/sugarsweetenedbeverages/.

Figure 203: Average Weekly Sugar-Sweetened Beverage Consumption, Tulsa County 2015

Average Weekly Sugar-Sweetened Beverage Consumption
Tulsa County | 2015

Downtown	4.42
East Tulsa	4.71
Jenks/Bixby/Glenpool/Tulsa Hills	4.26
Midtown	4.31
Tulsa North	4.86
Owasso/Sperry/Skiatook/Collinsville	4.63
Sand Springs/west Tulsa	4.65
South Tulsa/Broken Arrow	4.32
Tulsa County	4.52
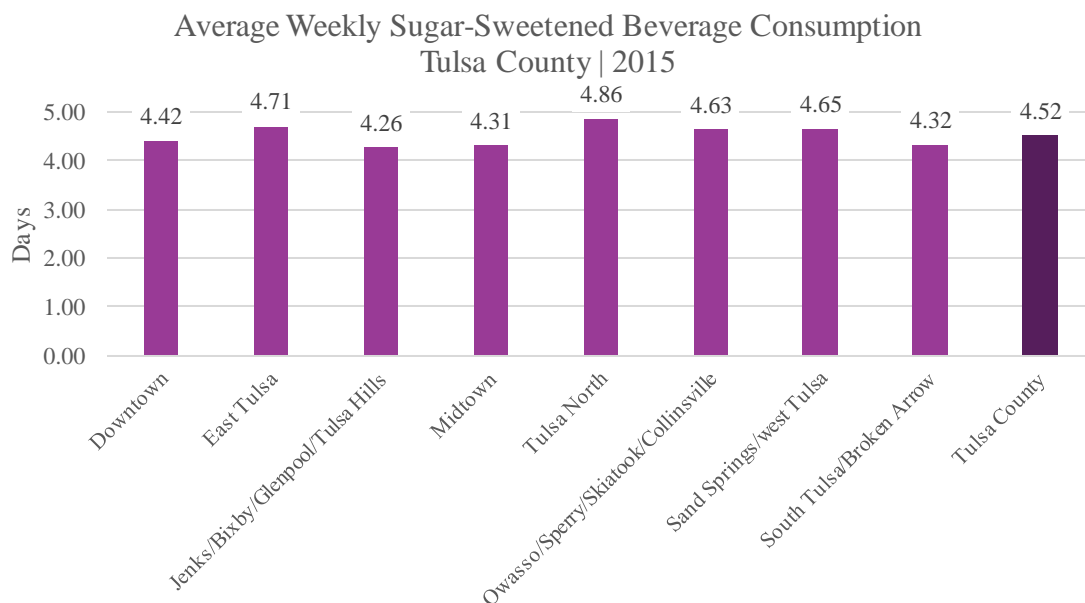
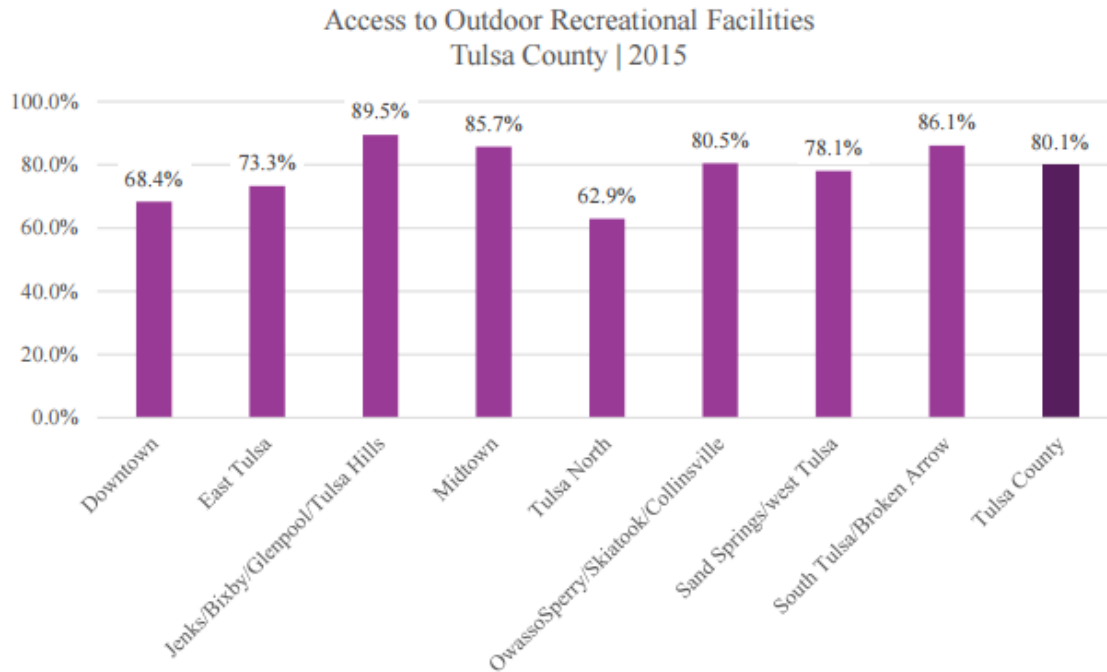*Asked of all respondents who reported sugar-sweetened beverage consumption*
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Physical Activity

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 symptoms of depression. For people who are inactive, even small increases in physical activity are associated with health benefits. Factors that may positively or negatively affect physical activity include age, socioeconomic status, safe neighborhoods, and access to recreational facilities, among other things.[121]

Level of Activity at Work

Over half of employed Tulsa County adults reported low levels of physical activity at work (mostly sitting or standing) (Figure 204).

Figure 204: Physical Activity Level at Work, Employed Tulsa County Adults, 2015

2016 Community Health Needs Assessment, St. John Owasso

Physical Activity Level at Work
Employed Tulsa County Adults | 2015

- Mostly sitting or standing
- Mostly walking
- Mostly heavy labor or physically demanding work

13.5%

26.6%

59.9%
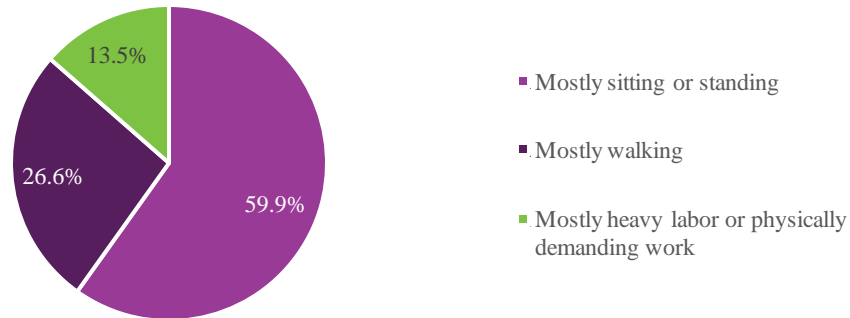
*Asked of all respondents who reported that they were employed full time, employed part time, or self-employed (n=1492)
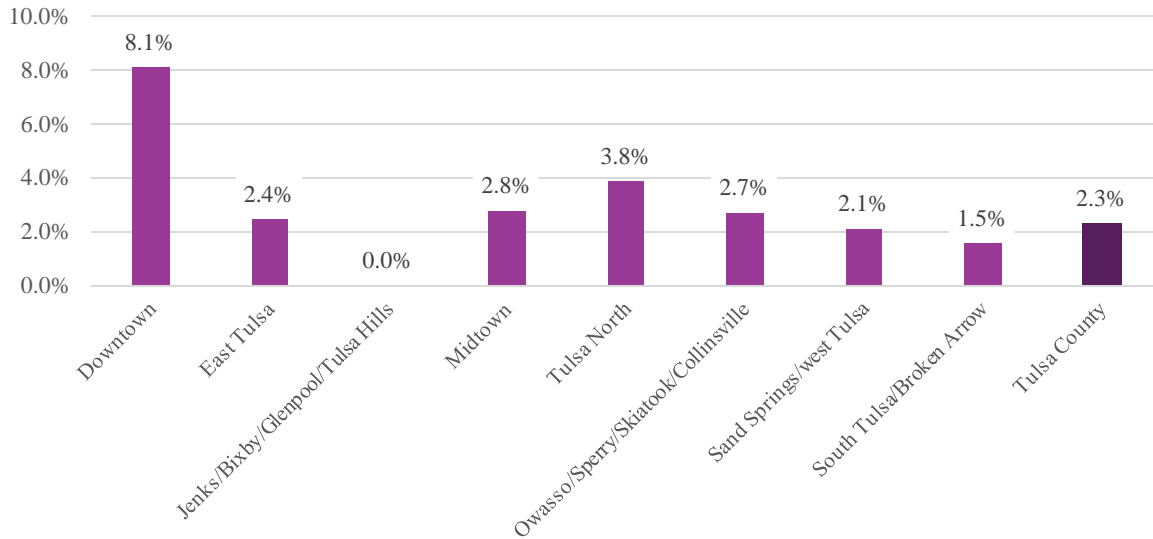*Source: Courtesy of the Tulsa Health Department. (2016). 2015 Tulsa County Community Health Needs Assessment:*
May 2016. Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report
_4_15_16-compressed.pdf

Low physical activity at work was most common in Jenks/Bixby/Glenpool/Tulsa Hills and Owasso/Sperry/Skiatook/Collinsville (70.5 percent and 69.6 percent, respectively) and least common in Tulsa North (45.4 percent) (Figure 205).

Figure 205: Low Level of Physical Activity at Work, Employed Tulsa County Adults, 2015
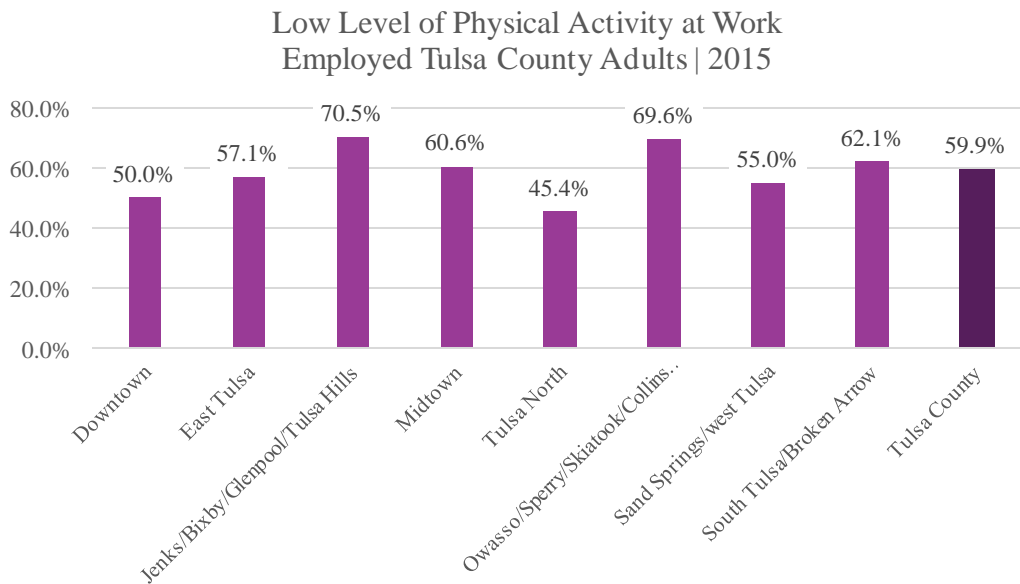
Low Level of Physical Activity at Work
Employed Tulsa County Adults | 2015

*Asked of all respondents who reported that they were employed full time, employed part time, or self-employed
Source: Courtesy of the Tulsa Health Department. (2016). 2015 Tulsa County Community Health Needs Assessment:
May 2016. Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report
_4_15_16-compressed.pdf

Leisure Time Physical Activity

About half of Tulsa County adults reported that they 'regularly' participated in physical activities in the previous month (51 percent) (Figure 206). An additional 30.2 percent 'sometimes' participated in physical activities.

Figure 206: Physical Activity Participation in the Previous Month, Tulsa County 2015

Physical Activity Participation in the Previous Month
Tulsa County | 2015
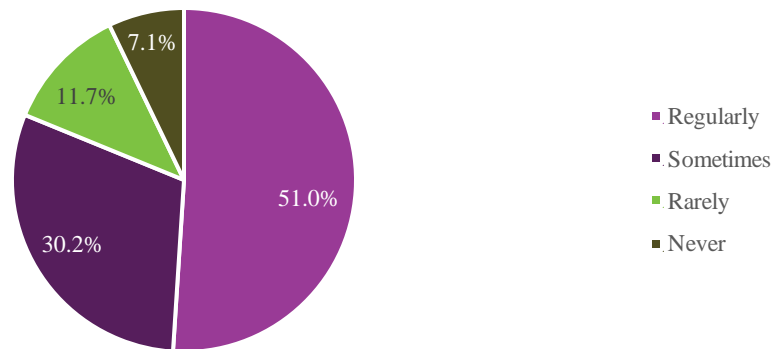
- Regularly 51.0%
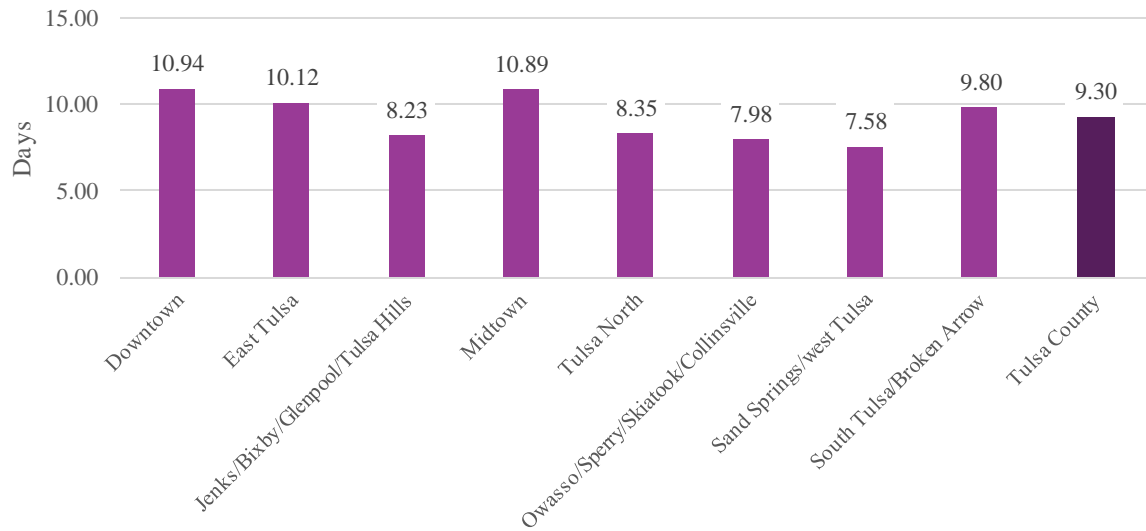- Sometimes 30.2%
- Rarely 11.7%
- Never 7.1%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

However, a total of 7.1 percent of Tulsa County adults reported that they 'never' participated in physical activities in the previous month. This was highest in Tulsa North (14.6 percent). Three regions had less than five percent of respondents report 'never' participating in physical activities: downtown (2.7 percent), Jenks/Bixby/Glenpool/Tulsa Hills (4 percent), and south Tulsa/Broken Arrow (4.8 percent) (Figure 207).

Figure 207: 'Never' Participated in Physical Activities in the Previous Month, Tulsa County 2015
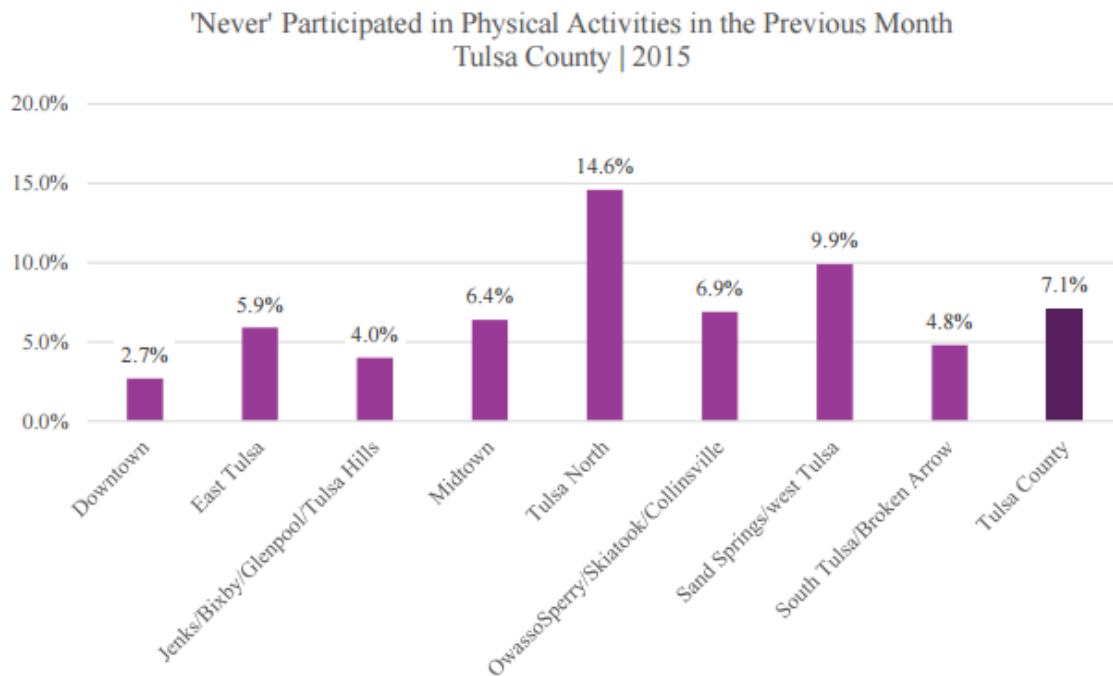
'Never' Participated in Physical Activities in the Previous Month
Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Physical Activity Levels

Overall, a total of 67.2 percent of Tulsa County adults met aerobic physical activity recommendations. This is defined as engaging in aerobic physical activity of at least moderate intensity for at least 150 minutes/week, or 75 minutes/week of vigorous intensity, or an equivalent combination.[135] Tulsa County met the Healthy People 2020 goal of 47.9 percent.[121] The proportion of adults who met aerobic physical activity guidelines was highest in midtown and south Tulsa/Broken Arrow (74.4 percent and 73.5 percent, respectively). It was lowest in Tulsa North (55.2 percent) (Figure 208).

Figure 208: Met Aerobic Activity Recommendations, Tulsa County 2015

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[135] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2015). *2008 Physical Activity Guidelines*. Retrieved from: http://health.gov/paguidelines/guidelines/adults.aspx.
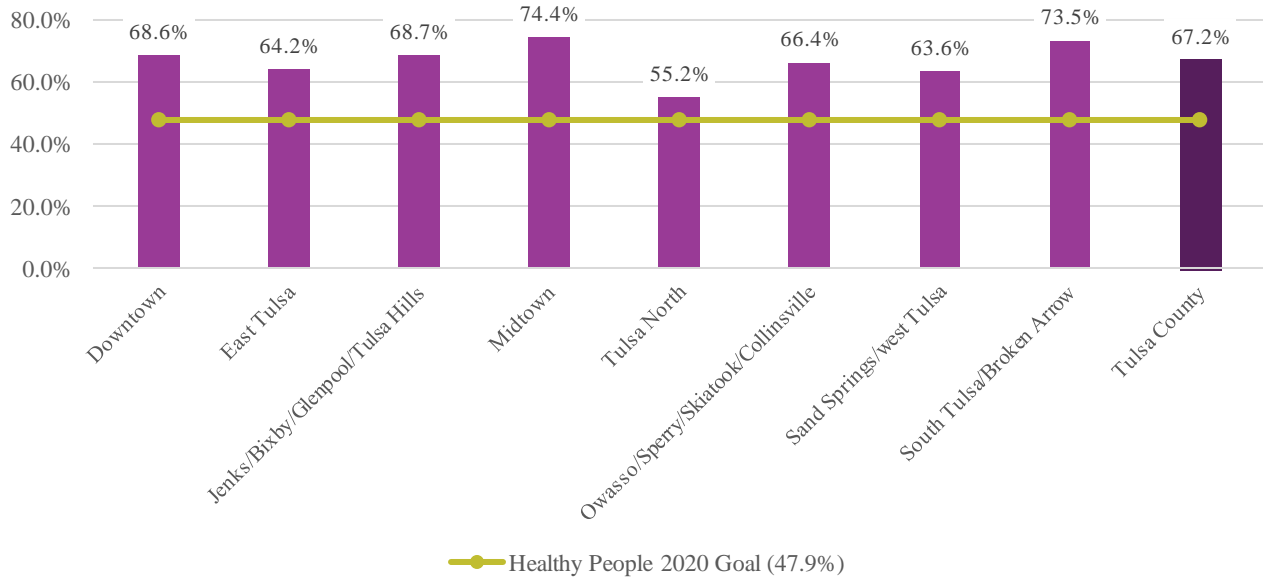
Met Aerobic Activity Recommendations
Tulsa County | 2015

Chart showing percentages by region:
- Downtown: 68.6%
- East Tulsa: 64.2%
- Jenks/Bixby/Glenpool/Tulsa Hills: 68.7%
- Midtown: 74.4%
- Tulsa North: 55.2%
- Owasso/Sperry/Skiatook/Collinsville: 66.4%
- Sand Springs/west Tulsa: 63.6%
- South Tulsa/Broken Arrow: 73.5%
- Tulsa County: 67.2%

—●— Healthy People 2020 Goal (47.9%)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Access to Indoor Recreational Facilities

About two-thirds of Tulsa County adults stated that they had regular access to indoor recreational facilities. In three regions, over 70 percent of adults reported regular access to indoor recreational facilities (Jenks/Bixby/Glenpool/Tulsa Hills, Owasso/Sperry/Skiatook/Collinsville, and south Tulsa/Broken Arrow). Less than half of adults reported regular access to indoor recreational facilities in Tulsa North (45.5 percent) (Figure 209).

Figure 209: Access to Indoor Recreational Facilities, Tulsa County 2015
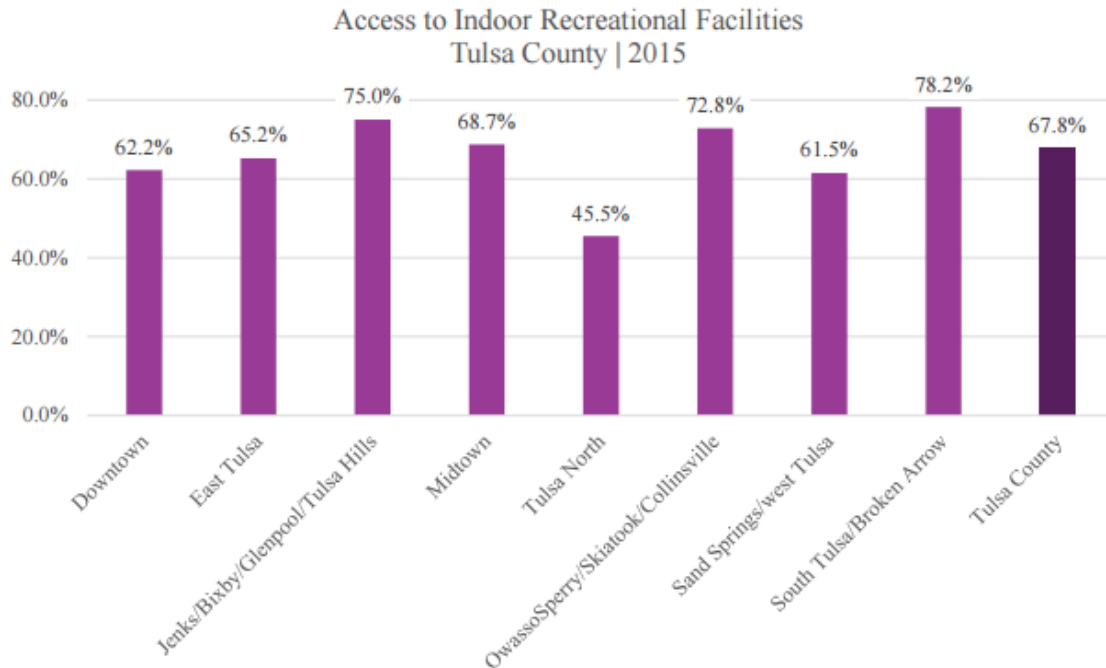
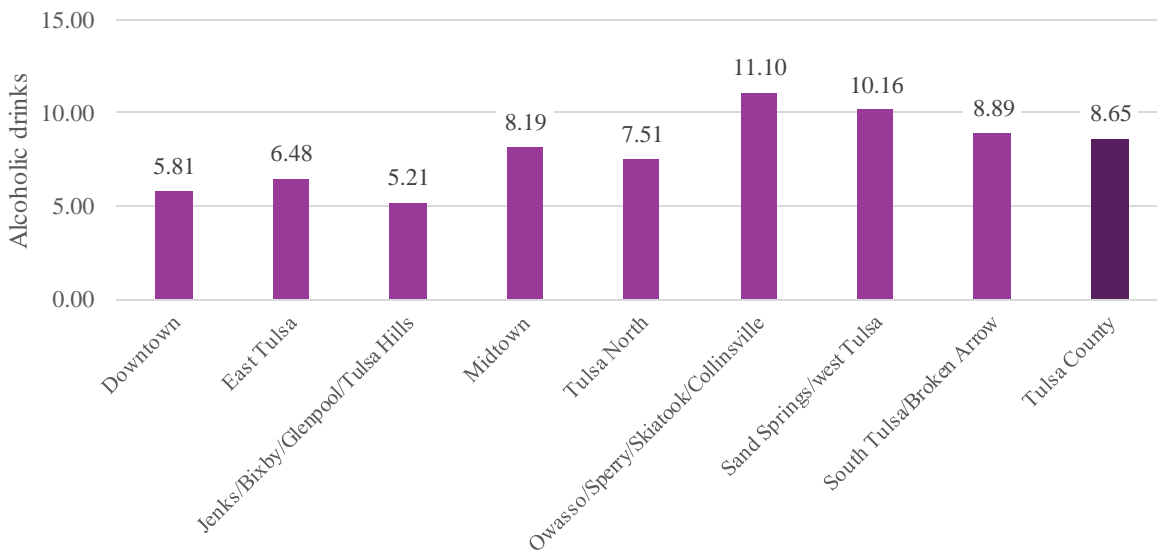Access to Indoor Recreational Facilities
Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Access to Outdoor Recreational Facilities

About four-fifths of Tulsa County adults reported regular access to outdoor recreational facilities (80.1 percent). In three regions, over 85 percent of adults reported regular access to outdoor facilities (Jenks/Bixby/Glenpool/Tulsa Hills, midtown, and south Tulsa/Broken Arrow). Less than two-thirds of adults in Tulsa North reported regular access to outdoor facilities (62.9 percent) (Figure 210).

Figure 210: Access to Outdoor Recreational Facilities, Tulsa County 2015

Access to Outdoor Recreational Facilities
Tulsa County | 2015

Substance Abuse

Substance abuse generally refers to alcohol and both prescription and illegal drug abuse. Substance abuse has a major impact on individuals, families, and communities, and contributes to poor public health outcomes. These costly social, physical, mental, and public health problems include teenage pregnancies, HIV/AIDS and other STDs, domestic violence, child abuse, motor vehicle accidents, physical fights, crime, homicide, and suicide. Estimates of individuals who have a substance abuse disorder are high, indicating the importance of prevention efforts and improved access to treatment for substance abuse.[121]

Alcohol Dependence

Overall, 2.3 percent of Tulsa County adults reported that they had been told by a health care or support service provider that they had an alcohol dependency. This was highest in downtown (5.3 percent) and lowest in Jenks/Bixby/Glenpool/Tulsa Hills (0.9 percent) (Figure 211).

Figure 211: Alcohol Dependence, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Alcohol Dependence
Tulsa County | 2015

Drug Dependence

A total of 2.3 percent of Tulsa County adults reported that they had been told by a health care or support service provider that they had a drug dependency (Figure 212). The percentage of individuals who reported a drug dependency was over twice as high in downtown compared to any other region. No one in the Jenks/Bixby/Glenpool/Tulsa Hills region reported a drug dependency.

Figure 212: Drug Dependence, Tulsa County 2015

Drug Dependence
Tulsa County | 2015

Alcohol Use in the Past Month

Overall, 56.5 percent of Tulsa County adults reported that there were zero days in the past month when they had at least one alcoholic beverage. Of the 43.5 percent who reported that they had at least one drink, the average number of days in which they consumed an alcohol beverage was 9.30. Downtown, east Tulsa, and midtown all reported an average of over 10 days per month (10.94 days, 10.12 days, and 10.89 days, respectively). The lowest average was in Sand Springs/west Tulsa (7.58 days) (Figure 213).

Figure 213: Average Monthly Alcohol Use, Tulsa County 2015

Average Monthly Alcohol Use
Tulsa County | 2015

Asked of all respondents who reported alcohol consumption in the previous month
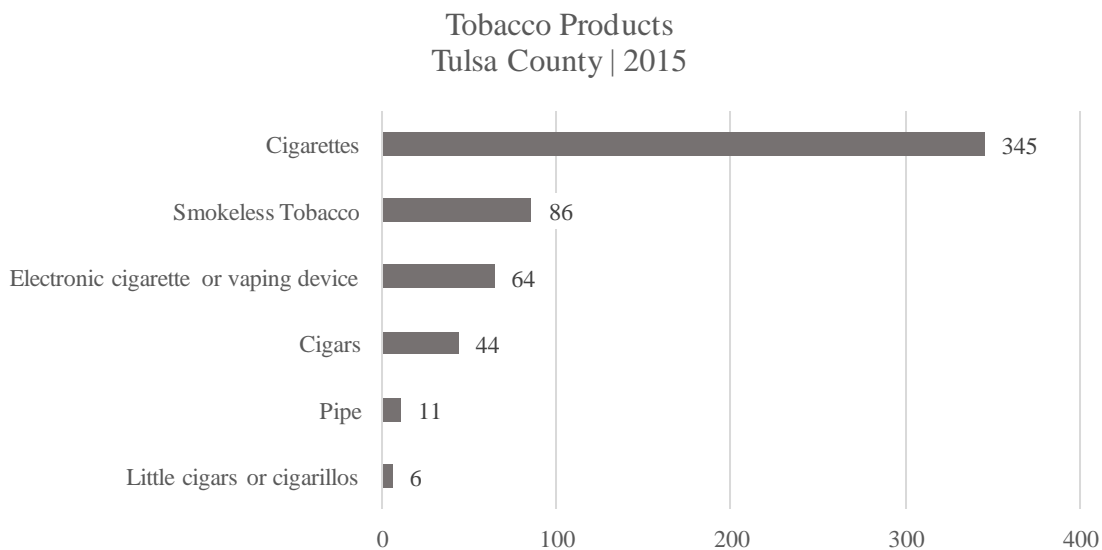Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Heavy Drinking

Overall, 5.8 percent of Tulsa County residents reported heavy drinking in the previous month, based on their average number of drinks per day (two drinks for men and one drink for women).[136] This was higher that the percentage in Oklahoma (4.2 percent), but lower than the United States (6.2 percent). Heavy drinking in downtown Tulsa was over four times as high as Owasso/Sperry/Skiatook/Collinsville (13.2 percent compared to 3 percent) (Figure 214).

Figure 214: Heavy Drinking, Tulsa County 2015

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[136] Centers for Disease Control and Prevention (CDC). (2015). *Behavioral Risk Factor Surveillance System Survey Questionnaire*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

Heavy Drinking
Tulsa County | 2015
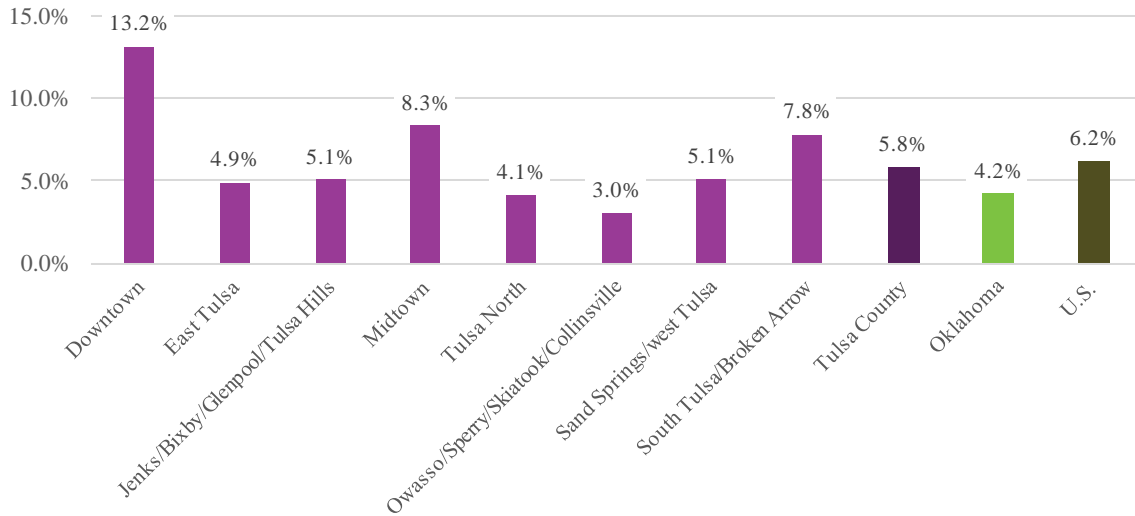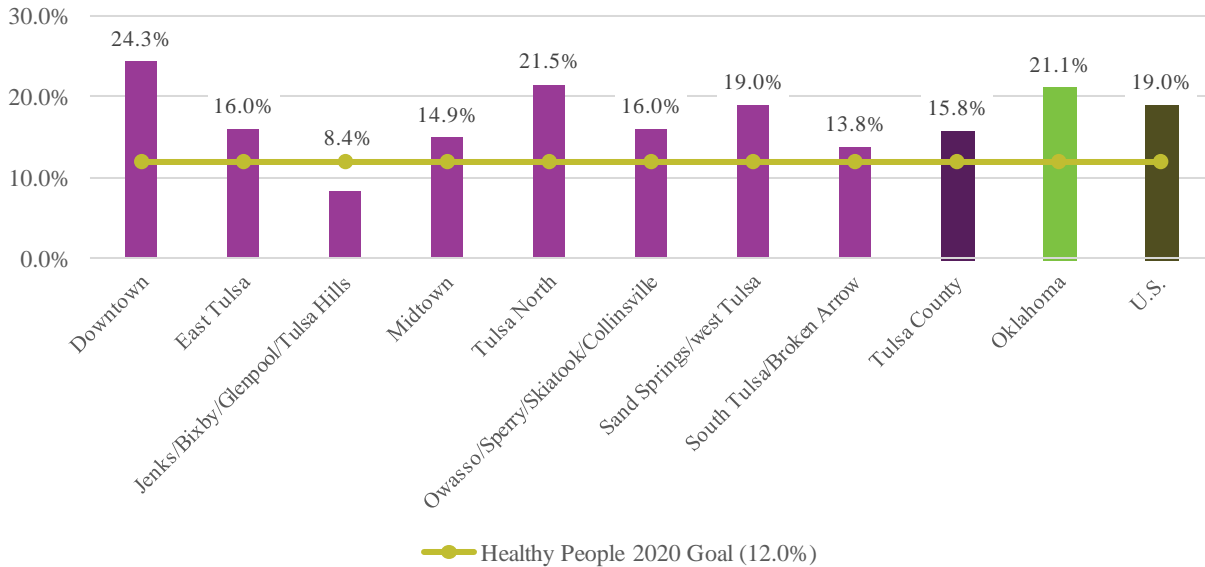

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Binge Drinking

Twelve percent of Tulsa County adults reported binge drinking in the previous month, based on their maximum alcohol consumption in one sitting (five drinks for men or four drinks for women). This was very similar to the percentage in Oklahoma (12.7 percent) and lower than the United States (16.8 percent).[122] [123] All three of these localities met the Healthy People 2020 goal of 24.4 percent of adults reporting binge drinking in the past month.[121] Binge drinking was highest in downtown (21.6 percent) and lowest in east Tulsa, Jenks/Bixby/Glenpool/Tulsa Hills, and Owasso/Sperry/Skiatook/Collinsville (9.2 percent, 8.0 percent and 7.3 percent, respectively) (Figure 215).

Figure 215: Binge Drinking, Tulsa County 2015
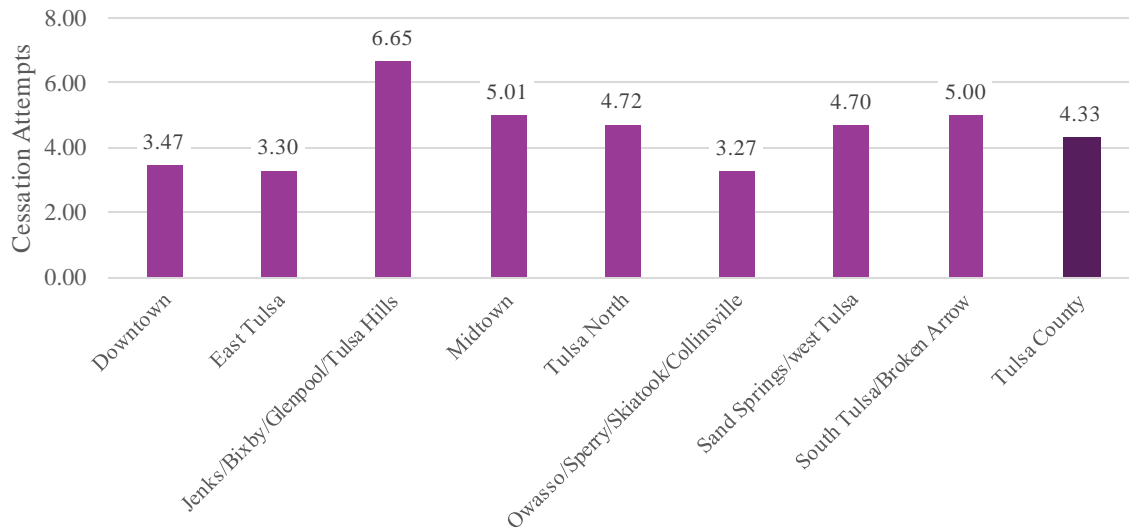
Binge Drinking
Tulsa County | 2015
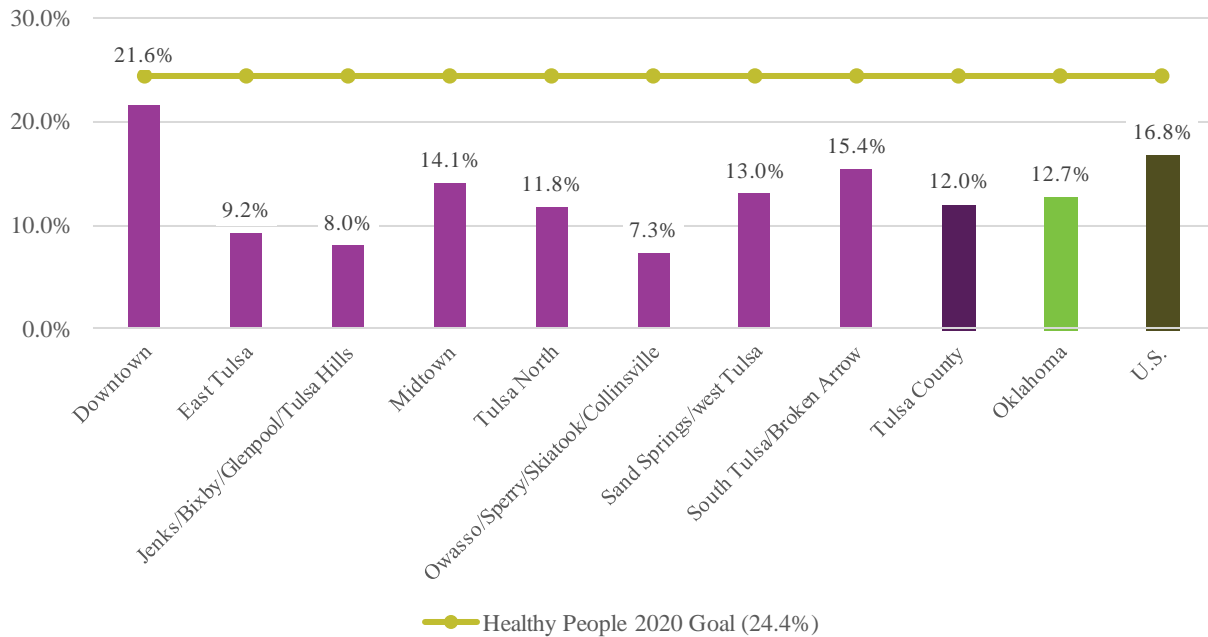
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Among binge drinkers, the average maximum number of drinks an individual consumed in one sitting over the past month was 8.65 drinks. This was highest in Owasso/Sperry/Skiatook/Collinsville (11.10 average max drinks) and lowest in downtown and Jenks/Bixby/Glenpool/Tulsa Hills (5.81 drinks and 5.21 drinks, respectively).It is interesting to note that although Owasso/Sperry/Skiatook/Collinsville had one of the lowest percentages of binge drinkers, those individuals who did binge drink had a much higher average max number of drinks. Conversely, downtown had a high percentage of binge drinkers but a lower average max number of drinks (Figure 216).

Figure 216: Average Max Number of Drinks, Binge Drinkers, Tulsa County 2015

Average Max Number of Drinks
Binge Drinkers | Tulsa County | 2015

Asked of all respondents who were binge drinkers, based on their self-reported alcohol consumption
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Tobacco Use

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.[121]

Prevalence of Tobacco Use

Overall, 24.7 percent of Tulsa County adults reported some type of tobacco use. Downtown Tulsa had the highest percentage of individuals who reported tobacco use (35.1 percent). Four regions had tobacco use below 25 percent (east Tulsa, Jenks/Bixby/Glenpool/Tulsa Hills, midtown, and south Tulsa/Broken Arrow) (Figure 217).

Figure 217: Tobacco Use, Tulsa County 2015

Tobacco Use
Tulsa County | 2015
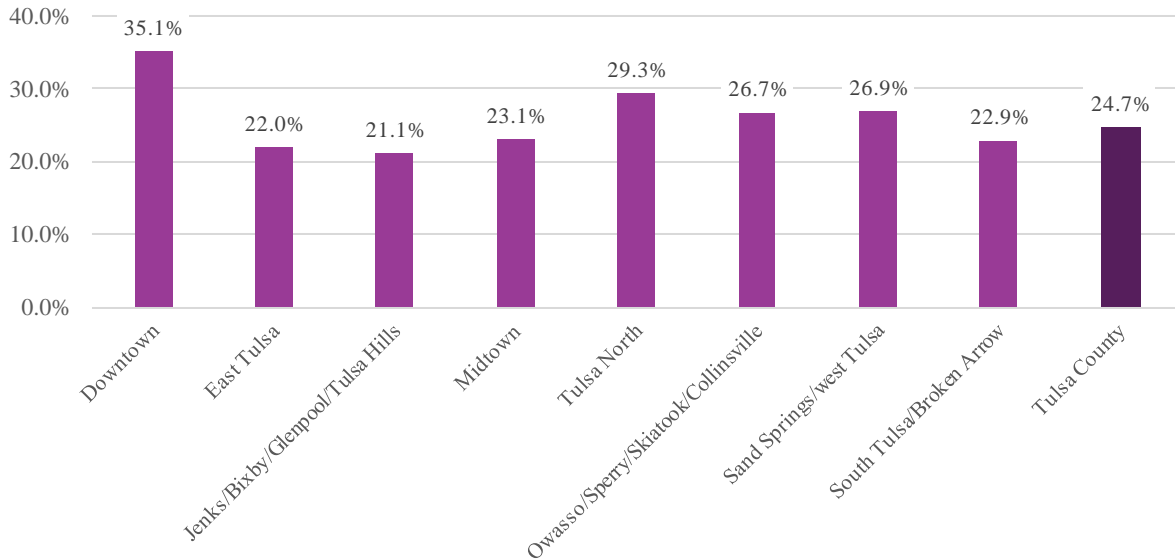
The most commonly reported tobacco product was cigarettes (345 respondents) (Figure 218). Individuals were able to select more than one response.

Figure 218: Tobacco Products, Tulsa County 2015

Tobacco Products
Tulsa County | 2015

*Respondents were able to choose multiple responses (n=574)

Cigarette Smoking

About 16 percent of Tulsa County adults smoked either regularly or occasionally (15.8 percent) (Figure 219).

Figure 219: Cigarette Smoking, Tulsa County 2015
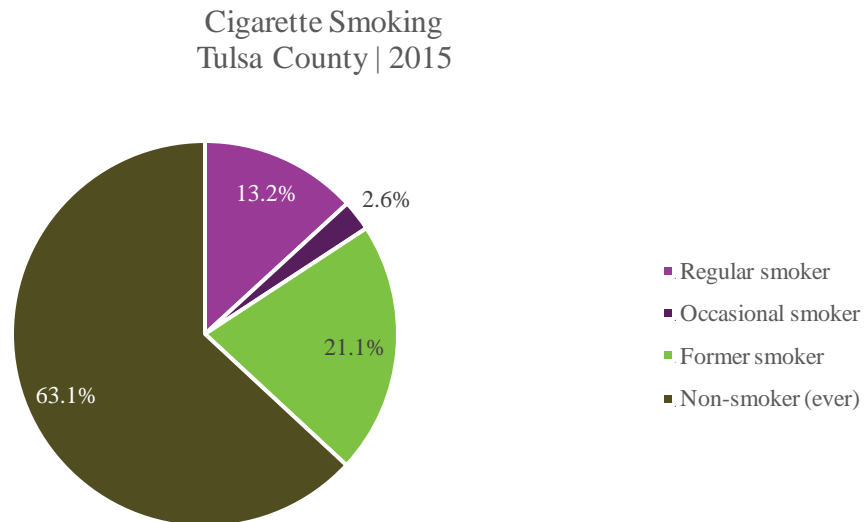
Cigarette Smoking
Tulsa County | 2015

- Regular smoker — 13.2%
- Occasional smoker — 2.6%
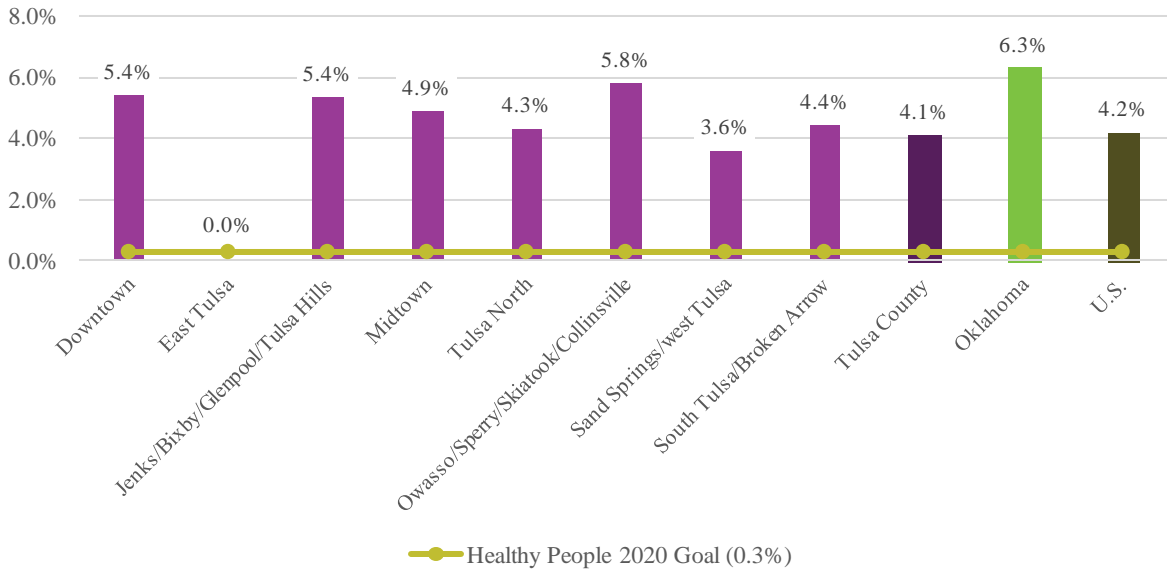- Former smoker — 21.1%
- Non-smoker (ever) — 63.1%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Current smokers (regular or occasional) was lower in Tulsa County than both Oklahoma and the United States (21.1 percent and 19.0 percent, respectively). [121] None of these regions met the Healthy People 2020 goal of 12.0 percent current smokers. [122] [123] Current smokers were most common in downtown and Tulsa North (24.3 percent and 21.5 percent, respectively), and least common in Jenks/Bixby/Glenpool/Tulsa Hills (8.4 percent) (Figure 220).

Figure 220: Current Smokers, Tulsa County 2015

Current Smokers
Tulsa County | 2015

Chart: Current Smokers, Tulsa County 2015

Region	Percentage
Downtown	24.3%
East Tulsa	16.0%
Jenks/Bixby/Glenpool/Tulsa Hills	8.4%
Midtown	14.9%
Tulsa North	21.5%
Owasso/Sperry/Skiatook/Collinsville	16.0%
Sand Springs/west Tulsa	19.0%
South Tulsa/Broken Arrow	13.8%
Tulsa County	15.8%
Oklahoma	21.1%
U.S.	19.0%

Healthy People 2020 Goal (12.0%)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Smoking Cessation

Fifty-five percent of current smokers in Tulsa County tried to quit at least once in the past year. The average number of times they tried to quit was 4.33 times. The average was highest in Jenks/Bixby/Glenpool/Tulsa Hills (6.65 times) and lowest in downtown, east Tulsa, and Owasso/Sperry/Skiatook/Collinsville (3.47 times, 3.30 times and 3.27 times, respectively) (Figure 221).

Figure 221: Average Number of Cessation Attempts, Current Smokers Who Tried to Quit, 2015

Average Number of Cessation Attempts
Current Smokers Who Tried to Quit | Tulsa County | 2015

*Asked of all respondents who reported that they tried to quit smoking at least once in the previous year*
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Those current smokers who tried to quit in the past year were asked what type of products they used to help them. The most common response was 'cold turkey' (108 respondents) (Figure 222). Individuals were able to choose more than one response.

Figure 222: Cessation Products Utilized, Current Smokers Who Tried to Quit, Tulsa County 2015
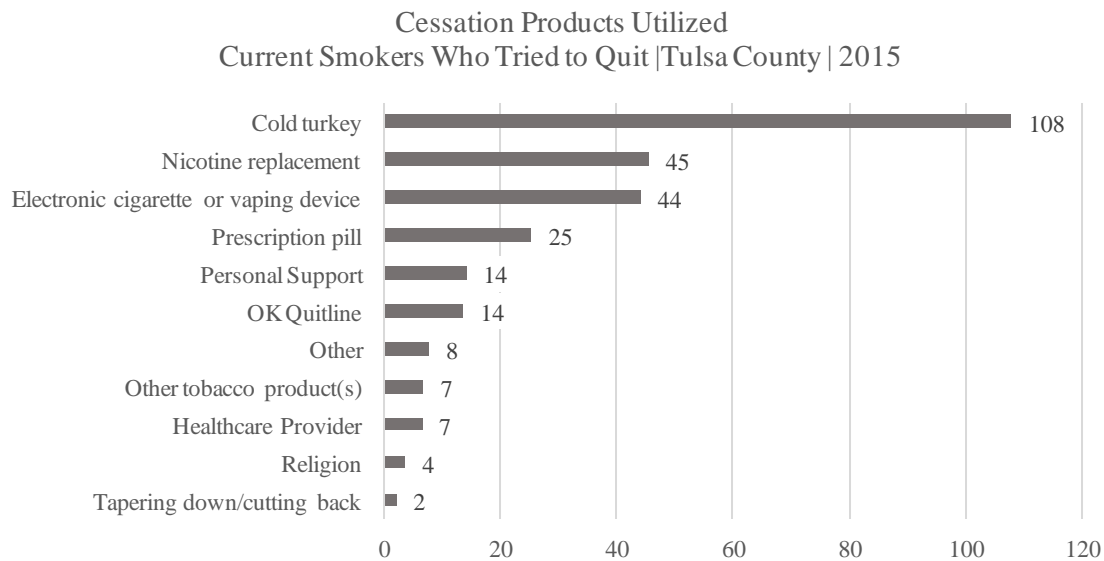
Cessation Products Utilized
Current Smokers Who Tried to Quit | Tulsa County | 2015

Asked of all respondents who reported that they tried to quit smoking at least once in the previous year (n=189)
**Respondents were able to choose multiple responses*

Former smokers were asked when they last smoked a cigarette. Almost half of former smokers quit over ten years ago (47.8 percent) (Figure 223).

Figure 223: Length of Time since Cessation, Former Smokers, Tulsa County 2015

Lenth of Time Since Cessation
Former Smokers | Tulsa County | 2015

Legend:
- Within the past month
- 1 – 3 months
- 4 – 6 months
- 7 months – 1 year
- 1 – 5 years
- 5 – 10 years
- More than 10 years

Values shown: 3.4%, 2.4%, 1.0%, 10.4%, 22.1%, 12.9%, 47.8%

*Asked of all respondents who reported that they were former smokers

The average number of years since quitting in Tulsa County was 15.14 years. This was longest in midtown (17.63 years) and shortest in east Tulsa and Sand Springs/west Tulsa (12.90 years and 12.57 years, respectively) (Figure 224).

Figure 224: Average Length of Time since Cessation, Former Smokers, Tulsa County, 2015

Average Length of Time Since Cessation
Former Smokers | Tulsa County | 2015
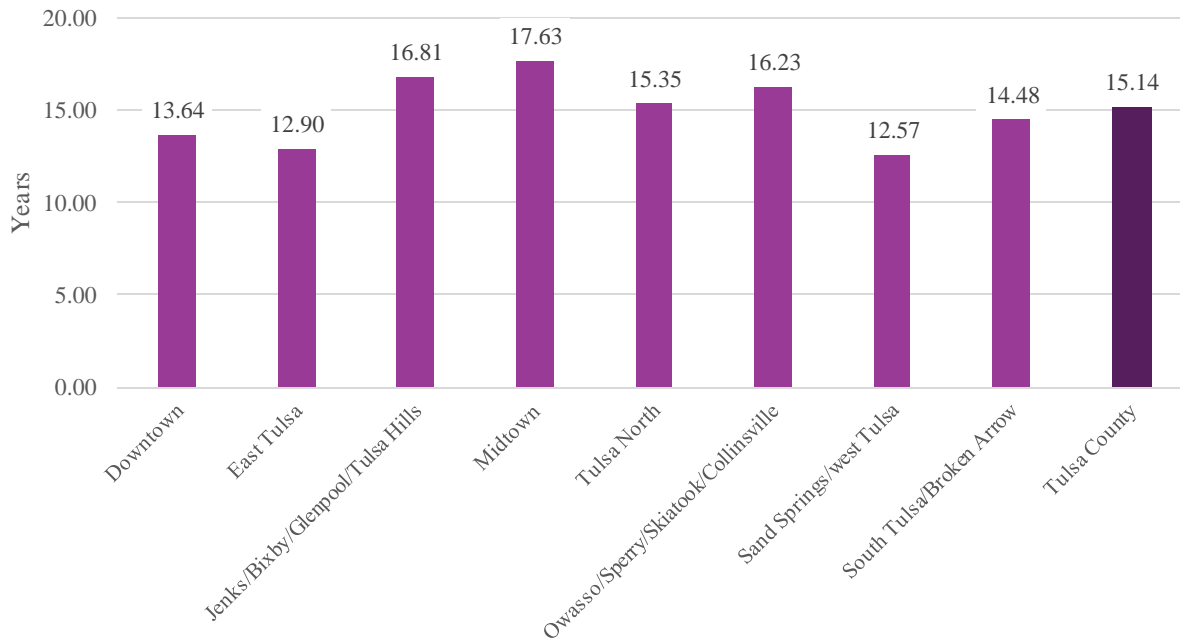
Asked of all respondents who reported that they were former smokers

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf
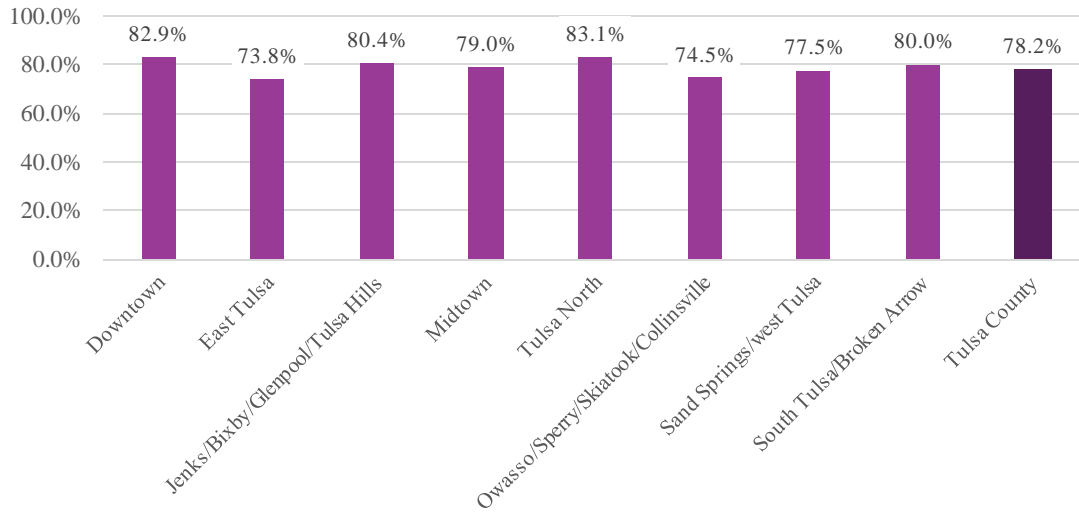
Smokeless Tobacco

A total of 4.1 percent of Tulsa County adults reported that they currently use smokeless tobacco (every day or some days). This was lower than in Oklahoma and very similar to the United States (6.3 percent and 4.2 percent, respectively). [122] [123] None of these regions met the Healthy People 2020 goal of 0.3 percent. [121] Smokeless tobacco use was above five percent in three regions: downtown (5.4 percent), Jenks/Bixby/Glenpool/Tulsa Hills (5.4 percent), and Owasso/Sperry/Skiatook/Collinsville (5.8 percent) (Figure 225). No one reported smokeless tobacco use in east Tulsa.

Figure 225: Current Smokeless Tobacco Use, Tulsa County 2015

Current Smokeless Tobacco Use
Tulsa County | 2015

Current Smokeless Tobacco Use, Tulsa County 2015

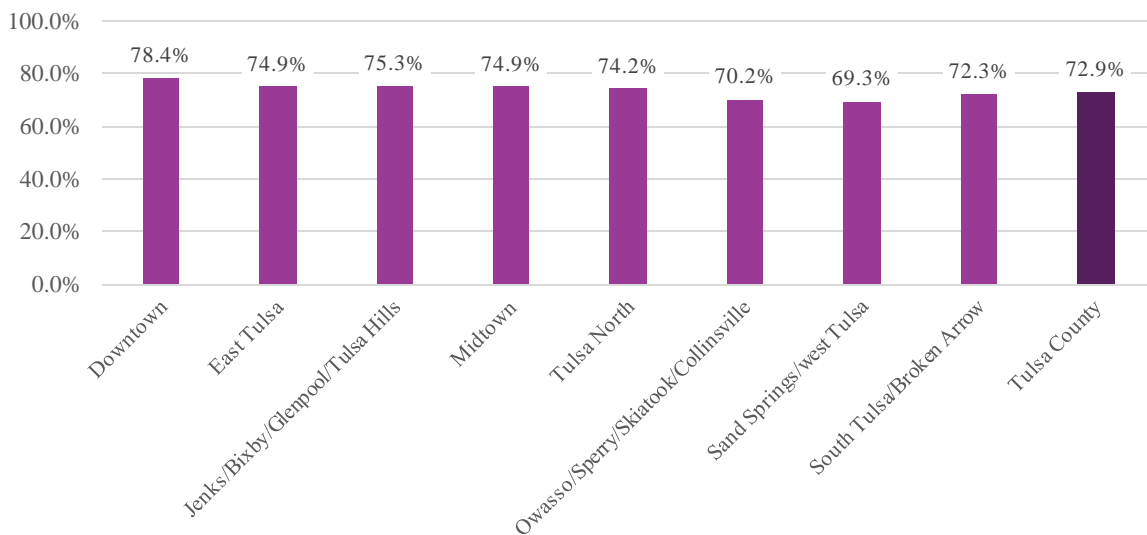| Location	Value
Downtown	5.4%
East Tulsa	0.0%
Jenks/Bixby/Glenpool/Tulsa Hills	5.4%
Midtown	4.9%
Tulsa North	4.3%
Owasso/Sperry/Skiatook/Collinsville	5.8%
Sand Springs/west Tulsa	3.6%
South Tulsa/Broken Arrow	4.4%
Tulsa County	4.1%
Oklahoma	6.3%
U.S.	4.2%

—●— Healthy People 2020 Goal (0.3%)

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Smokeless Tobacco Cessation

Almost one-third of smokeless tobacco users stated that they had tried to quit in the previous year (29 percent). All users in downtown Tulsa reported a cessation attempt. The lowest percentages of reported cessation attempts were in Sand Springs/west Tulsa and south Tulsa/Broken Arrow (16.7 percent and 18.2 percent, respectively) (Figure 226).

Figure 226: Smokeless Tobacco Cessation Attempts in the Last Year, Tulsa County 2015

Smokeless Tobacco Cessation Attempt in the Previous Year
Tulsa County | 2015
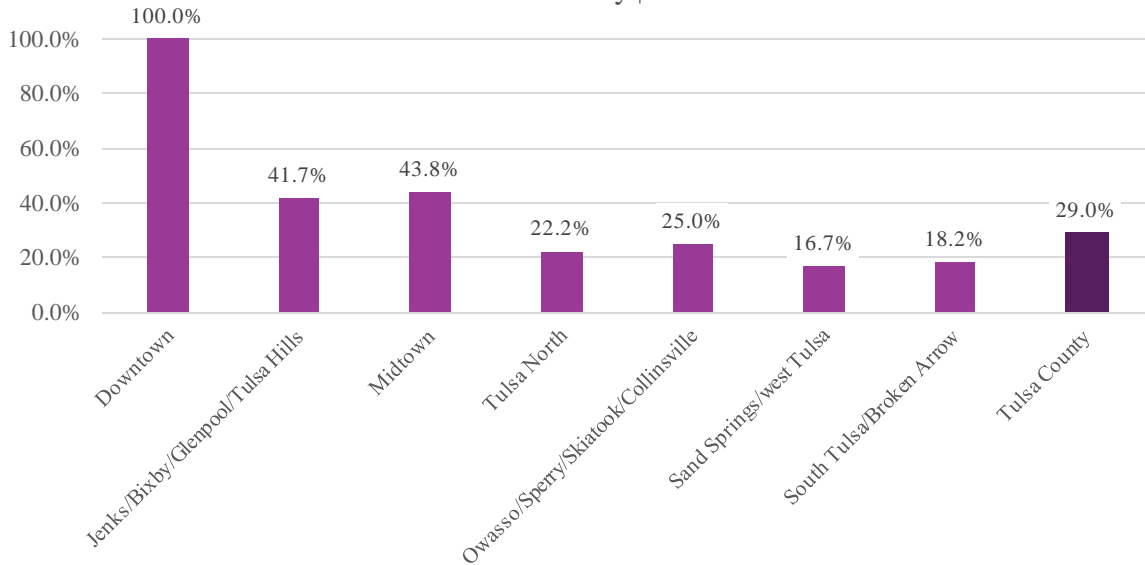
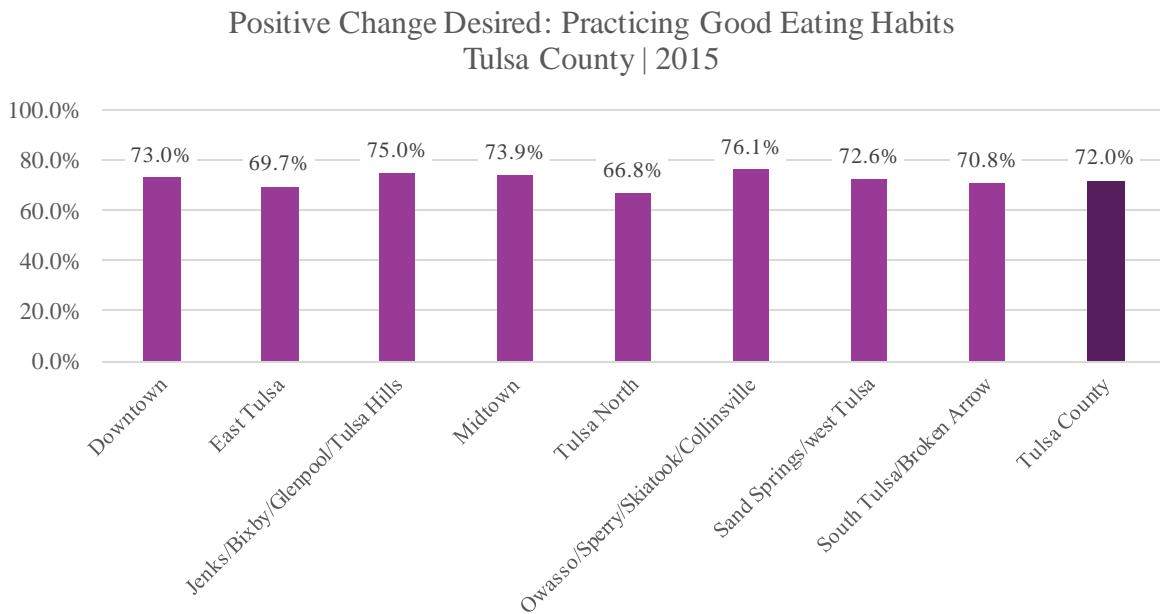*Asked of all respondents who reported that they used smokeless tobacco*
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Secondhand Smoke Exposure

About one-fourth of Tulsa County adults reported that they were regularly or sometimes exposed to secondhand smoke (25.3 percent) (Figure 227).

Figure 227: Secondhand Smoke Exposure, Tulsa County 2015

Secondhand Smoke Exposure
Tulsa County | 2015
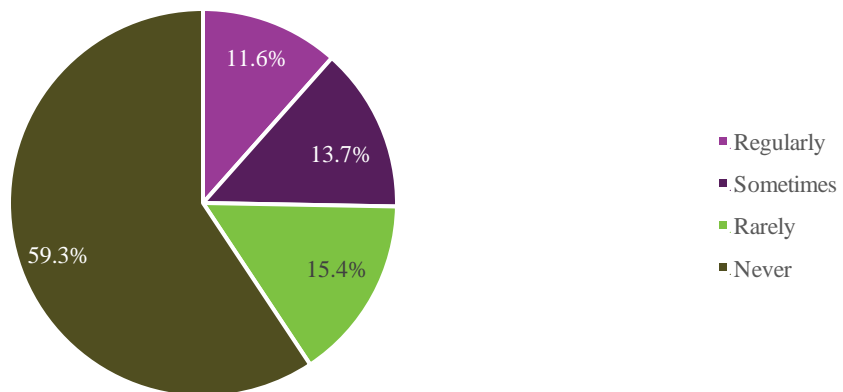
Willingness to Change

Regardless of education, knowledge, or type of intervention, it is difficult to change people's behaviors until they are ready. 'Willingness to Change' questions can help identify groups of individuals who are positively interested in (or absolutely unwilling) to change their behaviors. This can allow for more effective interventions that can be tailored to these specific groups.

Positive Change

Overall, 89.9 percent of Tulsa County residents reported that they would like to engage in a positive change in their health in at least one area. Individuals were asked about seven different areas of health. The area with the highest reported desired positive change was 'having a more fit and healthy lifestyle' (81 percent). The least commonly desired positive change was avoiding tobacco products (28.8 percent) (Figure 228). This question was asked of everyone so there is a possibility that many people may have responded 'no' because they do not currently use tobacco products.

Figure 228: Positive Change Desired, Tulsa County 2015
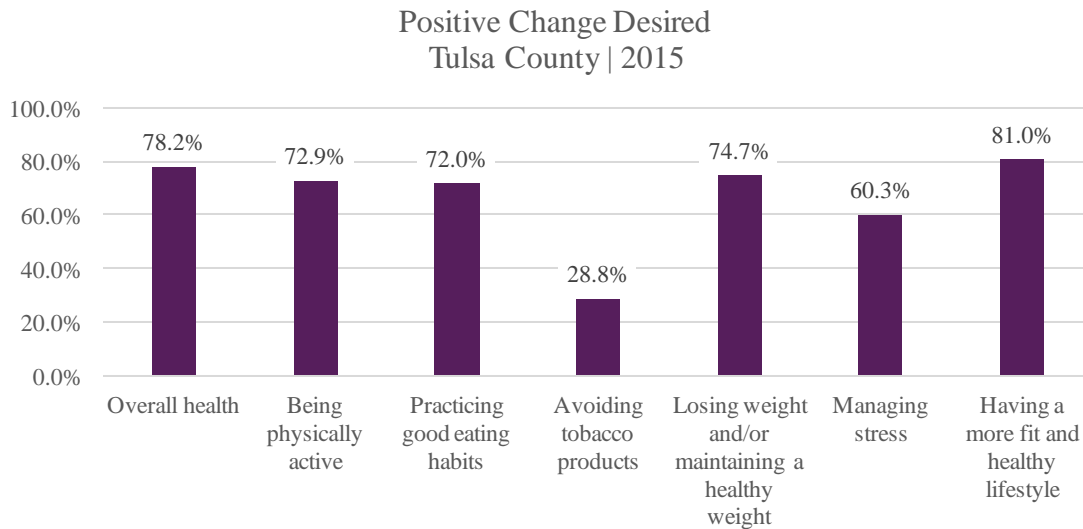
Positive Change Desired
Tulsa County | 2015

Overall Health

The regions with the highest reported desire for positive change regarding their overall health were downtown (82.9 percent) and Tulsa North (83.1 percent). The lowest regions were east Tulsa (73.8 percent) and Owasso/Sperry/Skiatook/Collinsville (74.5 percent) (Figure 229).

Figure 229: Positive Change Desired: Overall Health, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Positive Change Desired: Overall Health
Tulsa County | 2015

Bar chart showing percentages by region: Downtown 82.9%, East Tulsa 73.8%, Jenks/Bixby/Glenpool/Tulsa Hills 80.4%, Midtown 79.0%, Tulsa North 83.1%, Owasso/Sperry/Skiatook/Collinsville 74.5%, Sand Springs/west Tulsa 77.5%, South Tulsa/Broken Arrow 80.0%, Tulsa County 78.2%
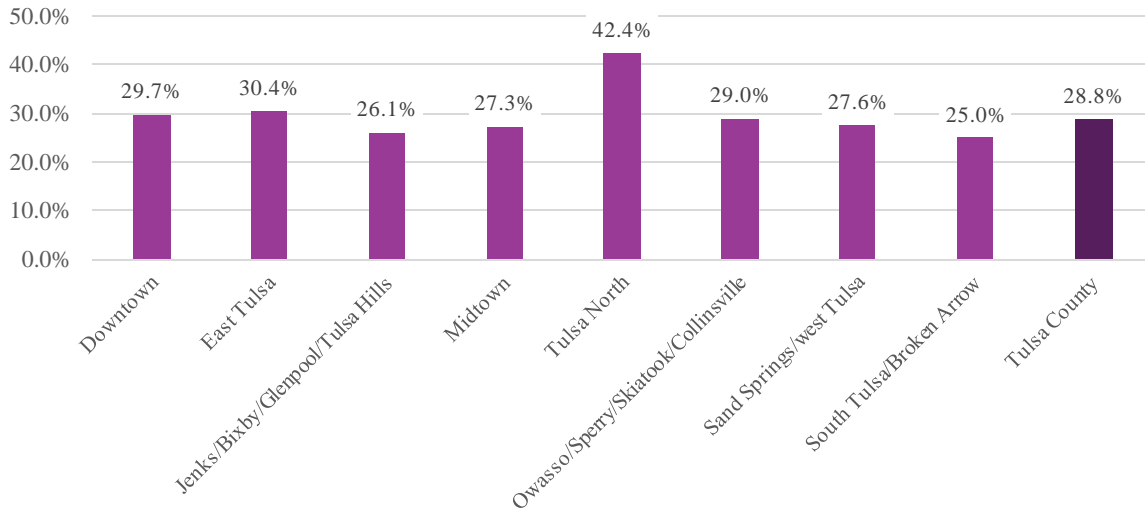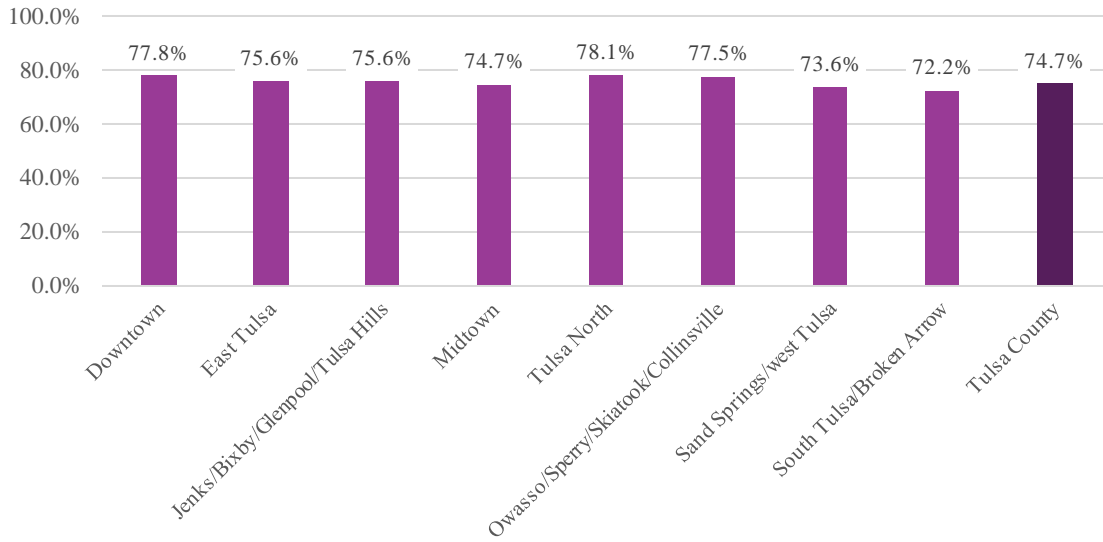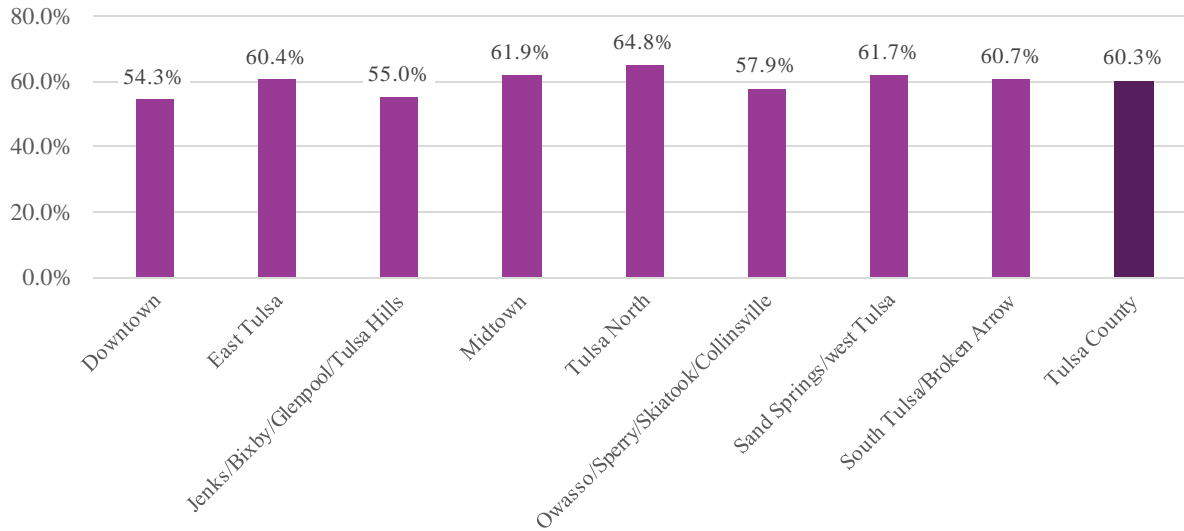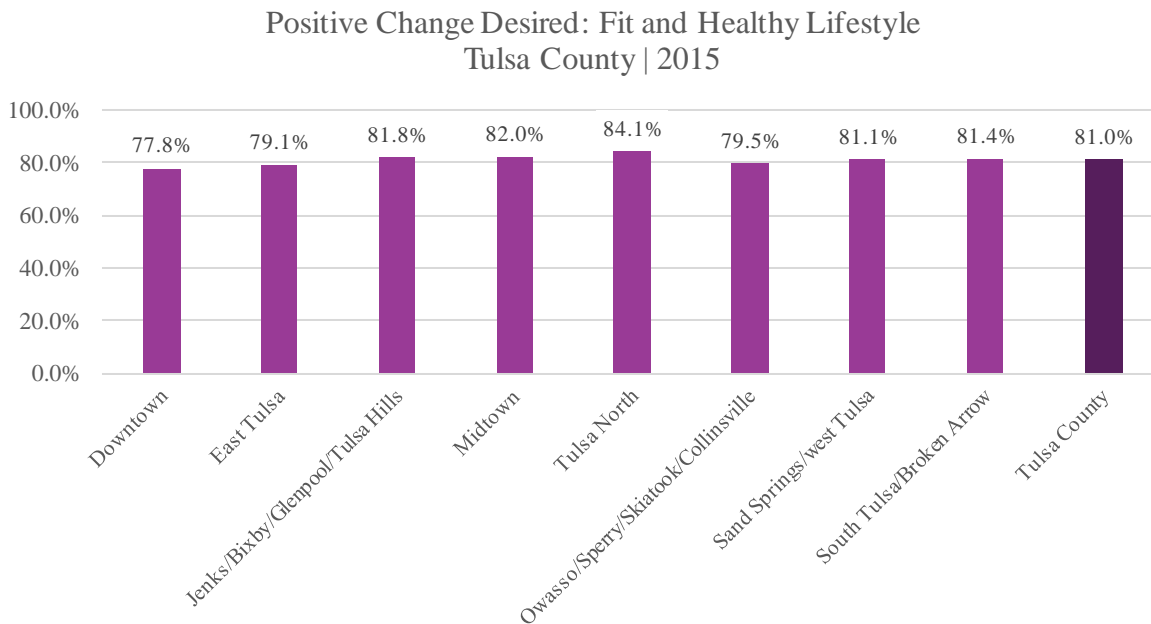
Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Physical Activity

The region with the highest reported desire for positive change regarding being physically active was downtown (78.4 percent). The lowest regions were Owasso/Sperry/Skiatook/Collinsville (70.2 percent) and Sand Springs/west Tulsa (69.3 percent) (Figure 230).

Figure 230: Positive Change Desired: Being Physically Active, Tulsa County 2015

Positive Change Desired: Being Physically Active
Tulsa County | 2015

Bar chart showing percentages by region: Downtown 78.4%, East Tulsa 74.9%, Jenks/Bixby/Glenpool/Tulsa Hills 75.3%, Midtown 74.9%, Tulsa North 74.2%, Owasso/Sperry/Skiatook/Collinsville 70.2%, Sand Springs/west Tulsa 69.3%, South Tulsa/Broken Arrow 72.3%, Tulsa County 72.9%

Good Eating Habits

The region with the highest reported desire for positive change regarding practicing good eating habits was Owasso/Sperry/Skiatook/Collinsville (76.1 percent). The lowest region was Tulsa North (66.8 percent) (Figure 231).

Figure 231: Positive Change Desired: Practicing Good Eating, Tulsa County 2015

Positive Change Desired: Practicing Good Eating Habits
Tulsa County | 2015

Avoiding Tobacco Products

The region with the highest reported desire for positive change regarding avoiding tobacco products was Tulsa North (42.4 percent) (Figure 232). All of the other regions were relatively similar.

Figure 232: Positive Change Desired: Avoiding Tobacco Products, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Positive Change Desired: Avoiding Tobacco Products
Tulsa County | 2015

Downtown	29.7%
East Tulsa	30.4%
Jenks/Bixby/Glenpool/Tulsa Hills	26.1%
Midtown	27.3%
Tulsa North	42.4%
Owasso/Sperry/Skiatook/Collinsville	29.0%
Sand Springs/west Tulsa	27.6%
South Tulsa/Broken Arrow	25.0%
Tulsa County	28.8%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Healthy Weight

The regions with the highest reported desire for positive change regarding losing weight and/or maintain a healthy weight were downtown (77.8 percent), Tulsa North (78.1 percent), and Owasso/Sperry/Skiatook/Collinsville (77.5 percent). The lowest region was south Tulsa/Broken Arrow (72.2 percent) (Figure 233).

Figure 233: Positive Change Desired: Healthy Weight, Tulsa County 2015

Positive Change Desired: Healthy Weight
Tulsa County | 2015

Figure: Bar chart showing Positive Change Desired: Healthy Weight for Tulsa County 2015 by region: Downtown 77.8%, East Tulsa 75.6%, Jenks/Bixby/Glenpool/Tulsa Hills 75.6%, Midtown 74.7%, Tulsa North 78.1%, Owasso/Sperry/Skiatook/Collinsville 77.5%, Sand Springs/west Tulsa 73.6%, South Tulsa/Broken Arrow 72.2%, Tulsa County 74.7%.

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Managing Stress

The region with the highest reported desire for positive change regarding handling stress was Tulsa North (64.8 percent). The lowest regions were downtown (54.3 percent) and Jenks/Bixby/Glenpool/Tulsa Hills (55.0 percent) (Figure 234).

Figure 234: Positive Change Desired: Managing Stress, Tulsa County 2015

Positive Change Desired: Managing Stress
Tulsa County | 2015

Healthy Lifestyle

The region with the highest reported desire for positive change regarding having a more fit and healthy lifestyle was Tulsa North (84.1 percent). The lowest region was downtown (77.8 percent) (Figure 235).

Figure 235: Positive Change Desired: Fit and Healthy Lifestyle, Tulsa County 2015

Positive Change Desired: Fit and Healthy Lifestyle
Tulsa County | 2015

2016 Community Health Needs Assessment, St. John Owasso

HEALTHY COMMUNITIES

Social determinants of health are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect health and quality of life, both positively and negatively. Conditions in these various environments and communities have been referred to as "place." "Place" can refer to material attributes of a community, as well as social engagement and sense of security and well-being that a person feels in their community. The conditions in which we live can help explain why some individuals are healthier than others and why some are not as healthy as they could be. Resources that enhance quality of life, such as safe and affordable housing, public safety, and availability of healthy foods, can have significant impacts on the health outcomes of a population.[121]

Acceptability and Perceptions of a Healthy Community

According to the *Healthy People 2010* report, a healthy community is one that "continuously creates and improves both its physical and social environments, helping people to support one another in aspects of daily life and to develop to their fullest potential."[137] Healthy places are designed and built to improve the quality of life for all people who live, work, worship, learn, and play there by providing healthy, available, accessible, and affordable options.[138]

Community Perceptions

Community health perceptions are used to determine how an individual feels about their community and also to identify areas for improvement and concern. Unsafe communities can cause anxiety, depression, and stress, and are also linked to higher rates of pre-term births and low birth weight babies. Fear of violence can also keep people indoors and away from neighbors, exercise, and healthy foods.[139] Safe neighborhoods can promote healthy behaviors and strong social support, which is linked to improved health outcomes.[140]

Community Health Status

A total of 15.6 percent of Tulsa County adults reported that their community had 'excellent' or 'very good' health. An additional 48.3 percent rated the health of their community as 'good' (Figure 236).

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[137] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2000). *Healthy People 2010. Part 7: Educational and community based programs*. Retrieved from: http://healthypeople.gov/2020/topicsobjectives2020/ DataDetails.aspx?topicId=11.

[138] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (2015). *About Healthy Places*. Retrieved from: http://www.cdc.gov/healthyplaces/about.htm.

[139] University of Wisconsin Population Health Institute, County Health Rankings & Roadmaps (2015). *Community Safety*. Retrieved from: http://www.countyhealthrankings.org/our-approach/health-factors/community-safety.

[140] University of Wisconsin Population Health Institute, County Health Rankings & Roadmaps (2015). *Family and Societal Support*. Retrieved from: http://www.countyhealthrankings.org/our-approach/health-factors/family-and-social-support.
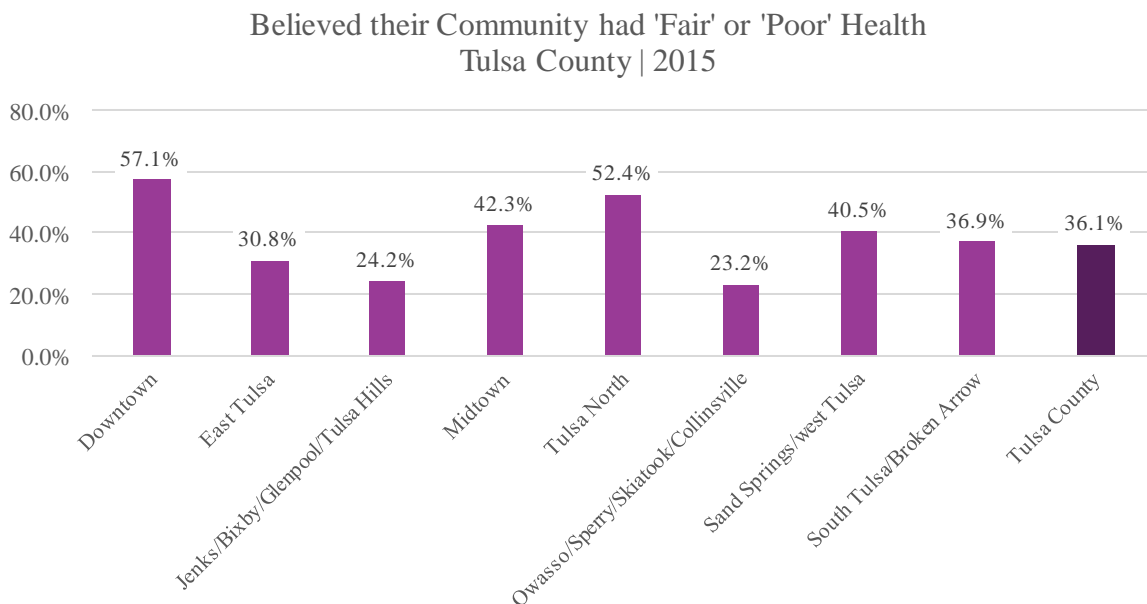
Figure 236: Community Health Status, Tulsa County 2015
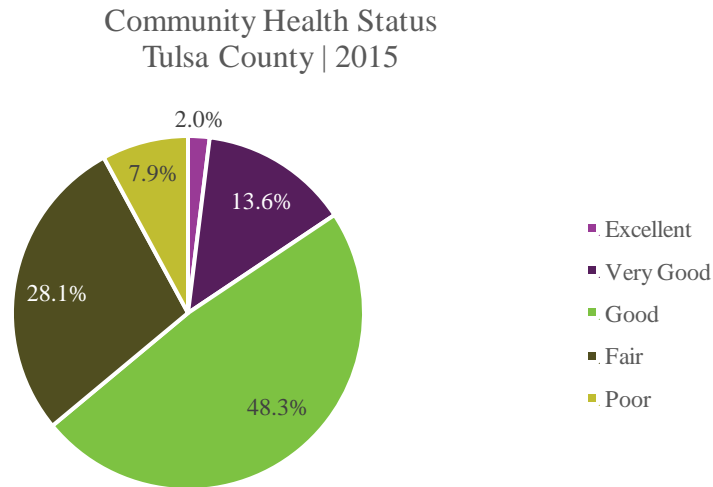
Community Health Status
Tulsa County | 2015

Legend:
- Excellent
- Very Good
- Good
- Fair
- Poor

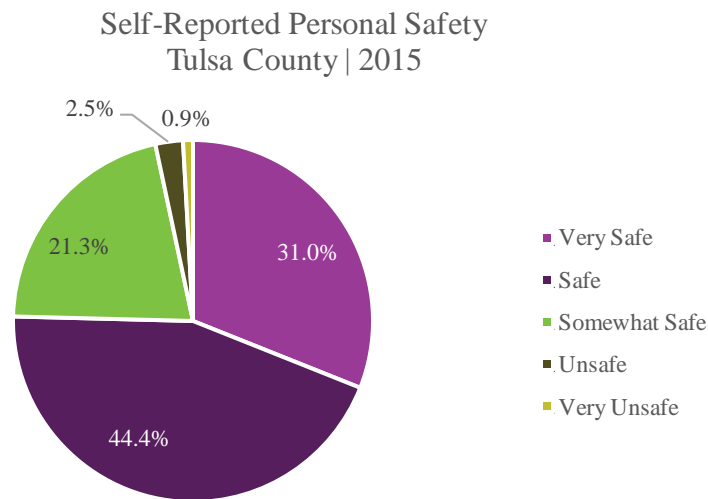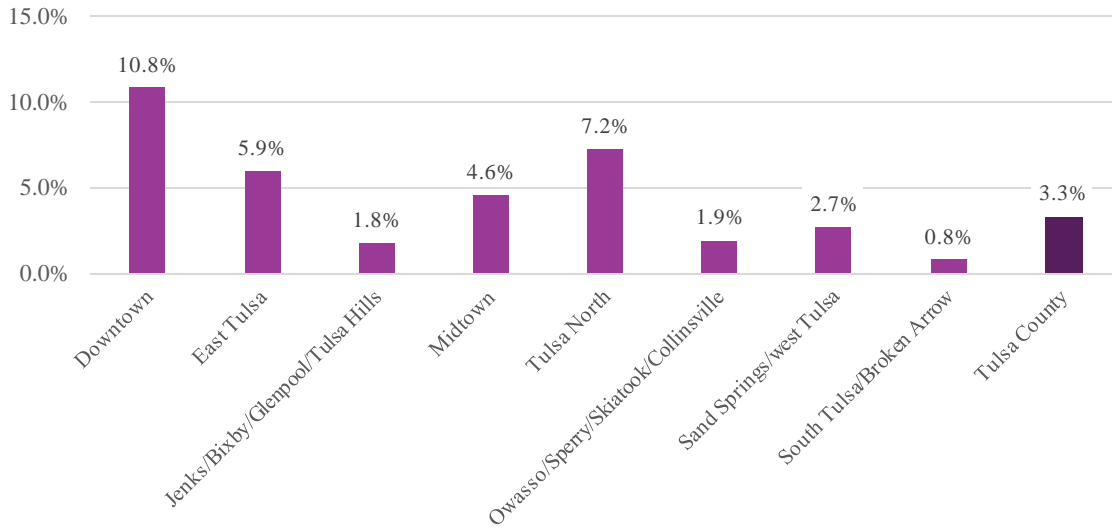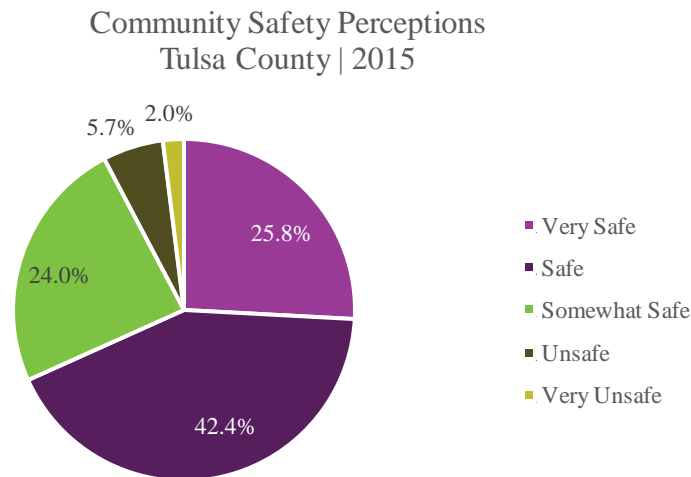Pie chart values: 2.0%, 13.6%, 48.3%, 28.1%, 7.9%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

However, 36.1 percent of Tulsa County adults believed that their community had 'fair' or 'poor' overall health. This was highest in downtown and Tulsa North (57.1 percent and 52.4 percent, respectively). This was lowest in Jenks/Bixby/Glenpool/Tulsa Hills and Owasso/Sperry/Skiatook/Collinsville (24.2 percent and 23.2 percent, respectively) (Figure 237).

Figure 237: Believed their Community had 'Fair' or 'Poor' Health, Tulsa County 2015

Believed their Community had 'Fair' or 'Poor' Health
Tulsa County | 2015

Bar chart values:
- Downtown: 57.1%
- East Tulsa: 30.8%
- Jenks/Bixby/Glenpool/Tulsa Hills: 24.2%
- Midtown: 42.3%
- Tulsa North: 52.4%
- Owasso/Sperry/Skiatook/Collinsville: 23.2%
- Sand Springs/west Tulsa: 40.5%
- South Tulsa/Broken Arrow: 36.9%
- Tulsa County: 36.1%

Personal Safety within Community

About three-fourths of Tulsa County adults reported that they felt 'very safe' or 'safe' in their community. An additional 21.3 percent reported that they felt 'somewhat safe' (Figure 238).
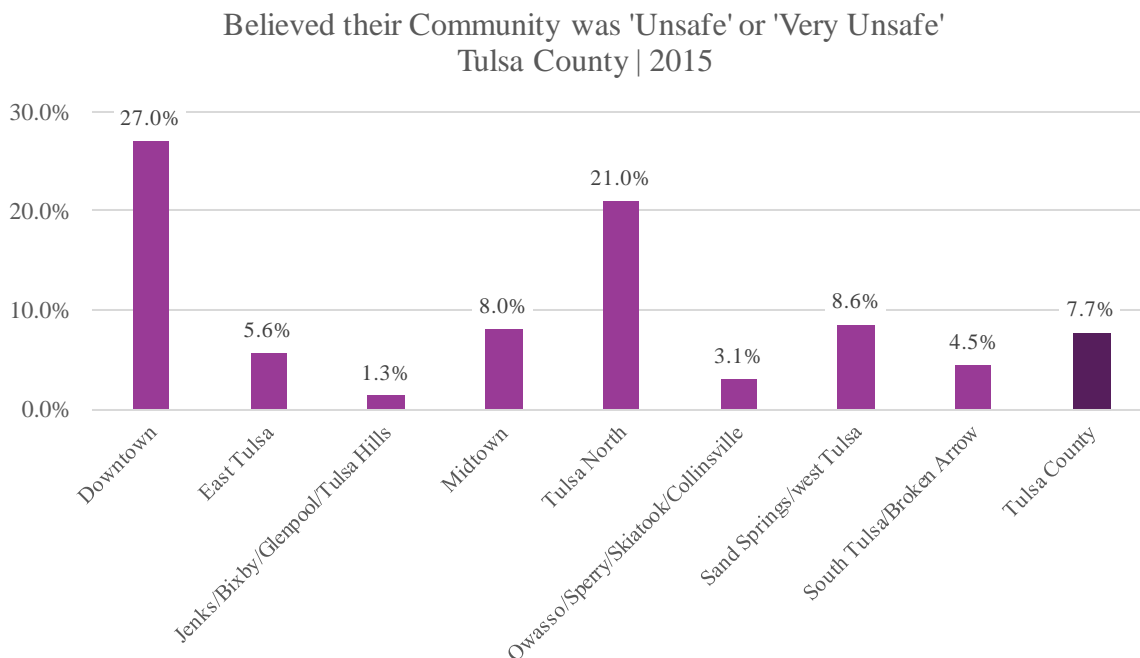
Figure 238: Self-Reported Personal Safety, Tulsa County 2015
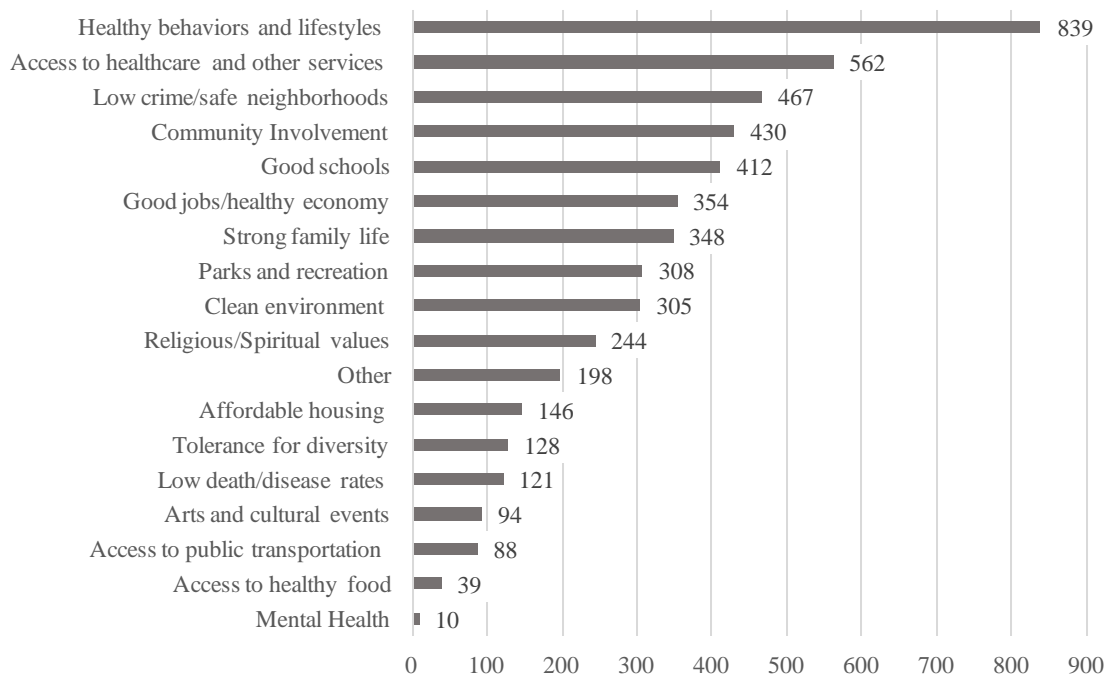

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Moreover, 3.3 percent of Tulsa County adults reported that they felt 'unsafe' or 'very unsafe' in their community. This was highest in downtown (10.8 percent) and lowest in south Tulsa/Broken Arrow (0.8 percent) (Figure 239).

Figure 239: Felt 'Unsafe' or 'Very Unsafe' in their Community, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Felt 'Unsafe' or 'Very Unsafe' in their Community
Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Community Safety

About two-thirds of Tulsa County adults believed their community was 'very safe' or 'safe.' An additional 24 percent believed that it was 'somewhat safe' (Figure 240). It is interesting to note that respondents felt that their personal safety was higher than the safety of their community.

Figure 240: Community Safety Perceptions, Tulsa County 2015
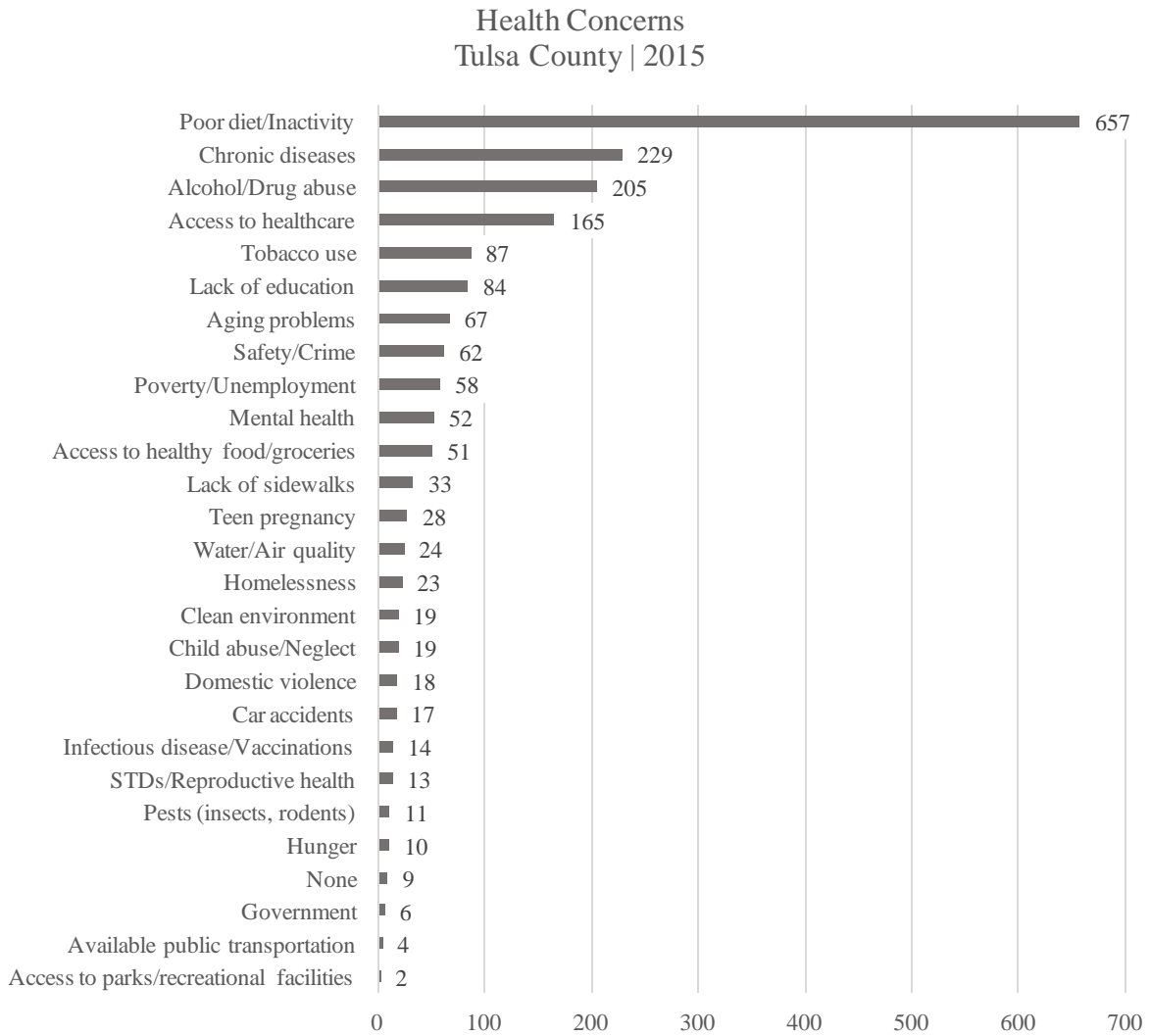

Community Safety Perceptions
Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

However, 7.7 percent of Tulsa County adults believed that their community was 'unsafe' or 'very unsafe.' This was highest in downtown and Tulsa North (27 percent and 21 percent, respectively). This perception was lowest in Jenks/Bixby/Glenpool/Tulsa Hills (1.3 percent) (Figure 241).

Figure 241: Believed their Community was 'Unsafe' or 'Very Unsafe', Tulsa County 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Community Concerns

CHNA survey respondents were asked about what they perceive as community concerns. The top five community concerns were healthy behaviors and lifestyles (839 respondents), access to health care and other services (562 respondents), low crime/safe neighborhood (467 respondents), community involvement (430 respondents), and good schools (412 respondents) (Figure 242). Although not included in this graph, 138 individuals responded with 'don't know/not sure/refused.' Individuals were able to choose multiple responses.

Figure 242: Community Concerns, Tulsa County 2015

Community Concerns
Tulsa County | 2015

Concern	Value
Healthy behaviors and lifestyles	839
Access to healthcare and other services	562
Low crime/safe neighborhoods	467
Community Involvement	430
Good schools	412
Good jobs/healthy economy	354
Strong family life	348
Parks and recreation	308
Clean environment	305
Religious/Spiritual values	244
Other	198
Affordable housing	146
Tolerance for diversity	128
Low death/disease rates	121
Arts and cultural events	94
Access to public transportation	88
Access to healthy food	39
Mental Health	10

Respondents were able to choose multiple responses

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Health Concerns

The following graph shows reported health concerns in Tulsa County, based on CHNA respondents. Individuals were able to select more than one response. **Concern regarding poor diet/inactivity was more than three times higher than the next highest health concern** (657 respondents) (Figure 243). Nine individuals responded that they had no health concerns, and there were 60 'other' responses. Although not shown in the graph below, 297 individuals refused to provide a health concern. The top ten concerns were:

1. Poor diet/Inactivity
2. Chronic diseases
3. Alcohol/Drug abuse
4. Access to healthcare
5. Tobacco use
6. Lack of education
7. Aging problems
8. Safety/Crime
9. Poverty/Unemployment
10. Mental health

Figure 243: Health Concerns, Tulsa County, 2015

Health Concerns
Tulsa County | 2015

Health Concern	Value
Poor diet/Inactivity	657
Chronic diseases	229
Alcohol/Drug abuse	205
Access to healthcare	165
Tobacco use	87
Lack of education	84
Aging problems	67
Safety/Crime	62
Poverty/Unemployment	58
Mental health	52
Access to healthy food/groceries	51
Lack of sidewalks	33
Teen pregnancy	28
Water/Air quality	24
Homelessness	23
Clean environment	19
Child abuse/Neglect	19
Domestic violence	18
Car accidents	17
Infectious disease/Vaccinations	14
STDs/Reproductive health	13
Pests (insects, rodents)	11
Hunger	10
None	9
Government	6
Available public transportation	4
Access to parks/recreational facilities	2

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

The following lists show the top five health concerns by CHNA region, along with the number of individuals reporting them as a problem:

Downtown
- Poor diet/Inactivity (8 individuals)
- Alcohol/Drug abuse (5 individuals)
- Chronic diseases (5 individuals)
- Access to healthcare (3 individuals)
- Safety/Crime (3 individuals)

Tulsa North
- Poor diet/Inactivity (34 individuals)
- Alcohol/Drug abuse (21 individuals)
- Chronic diseases (18 individuals)
- Access to healthcare (16 individuals)
- Safety/Crime (16 individuals)

East Tulsa
- Poor diet/Inactivity (86 individuals)
- Alcohol/Drug abuse (25 individuals)
- Access to healthcare (21 individuals)
- Chronic diseases (15 individuals)
- Lack of education (15 individuals)

Owasso/Sperry/Collinsville/Skiatook
- Poor diet/Inactivity (81 individuals)
- Chronic diseases (25 individuals)
- Alcohol/Drug abuse (23 individuals)
- Access to healthcare (21 individuals)
- Tobacco use (10 individuals)

Jenks/Bixby/Glenpool/Tulsa Hills
- Poor diet/Inactivity (72 individuals)
- Chronic diseases (20 individuals)
- Alcohol/Drug abuse (18 individuals)
- Lack of education (10 individuals)
- Access to healthcare (9 individuals)

Sand Springs/West Tulsa
- Poor diet/Inactivity (92 individuals)
- Alcohol/Drug abuse (40 individuals)
- Chronic diseases (36 individuals)
- Access to healthcare (30 individuals)
- Aging problems (14 individuals)

Midtown
- Poor diet/Inactivity (88 individuals)
- Chronic diseases (38 individuals)
- Alcohol/Drug abuse (35 individuals)
- Access to healthcare (20 individuals)
- Lack of education (12 individuals)
- Mental health (12 individuals)

South Tulsa/Broken Arrow
- Poor diet/Inactivity (179 individuals)
- Chronic diseases (59 individuals)
- Access to healthcare (34 individuals)
- Alcohol/Drug abuse (32 individuals)
- Tobacco use (29 individuals)

Safety Concerns

The following graph shows reported safety concerns in Tulsa County, based on CHNA respondents. Individuals were able to select more than one response. Thirty-four individuals responded that they had no safety concerns, and there were 79 'other' responses. Although not shown in the graph below, 420 individuals refused to provide a safety concern (Figure 244). The top ten concerns are listed below:

- Unsafe driving
- Alcohol and drug abuse
- Violence/Crime
- Gang violence
- Access to firearms
- Drug production/distribution
- Poor infrastructure
- None
- Need more police officers/emergency responders
- Racism/Intolerance

Figure 244: Safety Concerns: Tulsa County 2015
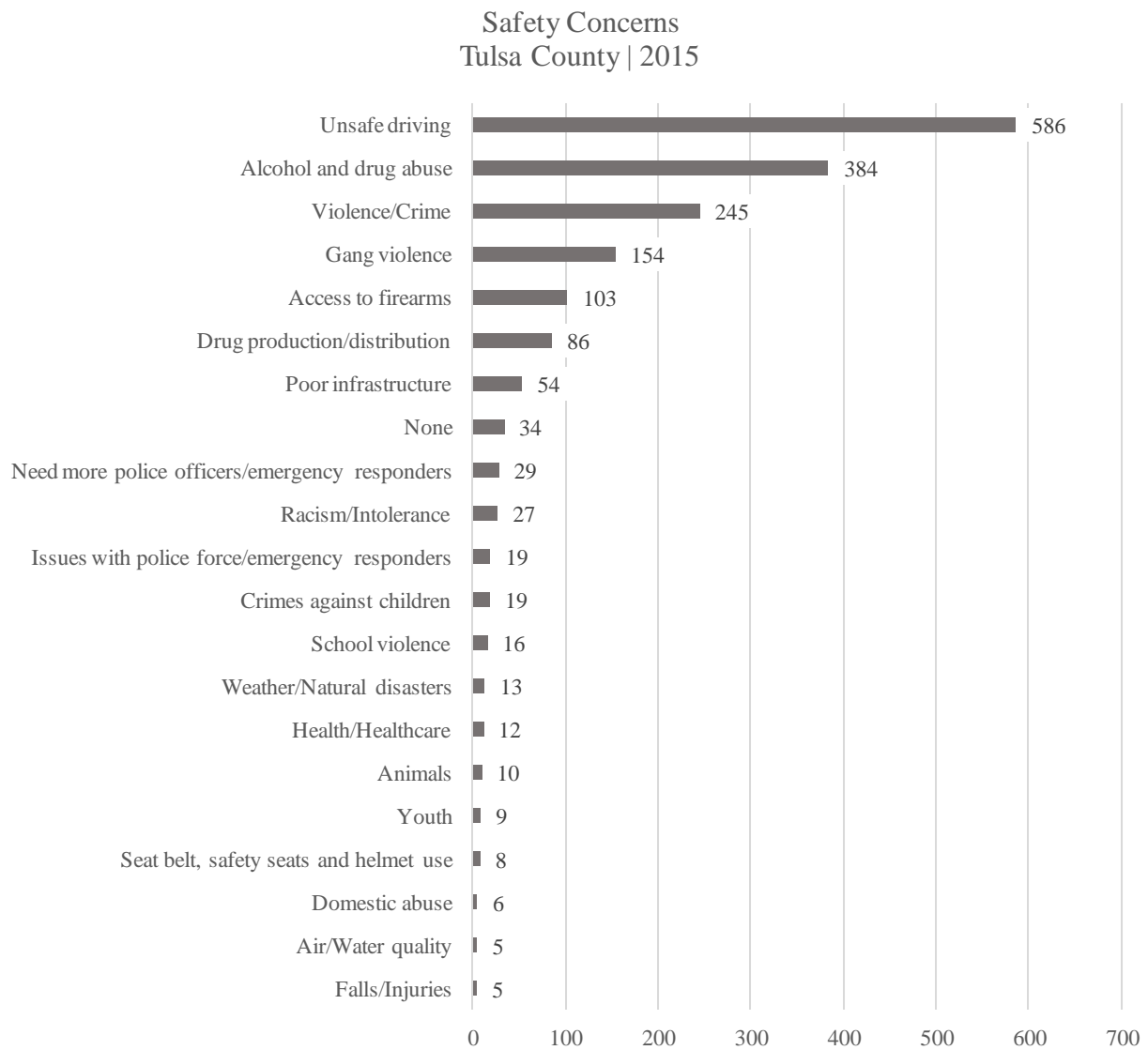
Safety Concerns
Tulsa County | 2015

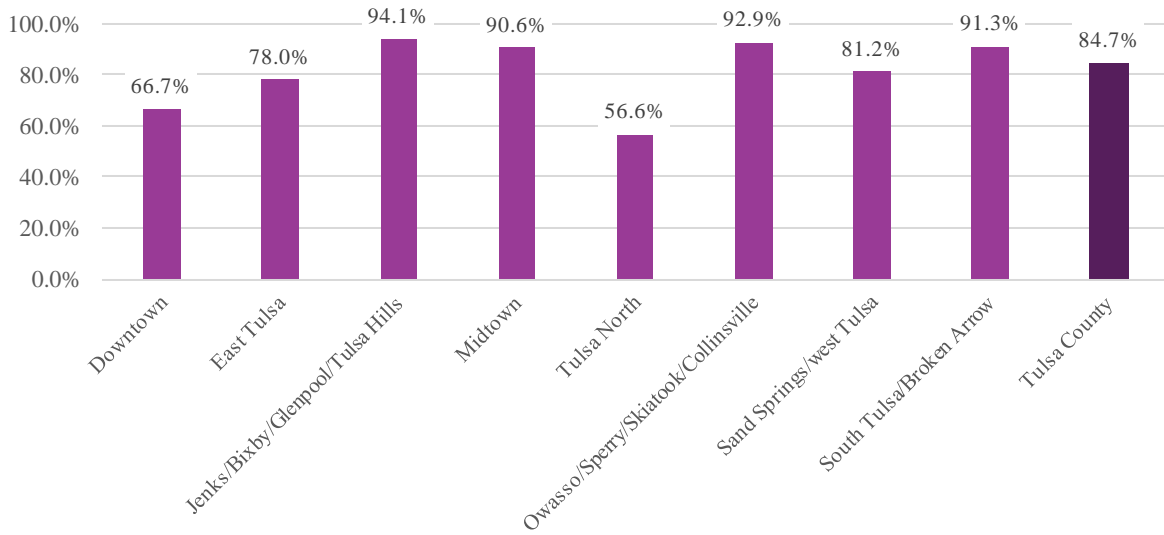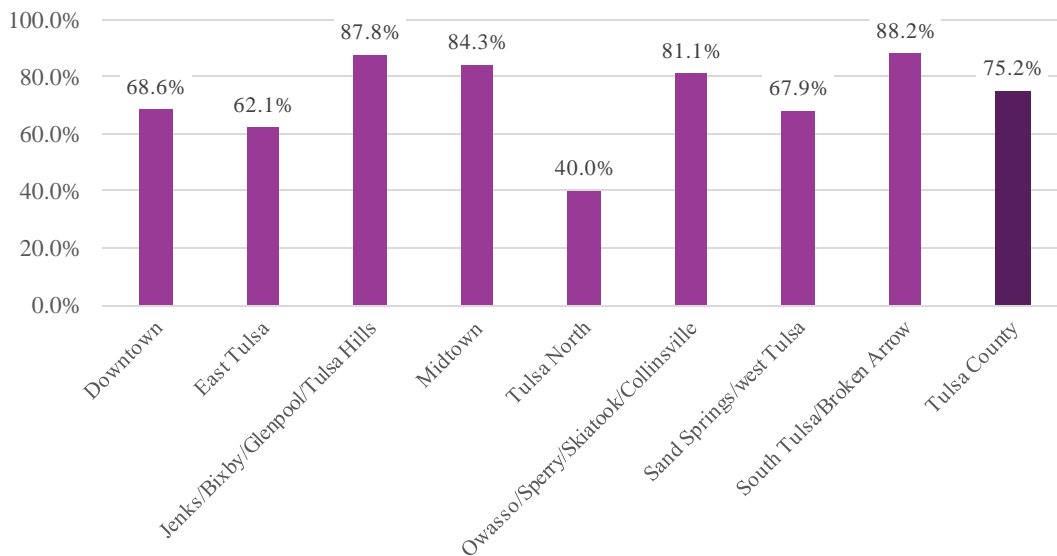| Category	Value
Unsafe driving	586
Alcohol and drug abuse	384
Violence/Crime	245
Gang violence	154
Access to firearms	103
Drug production/distribution	86
Poor infrastructure	54
None	34
Need more police officers/emergency responders	29
Racism/Intolerance	27
Issues with police force/emergency responders	19
Crimes against children	19
School violence	16
Weather/Natural disasters	13
Health/Healthcare	12
Animals	10
Youth	9
Seat belt, safety seats and helmet use	8
Domestic abuse	6
Air/Water quality	5
Falls/Injuries	5

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

The following lists show the top five safety concerns by CHNA region:

Downtown
- Unsafe driving (8 individuals)
- Alcohol and drug abuse (7 individuals)
- Violence/Crime (6 individuals)
- Access to firearms (4 individuals)
- Drug production/distribution (2 individuals)
- Gang violence (2 individuals)
- Racism/Intolerance (2 individuals)
- Need more police officers/emergency responders (2 individuals)

East Tulsa
- Unsafe driving (73 individuals)
- Alcohol and drug abuse (66 individuals)
- Violence/Crime (34 individuals)
- Gang violence (26 individuals)
- Access to firearms (11 individuals)

Jenks/Bixby/Glenpool/Tulsa Hills
- Unsafe driving (76 individuals)
- Alcohol and drug abuse (29 individuals)
- Violence/Crime (24 individuals)
- Poor infrastructure (8 individuals)
- None (8 individuals)

Midtown
- Unsafe driving (78 individuals)
- Alcohol and drug abuse (60 individuals)
- Violence/Crime (44 individuals)
- Access to firearms (27 individuals)
- Gang violence (25 individuals)

Tulsa North
- Alcohol and drug abuse (35 individuals)
- Gang violence (35 individuals)
- Unsafe driving (31 individuals)
- Violence/Crime (19 individuals)
- Access to firearms (17 individuals)

Owasso/Sperry/Collinsville/Skiatook
- Unsafe driving (65 individuals)
- Alcohol and drug abuse (44 individuals)
- Violence/Crime (30 individuals)
- Gang violence (11 individuals)
- Poor infrastructure (11 individuals)

Sand Springs/West Tulsa
- Unsafe driving (74 individuals)
- Alcohol and drug abuse (60 individuals)
- Violence/Crime (29 individuals)
- Gang violence (23 individuals)
- Drug production/distribution (18 individuals)

South Tulsa/Broken Arrow
- Unsafe driving (167 individuals)
- Alcohol and drug abuse (70 individuals)
- Violence/Crime (64 individuals)
- Access to firearms (23 individuals)
- Drug production/distribution (18 individuals)

Acceptability and Accessibility

Increasing opportunities for exercise and access to healthy foods in neighborhoods, schools, and workplaces can help children and adults eat healthy meals and reach recommended daily physical activity

levels.[141]

Additionally, adopting and implementing tobacco control policies can motivate users to quit, encourage youth to not start, and improve air quality.[142]

Fruits and Vegetables

About eighty-five percent of Tulsa County adults reported that fresh fruits and vegetables were easy to access in their neighborhood. Over 90 percent of respondents agreed with this in Jenks/Bixby/Glenpool/Tulsa Hills, Owasso/Sperry/Skiatook/Collinsville, and south Tulsa/Broken Arrow. In contrast, only 54.6 percent of respondents reported this in Tulsa North (Figure 245).

Figure 245: Fresh Fruits and Vegetables were Accessible, Tulsa County 2015
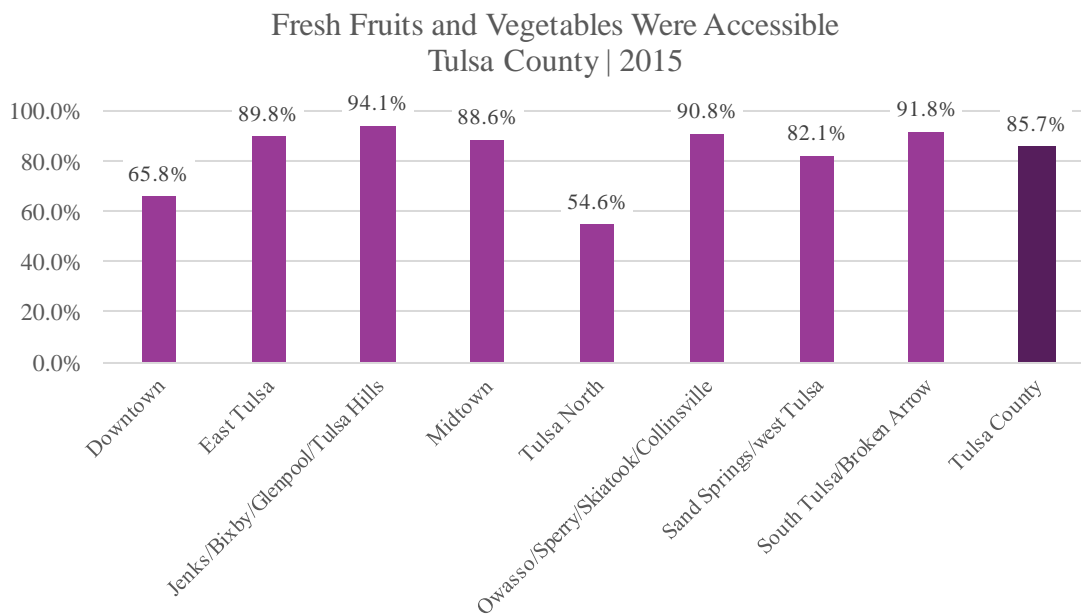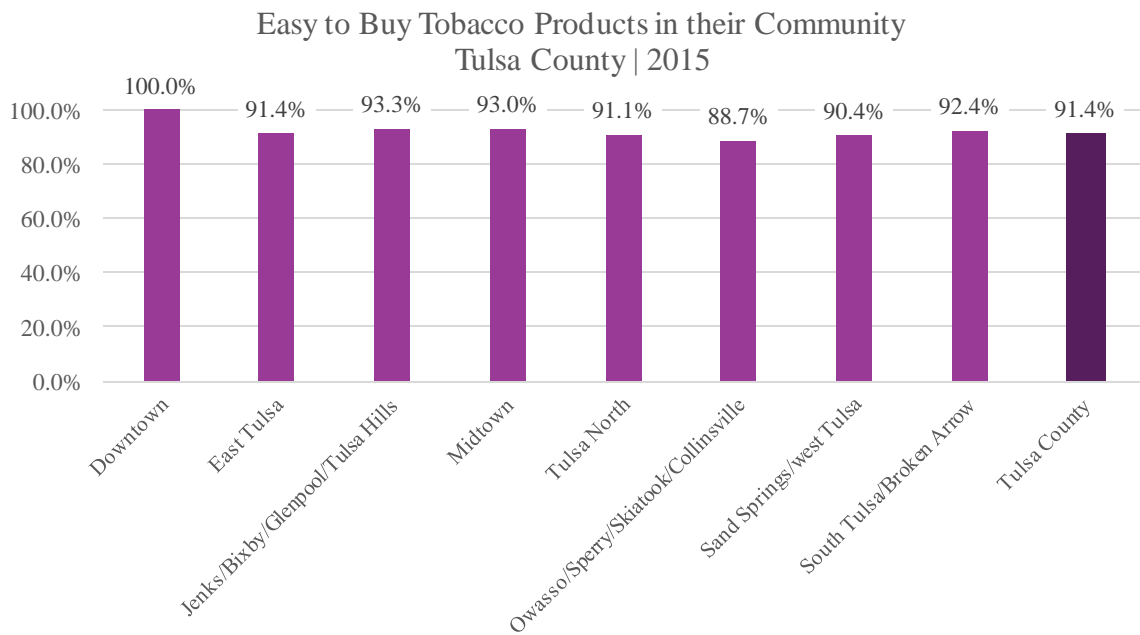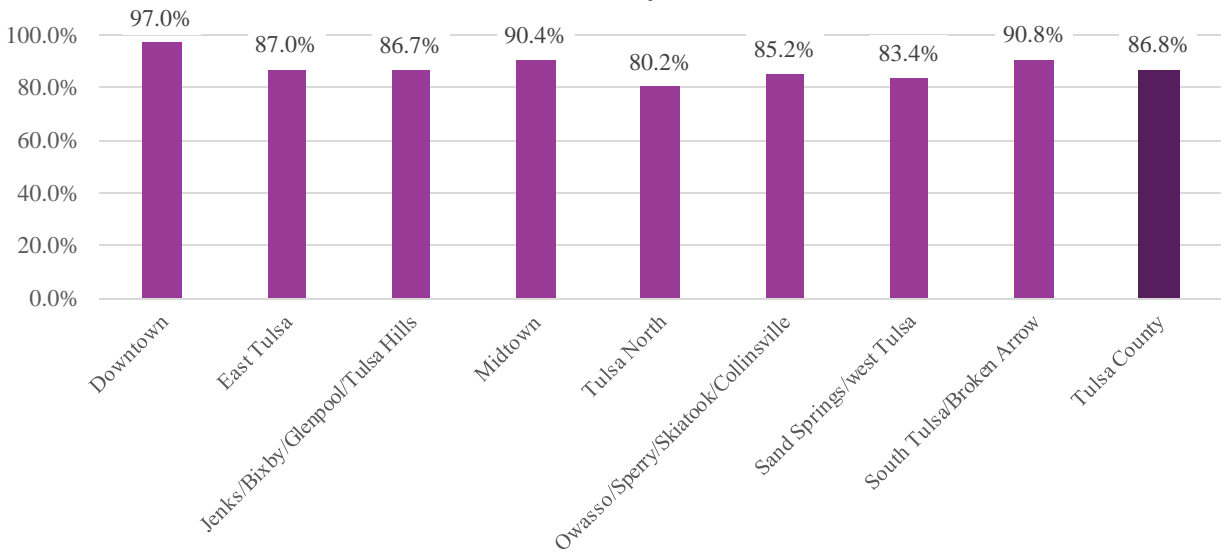

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

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[141] University of Wisconsin Population Health Institute, County Health Rankings & Roadmaps. (2015). *Diet & Exercise*. Retrieved from: http://www.countyhealthrankings.org/our-approach/health-factors/diet-and-exercise.
[142] University of Wisconsin Population Health Institute, County Health Rankings & Roadmaps. (2015). *Tobacco Use*. Retrieved from: http://www.countyhealthrankings.org/our-approach/health-factors/tobacco-use.

Almost three-fourths of Tulsa County adults reported that fresh fruits and vegetables were affordable in their neighborhood. Over 80 percent of respondents stated this in Jenks/Bixby/Glenpool/Tulsa Hills and south Tulsa/Broken Arrow. In contrast, only 52.6 percent of respondents reported this in Tulsa North (Figure 246).

Figure 246: Fresh Fruits and Vegetables were Affordable, Tulsa County 2015
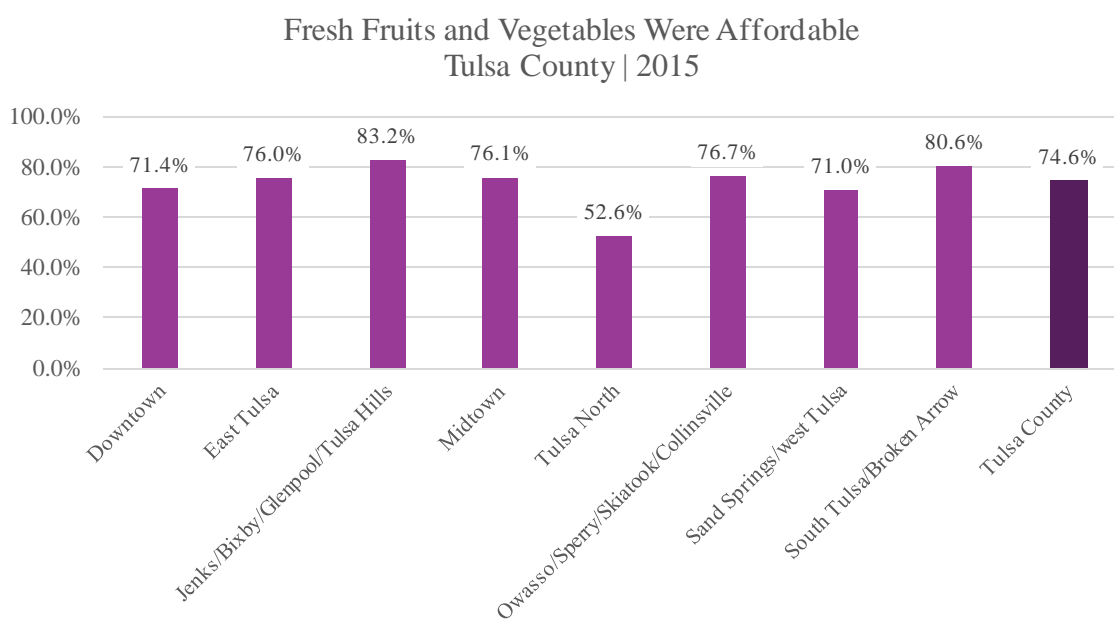
Fresh Fruits and Vegetables Were Affordable
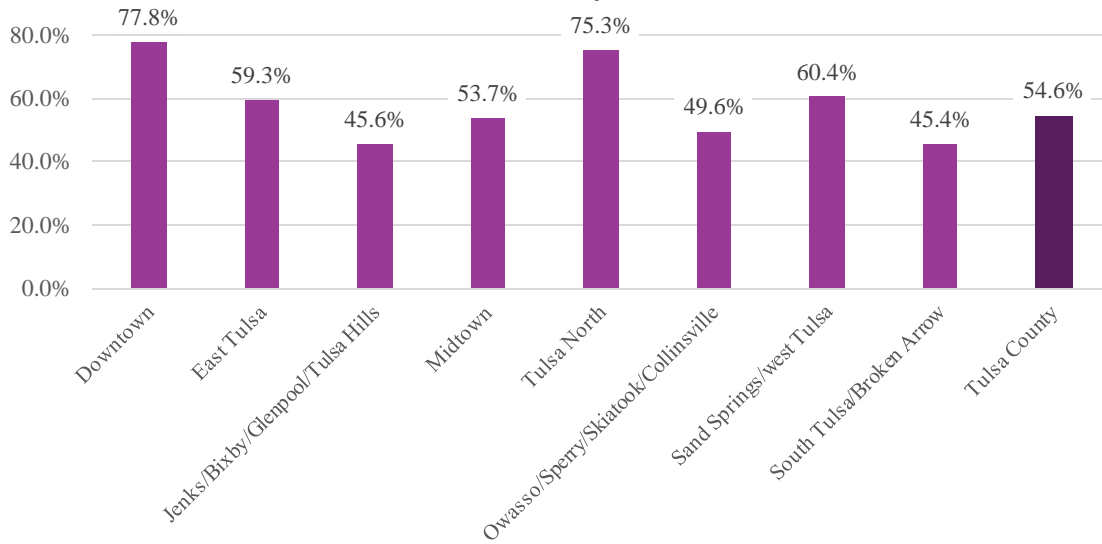Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Physical Activity

Overall, a total of 84.7 percent of Tulsa County adults reported that it was easy to find a safe place to exercise in their neighborhood or community. Over ninety percent of respondents reported this in four regions: Jenks/Bixby/Glenpool/Tulsa Hills (94.1 percent), midtown (90.6 percent), Owasso/Sperry/Collinsville/Skiatook (92.9 percent), and south Tulsa/Broken Arrow (91.3 percent). This proportion was lowest in Tulsa North (56.6 percent) (Figure 247).

Figure 247: Easy to Find a Safe Place to Exercise in their Community, Tulsa County 2015

2016 Community Health Needs Assessment, St. John Owasso

Easy to Find a Safe Place to Exercise in their Community
Tulsa County | 2015

Downtown: 66.7%
East Tulsa: 78.0%
Jenks/Bixby/Glenpool/Tulsa Hills: 94.1%
Midtown: 90.6%
Tulsa North: 56.6%
Owasso/Sperry/Skiatook/Collinsville: 92.9%
Sand Springs/west Tulsa: 81.2%
South Tulsa/Broken Arrow: 91.3%
Tulsa County: 84.7%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

About three-fourths of Tulsa County adults reported that it was common to see people exercising in their community. This was above eighty percent in four regions: Jenks/Bixby/Glenpool/Tulsa Hills (87.8 percent), midtown (84.3 percent), Owasso/Sperry/Collinsville/Skiatook (81.1 percent), and south Tulsa/Broken Arrow (88.2 percent). This proportion was lowest in Tulsa North (40 percent) (Figure 248).

Figure 248: Common to See People Exercising in their Community, Tulsa County 2015

Common to See People Exercising in their Community
Tulsa County | 2015

Downtown: 68.6%
East Tulsa: 62.1%
Jenks/Bixby/Glenpool/Tulsa Hills: 87.8%
Midtown: 84.3%
Tulsa North: 40.0%
Owasso/Sperry/Skiatook/Collinsville: 81.1%
Sand Springs/west Tulsa: 67.9%
South Tulsa/Broken Arrow: 88.2%
Tulsa County: 75.2%

Tobacco

Over 90 percent of Tulsa County adults reported that it was easy to buy tobacco products in their community (91.4 percent). This was highest in downtown (100 percent) and lowest in Owasso/Sperry/Skiatook/Collinsville (88.7 percent) (Figure 249).

Figure 249: Easy to Buy Tobacco Products in their Community, Tulsa County 2015

Easy to Buy Tobacco Products in their Community
Tulsa County | 2015

Similarly, 86.8 percent of Tulsa County adults reported that it was easy to buy electronic cigarettes or vaping products in their community. This was highest in downtown (97 percent) and lowest in Tulsa North (80.2 percent) (Figure 250).

Figure 250: Easy to Buy Electronic Cigarettes or Vaping Products in their Community, Tulsa County 2015

Easy to Buy Electronic Cigarettes or Vaping Products in their Community
Tulsa County | 2015

Bar chart showing:
- Downtown: 97.0%
- East Tulsa: 87.0%
- Jenks/Bixby/Glenpool/Tulsa Hills: 86.7%
- Midtown: 90.4%
- Tulsa North: 80.2%
- Owasso/Sperry/Skiatook/Collinsville: 85.2%
- Sand Springs/west Tulsa: 83.4%
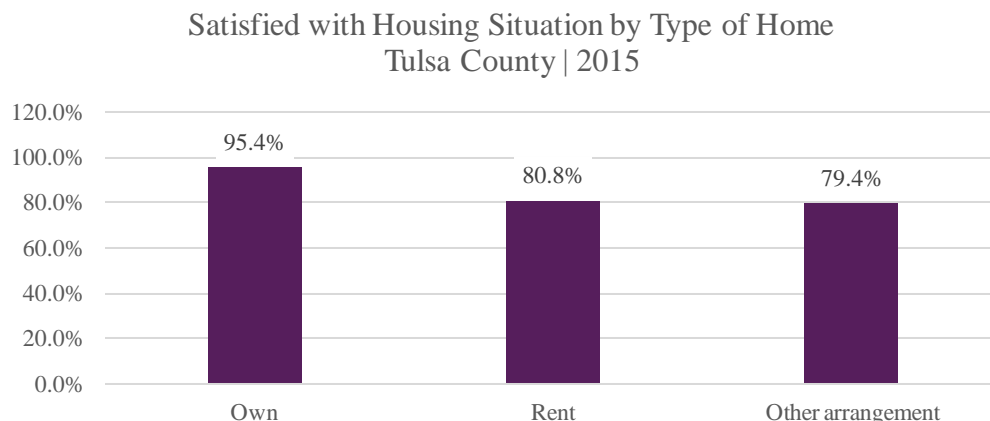- South Tulsa/Broken Arrow: 90.8%
- Tulsa County: 86.8%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

About half of Tulsa County residents reported that it was common to see people smoking in public places in their communities (54.6 percent). This percentage was above 75 percent in downtown and Tulsa North (77.8 percent and 75.3 percent, respectively). It was below fifty percent in three regions: Jenks/Bixby/Glenpool/Tulsa Hills (45.6 percent), Owasso/Sperry/Skiatook/Collinsville (49.6 percent), and south Tulsa/Broken Arrow (45.4 percent) (Figure 251).

Figure 251: Common to See People Smoking in Public Places in their Community, Tulsa County 2015

Common to See People Smoking in Public Places in their Community
Tulsa County | 2015

Downtown: 77.8%
East Tulsa: 59.3%
Jenks/Bixby/Glenpool/Tulsa Hills: 45.6%
Midtown: 53.7%
Tulsa North: 75.3%
Owasso/Sperry/Skiatook/Collinsville: 49.6%
Sand Springs/west Tulsa: 60.4%
South Tulsa/Broken Arrow: 45.4%
Tulsa County: 54.6%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

Housing

Good health depends on having homes that are safe and free from physical hazards such as poor indoor air quality, lead paint, and lack of home safety devices. Adequate housing can protect individuals and families and provide them with security, privacy, stability and control. Inadequate housing can contribute to health problems such as infectious and chronic disease, injuries, and poor childhood development. Families with fewer financial resources are more likely to experience unhealthy and unsafe housing conditions and are usually less able to remedy them, contributing to disparities in health across socioeconomic groups.[143]

Housing Situation and Satisfaction

Overall, about two-thirds of Tulsa County residents owned their home (67.5 percent) (Figure 252).

Figure 252: Housing Situation, Tulsa County 2015

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[143] Braveman P, Dekker M, Egeter S, Sadegh-Nobari T, and Pollack C. (2015). *Issue Brief #7: Robert Wood Johnson Foundation.* Retrieved from: http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf70451.

Housing Situation
Tulsa County | 2015
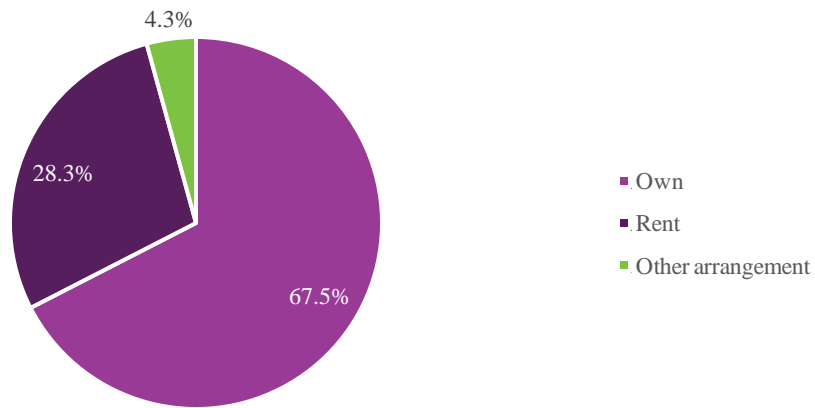
- Own
- Rent
- Other arrangement

4.3%
28.3%
67.5%

Overall, about ninety percent of individuals reported that they were satisfied with their housing situation (90.6 percent). This was highest in Jenks/Bixby/Glenpool/Tulsa Hills (95.5 percent) and lowest in downtown and Tulsa North (81.1 percent each) (Figure 253).

Figure 253: Satisfied with Housing Situation, Tulsa County 2015

Satisfied with Housing Situation
Tulsa County | 2015

Region	Percent
Downtown	81.1%
East Tulsa	88.6%
Jenks/Bixby/Glenpool/Tulsa Hills	95.5%
Midtown	90.3%
Tulsa North	81.1%
Owasso/Sperry/Skiatook/Collinsville	94.3%
Sand Springs/west Tulsa	92.4%
South Tulsa/Broken Arrow	93.2%
Tulsa County	90.6%

The majority of people in each type of housing were satisfied with their situation. A total of 95.4 percent of individuals who owned their home, 80.8 percent of those who rented, and 79.4 percent of those who lived in some 'other arrangement' were satisfied (Figure 254).

Figure 254: Satisfied with Housing Situation by Type of Home, Tulsa County 2015

Satisfied with Housing Situation by Type of Home
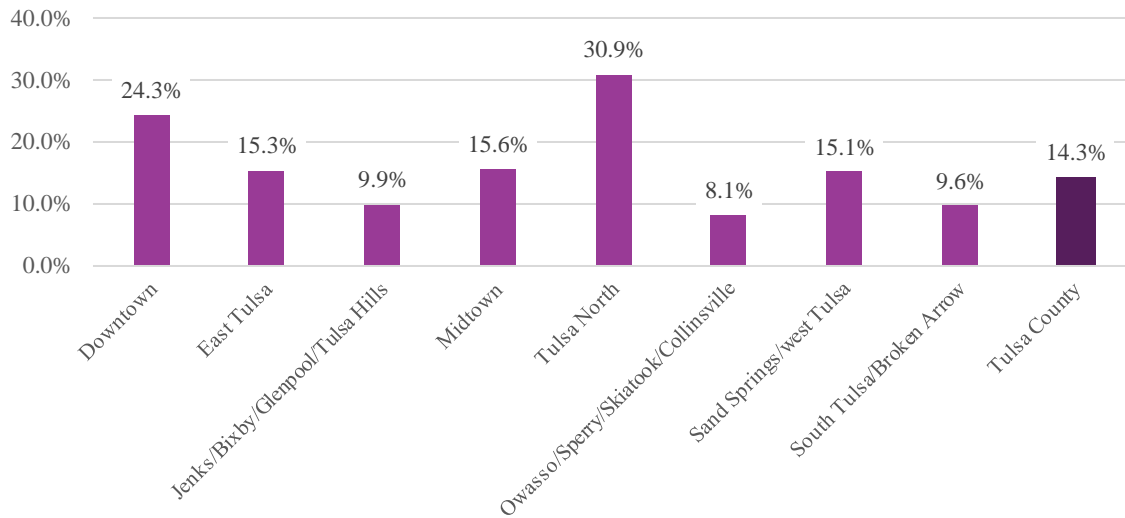Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

The individuals who reported that they were dissatisfied with their housing situation were asked why. The most common response was 'too small/crowded' (65 individuals) (Figure 255). Respondents were able to choose more than one response.

Figure 255: Reasons for Dissatisfaction with Housing Situation, Tulsa County 2015

Reasons for Dissatisfaction with Housing Situation
Tulsa County | 2015
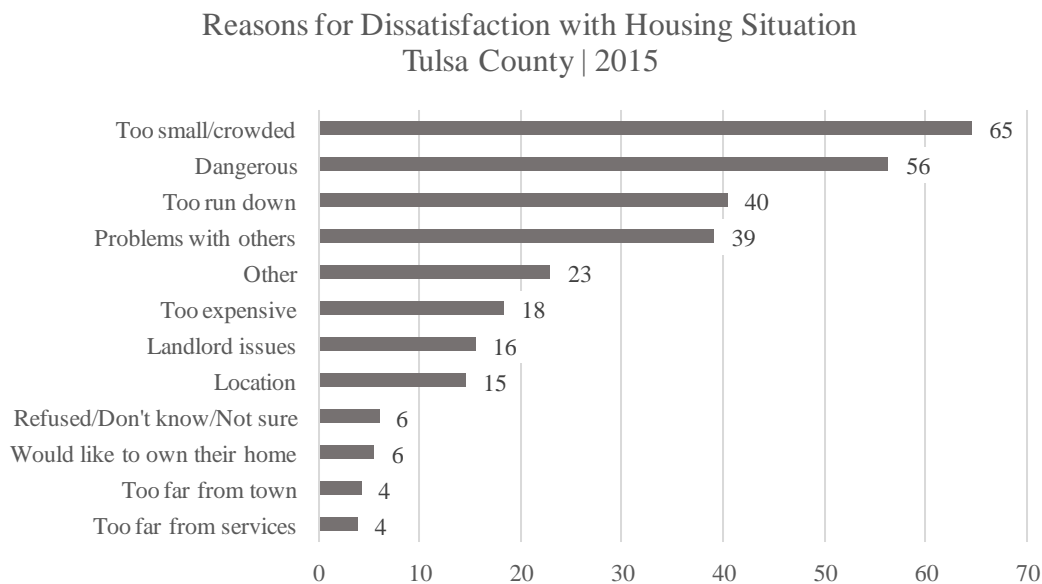
Asked of all respondents who reported that they were not satisfied with their housing situation (n=214)
**Respondents were able to select multiple responses*

Housing Security

Overall, 94.1 percent of Tulsa County adults reported that they were able to consistently pay their household bills such as mortgage or rent and utility bills. This was above 95 percent in four regions: Jenks/Bixby/Glenpool/Tulsa Hills (95.9 percent), Owasso/Sperry/Skiatook/Collinsville (97.3 percent), Sand Springs/west Tulsa (98.2 percent), and south Tulsa/Broken Arrow (95.1 percent). This proportion was below 90 percent in downtown and Tulsa North (83.8 percent and 85.6 percent, respectively) (Figure 256).

Figure 256: Consistently Able to Pay Household Bills, Tulsa County 2015
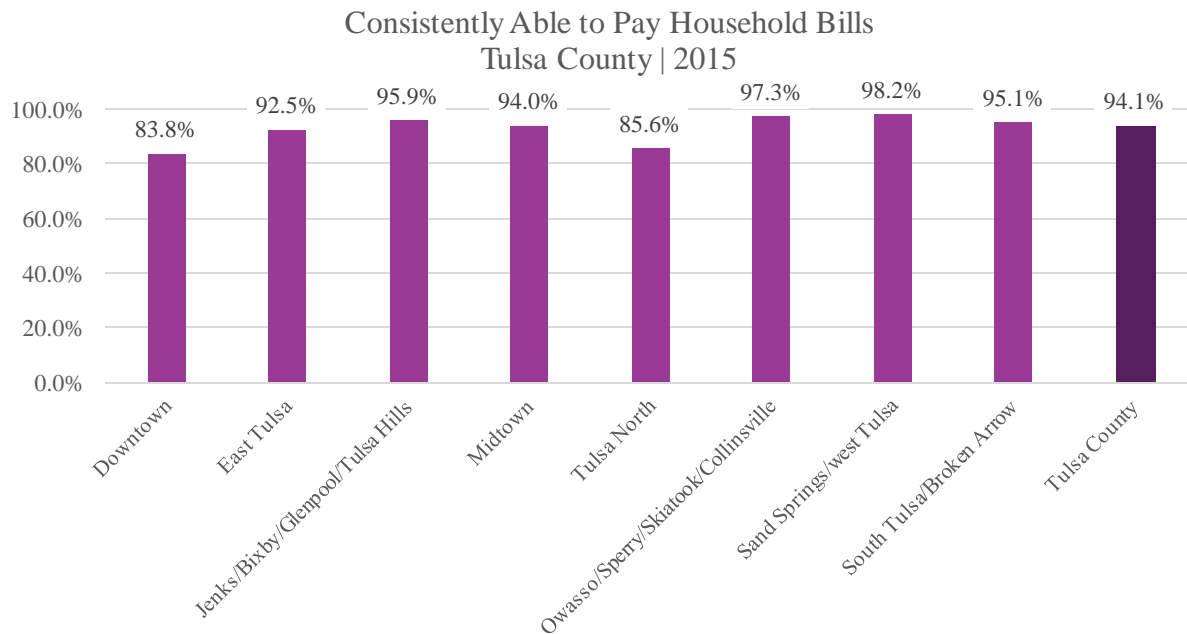
Food Security

According to the United States Department of Agriculture (USDA), about 48.1 million Americans lived in food-insecure households in 2014, including 7.9 million children. Although food insecurity can be harmful for anyone, it is especially harmful to children due to potential long-term developmental consequences. Programs to help combat hunger include the National School Lunch Program, the Supplemental Nutrition

Assistance Program (SNAP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).[144]

Food Security

A total of 16.8 percent of Tulsa County residents reported that they worried about their food running out before they had money to buy more in the previous year. This was more than five times as high in Tulsa North compared to Owasso/Sperry/Skiatook/Collinsville (38 percent compared to 7.4 percent) (Figure 257).

Figure 257: Worried about Food Running out in the Previous Year, Tulsa County 2015
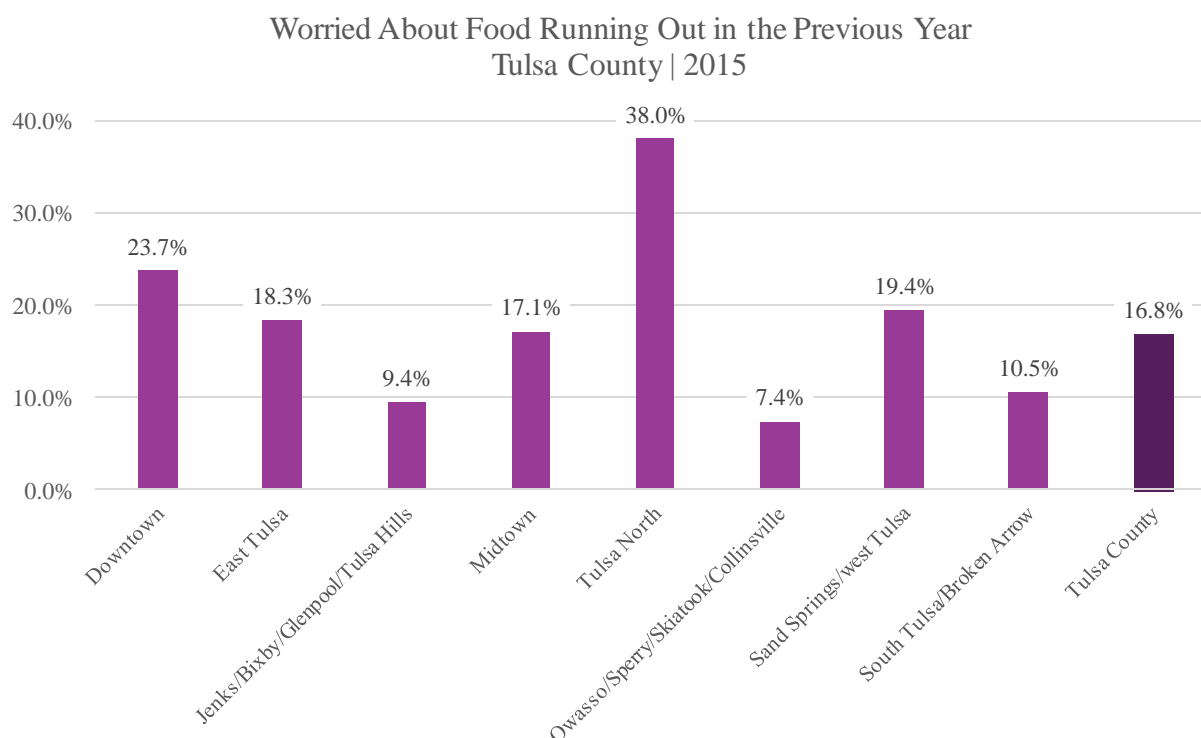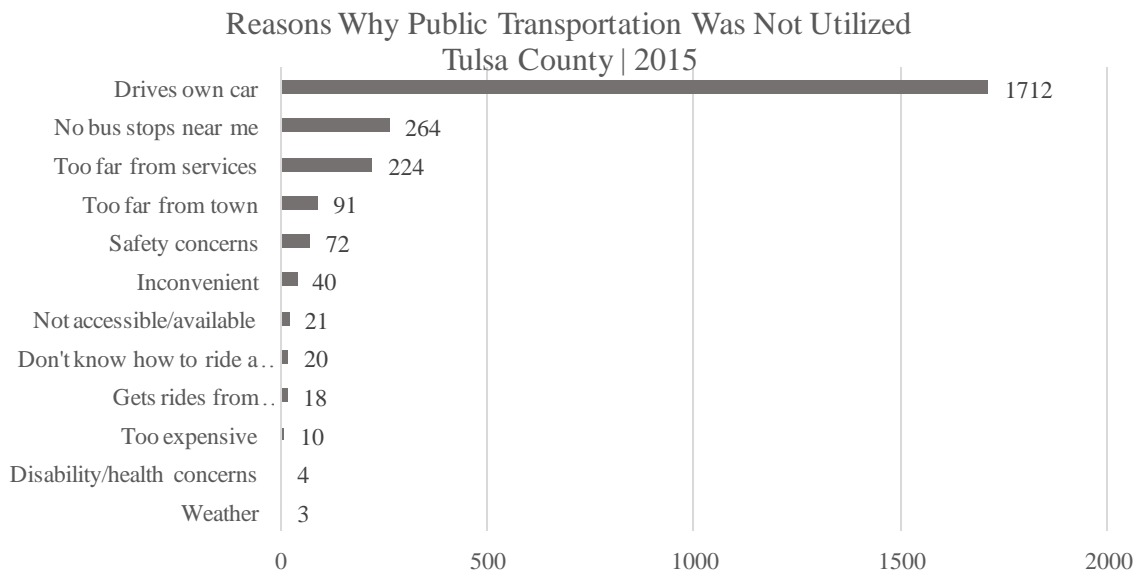

Worried About Food Running Out in the Previous Year
Tulsa County | 2015

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Additionally, 14.3 percent of Tulsa County adults reported that there was a time in the previous year when they did not have enough money to buy food. This was most common in Tulsa North (30.9 percent) and least common in Owasso/Sperry/Skiatook/Collinsville (8.1 percent) (Figure 258).

Figure 258: Did not have Enough Money to Buy Food in the Previous Year, Tulsa County 2015

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[144] Coleman-Jensen A, Rabbitt M, Gregory C, Singh A. (2015). *Household Food Security in the United States in 2014. Economic Research Report Number 194.* United Stated Department of Agriculture, Economic Research Service. Retrieved from: http://www.ers.usda.gov/media/1896841/err194.pdf.

Did Not Have Enough Money to Buy Food in the Previous Year
Tulsa County | 2015

- Downtown: 24.3%
- East Tulsa: 15.3%
- Jenks/Bixby/Glenpool/Tulsa Hills: 9.9%
- Midtown: 15.6%
- Tulsa North: 30.9%
- Owasso/Sperry/Skiatook/Collinsville: 8.1%
- Sand Springs/west Tulsa: 15.1%
- South Tulsa/Broken Arrow: 9.6%
- Tulsa County: 14.3%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Public Transportation

Transportation choices are an important part of building and maintaining healthy communities. Increasing a community's ability to choose to walk or bike can provide health benefits such as increased physical activity levels, decreased obesity, and improved accessibility for all residents regardless of income, age, or ability. It can also help reduce stress and allow for more social and family time. Improved public transit and lower vehicle usage can also reduce injuries, and reduce air pollution and related respiratory diseases.[145]

Public Transportation Utilization

A total of 5.3 percent of Tulsa County residents reported that they used public transportation such as a bus. This was most common in Tulsa North (15.2 percent) and least common in Jenks/Bixby/Glenpool/Tulsa Hills and Owasso/Sperry/Skiatook/Collinsville (0 percent and 0.4 percent, respectively) (Figure 259).

Figure 259: Utilized Public Transportation, Tulsa County 2015

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[145] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (2015). *Transportation and Health*. Retrieved from: http://www.cdc.gov/healthyplaces/healthtopics/ transportation/default.htm.
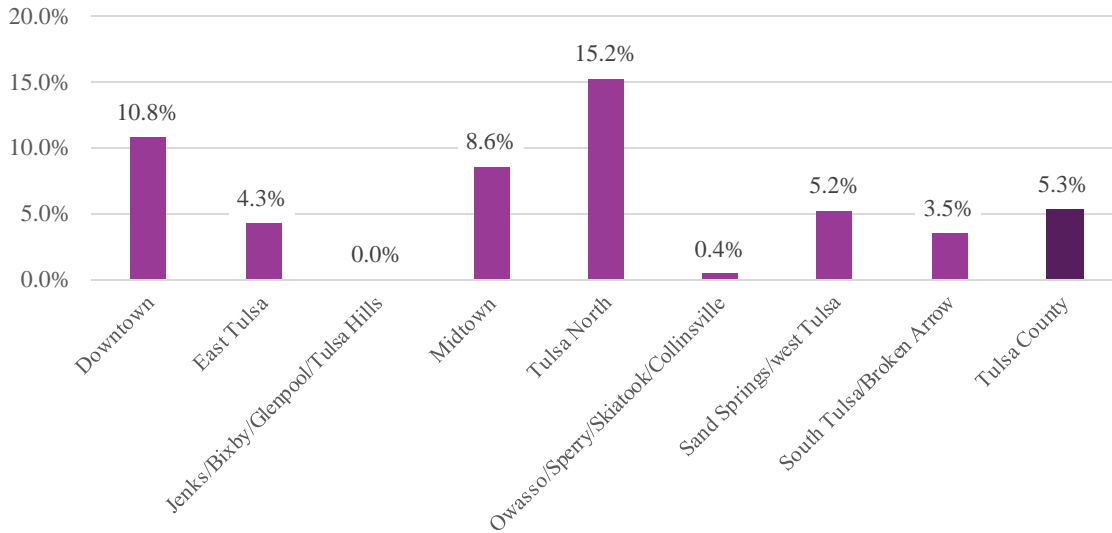
Utilized Public Transportation
Tulsa County | 2015

Downtown: 10.8%
East Tulsa: 4.3%
Jenks/Bixby/Glenpool/Tulsa Hills: 0.0%
Midtown: 8.6%
Tulsa North: 15.2%
Owasso/Sperry/Skiatook/Collinsville: 0.4%
Sand Springs/west Tulsa: 5.2%
South Tulsa/Broken Arrow: 3.5%
Tulsa County: 5.3%

Source: Courtesy of the Tulsa Health Department. (2016). *2015 Tulsa County Community Health Needs Assessment: May 2016.* Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report _4_15_16-compressed.pdf

Individuals who reported that they did not use public transportation were asked why not. The most common reason was 'drives own car' (1,712 individuals) (Figure 260). Respondents were able to choose more than one response.

Figure 260: Reasons Why Public Transportation was not Used, Tulsa County 2015

Reasons Why Public Transportation Was Not Utilized
Tulsa County | 2015

Drives own car: 1712
No bus stops near me: 264
Too far from services: 224
Too far from town: 91
Safety concerns: 72
Inconvenient: 40
Not accessible/available: 21
Don't know how to ride a…: 20
Gets rides from…: 18
Too expensive: 10
Disability/health concerns: 4
Weather: 3

*Asked of all respondents who reported that they did not use public transportation (n=2140)
**Respondents were able to select multiple responses

TULSA COMMUNITY HEALTH NEEEDS ASSESSMENT: FOCUS GROUPS

This section provides a review of some of the qualitative data derived from one of this assessment's primary data (community input) research methods, the *2015-2016 Tulsa County CHNA* focus groups. The focus groups were conducted by Saxum, an agency contracted by the Tulsa City-County Health Department. Community health concerns identified by the *2015-2016 Tulsa CHNA survey* served as a foundation for focus group content and questions.

The three main objectives of the focus groups were as follows:

1. Determine top community health concerns
2. Identify perceptions of barriers to addressing community health concerns
3. Assess awareness of community resources availability

FOCUS GROUP METHODOLOGY

Community Defined for the Focus Groups

As noted previously in this report, the study area for the focus groups includes all of Tulsa County, Oklahoma. Tulsa County was divided into eight geographical regions based on ZIP codes and associated communities: downtown Tulsa, east Tulsa, Jenks/Bixby/Glenpool/Tulsa Hills, midtown Tulsa, north City of Tulsa (Tulsa North),Owasso/Sperry/Collinsville/Skiatook, Sand Springs/west Tulsa, and south Tulsa/Broken Arrow. All ZIP codes that are fully or partially within Tulsa County were assigned regions, although only Tulsa County residents were able to participate in the focus groups.

Sample Approach and Design

The sample was drawn from the non-institutionalized adult population residing in Tulsa County, Oklahoma in telephone and e-mail equipped dwellings. Respondents were recruited by a third party vendor via telephone and e-mail by zip code.

The CHNA focus group study incorporated a non-randomized design. The demographic variables (e.g., gender, age, race, and ethnicity) are unlikely to perfectly match with the demographic makeup of Tulsa County. To account for this gap, respondent requirements included a mix of gender, age, race and ethnicity and household income levels. A specially designed database was utilized to obtain an even mix of respondents to appropriately represent Tulsa County as a whole.

Sixteen (16) 1 ½ hour focus group sessions were conducted between April 11-28, 2016. Two focus group sessions were conducted for each of the eight (8) CHNA regions. For each group, 8 respondents were recruited in planning for 6-8 to attend each session. Each participant was provided a $100 Visa gift card. A total of 119 Tulsa County residents participated in the focus groups.

All facilitation of the focus groups and data collection was conducted by Saxum, an agency contracted by the Tulsa Health Department. A discussion guide including questions from the focus groups can be found in the Appendices of this report.

Sample Characteristics

Sample characteristics included a mix of gender, age, race and ethnicity and household income levels.

FOCUS GROUP RESULTS

Top Five Community Health Concerns

The top five community health concerns voiced by focus group participants were as follows:

1. Affordability and Access to Quality Health Care
   - Rising insurance costs; high deductibles are a barrier to seeking preventative treatment (blame insurance companies and pharmaceutical companies)
   - Question the true cost of medical services
   - System is complex and challenging to navigate for both uninsured and insured
   - Healthcare system does not allow for preventative diagnosis and treatment of underlying causes, only treatment of tertiary conditions with prescription medications
   - Feeling of no control over healthcare decisions

2. Obesity and Link to Chronic Diseases
   - High awareness of link between obesity and chronic diseases
   - Often use the word obesity to describe overall poor health issues
   - Concern for all generations
   - Concern about quality of food products and ingredients
   - Confusion about best nutrition plan and how to implement it
   - Desire for simplified health education
   - Understand links between mental health/stress with nutrition and physical activity
   - Understand proper nutrition and exercise lead to improved health outcomes and reduced need for medications
   - Concern for early onset of chronic diseases in children

3. Mental Health Services
   - Lack of mental health services providers
   - Concerns about affordability of services
   - Lack of easy, quick access to services in crisis situations
   - High concern about homeless and veteran populations
   - Treatment for mental health illnesses is seen as a form of prevention for alcohol and drug abuse
   - Lack of education on mental health, especially among youth

4. Care for Older Adults

2016 Community Health Needs Assessment, St. John Owasso

- Nursing home closures
- Increasing aging population
- Lack of transportation services
- Lack of patient advocates
- Lack of understanding medications and potentially harmful interactions between multiple medications
- Challenge navigating new technologies

5. **Lack of Health Education**
   - Nutrition
   - Availability of free/affordable exercise programs available in community
   - Consequences of poor health choices on future health
   - How to care for self in different stages of life
   - School-based health education

Barriers

The following is a compilation of perceived barriers to addressing community health concerns as expressed by participants in the focus group sessions:

- Corporate greed of insurance and pharmaceutical companies
- Confusion about government policy (Affordable Care Act)
- High number of uninsured/underinsured
- Family structure
- Fast-paced, over scheduled lifestyles
- Culture that lacks compassion and care
- Lack of easily accessible walking and biking paths
- Affordability of nutritious foods
- School-based health education
- High level of poverty
- State budget cuts to education and clinical healthcare services

Awareness of Community Resources

The overall awareness of community resources among community members appears to be lacking. An overwhelming majority of focus group participants could not identify more than a few community resources event if they had referenced accessing local resources for assistance. The resources most cited included:

- Family and Children's Services
- Tulsa City-County Health Department
- DHS
- Primary Care physician
- Community Food Bank of Eastern Oklahoma
- Catholic Charities

- Churches

Key Insights

The following is a compilation of key insights based on the focus group findings:

- Affordability of healthcare, obesity, and mental health services are top of mind across the board and generate the most passionate opinions
- Insurance companies perceived to be the main reason for rising healthcare costs with pharmaceutical companies as a close second
- Strong understanding of obesity connection to chronic diseases
- Two distinct groups were most vocal about the importance of good nutrition - millennial mothers and Baby Boomer generation
- High awareness and concern about lack of access to timely and quality mental health services
- Perception that care for older adults is going to be an ongoing crisis with no end in sight
- Desire for simplified health education on living a healthy lifestyle
- Extremely low awareness of community health resources
- There is a general concern about the over-use of prescription medications, but this concern is strongest in East Tulsa
- Transportation concerns are primarily isolated to North Tulsa and older adults

TULSA COUNTY HOSPITAL COMMUNITY INPUT MEETINGS

During the month of April 2016, a total of 60 community leaders and representatives participated in three hospital community input meetings conducted at St. John Health System's Tulsa County hospital facilities, St. John Medical Center, St. John Owasso, and St. John Broken Arrow. The purpose of these meetings was to solicit community input from community leaders and representatives representing the broad interests of the community. These meetings were intended to obtain community input specific to each hospital and their surrounding Tulsa County CHNA region.

A hospital community input meeting with 14 community leaders and representatives was held at St. John Owasso on April 28th, 2016. The following section summaries the design and findings from this qualitative source of primary data. It should be noted that each of the three Tulsa County hospital reports summarizes findings from their respective hospital community input meeting. Therefore, this assessment report only includes findings from the St. John Owasso community input meeting.

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 Jane Phillips Medical Center 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
- Aging Problems

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 which are medically underserved, low-income, minority and/or with chronic disease needs. Community representatives and leaders also included those with special knowledge of and/or expertise in public health. Participants represented areas of healthcare services, law enforcement, first responders, education, non-profit agencies, faith communities, government representatives, safety net service providers, local schools, economic and workforce development, mental/behavioral health services, and other interest groups working with vulnerable populations.

COMMUNITY INPUT MEETING FINDINGS

The following sections provide summaries of findings from three of the four exercises completed with community leaders and representatives:

Community Input Group Discussion – Compilation of Answers

Question 1: What is St. John Owasso doing well that improves the health of the community?

- Diabetes education
- Community health fair
- Volunteers
- Accessibility (ER, Primary & Specialty Care)
- Emergency Services
  - Less time
  - Quality care
  - Personal care
- Helipad
- Sports Med.
- PT/Rehab
- Community Partnerships
- Kids' Triathlon

Question 2: What opportunities exist for St. John Owasso to improve the health of the community?

- Transports to Tulsa
- Access to more specialists
- Health Outreach (info – Gathering on Main, Community Forums)
- Partnerships with Aruban and other clinics
- Health education

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?

- Education on health – health literacy
- Health disparities
- Motivation
- Mental Health access
- Indoor walking track at YMCA

Question 2: What are the top three things about the community that you are proud of?

Skiatook

- Amenities (walking trails, etc.)
- Urgent care – Electric Service (revenue stream)

Collinsville

- Arubah (free clinic)
- Main Street
- Track at Park

Owasso

- YMCA, parks
- Owasso Sports Park
- Gathering on Main
- Caring, Giving Community
- City of Character
- Strong Schools
- Low crime
- Good family place to live
- Collaboration/Public-private partnerships

All Three

- Economic Development
- Willing to invest

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. Poor Diet/Inactivity
2. Chronic Disease
3. Mental Health
4. Access to Health Care
5. Alcohol/Drug Abuse
6. Aging Problems
7. Tobacco Use

Health Education/Health Literacy was also raised as a health concern throughout meeting discussion.

For more detailed information on the prioritization methodology utilized to confirm this ranking, please see the St. John Owasso Community Input Meeting Prioritization of Community Health Concerns in the Appendix. 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. 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
- Mental Health
- *Access to Health Care
- *Tobacco Use
- Alcohol/Drug Abuse
*Tied for fourth 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 Appendix.

Community Capacity Assessment

A community capacity assessment grid for Tulsa 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 261). 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 261: Tulsa County Community Capacity Assessment

2016 Community Health Needs Assessment, St. John Owasso
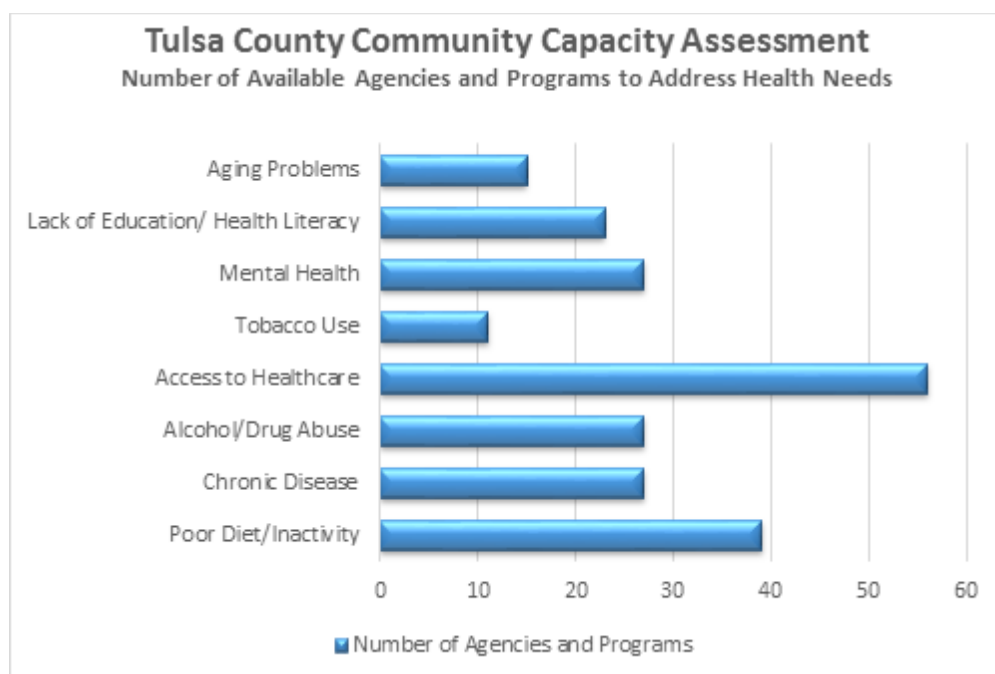
PRIORITIZATION OF SIGNIFICANT COMMUNITY HEALTH NEEDS

SIGNIFICANT COMMUNITY HEALTH NEEDS

Primary and secondary data were evaluated and synthesized to identify significant community health needs in Tulsa 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
- Health education and literacy
- Access to health services and affordability
- Tobacco use
- Substance abuse
- Social environment
- Prevention and safety
- Aging problems and care
- Children's health
- Available public transportation
- Physical environment
- Health behaviors

PRIORITZATION PROCESS

St. John Health System and St. John Owasso called together hospital decision makers, community residents, community partners, and community leaders and representatives to prioritize the significant community health needs of Washington 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 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 Owasso 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 Owasso have worked to address a set of prioritized health needs based on actions outlined in the implementation strategy.

St. John Owasso'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

For a detailed review of the St John Broken Arrow's 2013 Implementation Strategy, please visit: https://www.stjohnhealthsystem.com/media/file/1101/Community_Needs_Assessment_Implementation _Strategy_SJO.pdf

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 is the annual presenting sponsor and medical provider for the St. John Tulsa ZooRun, a family-friendly race offering a 5k, 10k, 1-mile FunRun, and children's activities through the St. John Kids Club. The ZooRun is the second oldest running event in Tulsa and sixth largest race in the state. In 2015, more than 70 St. John associates volunteered at the ZooRun.

St. John Health System is an annual sponsor and the official medical provider for the Tulsa Run. Approximately 60 St. John associates volunteer to assist with race day medical needs for runners each year. The Tulsa Run attracts 10,000 runners annually and is the oldest and one of the largest runs in Oklahoma.

The health system offered associates free or discounted registration fees for a number of these local runs and walks in FY 2014-2016.

Pathways to Health (P2H)

   Several associates actively participated in the community-wide coalition, Pathways to Health (P2H), which supports the Tulsa City-County Health Department and a multitude of community partners. P2H was formed by the Tulsa Health Department in 2008 in response to a challenge to decrease the overlap of health services and identify gaps where leaders are missing vulnerable populations. Today, P2H is an incorporated non-profit entity with the goal to connect community health resources to those who need it most. P2H leverages community-wide partnerships with more than 90 local agencies, organizations, corporations and health systems to improve the health and wellness of residents of Tulsa County. During 2015, the P2H Community Foundation set obesity prevention as its primary focus.

   St. John Health System also collaborated with P2H on a number of health and wellness initiatives, activities, and events throughout FY 2014-2016 including, but not limited to:

- **The 29th annual Tour de Tulsa presented by St. John Health System**.-This community bike ride took place on Saturday, May 7, 2016with more than 700 cyclists from across the state and region participating. Cyclists completed their choice of 22, 50, 62, or 100 mile routes and families were encouraged to participate in a family fun ride. Tour de Tulsa is hosted annually by the Tulsa Health Department and the Tulsa Bicycle Club as a way to promote health in the community. St. John Health System was proud to be the first-ever presenting sponsor of the Tour de Tulsa. This event paired our ongoing commitment to encourage physical activity for individuals of all ages, while supporting vital community programs that focus on initiatives to improve overall health outcomes to area residents.
- **P2H Block Parties**- St. John Health System associates participated in a series of free community block parties throughout Tulsa County hosted by P2H in 2013-2015. The interactive and family-

friendly events included activities such as cooking demonstrations, fitness classes, games, health screenings, snacks and fun for all ages.

- **Food on the Move**- St. John Health System associates participated in six Food on the Move mobile food initiative events in 2015-2016. Food on the Move is a collaboration of food and health experts and community partners to mobilize quality food into hard to reach economically challenged areas, helping combat hunger in Tulsa and Oklahoma in a new way. Health and wellness education and screenings (e.g. blood pressure, healthy nutrition) were offered by nurses, a dietician, and a physician from St. John Health System at these events.

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 Owasso sponsored 46 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.

St. John Owasso actively engaged with the local school district in supporting various events such as the health fair. The annual health fair is available to individuals and families in the Owasso and surrounding communities and provides free services such blood pressure and oxygen saturation screenings, exams, and health education. The fair provides an opportunity for healthcare staff to meet with to promote health and wellness in the community. St. John Owasso also served as the official medical provider of sports medicine for the Owasso Public Schools. In addition, the hospital facility partnered with the local YMCA on a number of events.

In June 2016, St. John Health System, Oklahoma Cancer Specialists and Research Institute (OCSRI) and MD Anderson Cancer Center joined forces to host The Fight to End Cancer, a free community health fair and cancer forum for Tulsa and surrounding communities. The event featured food trucks, family activities, health screenings and expert medical advice from St. John and OCSRI, and local cancer organizations.

Attendees were given the opportunity to watch a live broadcast of speaker Joan Lunden, cancer survivor, health and wellness advocate, and former co-host of "Good Morning America," and participate in a national conversation on cancer through a live, interactive broadcast of MD Anderson expert panel discussions.

As Oklahoma's only certified member of MD Anderson Cancer Network®, a program of MD Anderson Cancer Center, OCSRI is one of only 14 sites across the U.S. participating in these panel discussions. The first panel covered new research in cancer prevention, as well as future approaches to cancer treatments. The second panel focused on tobacco cessation. Audience members were able to interact with the MD Anderson experts during the discussions.

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 Broken Arrow 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

St. John Owasso participates as an ACO participant in the Medicare Shared Savings Program Accountable c Care Organization which establishes several quality and process outcome measures that pertain to chronic disease management such as diabetes, hypertension, coronary artery disease, and COPD.

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 both 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.

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 Owasso, St. John Owasso, Owasso Medical Facility (St. John Owasso), St. John Sapulpa, and Jane Phillips Medical Center participate in OKHI along with various other health care professionals including employed and affiliate physicians. 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

Primary Care Access

  St. John Clinic has added capacity for RNs and LPNs to provide Medicare Wellness visits to reduce gaps in care and to complete screenings for our Medicare population. We have identified 25,000 patients who are eligible for their Wellness visit. This is a free service for Medicare patients, and gives them a written plan of upcoming screenings they will need to complete.

St. John Clinic Family Medical Center and In His Image residential program have also added 2 slots for residents for FY16, bringing their total number of residents to 32. They are also adding 2 additional slots for residents in FY17 and FY18, eventually bringing their total to 36.

Medical Access Program (MAP)

The hospital's and health system's outreach begins with service to the area's medically uninsured and underinsured. The Tulsa Medical Access Program (MAP) has been developed to improve access to medical care by the uninsured. It is a program faithful to the mission of providing healthcare and related ministries for the people served, especially those who are sick, living in poverty, and/or otherwise deemed vulnerable. It provides access to medical services which serve the primary, diagnostics and specialty health care needs of the uninsured indigent population of the Tulsa area. Promoting the concept of a medical home, it works through a network of free primary care clinics in the area, whose patients are provided:

- Access to Primary Care
- Access to Specialty Care
  - Imaging Services
  - Diagnostic Testing
  - Specialists
  - Hospital/facility services, inpatient and outpatient
- Access to free or reduced cost medications
- Access to a medical home provided through the Health System, called the Rockford Medical Access Clinic (MAC)

The hospital and health system also continue support to the Tulsa County Medical Society's Medical Access Program, which solicits volunteer physicians to provide free care to uninsured patients, by underwriting the facility cost of procedures and surgeries.

The MAP program emphasizes collaboration with other organizations. The hospital and health system are working collaboratively with a provider network that includes University of Oklahoma, Good Samaritan Health Services, Tulsa Day Center for the Homeless, Morton Comprehensive Health Services (a federally qualified health center [FQHC]), Community Health Connection (a FQHC), Tulsa County Health Department, Tulsa Dream Center, Family and Children's Services, Neighbors Along the Line, Arubah Community Clinic, independent physicians, St. John employed physicians, and other organizations to create a network of coordinated care.

The Rockford Medical Access Clinic (MAC) is a unique part of the MAP. It seeks to operate as a true medical home for uninsured patients. The goals of the MAC are to improve health status of those enrolled in its patient panel in a cost-effective way by better managing chronic disease, and providing a reliable 24/7 support structure that emphasizes collaborative decision making with patients while seeking to minimize unnecessary utilization of emergency services.

St. John Health System and its donors have a long and rich history of supporting the health care needs of the uninsured and the underinsured in the Tulsa community. MAP is operated with a combination of funds donated to St. John Health System and the health system's own internal funds. Annual expenditures in FY 2014-FY 2016 continued to be at least $5 million.

Philanthropists including The Chapman Trusts, the George Kaiser Family Foundation, and other private donors continue to work with the Health System's Board of Directors and senior management leadership to oversee the MAP program. This has allowed for the continued growth and integration of safety net

systems which provides access to medical care for thousands, through the Tulsa Medical Access Program (MAP).

The Medical Access Program continues to evolve, making a difference in the lives of thousands in our community by providing medical care to those less fortunate, literally one person at a time.

Access to Primary Care

During this reporting period, the MAP has provided over 70,000 primary care patient encounters to uninsured individuals. Two of the pathways allowing this access are Good Samaritan Health Services and the Tulsa Day Center for the Homeless Nurse's Clinic. Below is information on these primary care access points.

Good Samaritan Health Services:

Good Samaritan continues to operate mobile clinics that include MAP funding for the clinics identified below. Good Samaritan also staffs a fixed clinic at the Tulsa Dream Center for one full day and two half days per week. These clinics have grown to capacity and MAP will be working with Good Samaritan on expanding hours and access.

Good Samaritan Health Services has strategically located the MAP-sponsored mobile clinics at sites easily accessible to at-risk populations such those who are living in poverty as well as vulnerable, uninsured, medically underserved, and minority populations. This removes the geographical barrier for patients who lack transportation resources. We believe it also helps to reduce "bounce-back" patients to emergency rooms. The clinics sponsored by MAP are as follows:

- New Jerusalem Baptist Church (Tuesday morning)
- Full Gospel Family Outreach (Wednesday morning)
- The Harvest (Wednesday afternoon)
- Riverside Baptist Church (Thursday morning)
- Tulsa Dream Center (Monday all day, Tuesday afternoon, Friday morning)

Good Samaritan Health Services provides the following services for free at these sites:

- A full doctor's examination
- All necessary labs
- Medications (Good Samaritan Health Services stocks an extensive formulary on the medical trucks)
- Specialty referrals (if needed)
- Follow-up care

MAP's contribution provides comprehensive medical care to thousands of disadvantaged individuals in our community. The MAP partnership with Good Samaritan Health Services clinics has proved successful:

- 75% are returning patients. For most patients, these clinics have become their medical home.

- 12% of patients are kept out of the emergency room. This is measured by nurses identifying health factors at such risk levels that these patients were within 24 to 48 hours of having to rush to the emergency room for medical care.
- 75% of the medications needed by patients are provided on the day of their visit. This ensures they are immediately on the road to recovery. Many patients would otherwise be unable to pay for their prescriptions.

Education is also a critical part of the medical care provided at the clinics. Patients receive training for how to take medications, learning proper nutrition and exercise, and how often to return to a clinic for continued monitoring of their health condition by a doctor. Through education and regular follow-up care, patients learn better health management.

Some specialty care is now provided by Good Samaritan Health Services volunteer doctors, including treatment from a cardiologist, psychologist, and endocrinologist who help patients dealing with heart, mental, and diabetic hormone health issues. Good Samaritan Health Services also has a rheumatology clinic that helps patients dealing with arthritis. Free, corrective laser treatment is now available for our diabetic patients with eye abnormalities that could lead to blindness.

The Tulsa Day Center for the Homeless Nurse's Clinic:

The Tulsa Day Center for the Homeless ("Day Center") continues with their specialty of reducing barriers to health care for individuals experiencing homelessness. The clinic operations at the Day Center have a Nurse Practioner (NP) with support staff consisting of both employed and volunteer nurses and medical assistants. This makes the cost per encounter very low, but also limits some of the services that can be provided in this setting. The Day Center and MAC staff have worked to maximize communication and coordination of patient care going both to and from the Day Center. Many patients with chronic medical conditions have been referred from Day Center to the MAC physician to evaluate and create a plan of care. Many MAC patients have been referred to the Day Center to assist in managing some of the mental health needs.

This medical clinic is essential in helping to keep our surrounding community healthy. The support from St. John plays a vital role in the continued ability to serve some of the most vulnerable people in Tulsa area, namely those experiencing homelessness.

The Nurse's Clinic operates during the following hours: Monday-Saturday mornings from 9:00-11:00 am and Tuesday, Wednesday, Thursday afternoons from 1:30-3:30 pm. The Clinic runs on a first come, first serve basis and continues to see clients until everyone who signed up that day has been seen. A factor in this achievement is the fact the clinic routinely has five consistent volunteer RN's that work through the week and a consistent core of volunteer RN's that work weekends.

Certain patient statistics are maintained by the Nurse's Clinic. The table below is an example of annual activity, and represents the quarters of calendar year 2015.

Table: 2015 The Tulsa Day Center for the Homeless Nurse's Clinic:

1ST QTR AVG	2ND QTR AVG	3RD QTR AVG	4TH QTR AVG

TOTAL CLIENTS VISITS:	1216.00	1279.67	1368.33	1330.00
AVERAGE # VISITS/DAY	40.67	42.33	44.67	43.00
UNDUPLICATED CLIENTS	171.00	179.00	192.33	127.44
TOTAL TRIAGE VISITS	420.67	406.67	488.33	438.55
TOTAL TB VISITS	623.00	699.67	756.00	692.89
TOTAL APRN VISITS	172.33	173.33	124.33	156.66
# VOLUNTEER RNS	9.33	12.00	13.00	11.44
VOLUNTEER RN HOURS	82.00	110.33	95.00	95.77
# VOLUNTEER RECEPTIONISTS	4.33	5.33	4.67	4.77
RECEPT. VOLUNTEER HOURS	24.00	32.00	27.00	27.66
RN CASE MANAGEMENT	104.33	93.67	93.33	97.11
TT TDCH EMSA Calls	36.00	27.33	28.67	30.66
TT BUS Tokens Given	197.33	192.67	173.67	187.89
TT Cab Vouchers Given	57.67	63.00	50.33	57.00
DIABETIC SUPPLIES GIVEN	22.33	15.33	13.67	17.11

Continuous Improvement:

   The Day Center continues to improve processes to enhance the lives of their clients. The Nurses Clinic served as a pilot agency for the new My Health electronic medical records (EMR) program. The clinic was provided with laptop computers, a scanner, and technical support at no cost to the Day Center, with other related operating expenses included in the funding amount provided by MAP. Initial implementation of the records program began in the fourth quarter of 2013, completing the conversion during 2014, and is now utilizing the EMR for all patient encounters.

Recognition:

   The free Nurses Clinic at the Tulsa Day Center for the Homeless, which is funded through the MAP, was the 2013 recipient of the Dr. Rodney L. Huey Memorial Champions Health award.

Access to Specialty Care

   During this three year reporting period, the MAP paid $6.45 million to provide almost 6,000 different specialty care requests to 3,200 different patients, at an average cost per unique patient of $2,120.   This average cost represents a blend of inpatient stays, outpatient procedures and diagnostic procedures that is consistent with the cost of and payment for care provided to comparable Medicare patients.

   The care provided was almost even based on gender, with 52% of the individuals receiving MAP specialty care during this time female and 48% male. 57% of the patients were between the ages of 40 to 59. Including those aged 60-64 increases the percentage to 76%.

   The top five diagnosis categories were 23% for cancer, 15% related to cardiology and cardiovascular services, 10% each to GYN and GI, and 6% for general surgery not included above. These "top five"

services totaled 64% of total specialty care provided. Urology services, specialized internal medicine services, endocrinology, nephrology and pulmonary care accounted collectively for another 24% of the care provided.

   MAP beneficiaries reside throughout the Tulsa area with no single zip code accounting for more than 8% of total specialty services and top five zip codes accounting for only 25% of specialty services.

Access to Free or Reduced Medications

   Throughout the history of MAP, we have attempted to provide cost and clinically effective services to those with both acute episodic needs and chronic needs. An important element of their ongoing treatment and care is the provision of prescription medications.

   Many of our clinic partners provide free or reduced cost medications to patients. However; the ongoing need continues for a supply of critical medications. In recent history, fluctuating costs of items such as vaccines (flu, pneumonia, tetanus, etc.) and chronic medications (inhalers and insulin) are often unavailable throughout the Safety Network Community. St. John efforts toward this need include:

Patient Assistant Programs (PAP):

   Over the last three years, we have averaged $238,000 annually, or $713,000 in total retail value of "free" prescription medications for MAP beneficiaries through the St. John Medical Access Clinic (MAC) alone.

Dispensary of Hope (DOH):

   During 2015 the St. John pharmacy applied for and was certified to be a Dispensary of Hope (DOH) access site. The DOH connects surplus medications from manufacturers, distributors, and providers to clinics and pharmacies serving the poor and uninsured. (www.dispensaryofhope.org)

   Available drugs are free, the annual fee is $13,000, and pharmacy labor costs are calculated at $25,000/year. Based on Q4 2015, annualized prescriptions should exceed 3,000, with a market value of nearly $50,000 per year. Good Samaritan patients have received 84% of these prescriptions. Insulin/diabetic supplies and inhalers are not on the free DOH formulary.

Access to a Medical Home

   Rockford Medical Access Clinic (MAC): It is recognized that many persons needing health care feel their only access is through hospital Emergency Departments (ED). These patients, often because of cultural training and/or financial limitations, have identified the hospital Emergency Department as the safest and least confrontational location for them to receive treatment for various aches and pains, as well as emergencies. Using the Emergency Department limits the patient's ability to obtain and maintain ongoing, consistent treatment and monitoring and management of chronic illnesses. It often perpetuates the progression of illnesses that otherwise could be managed and controlled. The MAC, like all of our other clinic partners, is trying to change this cycle so that uninsured patients will feel that they have safe and effective options to seek medical care outside of hospital emergency rooms.

St. John opened the MAC and cared for its first patient in January, 2012. The MAC is organized and operated as a St. John Clinic and has a fully integrated EMR and after hours "on call" physicians and nurses who are available for phone consultations 24 hours per day. MAC has improved the health status for the patients who accept the help. It has been challenged by high "no show" rates for patients referred in but who for a variety of reasons fail to take advantage of the free care at MAC. Our clinic partners report similar challenges in reaching out to our target population.

A "regular" clinic often measures success by counting "things" such as patient visits, work units and cash collections to be measured against established performance standards. The cost of the Rockford MAC for three years has been $1.7 million, which is an average cost per visit of $287. Success is measured a bit differently at the free clinic, Rockford MAC.

The MAC success stories cannot be measured in the volume of patients seen and services facilitated but in the individual patient experiences. This clinic is a story of lives saved, wounds healed after years of infections, limbs restored to functionality by improving circulation, and diagnosis and management of illness that now allow individuals the opportunity to maintain employment and quality of life.   For those individuals whose lives could not be saved, MAC was an available resource offering care and compassion.

MAC continues to offer options and support to providers at other MAP partner clinics and we are working to make these patient "handoffs" more effective. When options are few and resources scarce, the MAC physician leader is and has been a colleague to offer assistance, alternatives, and oversight. In multiple instances, MAC serves as an alternative to the emergency department, facilitates timely access to multiple coordinated services, and works hard to maintain the integrity of the original provider-patient relationship. All this while working hard to earn the trust of the patients served. This trust factor is key to increasing patient compliance with scheduled appointments and treatment plans.

The challenges of serving the uninsured population in Tulsa cannot be overstated. Both St. John and its community partners have found that traditional measures of cost effectiveness and efficiency do not readily apply to clinic operations that serve uninsured patients. Primary care services provided in the St. John funded Medical Access Clinic (MAC) continue to reflect the challenge of providing care to the uninsured in the Tulsa area. Effective patient follow-up is challenged by high rates of 'no shows' for follow-up appointments and the many physical, mental and economic challenges faced by the target population. We continue to seek better ways to improve care and access (and ultimately health status) through this facility. Some of the programs include:

- Diabetic Education: A program specifically developed by the St. John Diabetic Education staff based on the lifestyles of the MAC population.   The program is available for patients and their family members and teaches dietary fundamentals based on low income, limited choice access, and restrictive transportation capabilities. Sessions are available at the St. John Education Center and on site at MAC.

- Tulsa Day Center for the Homeless New Client Screening: After completing the nurses' clinic intake process, new clients at the Tulsa Day Center for the Homeless can be referred to MAC for a more comprehensive health evaluation. Priority is given to clients reporting history of chronic illnesses and / or those currently displaying healthcare issues. These assessments are an effort to provide pre-crisis intervention and if warranted, patients are accepted into MAC for timely ongoing medical management.

- Co-Management Arrangement with MAP's Free Clinic Partners: The physician at MAC has shared her direct contact information with key providers at partner safety-net clinics. Because these clinics are not available every day, the clinic providers are encouraged to contact the MAC physician when a patient is identified requiring close monitoring and/or medical management which they feel is beyond the capabilities of their facility. MAC is available to either manage or co-manage these patients until such a time it is appropriate for the patient to return to their home source.

- Expansion of Pharmaceutical Resources: MAC continues to access various prescription assistance programs (PAP) that provide patient's with multiple medications that would otherwise be cost-prohibitive. Since MAC opened its doors, it has obtained over $1,000,000 of medications, valued at retail cost. Since not all medications are available through a PAP and/or often needed more quickly than this process allows, MAC also has access to the Dispensary of Hope (DOH) pharmacy.

- Access to Affordable Care Act Information and other Insurance Coverage: MAC, with assistance from a community program titled the Tulsa Healthcare Coverage Project (THCP), actively works to identify community resources available to help patients obtain access to ongoing healthcare coverage.

- Expansion of Insurance Coverage Accepted at MAC: The Clinic was initially set up not to see patients with insurance coverage. However; with successful efforts made to facilitate patient's access to affordable healthcare coverage, MAC has made an adjustment. Now when a patient obtains coverage, the bond developed between provider and patient does not automatically have to be severed; instead, the patient can be transitioned to another medical home when medically and emotionally appropriate.

MAC Challenges:

- A general observation is how a large portion of this population does not demonstrate a propensity for planning. Much of healthcare requires ongoing commitment such as diet, medication, appointments, testing etc.   This population typically is not able to keep many long term plans they make. Patients will frequently agree to a plan and voice intentions to follow through but are easily diverted. Their circumstances often change their priorities; instead of keeping an appointment, they may be searching for their next meal or a locating their shelter for the night.

- Building the patient relationship is often a challenge. The patients typically do not easily trust and it often takes extensive interactions over numerous visits to get patients to "open-up". Early visits often take upward of 60+ minutes.

- Locating and notifying the patient can also be a challenge. Patients often have a transient lifestyle and an unfamiliar phone number may not be answered. Multiple attempts are made to contact the patient for upcoming appointments, tests, medication pickup, etc. Communication can also facilitate transportation needs.

- Care Delivery in the MAC includes multiple wound cleaning and redressing; Hydration and intravenous fluids; Preparing food real time for diabetic patients who appear at clinic without

eating; Extensive teaching/education-mostly verbal (vs. handouts) on proper medication taking, understanding of disease process and progression if not managed, helping the patient understand the importance of upcoming testing or specialist appointments.

- Timely verification of patient financial and/or insurance status for availability of alternative healthcare coverage opportunities such as Sooner Care, Affordable Care Act, Insure Oklahoma, etc., as well as access to Patient Assistance Programs for medications.

- Patient commitment to MAC as an alternative to emergency departments for healthcare needs.

- Timely validation the patient is not established with another appropriate primary care provider.

- Ongoing education of MAC staff regarding the complexity of this patient population, including needs that are unrelated to healthcare but impact the patient's health status. Examples are helping them access community resources available for clothing, shelter, food, transportation, etc.

Success Stories:

Despite the challenges, there have been many rewards. Below are several Patient Impact Examples where the Primary Care Partner Clinic and MAP worked together to make a difference:

- A patient from Neighbors Along the Line having severe headaches not relieved by any interventions at PCP level. Patient began having dizziness and fainting episodes. MRI of brain obtained through MAP. Patient found to have brain aneurism. Patient received an immediate referral to Neurosurgery and within days had surgery including stents. Patient now fully recovered and back to caring for grandchildren.

- Patient from Good Samaritan at The Dream Center referred to MAC for assistance because of extremely poor lymphatic circulation in one leg. Leg was swollen with "fluid" that pooled in leg regardless of traditional remedies/ treatments. Skin began to split, continuously ooze and patient was unable to work or manage any activities of daily living. Patient was seen and evaluated for various treatment options for a period of several years prior to being referred to MAC. MAC obtained additional testing and after numerous specialty evaluations an amputation was the only viable solution that would get this individual to the most positive outcome. This was accomplished and a leg weighing more than 90 pounds was removed. Patient is now healing and in process of being fitted for prostheses. The patient is now back at home recuperating and anticipating returning to work.

- Tulsa Dream Center patient complained of severe abdominal pain and chronic urinary issues. CT of abdomen through MAP revealed a large tumor on one kidney that appeared to be cancerous. Patient was sent immediately to surgeon, kidney was removed and tumor was caught early enough that no cancerous cells were found in lymph nodes.   Patient did not require any oncology intervention.

- Indigent patient was admitted through SJMC emergency department for pneumonia and upon discharge was sent to MAC for continued oversight and management. At time of discharge,

patient was also diagnosed with diabetes. Over the next few weeks, the patient was educated regarding diabetes, started on medications, and taught to monitor and maintain his sugar levels. The patient was stabilized, feeling healthy and active again. He has since found new employment with insurance.

- An Arubah Community Clinic patient was referred to MAC because of a large tumor mass on the left side of neck. Patient had work-up and surgery for cancer. Patient now has a feeding tube to prevent dehydration and malnourishment and is successfully undergoing chemo and radiation treatments. This patient is so thankful for the help he has received that he never misses an appointment, follows all medical recommendations and is currently waiting for repeat scans to validate his response to treatment.

- Numerous patients have had thyroid tumor biopsies and where needed, removed. Multiple hernias have been repaired allowing individuals to return to work or pass physicals in order to get jobs. Many female patients have had GYN interventions to address anemia issues and pre-cancerous fibroids.

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.
    - 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.
    - 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, fliers, 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, fliers, 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.

Telemedicine and Stroke Care

St. John Health System work with Ascension Health's Virtual Care Team to choose equipment and technology recommended and installed the first system at St. John Owasso's Emergency Department December 5, 2015. We plan to have another installation in Jane Phillips Medical Center this summer (2016). We have successfully completed our bi-annual Comprehensive Stroke Center certification with Joint Commission in August of 2015. We have hired one additional RN Stroke Navigator and continue to attempt to recruit neurologists for our stroke program whose volume has continued to rise year over year. This year we have added a RN Neurology Navigator which will improve clinic follow up for our stroke patients in collaboration with our inpatient stroke team. We have restarted the stroke support group in 2015 and now have a regular attendance. In 2016 we have increased our community education to hospitals that refer patients to us by sharing new evidence-based guidelines and impact of state law (HB1463) passed in the summer session 2015.

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 (2012-2014), 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.
In the greater Tulsa area, St. John actively reaches out to disadvantaged citizens. Through the creation of the Medical Access Program (MAP), St. John serves individuals living in poverty in numerous ways including through operation of the Rockford Medical Clinic in Tulsa, which offers free primary medical care; financial support of other organizations offering free primary medical care; and provision of free diagnostic imaging and specialty medical care. The estimated cost of this outreach program exceeds $5 million per year, which is provided by St. John and private donors. Many physicians in our community participate in this program by providing care at no cost to the patient.

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 $78 million in community benefit each year, which represents more than 8 percent of total St. John operating expenses for the last three years (2012–2014). 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 Tulsa 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 Tulsa 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, Tulsa 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 Owasso), and a rapidly expanding St. John Clinic network, with new primary and urgent care locations in south Tulsa, Broken Arrow, Claremore and Okmulgee.

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 Owasso'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 Tulsa County, Oklahoma. The prioritization of the identified significant health needs will guide the community health improvement efforts of St. John Owasso and St. John Health System. From this process, St. John Owasso 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.

APPENDIX A: INDEX FIGURES AND TABLES

2016 Community Health Needs Assessment, St. John Owasso

2016 Community Health Needs Assessment, St. John Owasso

2016 Community Health Needs Assessment, St. John Owasso

APPENDIX B: 2016 TULSA COUNTY CHNA REGIONS MAP

Source: Courtesy of the Tulsa Health Department. (2016). *Tulsa County Community Health Needs Assessment: May 2016*. Retrieved from: http://www.tulsahealth.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

APPENDIX C: 2015 TULSA COUNTY CHNA SURVEY

The *2015 Tulsa County Community Health Needs Assessment* survey and findings were sourced directly from the Tulsa City-County Health Department, Health Data and Evaluation Division The survey instrument for the assessment was developed by the Tulsa City-County Health Department, Health Data and Evaluation Division with input from community partners. The Oklahoma State University College of Public Health conducted the survey and the assessment report was written and prepared by the Tulsa City-County Health Department, Health Data and Evaluation Division. This source was provided courtesy of the Tulsa City-County Health Department for reprint in this publication.

A copy of the *2015 Tulsa County Community Health Needs Assessment* survey report is available at: http://www.tulsa-health.org/sites/default/files/page_attachments/CHNA%20report_4_15_16-compressed.pdf

APPENDIX D: SURVEY INSTRUMENT

This survey instrument was sourced directly from the Tulsa City-County Health Department's *2015 Tulsa County Community Health Needs Assessment (CHNA).* The instrument was developed by the Tulsa City-County Health Department, Health Data and Evaluation Division with input from community partners. The survey instrument was provided courtesy of the Tulsa City-County Health Department for reprint in this publication.

A copy of this instrument can be found at: http://www.stjohnhealthsystem.com/media/file/1980/THD-2015_Tulsa_County_CHNA-Survey_Instrument.pdf

2015 Tulsa County Community Health Needs Assessment (CHNA) Survey Instrument:

Hello, my name is ___(name)___. We are gathering information about the health of Tulsa County residents. This project is conducted by the Tulsa City-County Health Department and I am calling from the **VENDOR NAME**. Your telephone number has been chosen randomly, and I would like to ask some questions about health and health practices.

>   Is this xxx-xxx-xxxx?

>   Is this a private residence in Tulsa County? If no stop survey

>   Is this a Cell Phone?

I need to randomly select one adult who lives in your household to be interviewed. How many members of your household, including yourself are 18 years of age or older?

>   How many of these adults are men?

>   How many of these adults are women?

>   The person in the household I need to speak with is the _____? Are you the _____?

To the correct respondent:

I will not ask for your name, address, or other personal information that can identify you. You do not have to answer any question you do not want to, and you can end the interview at any time. Any information you give me will be confidential.

OPTIONAL: If you have any questions about the survey, please call **(give appropriate state telephone number)**.

Community Health Status

Individual

01.   Would you say in general your health is…?

Read 1-5

01.   Excellent
02.   Very Good
03.   Good
04.   Fair
05.   Poor

77.   DON'T KNOW/NOT SURE
99.   REFUSED

02.   In your opinion, would you rate the health of your community as…?

Read 1-5

01.   Excellent
02.   Very Good
03.   Good
04.   Fair
05.   Poor

77.   DON'T KNOW/NOT SURE
99.   REFUSED

03.   How safe do you feel in your community?

Read 1-5

01.   Very Safe
02.   Safe
03.   Somewhat safe
04.   Unsafe
05.   Very Unsafe

77.   DON'T KNOW/NOT SURE
99.   REFUSED

04.   In your opinion, how safe do you think your community is for children and families?

Read 1-5

01. Very Safe
02. Safe
03. Somewhat safe
04. Unsafe
05. Very Unsafe

77. DON'T KNOW/NOT SURE
99. REFUSED

05. How many days in the past month have you missed work or daily activities because of personal illness?

_____

88. None
77. DON'T KNOW/NOT SURE
99. REFUSED

06. In general, how often are you stressed at work?

Read 1-4

01. Regularly
02. Sometimes
03. Rarely
04. Never

77. DON'T KNOW/NOT SURE
99. REFUSED

07. In general, how often are you stressed at home?

Read 1-4

01. Regularly
02. Sometimes
03. Rarely
04. Never

77. DON'T KNOW/NOT SURE
99. REFUSED

08. How often in the last month did you participate in physical activities?

Read 1-4

01. Regularly
02. Sometimes
03. Rarely
04. Never

77. DON'T KNOW/NOT SURE
99. REFUSED

Demographics

D.1   What is your age?
_ _   Code age in years
77   Don't know / Not sure
99   Refused

D.2   Are you Hispanic or Latino?

01   Yes
02   No
77   Don't know / Not sure
99   Refused

D.3   Which one or more of the following would you say is your race?

(Check all that apply)

Please read:

01   White
02   Black or African American
03   Asian
04   Native Hawaiian or Other Pacific Islander
05   American Indian or Alaska Native

Or

07   Other [specify]_____
08   More than one race

Do not read:

09   No additional choices
77   Don't know / Not sure
99   Refused

D.5   Are you...?

Please read:

01   Married
02   Divorced
03   Widowed
04   Separated
05   Never married

Or

06   A member of an unmarried couple

Do not read:

99   Refused

D.6   How many children less than 18 years of age live in your household?

_ _   Number of children
88   None
99   Refused

D.7   What is the highest grade or year of school you completed?

Read only if necessary:

01   Never attended school or only attended kindergarten
02   Grades 1 through 8 (Elementary)
03   Grades 9 through 11 (Some high school)
04   Grade 12 or GED (High school graduate)
05   College 1 year to 3 years (Some college or technical school)
06   College 4 years or more (College graduate)

Do not read:
99   Refused

D.8   Are you currently…?
Please read:

01   Employed for wages full time
02   Employed for wages part time
03   Self-employed
04   Out of work for more than 1 year
05   Out of work for less than 1 year
06   A Homemaker
07   A Student
08   Retired

Or

88   Unable to work

Do not read:

99   Refused

D.9   Is your annual household income from all sources—

If respondent refuses at ANY income level, code '99' (Refused)

Read only if necessary:

0 4   Less than $25,000   **If "no," ask 05; if "yes," ask 03**
           ($20,000 to less than $25,000)

0 3   Less than $20,000   **If "no," code 04; if "yes," ask 02**
           ($15,000 to less than $20,000)

0 2   Less than $15,000   **If "no," code 03; if "yes," ask 01**
           ($10,000 to less than $15,000)

0 1   Less than $10,000   **If "no," code 02**

0 5   Less than $35,000   **If "no," ask 06**
           ($25,000 to less than $35,000)

0 6   Less than $50,000   **If "no," ask 07**
           ($35,000 to less than $50,000)

0 7   Less than $75,000   **If "no," code 08**
           ($50,000 to less than $75,000)

0 8 $75,000 or more

Do not read:

77   Don't know / Not sure
99   Refused

D.10   About how much do you weigh without shoes?

Round fractions up

_ _ _ _   Weight

(pounds/kilograms)
7 7 7 7   Don't know / Not sure
9 9 9 9   Refused

D.11   About how tall are you without shoes?

Round fractions down

_ _ / _ _   Height
(ft / inches/meters/centimeters)
7 7 / 7 7   Don't know / Not sure
9 9 / 9 9   Refused

D.12   What county do you live in?

_ _ _   ANSI County Code (formerly FIPS county code)
7 7 7   Don't know / Not sure
9 9 9   Refused

D.13   What is the ZIP Code where you live?

_ _ _ _ _   ZIP Code
7 7 7 7 7   Don't know / Not sure

9 9 9 9 9   Refused

D.14   Do you have more than one telephone number in your household? Do not include cell phones or numbers that are only used by a computer or fax machine.

01   Yes
02   No
77   Don't know / Not sure
99   Refused

D.15   How many of these telephone numbers are residential numbers?

_   Residential telephone numbers **[6 = 6 or more]**
77   Don't know / Not sure
99   Refused

D.16   Do you own or rent your home?

01   Own
02   Rent
03   Other arrangement
77   Don't know / Not sure
99   Refused

INTERVIEWER NOTE: "Other arrangement" may include group home, staying with friends or family without paying rent.

NOTE: Home is defined as the place where you live most of the time/the majority of the year.

D.17   What is your gender?

          01   Male   [Go to Q11]
          02   Female
          03   Transgender
          99   REFUSED   [Go to Q11]

D. 18   Are you currently pregnant?

          01.   Yes
          02.   No

          77.   DON'T KNOW/NOT SURE
          99.   REFUSED

Physician Access

Healthcare Access

Individual

09.   Do you have any kind of healthcare coverage, including health insurance, prepaid plans such as HMOs or government plans such as Medicare?

          01.   Yes
          02.   No   [Go to Q11]

          77.   DON'T KNOW/NOT SURE
          99.   REFUSED [Go to Q11]

10.   Is it...?

          Read 1-8. Probe for the type used most frequently if more than one is mentioned.

          01.   Employer Provided or Private
          02.   Self-purchased
          03.   Medicaid
          04.   Medicare
          05.   Medicare Supplemental

06. Tribal/Indian Health
07. Active Military
08. Retired Military

77. DON'T KNOW/NOT SURE
99. REFUSED

Skip to Question 12

11. What is the main reason for NOT having insurance?

    Do not read

    01. Employer does not provide
    02. Cannot afford to purchase
    03. Not eligible / denied
    04. Unemployed
    05. Doesn't need / is healthy
    06. Hasn't thought about it
    07. Doesn't understand / doesn't know how to obtain support
    08. Ended / ran out
    09. Other [specify]_____

    77. DON'T KNOW/NOT SURE
    99. REFUSED

12. Do you have at least one person you think of as your personal doctor or health care provider?

    01. Yes
    02. No

    77. DON'T KNOW/NOT SURE
    99. REFUSED

13. Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?

    01. Yes
    02. No

    77. DON'T KNOW/NOT SURE
    99. REFUSED

14. About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.

Read only if necessary

01.   Less than 12 months ago [Go to Q16]
02.   1 year but less than 2 years
03.   2 years but less than 5 years
04.   5 or more years ago

77.   DON'T KNOW/NOT SURE
88.   Never
99.   REFUSED

15.   What is the MAIN reason you have not had a general physical exam in the past year?

Do not read

01.   No insurance
02.   Insurance does not cover
03.   Unable to afford co-pay
04.   No doctor
05.   Doesn't like doctors/ going to doctors
06.   Couldn't get off work
07.   Cost / can't afford (non-specific)
08.   Seen for other health problems
09.   No time
10.   Not needed/healthy
11.   No motivation or reason to go
12.   No transportation
13.   Other [specify] _____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

16.   Where do you most frequently go to receive healthcare services?

Read 1-10

01.   University Clinic
02.   Federally Qualified Healthcare Center (like Morton, Community Health Connection)
03.   Indian Health Clinic
04.   Health Department
05.   Emergency Room
06.   Urgent Care Center
07.   Doctor's Office
08.   Free Clinic
09.   I don't have a place
10.   Other [specify]_____

77.	DON'T KNOW/NOT SURE
99.	REFUSED

17.	How many times a year do you receive services at this/these facilities?

Read only if necessary

01. 0-3 times a year
02. 4-6
03. 7-9
04. 10-12
05. 13-15
06. 16-20
07. 21+

General Healthcare Access

Dental Care

Individual

18.	About how long has it been since you lasted visited a dentist for a routine teeth cleaning?

Read Only if Necessary

01.	Less than 12 months ago [Go to Q20]
02.	1 year but less than 2 years
03.	2 years but less than 5 years
04.	5 or more years ago

77.	DON'T KNOW/NOT SURE
88.	Never
99.	REFUSED

19.	What is the MAIN reason you have not had a routine teeth cleaning in the past year?

Do not read.

01.	No insurance
02.	Insurance does not cover
03.	Unable to afford co-pay
04.	No doctor
05.	No time
06.	Not needed/healthy
07.	No motivation or reason to
08.	Cost / can't afford (non-specific)
09.	Fear / don't like dentist

10. No teeth
11. No transportation
12. Other [specify]_____

77. DON'T KNOW/NOT SURE
99. REFUSED

Mental Health Care

Individual

For the next set of questions, I am going to ask you about your access to mental health and social support services.

20. Have you accessed any of the following services within the past 12 months?

20a. Medical assistance for depression
01. Yes
02. No

77. DON'T KNOW/NOT SURE
99. REFUSED

20b. Medical assistance for alcohol use
01. Yes
02. No

77. DON'T KNOW/NOT SURE
99. REFUSED

20c. Medical assistance for other drug use
01. Yes
02. No

77. DON'T KNOW/NOT SURE
99. REFUSED

20d. Medical assistance for other mental health issues
01. Yes
02. No

77. DON'T KNOW/NOT SURE
99. REFUSED

20e. Social support, such as Alcoholics Anonymous, for alcohol use
01. Yes

02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

20f.   Social support for depression or other mental

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

If No to all of the above, continue to Q21, otherwise, go to Q23

21.   When was the last time you accessed mental health/social support services?

Read only if necessary

01.   Less than 12 months ago **[Go to Q24]**
02.   1 year but less than 2 years
03.   2 years but less than 5 years
04.   5 or more years ago

77.   DON'T KNOW/NOT SURE
88.   Never
99.   REFUSED

22.   What is the MAIN reason you do <u>not</u> use mental health/support services?

Do not read

01.   No Insurance
02.   Insurance does not cover
03.   Unable to afford co-pay
04.   No doctor
05.   No time
06.   Not needed/healthy
07.   Transportation
08.   Stigma
09.   Other [specify] _____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

Individual

23.   Do you use a hearing aid?

        01   Yes   [Go to Q26]
        02   No

        07   DON'T KNOW/NOT SURE
        09   REFUSED

24.   Do you have difficulty hearing?

        01.   Yes
        02.   No   [Go to Q26]

        77.   DON'T KNOW/NOT SURE
        99.   REFUSED

25.   Do you think you would benefit from a hearing aid?

        01.   Yes
        02.   No

        77.   DON'T KNOW/NOT SURE
        99.   REFUSED

Specialty Care

Individual

26.   In the past 12 months, has a provider referred you to specialty healthcare for one of the following health conditions?

26a.   Heart attack or other heart problems

        01.   Yes
        02.   No

        77.   DON'T KNOW/NOT SURE
        99.   REFUSED

26b.   Stroke

        01.   Yes
        02.   No

      77.   DON'T KNOW/NOT SURE
      99.   REFUSED

26c.   Diabetes

      01.   Yes
      02.   No

      77.   DON'T KNOW/NOT SURE
      99.   REFUSED

26d.   Asthma

      01.   Yes
      02.   No

      77.   DON'T KNOW/NOT SURE
      99.   REFUSED

26e.   Cancer

      01.   Yes
      02.   No

      77.   DON'T KNOW/NOT SURE
      99.   REFUSED

26f.   Other health issues

      01.   Yes
      02.   No

      77.   DON'T KNOW/NOT SURE
      99.   REFUSED

If No to all, go to Q29, otherwise continue to Q27.

27.   Did you have difficulty obtaining specialty services?

      01.   Yes
      02.   No   **[Go to Q29]**

      77.   DON'T KNOW/NOT SURE
      99.   REFUSED

28.   What challenges did you face?

Do not read. Mark all that apply.

01.   Time to apt too long
02.   Insurance approval
03.   Don't know where to go
04.   Couldn't get off work
05.   Limited openings/hours
06.   Language barrier
07.   Cost too much
08.   Fear
09.   Transportation
10.   Other [specify] _____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

Individual Risk Factor Assessment

29.   About how many days a week do you drink regular soda, pop, sports drinks, energy drinks, sweetened fruit drinks (such as Kool-Aid), cranberry juice, lemonade, or other drinks that contain sugar? Do not include diet soda or other diet drinks."

01.   _____
02.   None

77.   Don't know / Not sure
99.   Refused

NOTES:
1) *Snus (Swedish for snuff) is a moist smokeless tobacco, usually sold in small pouches that are placed under the lip against the gum.*
2) *Hookahs are pipes that pull tobacco over water. They are usually large and shared by multiple people at once in a hookah lounge or bar.*
3) *Electronic cigarettes or vaping devices are battery-powered, produce vapor instead of smoke, and may or may not contain nicotine. There are types of these electronic devices and many names for them, including e-cigarettes, e-hookahs, hookah pens, refillable tank systems, and rebuildable atomizers. Some common brands include NJOY, Blu, Smoking Everywhere, Starbuzz, Joyetech, Halo, and Nirvana.*

30.   Do you use...?

Read 1-8. Mark all that apply

01.   Cigarettes
02.   Cigars
03.   Smokeless Tobacco, such as chewing tobacco, snuff, dip or snus
04.   Little cigars or cigarillos, such as Black and Milds
05.   Electronic cigarette or vaping device
06.   Other tobacco product [specify] _____
07.   I do not use any tobacco products, electronic cigarettes or vaping devices

77.   DON'T KNOW/NOT SURE
99.   REFUSED

31.   Have you smoked at least 100 cigarettes in your entire life?

NOTE: 5 packs = 100 cigarettes

01.   Yes
02.   No   **[Go to Q36]**

77.   Don't know / Not sure
99.   Refused

32.   Do you now smoke cigarettes every day, some days, or not at all?

01.   Every day
02.   Some days
03.   Not at all   **[Go to Q34]**

77.   Don't know / Not sure
99.   Refused

33.   During the past 12 months, how many times have you stopped smoking for one day or longer because you were trying to quit smoking for good?

01.   _____
02.   None

77.   Don't know / Not sure
99.   Refused

34.   How long has it been since you last smoked a cigarette, even one or two puffs?

Read only if necessary
1 _ _   Days
2 _ _   Months

3_ _   Years

77.   Don't know / Not sure
99.   Refused

35.   Thinking back to the last time you quit or tried to quit smoking in the past 12 months, did you use any of the following products?

Read 1-10, select all that apply.

01.   OK Quitline
02.   Personal Support
03.   Healthcare Provider
04.   Nicotine Replacement (Gum, Patch)
05.   Cold Turkey
06.   Religion
07.   Electronic cigarette or vaping device
08.   Other tobacco product(s)
09.   Prescription pill (like Chantix, Wellbutrin)
10.   Other [specify]_____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

36.   Are you exposed to secondhand smoke…?

Read 1-4.

01.   Regularly
02.   Sometimes
03.   Rarely
04.   Never   [GO TO Q38]

77.   DON'T KNOW/NOT SURE
99.   REFUSED

37.   Where do you most frequently encounter secondhand smoke?

Read 1-9.

01.   My home
02.   Family/Friends Home
03.   Restaurants
04.   Parks
05.   Other public areas
06.   Car(s)
07.   Bar(s)

08.   Casino(s)
09.   Other [specify]_____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

38.   Do you currently use chewing tobacco, snuff, or snus every day, some days, or not at all?

NOTE: Snus (Swedish for snuff) is a moist smokeless tobacco, usually sold in small pouches that are placed under the lip against the gum.

01.   Every day
02.   Some days
03.   Not at all **[GO TO Q40]**

77.   DON'T KNOW/NOT SURE
99.   REFUSED

39.   Have you tried to quit tobacco use in the last 12 months?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

40.   During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?

1 _ _   Days per week
2 _ _   Days in past 30 days

888.   No drinks in past 30 days   [Go to Q44]
777.   Don't know / Not sure
999.   Refused

41.   One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?

NOTE: A 40 ounce beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks.

_ _   Number of drinks

77.   Don't know / Not sure
99.   Refused

42.   Considering all types of alcoholic beverages, how many times during the past 30 days did you have one or more drinks on an occasion?

    _ _   Number of times

88.   None
77.   Don't know / Not sure
99.   Refused

43.   During the past 30 days, what is the largest number of alcoholic drinks you had on any occasion?

    _ _   Number of drinks

77.   Don't know / Not sure
99.   Refused

44.   Have you ever been told by a health care or support service provider you have an alcohol dependency?

01   Yes
02   No

77   Don't Know
99   Refused

45.   Have you ever been told by a health care or support service provider you have a drug dependency?

01   Yes
02   No

77   Don't Know
99   Refused

If D8 = 1 (employed for wages full-time), 2 (employed for wages part-time) or 3 (self-employed) then continue. Otherwise, continue to Q46.

46.   When you are at work, which of the following best describes what you do? Would you say…

If respondent has multiple jobs, include all jobs.
Please read:

01.   Mostly sitting or standing
02.   Mostly walking
03.   Mostly heavy labor or physically demanding work

77.   Don't know / Not sure
99.   Refused

Please read:
We are interested in two types of physical activity - vigorous and moderate. Vigorous activities cause large increases in breathing or heart rate while moderate activities cause small increases in breathing or heart rate.

47.   Now, thinking about the moderate activities you do in a usual week, do you do moderate activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate?

01.   Yes
02.   No   [Go to Q50]

77.   Don't know / Not sure   [Go to Q50]
99.   Refused   [Go to Q50]

48.   How many days do you do these moderate activities for at least 10 minutes at a time?

_ _ Days per week
_ _ Days per month

77.   Don't know / Not sure   [Go to Q50]
99.   Refused   [Go to Q50]

49.   On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

_:_ _   Hours and minutes per day

777.   Don't know / Not sure
999.   Refused

50.   Now, thinking about the vigorous activities you do in a usual week, do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, and heavy yard work like shoveling, or anything else that causes large increases in breathing or heart rate?

01.   Yes
02.   No   [Go to Q53]

77.   Don't know / Not sure   [Go to Q53]
99.   Refused   [Go to Q53]

51. How many days per week do you do these vigorous activities for at least 10 minutes at a time?

    _ _ Days per week
    _ _ Days per month

    77. Don't know / Not sure   [Go to Q53]
    99. Refused   [Go to Q53]

52. On days when you do vigorous activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?

    _:_ _   Hours and minutes per day

    777. Don't know / Not sure
    999. Refused

53. What do you think is the most important factor that defines a Healthy Community?3

    Read only if necessary. Select all that apply.

    01. Access to healthcare and other services
    02. Access to public transportation
    03. Affordable housing
    04. Arts and cultural events
    05. Clean environment
    06. Community Involvement
    07. Good jobs/healthy economy
    08. Good schools
    09. Healthy behaviors and lifestyles
    10. Low crime/safe neighborhoods
    11. Low death/disease rates
    12. Parks and recreation
    13. Religious/Spiritual values
    14. Strong family life
    15. Tolerance for diversity
    16. Other [specify] _____
    77. DON'T KNOW/NOT SURE
    99. REFUSED

54. What do you think is the biggest health concern in your community?

    Read only if necessary
    01. Access to healthcare
    02. Access to healthy food/groceries
    03. Aging problems
    04. Alcohol/Drug Abuse
    05. Available Public Transportation

06.   Car accidents
07.   Child Abuse/Neglect
08.   Chronic Diseases
09.   Domestic Violence
10.   Homelessness
11.   Hunger
12.   Lack of education
13.   Lack of sidewalks
14.   Mental Health
15.   Poor Diet/Inactivity
16.   Poverty
17.   STDs
18.   Teen pregnancy
19.   Tobacco Use
20.   Violent Crime
21.   Other [specify]_____
77.   DON'T KNOW/NOT SURE
99.   REFUSED

55.   What do you think is the biggest safety concern in your community?

Read only if necessary

01.   Access to firearms
02.   Alcohol and drug abuse
03.   Drug production/distribution
04.   Gang violence
05.   Racism/Intolerance
06.   School violence
07.   Seat belt, safety seats and helmet use
08.   Unsafe driving
09.   Other [specify]_____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

56.   Are you satisfied with your housing situation?

01.   Yes   **[Go to Q58]**
02.   No

77.   DON'T KNOW/NOT SURE **[Go to Q58]**
99.   REFUSED   **[Go to Q58]**

57.   Why not?

Do not read. Mark all that apply.

01.   Too small/crowded
02.   Problems with others
03.   Too run down
04.   Too expensive
05.   Dangerous
06.   Too far from services
07.   Too far from town
08.   Too far from services
09.   Other [specify]_____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

58.   Are you consistently able to pay your household bills, including mortgage or rent and utility bills?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

59.   In your neighborhood or community, is it easy to buy tobacco products?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

60.   In your neighborhood or community, is it easy to buy electronic cigarettes or vaping products?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

61.   In your neighborhood or community, is it common to see people smoking in public places?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

62.   In your neighborhood, is it easy to buy fresh fruits and vegetables?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

63.   In your neighborhood, are fresh fruit and vegetables affordable?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

64.   Within the past 12 months did you ever worry whether your food would run out before you had money to buy more?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

65.   Within the past 12 months was there ever a time when you did not have enough money to buy food?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

66.   In your neighborhood or community, is it easy to find a safe place to exercise?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

67.   In your neighborhood or community, is it common to see people exercising?

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

68.   Do you have regular access to indoor recreational facilities?
(Read if necessary: such as a place with exercise equipment, jogging/walking trail or track, indoor tennis courts, etc.)

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

69.   Do you have regular access to outdoor recreational facilities?
(Read if necessary: such as a sports field,, jogging/walking trail or track, tennis courts, etc.)

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

70.   Do you ride a bicycle?

01.   Yes   [Go to Q72]
02.   No

77.   DON'T KNOW/NOT SURE [Go to Q74]
99.   REFUSED   [Go to Q74]

71.   Why not?
Do not read. Mark all that apply.

01.   Do not have a bike
02.   Don't know how to ride a bike
03.   Safety concerns
04.   Too expensive
05.   Weather
06.   Too far from services
07.   Too far from town
08.   No streets or sidewalks to ride on
09.   Other [specify]_____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

Skip to Q74

72.   Why do you bike outside?
       Do not read. Mark all that apply.

       01.   For exercise or physical fitness
       02.   For mental health or stress relief
       03.   To get to work
       04.   To get to school
       05.   To get to the store
       06.   To get to some other destination
       07.   For fun or entertainment
       08.   Other [specify]_____

       77.   DON'T KNOW/NOT SURE
       99.   REFUSED

73.   In general, how often do you bike?
       Do not read.

       01_ _ Days per week
       02_ _ Days per month

       77.   DON'T KNOW/NOT SURE
       99.   REFUSED

74.   In general, how often do you walk or run outside?

       01_ _ Days per week
       02_ _ Days per month

       88. Do not run or walk outside   [Go to Q76]

       77.   DON'T KNOW/NOT SURE [Go to Q77]
       99.   REFUSED   [Go to Q77]

75.   Why do you walk/run outside?
       Do not read. Mark all that apply.

       01. For exercise or physical fitness
       02. For mental health or stress relief
       03. To get to work
       04. To get to school
       05. To get to the store

06. To get to some other destination
07. For fun or entertainment
08. Other [specify]_____

77.   DON'T KNOW/NOT SURE
99.   REFUSED

Skip to Q77

76.   Why not?
       Do not read. Mark all that apply.

       01.   Not able / health or physical limitations

       02.   Safety concerns
       03.   Too expensive
       04.   Weather
       05.   Too far from services
       06.   Too far from town
       07.   No streets or sidewalks to ride on
       08.   Other [specify]_____

       77.   DON'T KNOW/NOT SURE
       99.   REFUSED

77.   Do you use mass transit like a bus or other transit service?

       01.   Yes **[Go to Q79]**
       02.   No

       77.   DON'T KNOW/NOT SURE
       99.   REFUSED

78.   Why not?
       Do not read. Mark all that apply.

       01.   Drives own car
       02.   Don't know how to ride a bus
       03.   Safety concerns
       04.   Too expensive
       05.   Weather
       06.   Too far from services
       07.   Too far from town
       08.   No bus stops near me
       09.   Other [specify]_____

       77.   DON'T KNOW/NOT SURE
       99.   REFUSED

79.		Would you say that you would like to engage in positive change for yourself regarding your health in the following areas?

79a.		Your overall health

    01.		Yes
    02.		No

    77.		DON'T KNOW/NOT SURE
    99.		REFUSED

79b.		Being physically active

    01.		Yes
    02.		No

    77.		DON'T KNOW/NOT SURE
    99.		REFUSED

79c.		Practicing good eating habits

    01.		Yes
    02.		No

    77.		DON'T KNOW/NOT SURE
    99.		REFUSED

79d.		Avoiding tobacco products

    01.		Yes
    02.		No

    77.		DON'T KNOW/NOT SURE
    99.		REFUSED

79e.		Losing weight and/or maintaining a healthy weight

    01.		Yes
    02.		No

    77.		DON'T KNOW/NOT SURE
    99.		REFUSED

79f.		Handling stress

    01.		Yes
    02.		No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

79g.   Having a more fit and healthy lifestyle

01.   Yes
02.   No

77.   DON'T KNOW/NOT SURE
99.   REFUSED

Closing statement

Please read:

That was my last question. Everyone's answers will be combined to help us provide information about the health practices of people in Tulsa County. Thank you very much for your time and cooperation.

Source: Courtesy of the Tulsa City County Health Department, Health Data and Evaluation Division. (2015). *Tulsa County Community Health Needs Assessment Survey Instrument.*

APPENDIX E: FOCUS GROUP DISCUSSION GUIDE

Saxum and Tulsa Health Department
Discussion Guide: April 2016

Introduction – moderator	- Thanks for coming, sharing your time Casual, snacks & drinks, bathrooms 1.5 hours - Honest and candid - All views important, want to hear from everyone - No wrong answers - Videotaping for research team to review – no commercials or endorsements
Ice Breaker	Introduce yourself; help us get to know you better.
Health & Wellness Attitudes & Perceptions Community Wide	- Notepads/write answers/leave behind. - Fill in the blank. - Tulsa's health is _____. .
	- Please list your top 5 health concerns for your community. - Probe issues listed: - Broad Tulsa concern or concentrated in certain areas of Tulsa? - Tell me more about why you listed that as your top concern. - Who is responsible? - Who can change it? - Why do you think that? - Why did you choose those words?

Personal/Family Health	• Draw a word web of all of the components, including thoughts and feelings related to you and your family's health and wellness.
Role play	• You are now the City of Tulsa's Health Director and will be serving a 50 year term: ○ Write down your top priorities for the short term and the long term.
Health & Wellness Resources	• List the community resources you are aware of to address your top health concerns.
Benefits Fill in the Blank	• The benefits of a healthy city are_____. • Probe who benefits and why
Wrap Up	• Is there anything you wanted to say or provide more information about that you haven't had the opportunity to share?

Source: Courtesy of Saxum and the Tulsa Health Department. (2016). *Tulsa Health Department Focus Group Discussion Guide.*

APPENDIX F: COMMUNITY INPUT MEETING PARTICIPANTS

Community Input Meeting Participant List: St. John Owasso

Thursday, April 28, 2016
3:00-4:15pm

Welcome and General Introduction:

David Phillips
President and Chief Operating Officer
St. John Owasso

Meeting Facilitators:

Annie Smith, MSW, MPH
Special Projects Manager, Community Health
St. John Health System

Ann Paul, MPH
Chief Strategy Officer
St. John Health System

Facilitation Assistant:

Kelly Green
Marketing Specialist
St. John Community Relations

Meeting Participants:

Gary Akin
President
Owasso Chamber of Commerce

Randy Cowling, D.Min. D.Div.
Executive Director
Owasso Community Resources

Jerry Fowler
Neighborhood Coordinator
City of Owasso

Dan Hall, RN
Chief Nursing Officer

St. John Owasso

Tony Heaberlin, APR
Chairman of the Board
Owasso Chamber of Commerce

Shelley Nachtigall, APR
Director of Development and Community Relations
Arubah Community Clinic

Gary Nunley
Executive Director
Arubah Community Clinic

Pamela Polk, MBA
City Manager
City of Collinsville

Maiuri Ranchhod, MD
Health Home Program Director
Family and Children's Services

Kaitlin Snider, MPH
Marketing Director
Tulsa Health Department

Kelly VanBuskirk, MPH
Division Chief, Health Data and Evaluation
Tulsa Health Department

Manny Voska
District Sports Director
YMCA of Greater Tulsa

Dan Yancey
City Manager
City of Skiatook

APPENDIX G: COMMUNITY INPUT MEETING AGENDA

Agenda
Community Input Meeting: St. John Owasso

Wednesday, April 28, 2016 from 3:00-4:15pm

Topic	Speaker	Time
Welcome and General Introduction	David Phillips	5 minutes
Community Health Needs Assessment (CHNA) Presentation 1. Overview and purpose 2. Summary of 2013 CHNA and Implementation Strategy Plan 3. 2016 CHNA	Annie Smith	10 minutes
Community Input 5. Hospital assessment exercise 6. Nominal group exercise to validate and prioritize health needs based on top health needs identified 7. Community perception group exercise	Annie Smith	40 minutes
Next Meeting and Next Steps	Annie Smith	5 minutes

APPENDIX H: Community Input Meeting Prioritization of Health Needs

St. John Owasso Community Input Meeting: Prioritization of Health Needs

Health Needs	1's	2's	3's	4's	5's	6's	7's
Tobacco Use	0	1	0	0	2	2	4
Access to Healthcare	0	2	1	1	4	0	2
Alcohol/Drug Abuse	0	1	0	3	2	4	0
Chronic Disease	4	2	1	2	0	0	0
Poor Diet/Inactivity	5	3	1	1	0	0	0
Mental Health	0	1	6	0	1	1	0
Aging Problems	0	0	1	3	1	3	2

Health Needs	x7pts	x6pts	x5pts	x4pts	x3pts	x2pts	x1pts	Total Points
Tobacco Use	0	6	0	0	6	4	4	20
Access to Healthcare	0	12	5	4	12	0	2	35
Alcohol/Drug Abuse	0	6	0	12	6	8	0	32
Chronic Disease	28	12	5	8	0	0	0	53
Poor Diet/Inactivity	35	18	5	4	0	0	0	62
Mental Health	0	6	30	0	3	2	0	41
Aging Problems	0	0	5	12	3	6	2	28

*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 need/number category.

APPENDIX I: 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 J: PATHWAYS TO HEALTH COMMUNITY PARTNERS

- Accessible Transportation Coalition of Tulsa
- Alzheimer's Association
- Bicycle Pedestrian Advisory Committee
- Broken Arrow Public Schools
- Camp Fire Green Country
- City of Owasso
- City of Tulsa
- Community Action Project
- Community Service Council
- Degrees of Geriatrics Consortium
- EMSA
- George Kaiser Family Foundation
- Hillcrest Health System
- INCOG
- INCOG Area Agency on Aging
- Indian Health Care Resource Center
- Jenks Public School District
- LIFE Senior Services
- Mental Health Association in Tulsa
- Metropolitan Tulsa Urban League
- Morton Comprehensive Health Services
- MyHealth Access Network
- Oklahoma Healthy Aging Initiative
- Oklahoma Turning Point Council
- Operation Aware of Oklahoma
- OU Physicians
- OU-Tulsa
- Saint Francis Health System
- Saint Francis Health Zone
- Southwood Landscape & Nursery
- St. John Health System
- Tulsa Area Emergency Management Agency
- Tulsa Health Department
- Tulsa Area Community School's Initiative
- Tulsa Area Wellness Forum
- Tulsa City-County Library
- Tulsa County Commissioner's Office
- Tulsa County OSU Extension Services
- Tulsa County Wellness Partnership
- Tulsa Food Security Council
- Tulsa Public Schools
- YMCA of Greater Tulsa

APPENDIX K: COMMUNITY CAPACITY ASSESSMENT

Poor Diet/Inactivity
Pathways to Health Alliance Groups (Healthy Choices, Healthy Places, Healthy Worksites, Healthy Kids, and Healthy Aging)
Tulsa-City County Health Department
LIFE Senior Services
Oklahoma State University-Tulsa Family Health and Nutrition Clinic
Area Schools (Tulsa, Owasso, Collinsville, Sperry, Skiatook, Broken Arrow, Jenks, etc)
Area Farmers' Markets
Meals on Wheels
Tulsa County Wellness Partnership
Family Health Coalition
St. John Health System Worksite Wellness and Smart Health Initiatives
Oklahoma State University Extension Service
Global Gardens
YWCA
YMCA
Area Senior Centers
Oklahoma Academy of Nutrition and Dietetics
Owasso Community Resources
Tulsa Food Security Council
R&G Family Grocers
Indian Health Care Resource Center of Tulsa
Broken Arrow Seniors, Inc.
Bicycle Pedestrian Advisory Committee

Tulsa Area Wellness Forum

Food Bank of Eastern Oklahoma

INCOG: Area Agency on Aging (nutrition assistance, promotion of physical activity)

St. John Healthy Lifestyles/Health Club Services

Morton Comprehensive Health Services, Inc. and Community Health Center System

Skiatook Emergency Assistance Center (SEAC) and Skiatook Resource Center (SRC)

Arms around BA

Cherokee Health- Healthy Nation Program

Indian Health Care Resource Center of Tulsa

VA Health Services

Tulsa Dream Center

Visiting Nurses Association

Bixby Community Outreach Center

Catholic Charities

OKDHS-SNAP and WIC

Local parks and recreational areas

Walking/Biking Trails

Chronic Disease

Area Hospital/Health System Inpatient and Outpatient Services

American Heart Association

American Stroke Association

American Cancer Society

American Lung Association

Oklahoma Health Initiatives, Medicare Shared Savings Program ACO (readmission/admission reduction measures, chronic disease management initiatives, transition of care/care coordination, preventive health measures)

Comprehensive Primary Care Initiative (readmission reduction measure, chronic disease management initiatives, medical home model, transition of care/care coordination, preventive health measures)

Cancer Treatment Centers of America- Tulsa

Tulsa Cancer Institute/St. John Joint Venture

My Health (Health Information Exchange; data aids in transition of care/care coordination)

St. John Health System/MD Anderson Cancer Care Partnership

St. John Medical Center/St. John Clinic Heart Failure Initiative

Healthy Hearts for Oklahoma Initiative

Area Home Health Agencies

Morton Comprehensive Health Services, Inc. and Community Health Center System

Cherokee Nation Health

VA Health Services

Arms around BA

Tulsa-City County Health Department

Arubah Community Clinic

Broken Arrow Neighbors

Indian Health Care Resource Center of Tulsa

Neighbor for Neighbor

Visiting Nurses Association

Koweta Indian Health Facility

American Diabetes Association

South Tulsa Community House

Alcohol/Drug Abuse

Family and Children's Services

Tulsa Center for Behavioral Health

Counseling and Recovery Services of Oklahoma

12 &12

Resonance Center for Women

Tulsa Boys Home

Center for Therapeutic Interventions

Community Service Council of

Tulsa-Tulsa Courts Program

CREOKS Behavioral Health Services

Hillcrest Healthcare System

HOW Foundation

Human Skills and Resources

Indian Health Care Resource Center of Tulsa

Laureate Psychiatric Clinic and Hospital

St. John Behavioral Health

Veterans Affairs Behavioral Health Clinic

Oxford House

Parkside Psychiatric Hospital and Clinic

Restoring Lives

Tulsa Women and Children's Center

Shadow Mountain Behavioral Health System

AA/NA Support Groups

Cherokee Nation Health

St. John Medical Center-Behavioral Assessment Team

Area Hospitals-Medical Detox Services

St. John Medical Center-Psychiatrist

Celebrate Recovery at local churches

Access to Healthcare

Medical Access Program, St. John Health System

Good Samaritan Health Services

Morton Comprehensive Health Services, Inc. and Community Health Center system (primary care, health services, social supports, enrollment assistance, and free, lift-equipped transportation programs)

Claim Your Coverage Coalition

Tulsa-City County Health Department

Free Clinic Coalition

Charity Care/Financial Assistance, St. John Health System

Medical Access Clinic, St. John Health System

Catholic Charities

Community Health Connection (clinics, health services, Health Insurance Marketplace enrollment assistance)

Day Center for the Homeless

Tulsa Dream Center

Arubah Community Clinic

Neighbor for Neighbor

Neighbors along the Line

OSU Center for Health Sciences- Tulsa (health services, Health Insurance Marketplace enrollment assistance)

Planned Parenthood of the Heartland

Tulsa County Social Services

University of Oklahoma-Tulsa

St. Francis Health System

Indian Health Care Resource Center of Tulsa (Clinic, Health Services, Transportation)

Family Medical Care, St. John Health System

Cherokee Nation Health

Tulsa Healthcare Project

LIFE Senior Services (PACE, SHIP, transportation, health services, insurance enrollment education and assistance)

Hillcrest Healthcare System

Oklahoma Project Woman

Owasso Community Resources

St. John Medical Center/Morton Comprehensive Services Transportation Assistance Program

St. John Health System Telemedicine Services

LIFT program

SoonerRide

VA transportation services

St. John Health System-Health Insurance Marketplace Outreach and Enrollment Assistance

Broken Arrow Neighbors

Tulsa County Medical Society

Arms around BA

Dispensary of Hope-St. John Health System

VA Health Services

American Cancer Society Road to Recovery Program (transportation to treatment and cancer related healthcare services), Hotel Partners Program (designed to provide free or low-cost accommodations for

patients undergoing treatment on an outpatient basis), and prescription assistance
Pathways to Health (Access to Care Alliance Group)
Area Hospital/Health System Inpatient and Outpatient Services
St. John Clinic-St. John Health System
Visiting Nurses Association
Koweta Indian Health Facility
Xavier Medical Clinic
Take Charge!
Western Neighbors (prescription assistance)
Ministry Center at Allan Davis Building (prescription assistance)
Leukemia and Lymphoma Society (prescription assistance)
RX for Oklahoma
GenScripts
OKDHS
South Tulsa Community House
Tulsa County Retired Seniors
Volunteer Program (RSVP) - medical transportation for 55+
Pelivan Transit

Tobacco Use
American Lung Association
TSET
Oklahoma Tobacco Helpline
Tobacco Free Coalition for Tulsa County
Tulsa-City County Health Department
American Cancer Society
Area Health System/Hospital Smoking Cessation Screenings and Counseling
Morton Comprehensive Health Services, Inc. and Community Health Center system
Cherokee Health- Healthy Nation Program
Indian Health Care Resource Center of Tulsa
VA Health Services

Mental Health
Family and Children's Services
Mental Health Association Oklahoma
Tulsa Center for Behavioral Health
University of Oklahoma-Tulsa
Counseling and Recovery Services of Oklahoma
Shadow Mountain Behavioral Health System
Red Rock Behavioral Health Services
Parkside Psychiatric Hospital and Clinic
Indian Health Care Resource Center of Tulsa
Community Health Connection
Laureate Psychiatric Clinic and Hospital
OSU Center for Health Sciences-Tulsa
St. John Behavioral Health
Veterans Affairs Behavioral Health Clinic
CREOKS Behavioral Health Services
Center for Therapeutic Interventions
St. John Clinic Primary Care/Behavioral Health Integration
Depression screening initiatives: Comprehensive Primary Care Initiative and Oklahoma Health Initiatives (Medicare Shared Savings Program ACO)
Behavioral Health Task Force: Oklahoma Health Initiatives (Medicare Shared Savings Program ACO)
Morton Comprehensive Health Services, Inc. and Community Health Center system
Cherokee Nation Health
St. John Medical Center-Psychiatrist
St. John Medical Center-Behavioral Assessment Team
DaySpring Behavioral Health
COPES
Area PACT Teams
NAMI-Tulsa

Lack of Education (Includes Health Literacy Education)
Tulsa-City County Health Department
Area Schools (Tulsa, Owasso, Collinsville, Sperry, Skiatook, Broken Arrow, Jenks, etc)
Reach Out and Read Program
Tulsa City-County Library
Health education provided during inpatient and outpatient services at area hospitals and clinics
Tulsa Healthcare Project
Local Universities and Colleges (OU, OSU, ORU, NSU, TCC, etc)
University of Oklahoma-Tulsa Health Library
Family Health Coalition
Morton Comprehensive Health Services, Inc. and Community Health Center system
Community Health Connection
Medical Access Program, St. John Health System
Broken Arrow Neighbors
Arubah Community Clinic

2016 Community Health Needs Assessment, St. John Owasso

Arms around BA
St. John Clinic-St. John Health System
Area Hospital/Health System Inpatient and Outpatient Services
Indian Health Care Resource Center of Tulsa
Tulsa County Medical Society
Visiting Nurses Association
Koweta Indian Health Facility
South Tulsa Community House
Reading Partners

Aging Problems

LIFE Senior Services
Meals on Wheels
Area Senior Centers
Broken Arrow Seniors, Inc.
INCOG: Area Agency on Aging
Morton Comprehensive Health Services, Inc. and Community Health Center system
Arms around BA
Oklahoma Health Initiatives, Medicare Shared Savings Program ACO (readmission/admission reduction measures, chronic disease management initiatives, transition of care/care coordination, preventive health measures)
Area Home Health Agencies
Cherokee Nation Health-ElderCare
VA Health Services
Visiting Nurses Association
AARP Oklahoma
Alzheimer's Association
Retired Seniors Volunteer Program (RSVP)

APPENDIX L: COMMUNITY RESOURCES

Number of Agencies Providing Basic Needs and Services in Tulsa County

Types of Needs/Services	Count of Agencies
Food Pantries	43
General Clothing Provision	38
Congregate Meals/Nutrition Sites	21
Thrift Shops	18
Utility Assistance	17
Diapers	14
Formula/Baby Food	12
Transitional Housing/Shelter	11
Household Goods	10
Supportive Housing	9
Utility Service Providers	8
Low Income/Subsidized Rental Housing	7
Transportation Organizations	7
Rent Payment Assistance	5
Transitional Housing/Shelter * Men	5
Crisis Shelter * Youth	4
Transportation Expense Assistance	4
Home Delivered Meals	4
Homeless Drop In Centers	4
Homeless Shelter	4
Home Improvement/Accessibility	4
Transportation Organizations * Veterans	4
Housing Search and Information	4
Paratransit Programs (Disabled Transportation) * Veterans	4
Crisis Shelter * Children	3
General Counseling Services * Domestic Violence Issues	3
Transitional Housing/Shelter * Women	3
Transitional Housing/Shelter * Veterans	2
Supportive Housing * Developmental Disabilities	2
Crisis Shelter * Domestic Violence Issues	2
Subsidized Home Purchase	2
Crisis Shelter * Victims of Human Trafficking	2
Hairdressing/Nail Care	2
Personal/Grooming Supplies	2
Housing Counseling	2
Transportation Organizations * Native American Community	1
Computer Distribution Programs	1
Child Custody/Visitation Assistance * Domestic Violence Issues	1
Adult Education * Domestic Violence Issues	1
Congregate Meals/Nutrition Sites * Native American Community	1
Food Pantries * Native American Community	1
Utility Assistance * Multiple Sclerosis	1
Housing Search and Information * Mental Health Issues	1
Supportive Housing * Veterans	1
Long Distance Transportation	1
Transitional Housing/Shelter * Offender/Ex-Offender Issues	1
Food Production Support Services	1

Home Improvement/Accessibility * Physical Disabilities	1
Paratransit Programs (Disabled Transportation)	1
Travelers Assistance	1
Food Vouchers	1
Congregate Meals/Nutrition Sites * Native American Community * Older Adults	1
Crisis Intervention * Domestic Violence Issues	1
Supportive Housing * Mental Health Issues	1
Protective/Restraining Orders * Domestic Violence Issues	1
Grocery Delivery	1
Public Awareness/Education * Domestic Violence Issues	1
Advocacy * Domestic Violence Issues	1
Child and Adult Care Food Programs	1
Transitional Housing/Shelter * Substance Abuse Issues	1
Rent Payment Assistance * Multiple Sclerosis	1
Home Improvement/Accessibility * Older Adults	1
Rent Payment Assistance * Veterans	1
Divorce Assistance * Domestic Violence Issues	1
School Clothing	1
Food Banks/Food Distribution Warehouses	1
General Clothing Provision * Infants/Toddlers	1
Food Cooperatives	1
Summer Food Service Programs	1
Utility Assistance * Veterans	1
General Clothing Provision * Women	1
Supportive Housing * Brain Injuries	1
Housing Counseling * Adoption/Foster Care Issues	1
Grand Total	**324**

Source: 211 Oklahoma Helpline (2016). *Tulsa County Resources.* *Additional analysis and data query performed courtesy of My Health Access Network.