# Tulsa County
# Health Profile
# 2014

**THD**

**TULSA HEALTH**

Department

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# Health Profile
# 2014

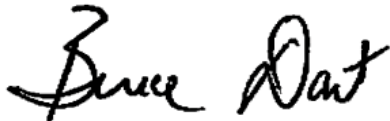# Board of Health

# Director's Message

I am pleased to present the 2014 Tulsa County Health Profile. The Tulsa Health Department collects and analyzes data to inform the public and health professionals about the health status of Tulsa County residents over time. The goal of the County Health Profile is to provide an overview of important health indicators that impact the population's health, drive policy, program planning and implementation, and encourage discussions within the community about health improvement strategies.

This document is developed as an efficient and meaningful way to track causes of morbidity and mortality among residents of Tulsa County. Many factors contribute to health status, including behavioral factors such as tobacco use, diet, physical activity, alcohol and drug use, and sexual behavior.

The County Health Profile, coupled with the Community Health Needs Assessment and the Community Health Improvement Plan, promotes collaborative efforts in order to improve healthy behaviors and health outcomes. When information is made available to the community, it helps clarify or bring into perspective what can be done in response to trends and indicators that adversely affect our health.

The availability of local level data continues to be important for the work of our organization. It is invaluable for community priority-setting, grant writing, sustaining existing programs, and establishing new initiatives to address specific health concerns. The collective community response to this profile will further enhance our efforts to understand opportunities, resources, trends, and other factors that may impact the public's health.

Sincerely,

Bruce Dart, Ph.D.
Health Director
Tulsa Health Department

# Methodology

## ZIP Code Level

Many of the health indicators in this assessment are defined at the ZIP code level and are presented for all the ZIP codes that are completely or partially within Tulsa County. This more visual approach to data presentation is intended to promote easier identification of health concerns for specific areas of the county and therefore assist in targeting programs, resources and necessary interventions where they are most needed.

## Rates

This profile presents most of the information in the form of *rates*. Rates allow for easier comparison to other populations and geographic areas. Rates are developed by taking the total number of events and dividing it by the total population (or population at risk of the event) in the same specific area. Rates in this profile are computed per 1,000 or 100,000 population. This report contains both crude and age-adjusted death rates (see glossary for definitions).

In general, areas of larger population can be expected to support more reliable rate calculations. Note that ZIP codes 74050, 74103, 74116, 74117, 74119, 74120, 74130 and 74131 all have populations less than 5,000. Caution should be exercised in interpreting data for these less populated areas as they can potentially result in misleading comparisons with other ZIP codes. In addition, the calculation of rates is not recommended when there are less than five indicator births or deaths due to confidentiality and reliability concerns.

## Data Breaks

When viewing a table or map, the data are grouped for presentation by natural breaks in the data sets. *Natural breaks* is also the name of the default computer generated method of classifying data in the geographic information system software, ArcGIS, which was used to produce the maps presented in this report. This method of classification was developed by the cartographer George Jenks and creates classes according to clusters and gaps in the data. Use of natural breaks supports a user-friendly visual representation of the geographic distribution of risk factors and outcomes of health data in Tulsa County.

## Descriptive Statistics

This profile uses graphs, charts, maps, and narrative to statistically describe the factors that affect the health of the Tulsa County community. These statistics show patterns and general trends, without any effort to test hypotheses. The information presented includes both risk factors and health outcomes. Geographic and demographic areas of public health concern can be identified by evaluating data presented for each of the Tulsa County ZIP codes.

## Time Period

Data throughout the profile are generally included for the years 2008 – 2010, depending on the availability of data for the specific topic. Therefore, most data are average annual rates over a three year period. All ZIP code level population data is an average of 2010 census data and 2008 – 2009 incremental estimates. Census data from years 2000 and 2010 were considered while calculating 2008 and 2009 incremental estimates.

## Comparative Data for Oklahoma and U.S.

Where possible, this profile includes comparative data for Tulsa County, Oklahoma, and the United States. Additionally, Healthy People 2020 objectives were used as indicators for areas of improvement, where applicable. Healthy People provides science-based, 10-year national objectives for improving the health of all Americans.

## Overall Zip Code Rating

This profile looks at numerous risk/outcome measures that give an indication of the health status of the community. The profile records the data by ZIP codes and each measure uses the same exact ZIP codes. ZIP codes are grouped into five data ranges using natural breaks in the overall data for each measure (see Data Breaks) and shaded accordingly in the presentation maps. Data groupings are assigned values of 1 through 5 with "1" (lightest shading) being the most favorable and "5" (darkest shading) indicating areas of greatest potential concern from a public health perspective. An average ZIP code rating is also computed that collapses the individual risk/outcome measures into a single summary statistic for each ZIP code and the tables are sorted according to this average rating.

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# Table of Contents

# Demographics

# Total Population

The total population is presented simply as the number of individuals living in each ZIP code, according to the 2010 U.S. Census.

## 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 a population of 603,403 individuals in 2010. Overall, the female population (51.2 percent) slightly exceeded the male population (48.8 percent). At lower age ranges, males outnumbered females; however, the opposite was true in older age groups. In fact, females comprised almost two-thirds of the population age 65 and older. Tulsa County's median age (35.2 years) was slightly younger than the state's median age (36.2 years) and the median age of the nation (37.2 years).

Whites comprised 69.2 percent of the population and blacks made up the largest minority race at 10.7 percent. Hispanics comprised 11.0 percent of the population in 2010, although that is likely an underestimation because of potential undercounting of undocumented Hispanic immigrants. 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.

The ZIP codes with the highest population were 74012 in Broken Arrow and 74133 in south Tulsa. Together, these ZIP codes comprised 16.7 percent of the Tulsa County population.

Data Source:
U.S. Census Bureau: 2010 Census.

**Population Distribution by Age Group**
**Tulsa County | 2010**
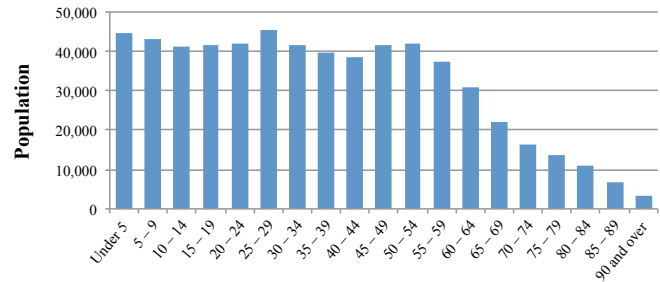
**Total Population by Race**
**Tulsa County | 2010**

Black 10.7%

American Indian and Alaska Native, 6.0%

Asian, 2.3%

White, 69.2%

Native Hawaiian and Other Pacific Islander, 0.1%

Some Other Race, 5.8%

Two or More Races, 5.8%

Hispanic 11%

**Population by Age and Gender**
**Tulsa County | 2010**

■ Male (49%) ■ Female (51%)

# Total Population

**Total Population**

| | |
|---|---|
| | 87 – 5,118 |
| | 5,119 – 13,928 |
| | 13,929 – 22,941 |
| | 22,942 – 38,680 |
| | 38,681 – 57,526 |

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# Population Change

This demographic indicator is presented as the percentage change in the population within each ZIP code from the 2000 Census to the 2010 Census. 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?*

While many cities in Tulsa County experienced significant growth from 2000 to 2010, the city of Tulsa slightly decreased in population by 0.3 percent. Jenks was the fastest growing city, with a 77.1 percent increase in population from 2000 to 2010.

Although Tulsa County's white population decreased by 1.2 percent, minority and ethnic populations grew at substantial rates. The most striking growth occurred in the Hispanic population, which is estimated to have increased by 98.1 percent from 2000 – 2010. These are likely underestimates of the true growth because of the potential undercounting of undocumented immigrants. Additionally, the 2010 U.S. Census more clearly defined Hispanic ethnicity as not being a race.

The following map outlines how the population has decreased in central portions of Tulsa County while the largest increases in population occurred in northern and southern suburbs.

Data Source:
U.S. Census Bureau: 2010 Census.

**Percentage Population Change by Selected Cities
2000 – 2010**

| City | Percentage Change |
|------|------|
| Tulsa | -0.3% |
| Sperry | 22.9% |
| Skiatook | 37.1% |
| Sand Springs | 8.3% |
| Owasso | 56.3% |
| Jenks | 77.1% |
| Glenpool | 33.1% |
| Collinsville | 37.5% |
| Broken Arrow | 32.0% |
| Bixby | 56.6% |
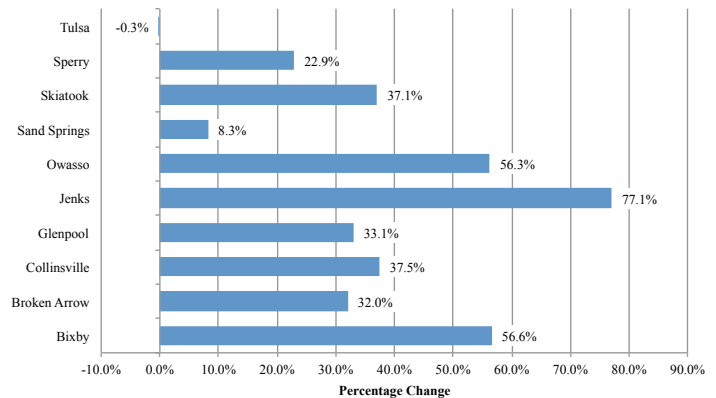
**Percentage Population Change by Race/Ethnicity
Tulsa County | 2000 – 2010**

| Race/Ethnicity | Percentage Change |
|------|------|
| White | -1.2% |
| Black | 5.1% |
| American Indian/Alaska Native | 24.1% |
| Asian | 54.2% |
| Native Hawaiian/Other PI | 68.2% |
| Population of two races | 41.5% |
| Hispanic | 98.1% |
| Not Hispanic or Latino | 1.3% |

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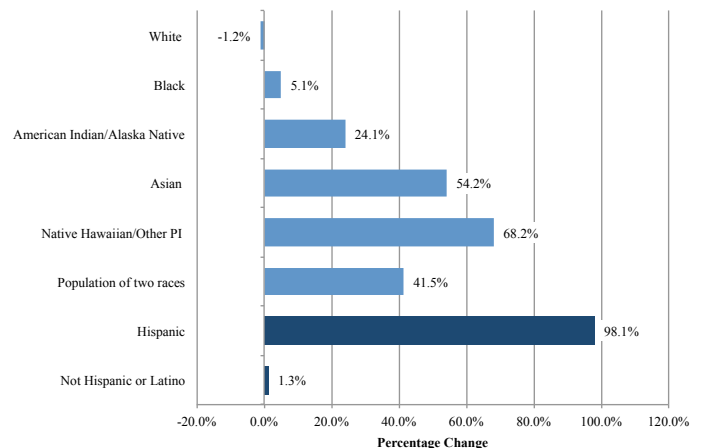
# Population Change

**Percentage Change in Population**

- -26.3% to -21.3%
- -21.2% to -1.4%
- -1.3% to 12.1%
- 12.2% to 30.1%
- 30.2% to 60.8%
- Rate not calculated



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# Black Population

The distribution of the black population is expressed as the percentage of the total population within each ZIP code who reported being black, based on the 2010 U.S. Census.

## Why Is This Indicator Important?

There are many health inequalities that affect blacks and other minorities in the United States. Some apparent disparities include lower life expectancies and higher death and infant mortality rates, as well as other measures of health status, risk conditions, and behaviors. Factors contributing to poor health outcomes among blacks include socioeconomic factors, discrimination, cultural barriers, and lack of access to health care.

## How Are We Doing?

Blacks comprised the largest minority race in Tulsa County with a population of 64,779 in 2010. Data from 2010 indicates that blacks comprised 10.7 percent of Tulsa County's population, compared with 7.4 percent of Oklahoma and 12.6 percent of the nation.

Overall, 47.3 percent of blacks were male and 52.8 percent were female. Males slightly outnumbered females in the younger age groups, but this trend began to reverse after the teenage years. Females comprised 62 percent of the black population age 65 and older.

The black population was shown to reside primarily in the city of Tulsa, with the highest percentages in ZIP codes 74106 and 74126.

Data Source:
Minority Health: Black or African American Populations. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

U.S. Census Bureau: 2010 Census.

**Black Population by Age and Gender
Tulsa County | 2010**
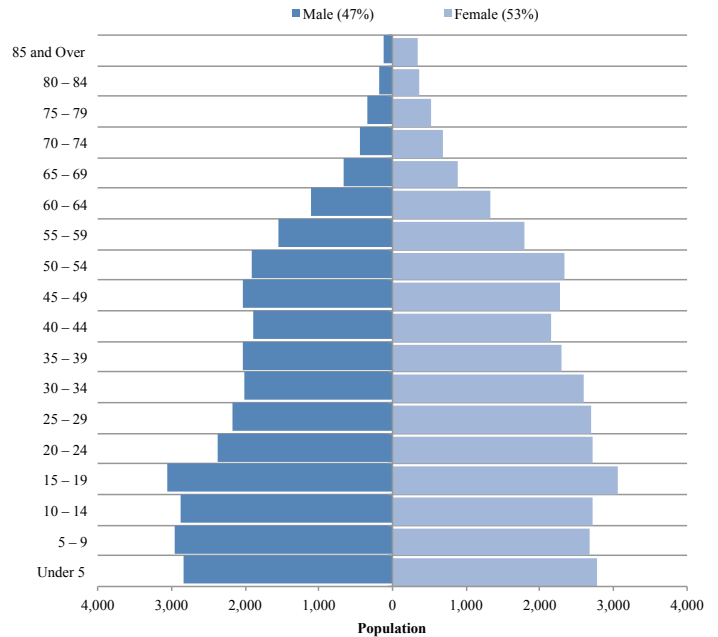


**Percentage of Black Population by
Region | 2010**

# Black Population

**Percentage of Black Population**

- 0.5% – 4.0%
- 4.1% – 9.7%
- 9.8% – 16.8%
- 16.9% – 41.2%
- 41.3% – 74.4%

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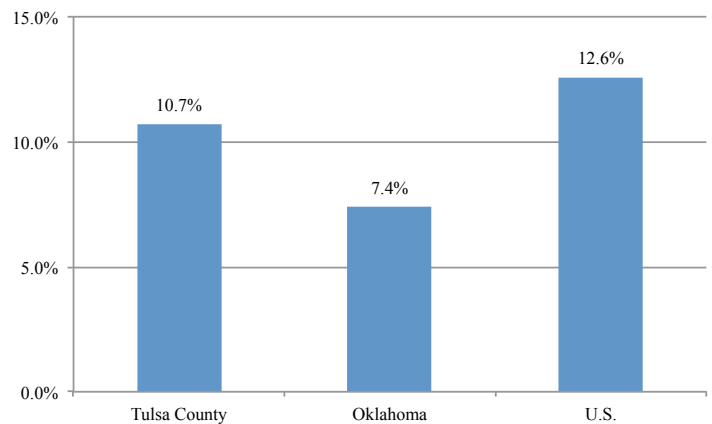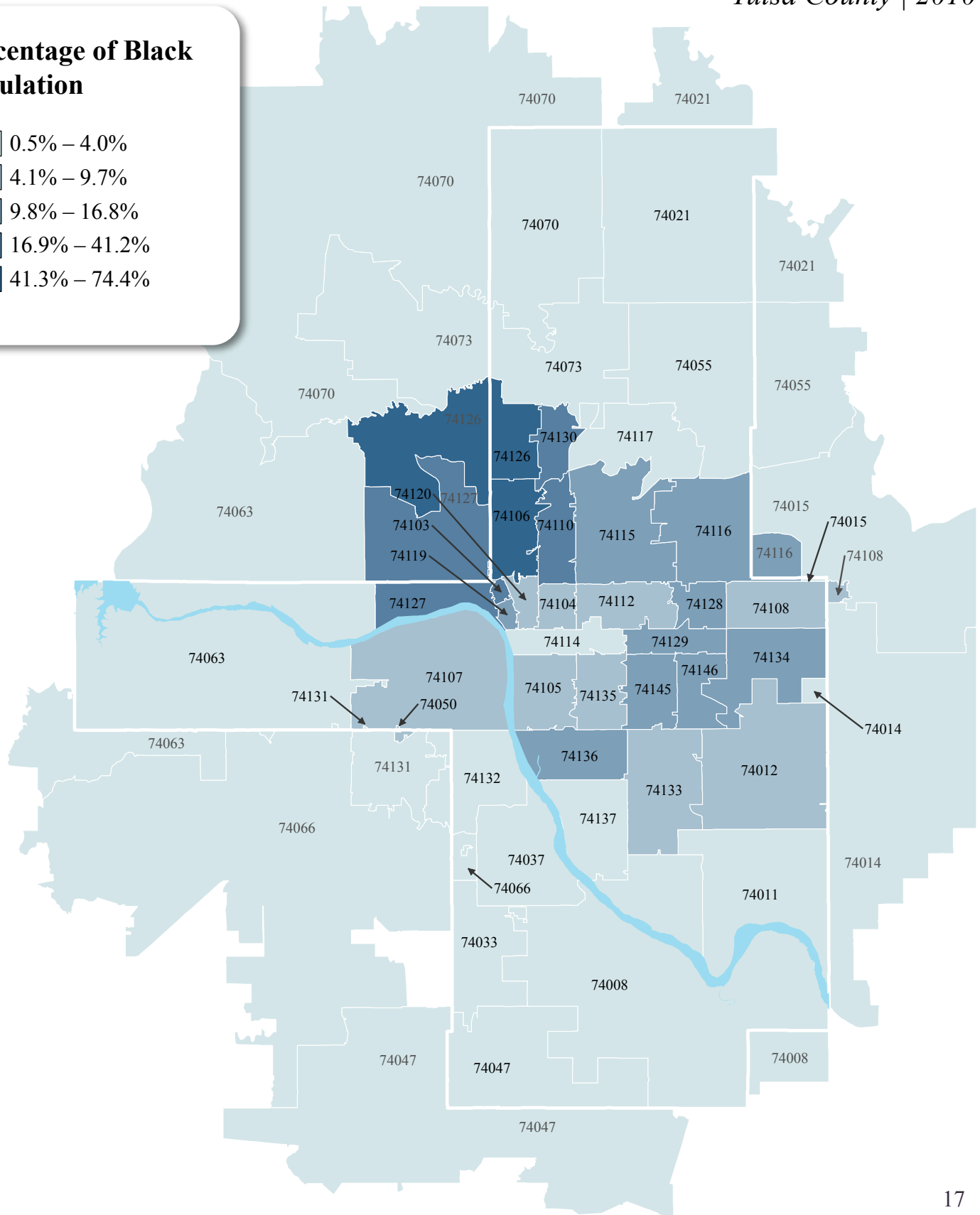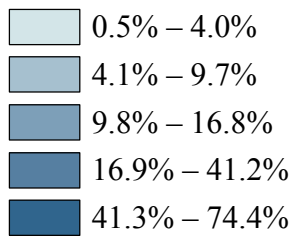
# Hispanic Population

The distribution of the Hispanic population in Tulsa County is expressed as a percentage of the total population within each ZIP code who reported being Hispanic or Latino, based on the 2010 U.S. Census.

## Why Is This Indicator Important?

Based on U.S. Census data, Hispanics are the largest and fastest growing ethnic group in Tulsa County. However, there are many barriers which can lead to inequalities in health care and preventive services among this group, such as education and income. Health disparities among Hispanics include high rates of asthma, HIV/AIDS, and obesity. Hispanics also have a disproportionately higher uninsured rate compared to non-Hispanics.

## How Are We Doing?

According to the 2010 Census, the Hispanic population numbered 66,582 in Tulsa County. However, due to the potential undercounting of undocumented Hispanic immigrants, the number was likely much higher. Overall, 53.4 percent were male and 46.6 percent were female. Hispanic males outnumbered females in all age groups below age 60.

In 2010, Hispanics comprised 11.0 percent of the Tulsa County population, which was higher than the state value of 8.9 percent, but lower than the U.S. value of 16.3 percent. Again, these were likely underestimates of the true size of the population.

The Tulsa County ZIP codes with the highest percentages of Hispanics were concentrated in north and east Tulsa.

Data Source:
Minority Health: Hispanic or Latino Populations. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

U.S. Census Bureau: 2010 Census.

**Hispanic Population by Age and Gender
Tulsa County | 2010**
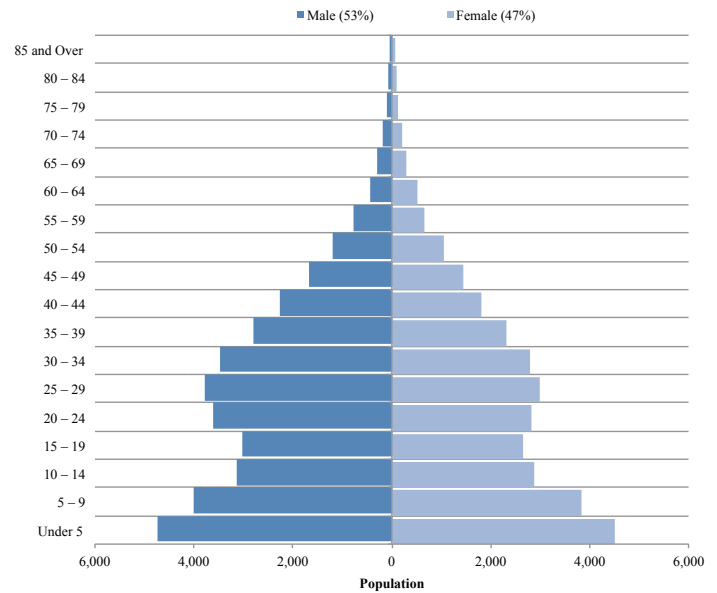


**Percentage of Hispanic Population by Region | 2010**
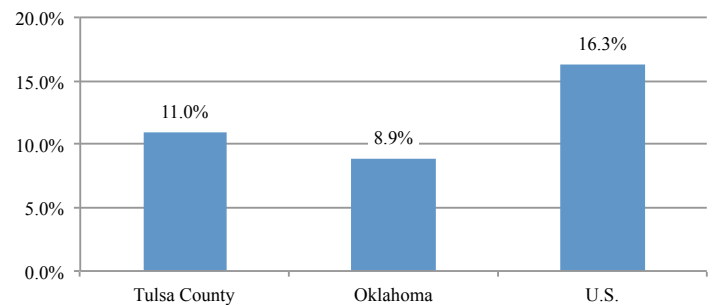
# Hispanic Population

**Percentage of Hispanic Population**

- 2.6% – 4.1%
- 4.2% – 6.2%
- 6.3% – 9.9%
- 10.0% – 15.5%
- 15.6% – 38.3%

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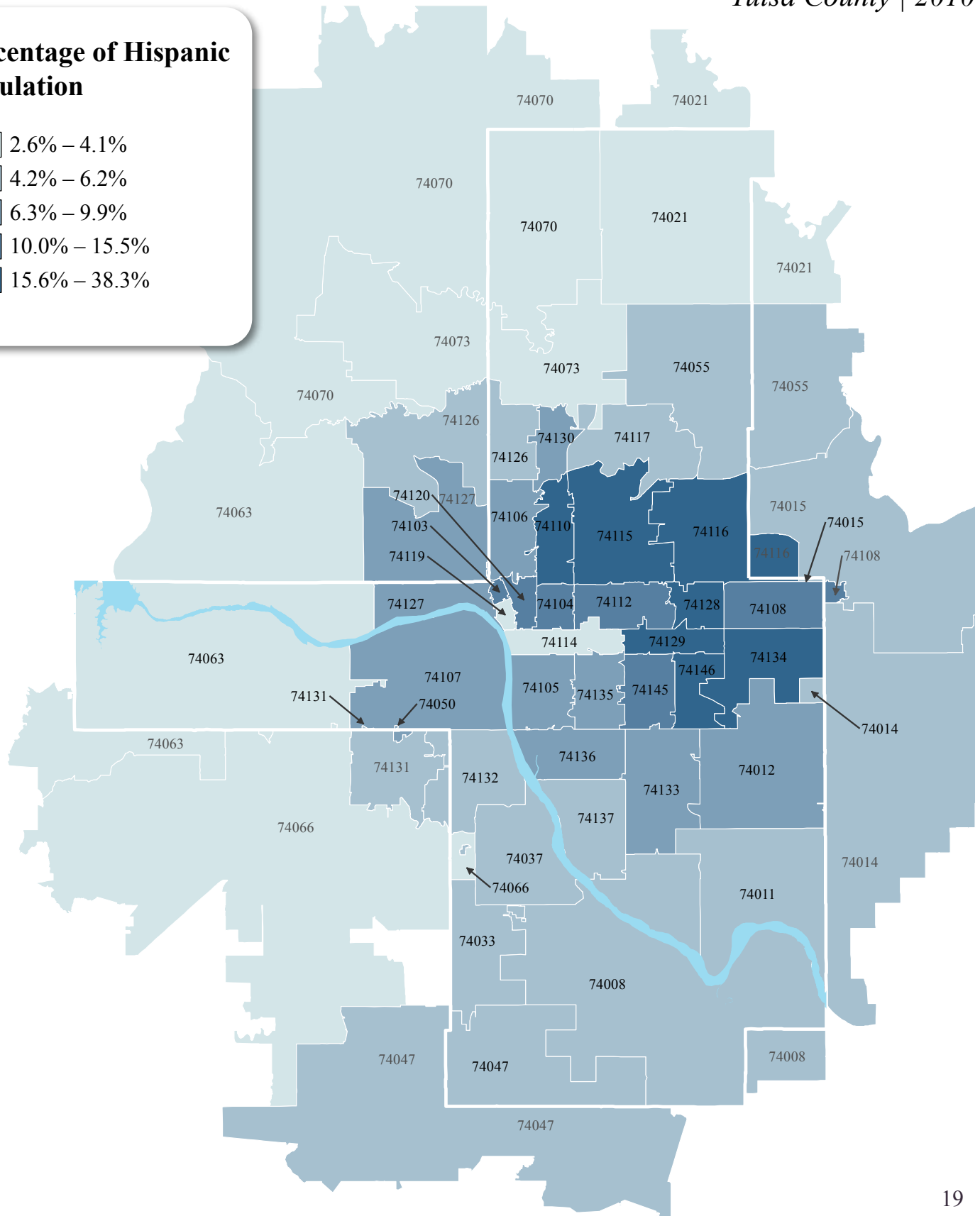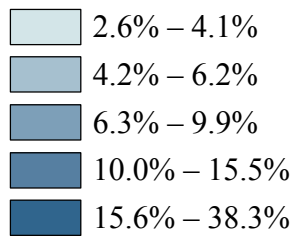
# Young Children Ages 0 – 4

This indicator is presented as the percentage of the total population ages 0 to 4 years, based on the 2010 Census.

## *Why Is This Indicator Important?*

Very young children are especially vulnerable to unintentional injuries, lead poisoning, infectious diseases, and abuse and neglect, which are conditions that are largely preventable and open to public health interventions.

## *How Are We Doing?*

In 2010, there were approximately 44,711 children ages 0 to 4 years living in Tulsa County. The proportion of very young children was highest among American Indians/Alaska Natives and blacks (9.0 percent and 8.7 percent, respectively). Children in this age group made up almost 14 percent of the Hispanic population.

In 2010, Tulsa County had a higher proportion of very young children (7.4 percent) than Oklahoma (7.0 percent) and the nation (6.5 percent).

North and east Tulsa tended to have the highest percentages of children ages 0 to 4 years. The ZIP codes with the lowest percentages were primarily located in downtown Tulsa (74103, 74119, and 74117).

Data Source:
Parent Information: Infants and Toddlers. Centers for Disease Control and Prevention. Retrieved from:
http://www.cdc.gov/parents/infants/index.html.

U.S. Census Bureau: 2010 Census.

**Percentage of Population Ages 0 – 4 by Race/Ethnicity**
**Tulsa County | 2010**

- White: 5.9%
- Black: 8.7%
- AI /AN: 9.0%
- Asian: 7.9%
- Hispanic: 13.9%
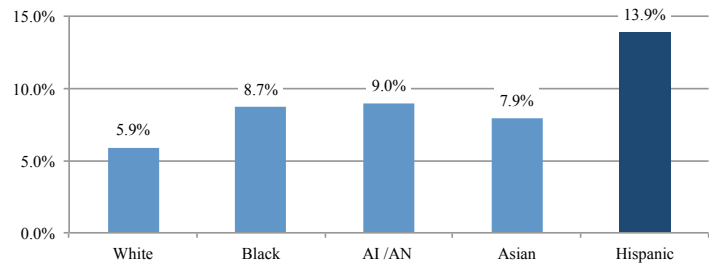
Graph shows value within each individual category (in this case, within racial or ethnic group); percentages will not add up to 100%. For example: Within the total white population of Tulsa County, 5.9 percent of these individuals are ages 0 – 4. Unless otherwise noted, all further column graphs follow this guideline.

**Percentage of Population Ages 0 – 4 by Region | 2010**

- Tulsa County: 7.4%
- Oklahoma: 7.0%
- U.S.: 6.5%

# Young Children Ages 0 – 4

**Percentage of Population Ages 0 – 4**

- 0.8% – 1.9%
- 2.0% – 6.3%
- 6.4% – 7.4%
- 7.5% – 9.3%
- 9.4% – 10.5%

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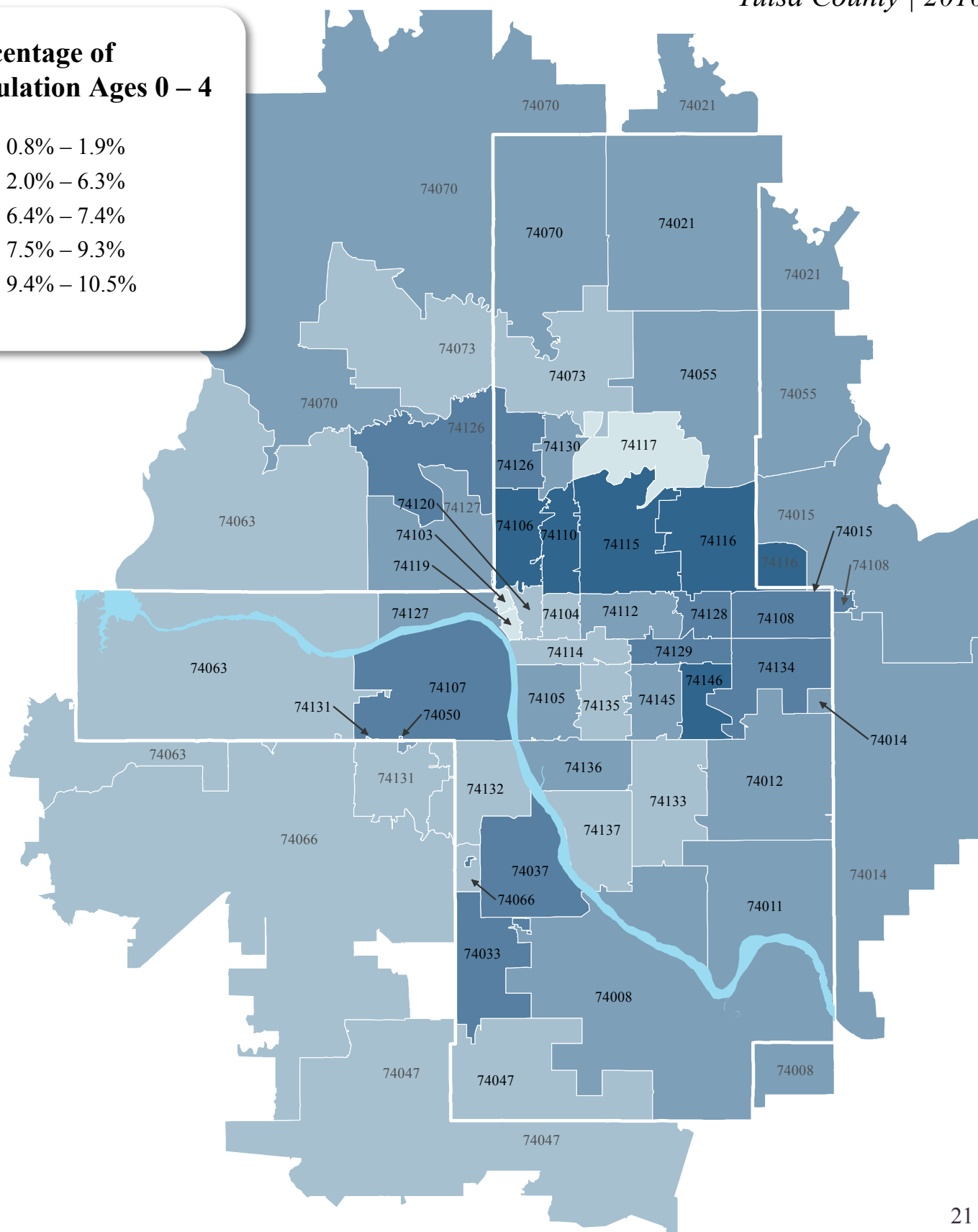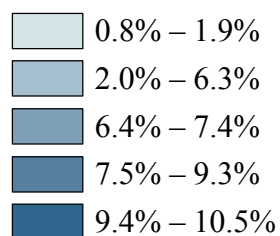
# Population Ages 15 – 24

This indicator is presented as the percentage of the total population ages 15 – 24 years, based on the 2010 Census.

## Why Is This Indicator Important?

Adolescents and young adults are particularly sensitive to environmental influences, which makes them susceptible to risky behaviors and social problems that can determine their current health status and their risk for developing chronic diseases in adulthood. Examples of behaviors and social problems that often start or peak during these years include homicide, suicide, motor vehicle accidents, substance abuse, smoking, sexually transmitted diseases including HIV/AIDS, teen and unplanned pregnancies, and homelessness. Addressing the positive development of young people facilitates their adoption of healthy behaviors and helps to ensure a healthy and productive future adult population.

## How Are We Doing?

In 2010, this age group included 83,827 individuals, or 13.9 percent of the total population. Blacks had the highest proportion of individuals in this age group (17.3 percent), followed by American Indians/Alaska Natives and Asians (16.5 percent and 16.0 percent, respectively). Individuals in this age group made up about 18 percent of the Hispanic population.

In 2010, Tulsa County had a lower proportion of individuals ages 15 – 24 (13.9 percent) than Oklahoma (14.2 percent) and the U.S. (14.1 percent).

ZIP codes with the highest proportion of individuals ages 15 – 24 included 74103, 74104, and 74136.

Data Source:
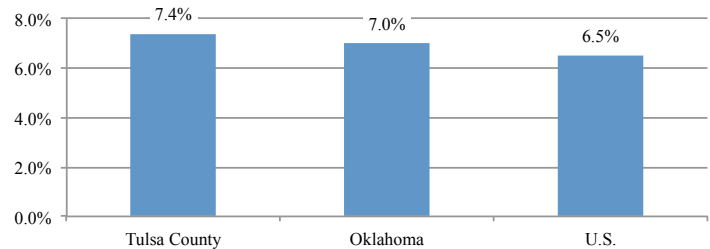Healthy People 2020: Adolescent Health. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

U.S. Census Bureau: 2010 Census.

**Percentage of Population Ages 15 – 24 by Race/Ethnicity Tulsa County | 2010**

| Race/Ethnicity | Percentage |
|---|---|
| White | 12.4% |
| Black | 17.3% |
| AI /AN | 16.5% |
| Asian | 16.0% |
| Hispanic | 18.1% |
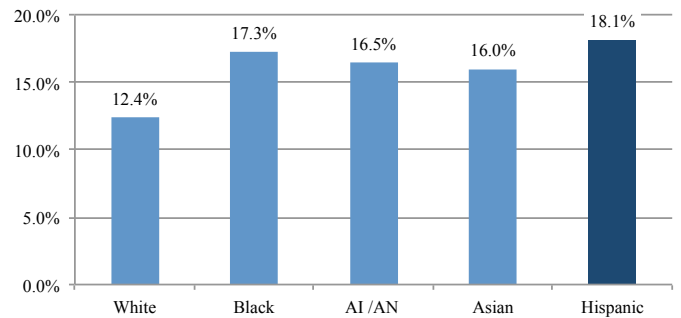
**Percentage of Population Ages 15 – 24 by Region | 2010**

| Region | Percentage |
|---|---|
| Tulsa County | 13.9% |
| Oklahoma | 14.2% |
| U.S. | 14.1% |

# Population Ages 15 – 24

**Percentage of Population Ages 15 – 24**

- 8.0% – 10.2%
- 10.3% – 12.7%
- 12.8% – 14.3%
- 14.4% – 17.5%
- 17.6% – 25.6%

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# Population Ages 25 – 64

This indicator represents the percentage of the total population ages 25 – 64 years, based on the 2010 Census.

## Why Is This Indicator Important?

This age group represents working-age adults that significantly contribute to the work force and the economy. The health of this age group is especially important for a healthy and productive economy. Research indicates that employees are more productive in the workplace if they are both physically and mentally healthy.

## How Are We Doing?

In 2010, this age group numbered 317,451 individuals. Whites and Asians had a higher percentage of the population in this age group (54.9 percent and 55.4 percent, respectively) than the other races. Individuals in this age group accounted for 45 percent of the Hispanic population.

In 2010, 52.6 percent of Tulsa County residents were ages 25 – 64, compared to 51.5 percent of Oklahomans and 53.0 percent of the national population.

The ZIP codes with the highest percentage of individuals in this age group were 74103 and 74119 in the downtown Tulsa area.

Data Source:
Workplace and Community Wellness. Trust for America's Health. Retrieved from: http://healthyamericans.org.

U.S. Census Bureau: 2010 Census.

**Percentage of Population Ages 25 – 64 by Race/Ethnicity Tulsa County | 2010**

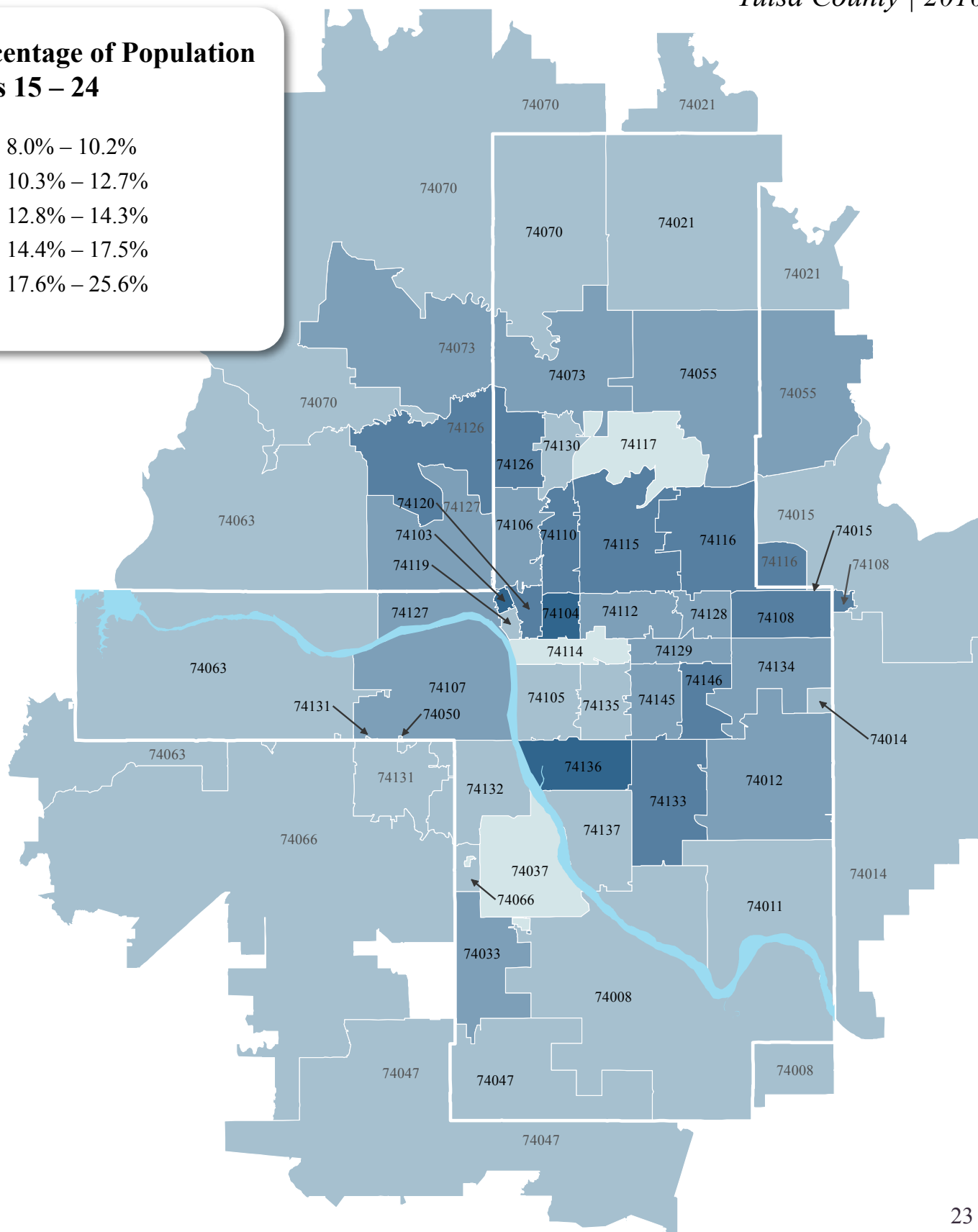| Race/Ethnicity | Percentage |
|----------------|-----------|
| White | 54.9% |
| Black | 49.7% |
| AI /AN | 49.8% |
| Asian | 55.4% |
| Hispanic | 45.0% |
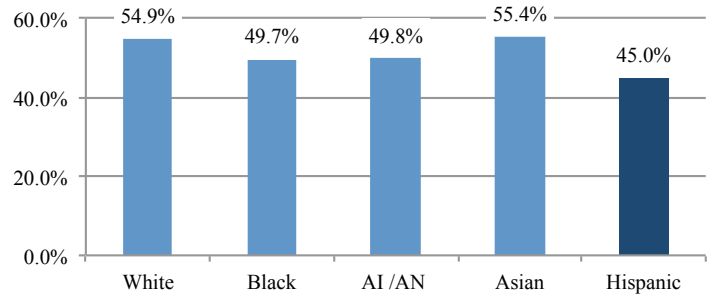
**Percentage of Population Ages 25 – 64 by Region | 2010**
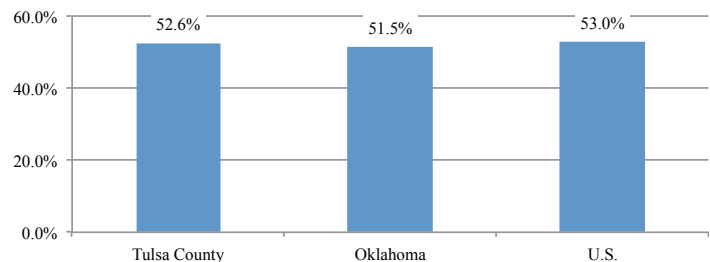
| Region | Percentage |
|--------|-----------|
| Tulsa County | 52.6% |
| Oklahoma | 51.5% |
| U.S. | 53.0% |

# Population Ages 25 – 64

**Percentage of Population Ages 25 – 64**

- 45.9% – 50.8%
- 50.9% – 56.6%
- 56.7% – 62.1%
- 62.2% – 76.6%
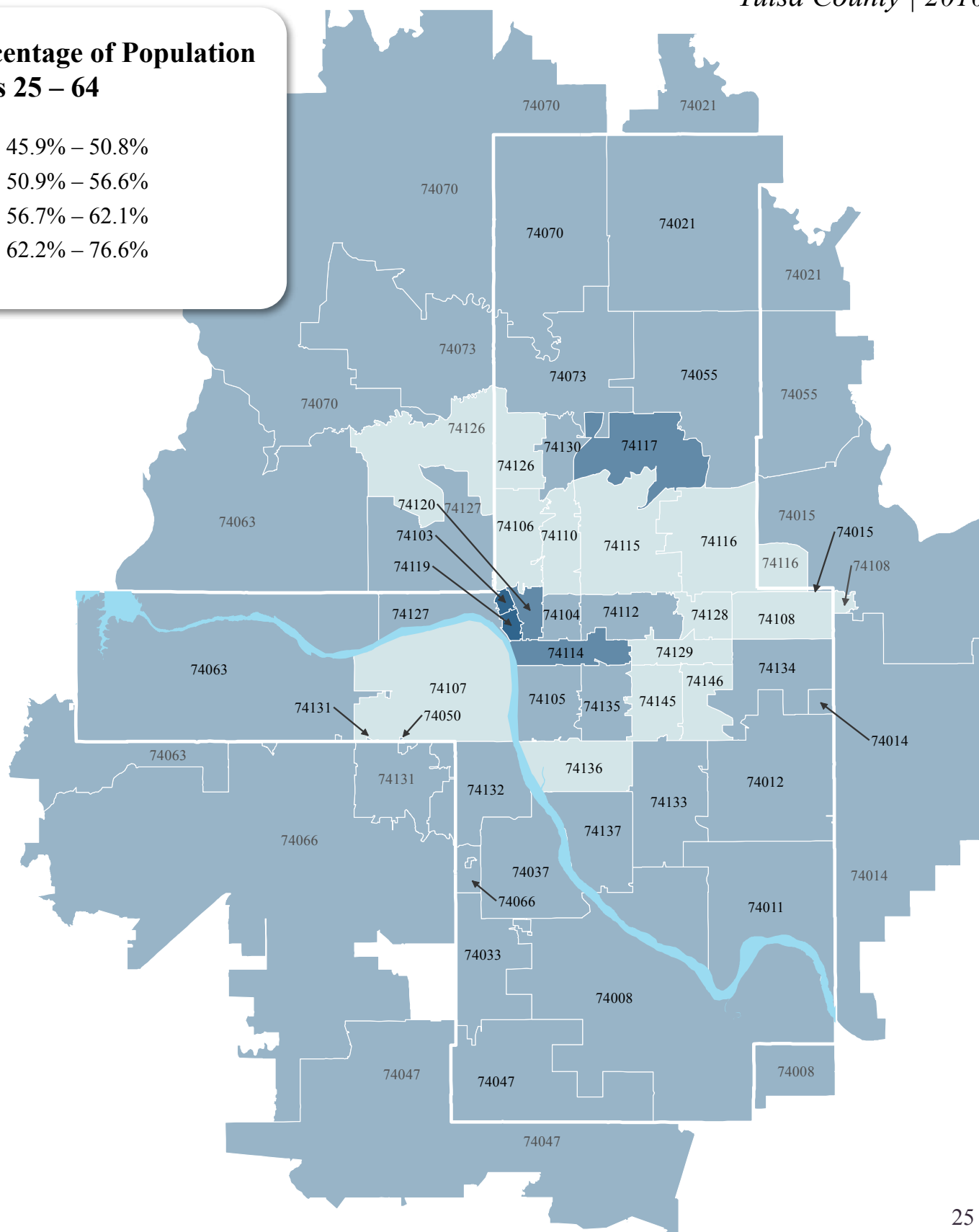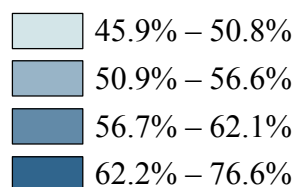
# Population Age 65 and Older

This indicator represents the percentage of the total population age 65 years and older, based on the 2010 Census.

## Why Is This Indicator Important?

Due to increased life expectancies, the proportion of adults age 65 and older is growing faster than ever before. Although life expectancy and overall health have both improved in recent years, there are still significant health disparities within this age group due to factors such as economic status, race, and gender. Many older adults struggle with chronic disease, falls, and mental health issues which can negatively impact their quality of life. The increased proportion of adults within this age group will cause significant challenges to social service programs and healthcare providers to provide all necessary services.

## How Are We Doing?

In 2010, Tulsa County had 72,856 residents age 65 and older. The proportion of the white population age 65 and older was significantly larger than the other races (15.0 percent). Individuals in this age group made up only 2.2 percent of the Hispanic population.

In 2010, 12.1 percent of Tulsa County residents were age 65 and older, which was lower than both Oklahoma (13.5 percent) and the U.S. (13.0 percent).

The ZIP codes with the highest percentage of individuals in this age group were 74114, 74131, 74135, and 74145, which include some of the older, more established neighborhoods of midtown Tulsa.

Data Source:
Healthy Aging Fact Sheet. National Council on Aging. Retrieved from: http://www.ncoa.org.

U.S. Census Bureau: 2010 Census.

**Percentage of Population Age 65 and Older by Race/Ethnicity**
**Tulsa County | 2010**

| | White | Black | AI /AN | Asian | Hispanic |
|---|---|---|---|---|---|
| | 15.0% | 7.0% | 6.5% | 6.0% | 2.2% |
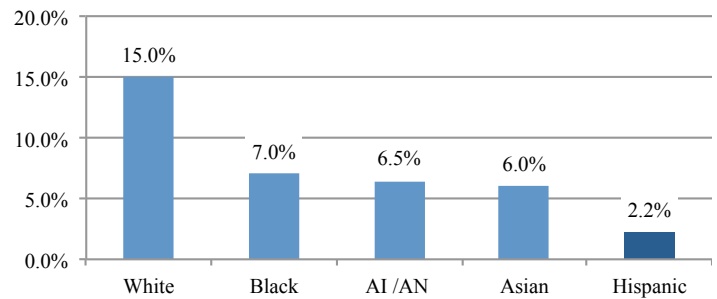
**Percentage of Population Age 65 and Older by Region | 2010**

| | Tulsa County | Oklahoma | U.S. |
|---|---|---|---|
| | 12.1% | 13.5% | 13.0% |
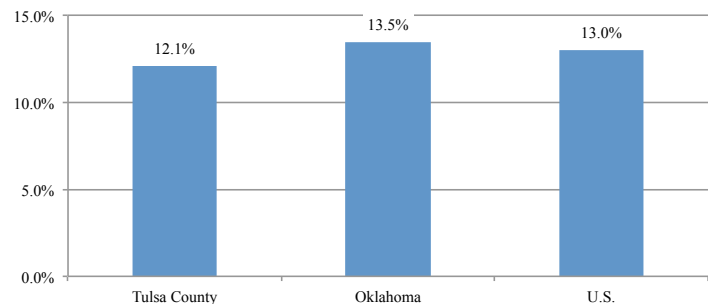
# Population Age 65 and Older

**Percentage of Population Ages 65 and older**

- 1.6% – 7.4%
- 7.5% – 11.1%
- 11.2% – 13.3%
- 13.4% – 15.4%
- 15.5% – 19.0%

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# Socioeconomic

# Median Household Income

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 the households reported incomes below the median income. Per capita income is the average income of each individual.

## 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.

## How Are We Doing?

The estimated median household income for Tulsa County in 2011 was $47,005. 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. Hispanic households had a median income of $37,129.

Additionally, median household incomes increased with age until the 65 and older age group. This is most likely attributable to lower incomes after retirement.

Another measure of economic health, per capita income, showed that Tulsa County had a higher per capita income than Oklahoma in 2011 ($27,425 compared to $23,770). It was slightly lower than the per capita income of the United States overall ($27,915).

The ZIP codes with the highest median household incomes were 74103, 74037 and 74137. These ZIP codes include parts of downtown and south Tulsa, as well as the suburb of Jenks.

Data Source:
General Data Issues. Healthy People 2010. U.S. Department of Health and Human Services. Retrieved from: http://www.cdc.gov.

American Community Survey 2011.

### Median Household Income in the Past 12 Months by Race/Ethnicity
### Tulsa County | 2011

| Race/Ethnicity | Income |
|---|---|
| White | $51,626 |
| Black | $26,410 |
| AI/AN | $41,901 |
| Asian | $55,897 |
| Hispanic | $37,129 |

### Median Household Income in the Past 12 Months by Age
### Tulsa County | 2011

| Age | Income |
|---|---|
| 15 – 24 | $26,079 |
| 25 – 44 | $48,454 |
| 45 – 64 | $59,094 |
| 65+ | $35,271 |
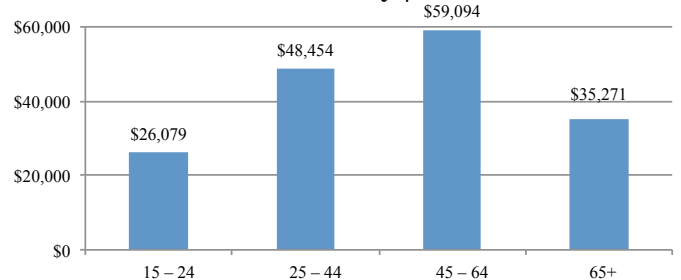
### Per Capita Income in the Past 12 Months by Region | 2011

| Region | Per Capita Income |
|---|---|
| Tulsa County | $27,425 |
| Oklahoma | $23,770 |
| U.S. | $27,915 |

# Median Household Income

**Median Household Income**

- $19,484 – $34,884
- $34,885 – $45,414
- $45,415 – $58,510
- $58,511 – $71,330
- $71,331 – $100,972

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# Population Below Poverty

This indicator is the percentage of persons living below the federal poverty level in the past 12 months and is taken from the 2011 American Community Survey. The Census Bureau determines poverty levels using a set of income thresholds that vary by family size and composition. In 2011, the Census Bureau designated that the weighted average poverty threshold for a family of four was $23,021.

## 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 earlier 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.

## How Are We Doing?

Estimates for 2011 stated that the poverty rate for Tulsa County was 15.1 percent. Racial disparity among those living in poverty was evident in Tulsa County. The 2011 American Community Survey showed that more than 30 percent of the black population lived below the poverty line, which was almost three times higher than the percentage of the white population. About twenty-seven percent of the Hispanic population lived below the poverty level.

With regard to age, the proportion of the population in poverty decreased as age increased. A total of 22.6 percent of Tulsa County residents under the age of 18 lived below the poverty level.

In 2011, the estimated poverty rate in Tulsa County (15.1 percent) was lower than Oklahoma (16.3 percent) but above the national rate (14.3 percent).

The ZIP codes with the highest percentages of residents living in poverty were primarily concentrated in north and downtown Tulsa.

Data Source:
U.S. Census Poverty Thresholds 2011.

Poverty in America: Economic Research Shows Adverse Impacts on Health Status and Other Social Conditions as well as the Economic Growth Rate (2007). United States Government Accountability Office. Retrieved from: http://www.gao.gov.

American Community Survey 2011.

**Percentage of Population Below Poverty in the Past 12 Months by Race/Ethnicity**
**Tulsa County | 2011**

| Race/Ethnicity | Percentage |
|---|---|
| White | 11.4% |
| Black | 32.3% |
| AI/AN | 19.3% |
| Asian | 13.5% |
| Hispanic | 27.2% |

**Percentage of Population Below Poverty in the Past 12 Months by Age**
**Tulsa County | 2011**

| Age | Percentage |
|---|---|
| < 18 | 22.6% |
| 18 – 64 | 13.3% |
| 65+ | 8.2% |

**Percentage of Population Below Poverty in the Past 12 Months by Region | 2011**

| Region | Percentage |
|---|---|
| Tulsa County | 15.1% |
| Oklahoma | 16.3% |
| U.S. | 14.3% |

*Tulsa County | 2011*

**Percentage of the Population Below Poverty**

- 4.3% – 9.8%
- 9.9% – 15.7%
- 15.8% – 20.0%
- 20.1% – 27.1%
- 27.2% – 47.8%

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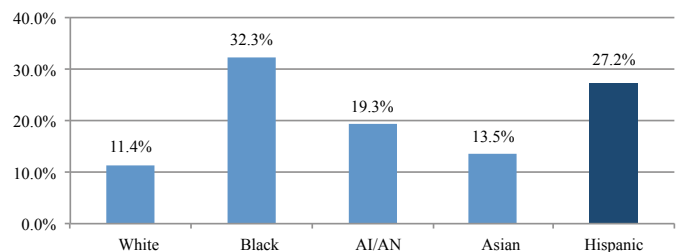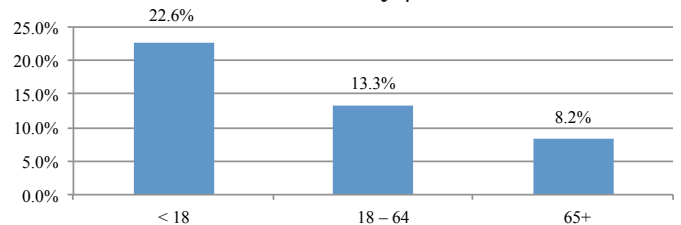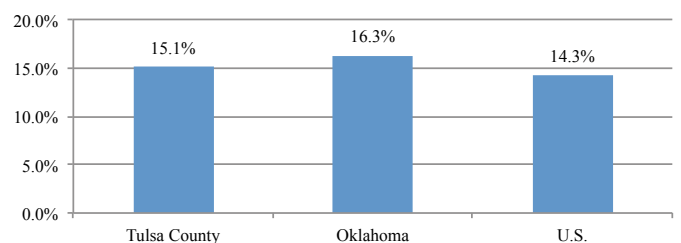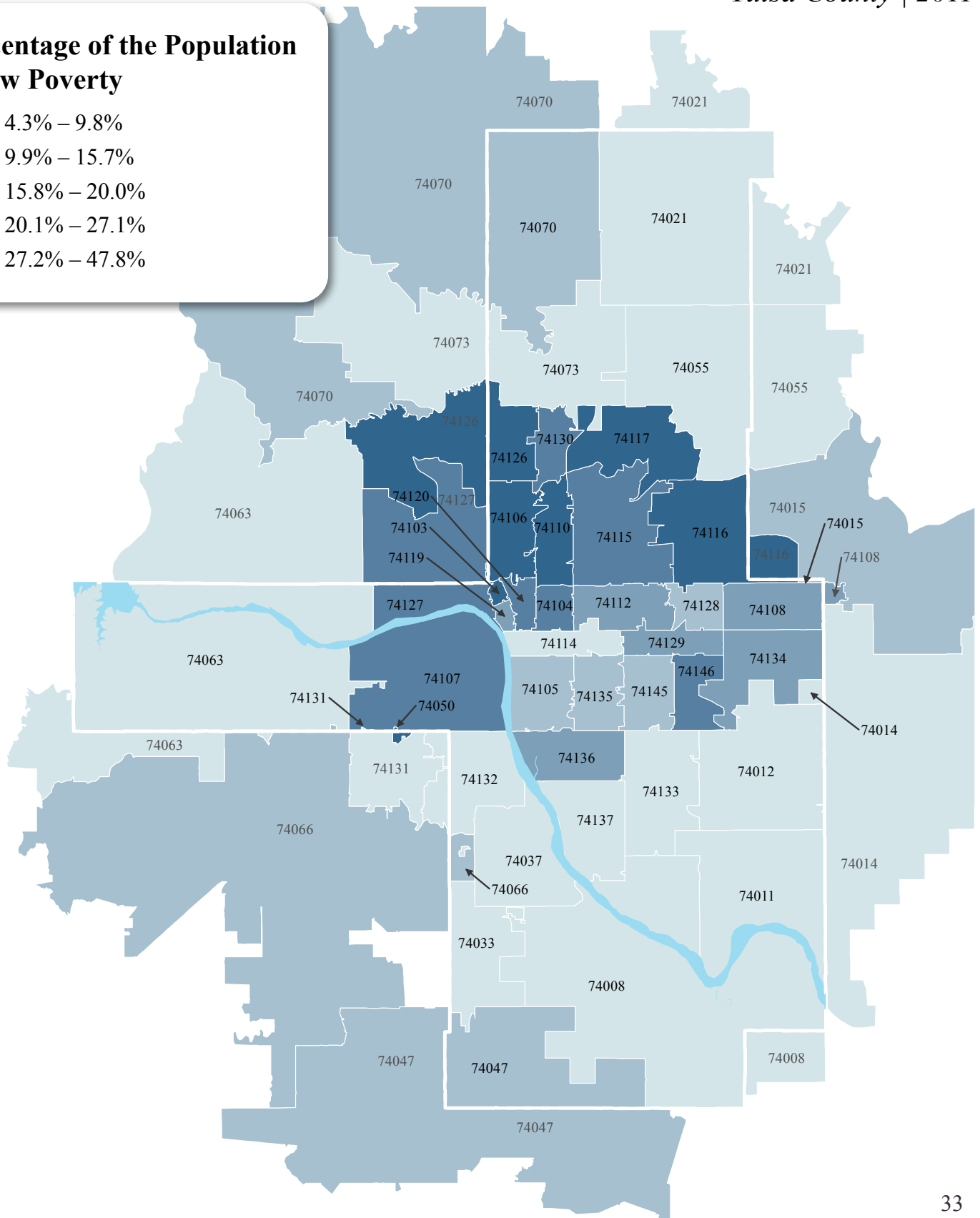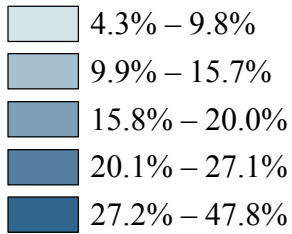
# Female-Headed Household

This indicator is defined as a household headed by a female with her own children less than 18 years of age, with no husband present. It is presented as a percentage of all households.

## Why Is This Indicator Important?

Households headed by single women are more likely to be poor, which impacts the physical, mental, and educational outcomes of the children raised in these homes. Parents with limited economic resources face many obstacles to healthy living and opportunities for learning. The effects of living in a single-parent household go beyond the children; the mothers are also affected. Single mothers report higher levels of psychological distress, lower levels of perceived social support, and poorer eating habits, all of which affect their ability to parent.

## How Are We Doing?

According to the 2010 U.S. Census, 12.5 percent of households in Tulsa County were headed by a female living with her own children under the age of 18. A significant proportion (33.3 percent) of black households were headed by females. In contrast, only 5.7 percent of Asian households were female-headed. Approximately fifteen percent of Hispanic households with children under 18 were headed by females.

Tulsa County had a higher rate of female-headed households (12.5 percent) compared to Oklahoma (10.5 percent) and the United States (10.8 percent).

The ZIP codes with the highest percentages of female-headed households were 74106, 74126, and 74146.

Data Source:
Social Determinants. Putting Women's Health Care Disparities on The Map: Examining Racial and Ethnic Disparities at the State Level. The Henry J. Kaiser Family Foundation. Retrieved from: http://kaiserfamilyfoundation.files.wordpress.com.

U.S. Census Bureau: 2010 Census.

**Percentage of Female-Headed Households by Race/Ethnicity Tulsa County | 2011**

| Race/Ethnicity | Percentage |
|----------------|-----------|
| White | 8.9% |
| Black | 33.3% |
| AI/AN | 16.2% |
| Asian | 5.7% |
| Hispanic | 14.6% |
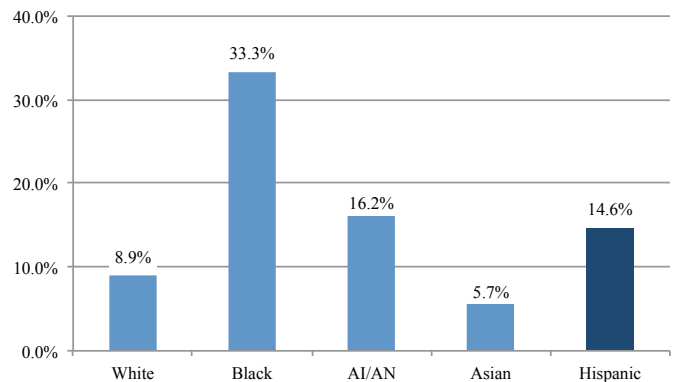
**Percentage of Female-Headed Households by Region | 2011**
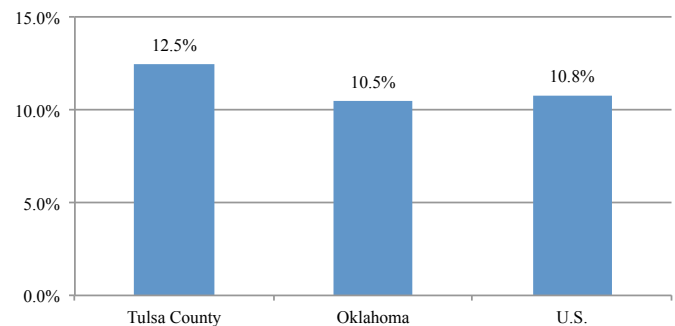
| Region | Percentage |
|--------|-----------|
| Tulsa County | 12.5% |
| Oklahoma | 10.5% |
| U.S. | 10.8% |

# Female-Headed Household

**Percentage of Female-Headed Households**

- 4.9% – 5.2%
- 5.3% – 9.0%
- 9.1% – 13.6%
- 13.7% – 20.5%
- 20.6% – 33.5%

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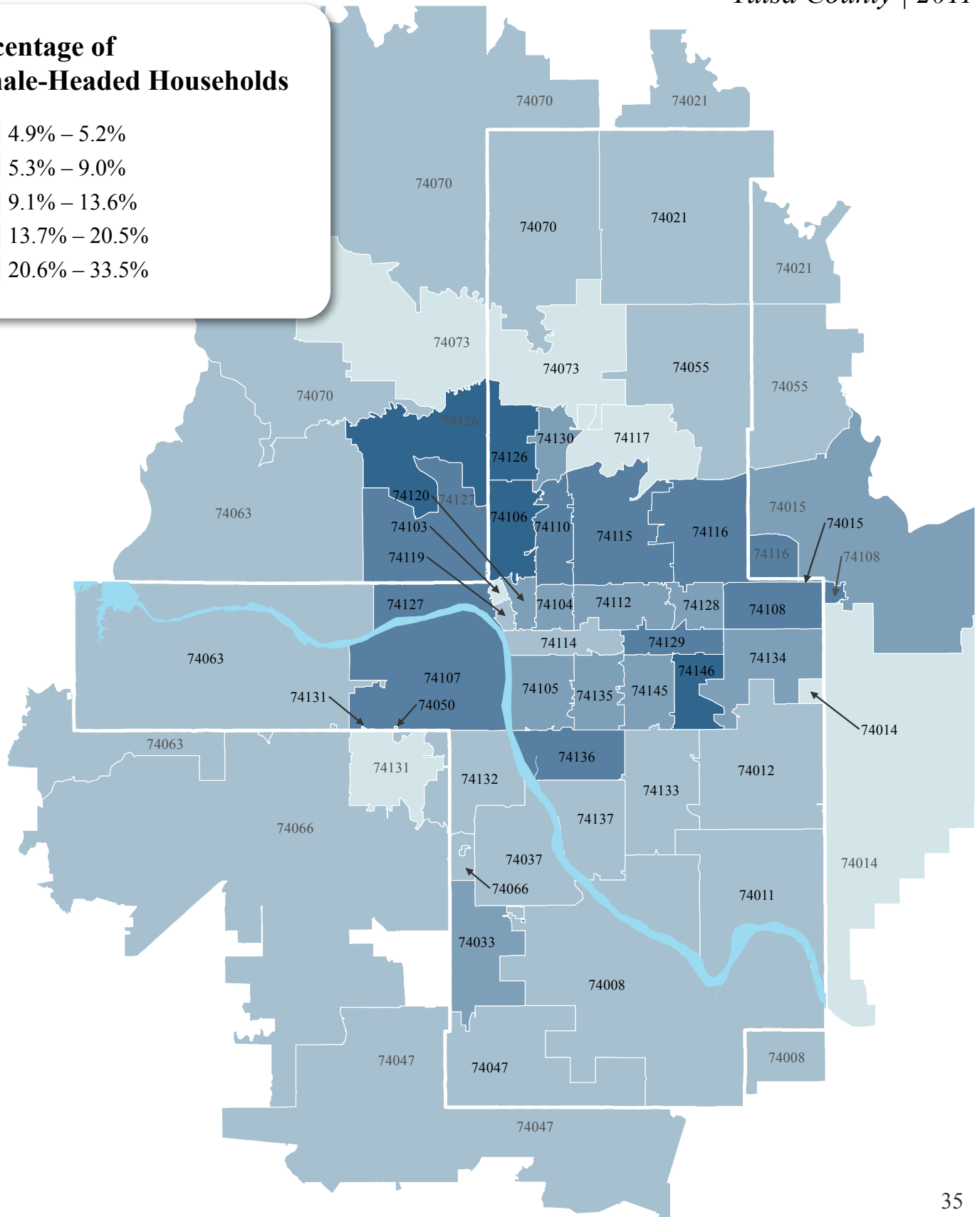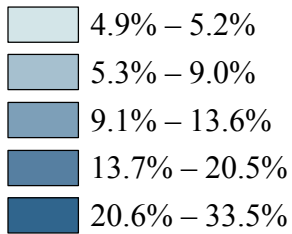
# Educational Attainment

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 age 25 and older, based on the 2011 American Community Survey.

## 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.

## How Are We Doing?

Tulsa County was estimated to have an overall educational attainment of 88.2 percent in 2011, according to the American Community Survey. This was highest in whites (90.1 percent), followed by blacks (85.9 percent). About 57 percent of Hispanics had a high school education or higher. With regard to gender, females had a higher educational attainment (88.9 percent) compared to males (87.5 percent).

The 2011 estimates stated that the educational attainment for Tulsa County was 88.2 percent, which was higher than both Oklahoma (85.9 percent) and the U.S. (85.4 percent).

The ZIP codes with the highest educational attainment were primarily concentrated in the midtown area and south Tulsa, including the south suburbs.

Data Source:
Telfair, J. & Shelton, T. Educational Attainment as a Social Determinant of Health. North Carolina Medical Journal. Retrieved from: http://www.ncmedicaljournal.com.

American Community Survey 2011.

**Educational Attainment by Race/Ethnicity Tulsa County | 2011**

| Race/Ethnicity | Percentage |
|---|---|
| White | 90.1% |
| Black | 85.9% |
| AI/AN | 85.7% |
| Asian | 81.7% |
| Hispanic | 57.2% |
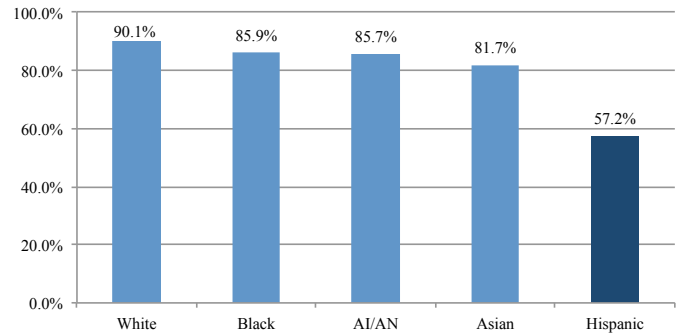
**Educational Attainment by Region | 2011**

| Region | Percentage |
|---|---|
| Tulsa County | 88.2% |
| Oklahoma | 85.9% |
| U.S. | 85.4% |
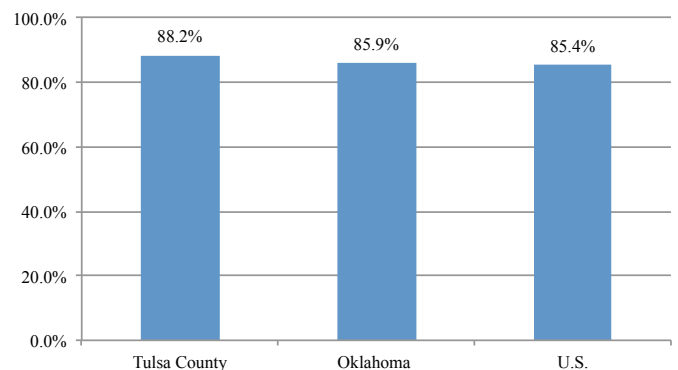
*Tulsa County | 2011*

**Percentage of the Population Age 25+ with at least a High School Education**

- 35.6% – 69.4%
- 69.5% – 82.3%
- 82.4% – 88.2%
- 88.3% – 93.0%
- 93.1% – 96.7%
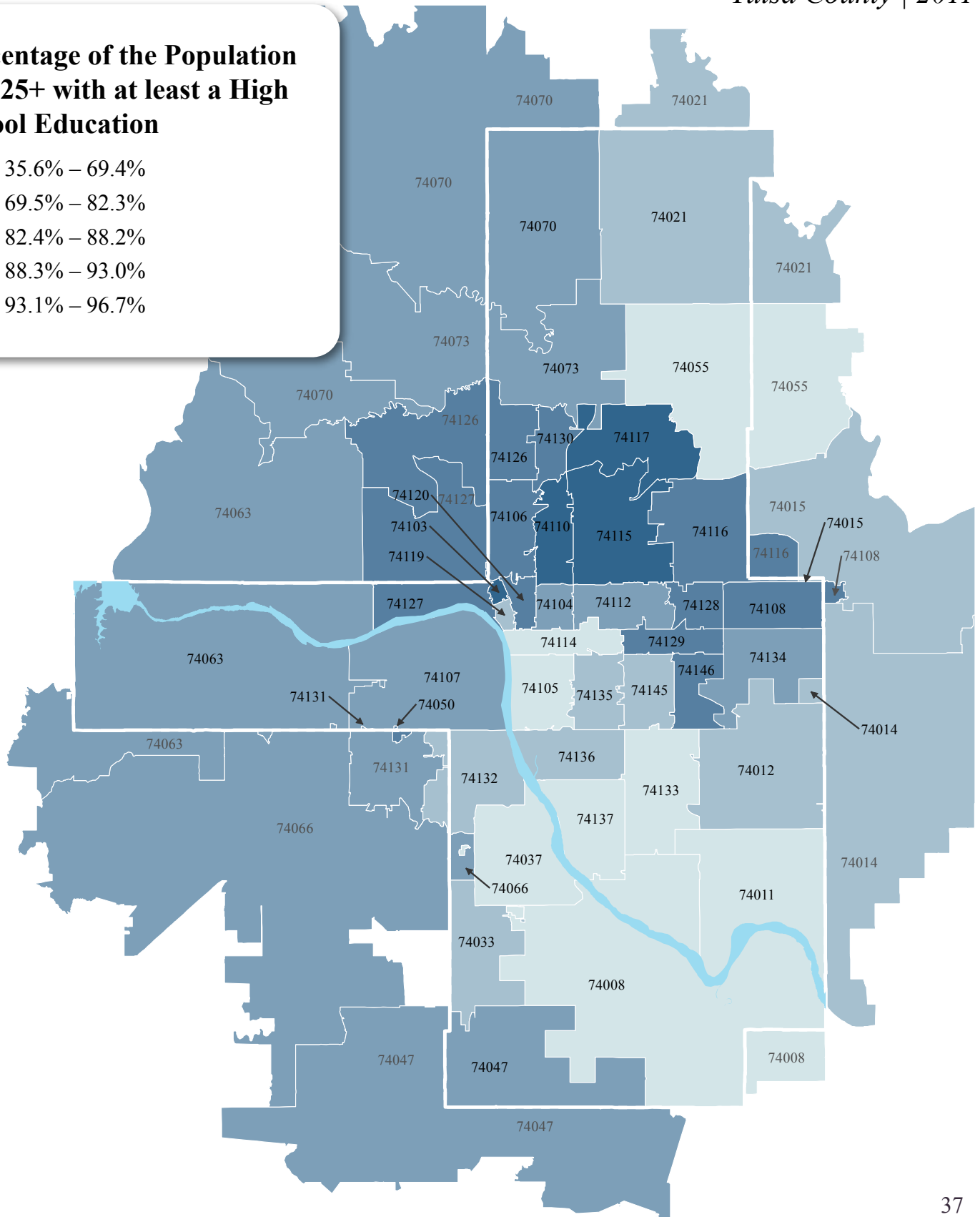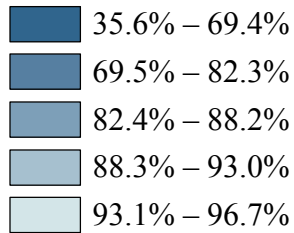
# Unemployment Rate

This indicator is presented as the percentage of the total civilian labor force (age 16 and older) that was unemployed in 2011.

## 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 the loss of employer-sponsored health insurance and reduced income. Unemployed adults have poorer mental and physical health than employed adults; this pattern is found for both insured and uninsured adults. Unemployed adults are less likely to receive necessary medical care and prescription drugs due to cost than the employed in each insurance category.

## How Are We Doing?

The overall unemployment rate in 2012 for Tulsa County was 5.5 percent. This was slightly higher than Oklahoma (5.2 percent) but significantly lower than the United States (8.1 percent). The unemployment rate in Tulsa County has been decreasing each year since peaking in 2010.

With regard to race, blacks in Tulsa County had an unemployment rate that was more than two times that of whites (12.8 percent compared to 5.1 percent). Asians had the lowest unemployment rate with 3.8 percent. The unemployment rate of Hispanics was 5.4 percent.

The ZIP codes with the highest rates of unemployment were primarily concentrated in north and west Tulsa.

Data Source:
Health and Access to Care Among Employed and Unemployed Adults: United States, 2009 – 2010. National Center for Health Statistics. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

American Community Survey 2011.

U.S. Department of Labor Bureau of Labor Statistics (BLS) Local Area Unemployment Statistics (LAUS). www.bls.gov.

**Percentage of Civilian Labor Force Unemployed by Race/Ethnicity Tulsa County | 2011**
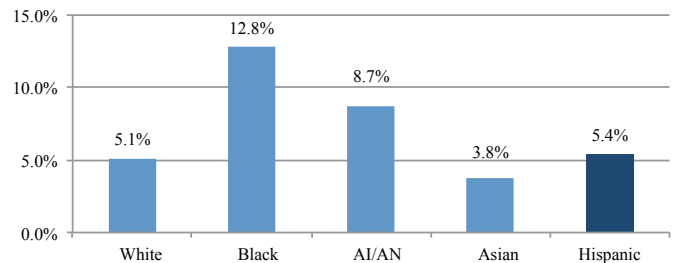


**Percentage of Civilian Labor Force Unemployed by Region | 2012**
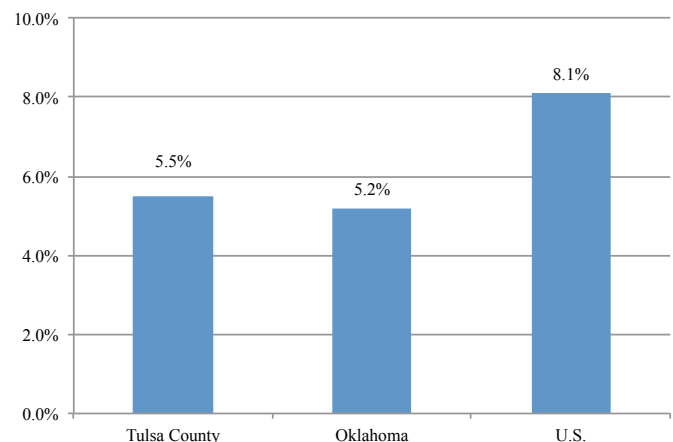


**Percentage of Civilian Labor Force Unemployed Tulsa County | 2005 – 2012**
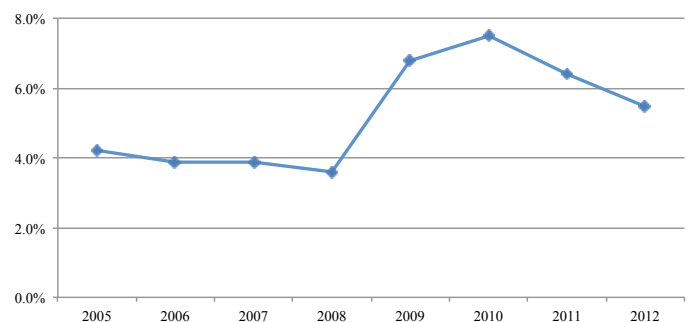
# Unemployment Rate

**Percentage of Civil Labor Force Unemployed**

- 0.0% – 4.3%
- 4.4% – 6.0%
- 6.1% – 7.7%
- 7.8% – 10.0%
- 10.1% – 16.4%

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# Maternal & Child Health

# Crude Birth Rate

The crude birth rate is the number of live births divided by the total population and multiplied by 1,000. It is called crude because it does not account for sex or age differences in the populations being compared. The crude birth rate is presented as the number of live births to Tulsa County residents per 1,000 persons, averaged over the years 2008 – 2010.

## *Why Is This Indicator Important?*

The crude birth rate indicates where population growth is occurring naturally through reproduction.

## *How Are We Doing?*

There were 28,597 live births to Tulsa County residents from 2008 – 2010. Males comprised 50.9 percent of live births while females made up 49.1 percent. Birth rates were highest among blacks (18.2) and lowest among whites (15.4). The Hispanic birth rate (25.7) was almost twice as high as the birth rate among non-Hispanics (14.8).

In 2010, Tulsa County's crude birth rate of 15.3 live births per 1,000 population was higher than the rates in both Oklahoma (13.9) and the United States (13.0).

The ZIP codes with the highest birth rates were 74110, 74116, 74134, and 74146. The ZIP codes with the lowest birth rates were 74119 and 74137.

Data Source:
Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.

Martin JA, Hamilton BE, Ventura SJ, et al. Births: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 1. Hyattsville, MD: National Center for Health Statistics. 2012.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Crude Birth Rate by Race/Ethnicity of Mother**
**Tulsa County | 2008 – 2010**

White: 15.4
Black: 18.2
American Indian: 17.4
Asian/Pacific Islander: 17.6
Hispanic: 25.7
Non-Hispanic: 14.8

Y-axis: Live Births per 1,000 Population

**Crude Birth Rate by Region | 2010**

Tulsa County: 15.3
Oklahoma: 13.9
U.S.: 13.0

Y-axis: Live Births per 1,000 Population

# Crude Birth Rate

*Tulsa County | 2008 – 2010*

**Live Births per 1,000 Population**

- 5.5 – 8.8
- 8.9 – 13.0
- 13.1 – 16.0
- 16.1 – 20.1
- 20.2 – 25.9
- Rate not calculated



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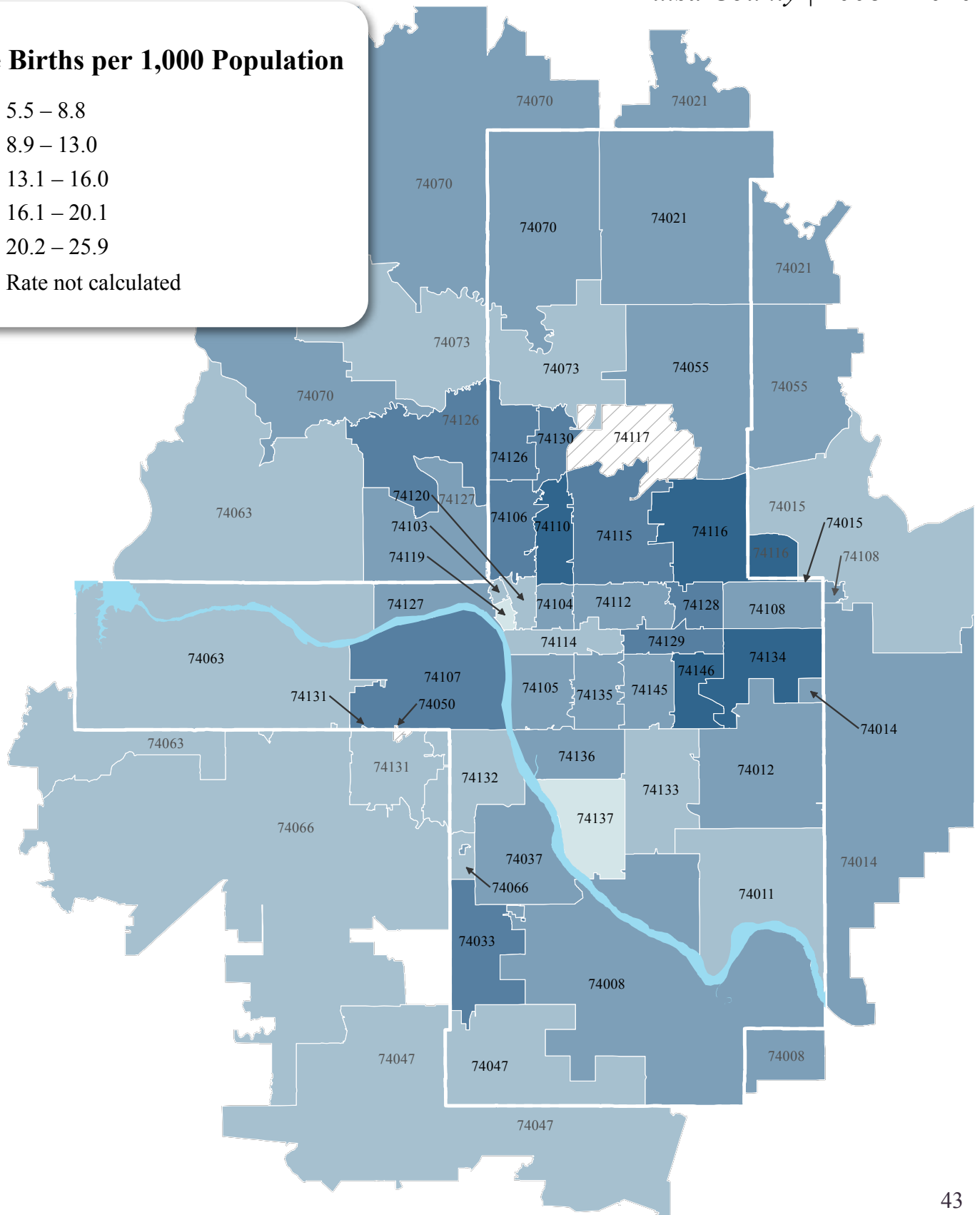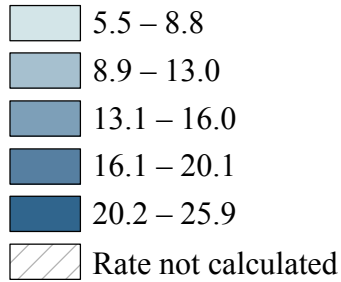
# Births to Teens 17 and Younger

This indicator is presented as births to Tulsa County teenagers age 17 and younger as a percentage of total births, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?

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 include 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.

## How Are We Doing?

There were 1,095 births to Tulsa County teens age 17 and younger from 2008 – 2010, comprising 3.8 percent of total births during this time period. Overall, the percentage of births to teens age 17 and younger decreased from 4.6 percent to 3.6 percent between 2000 and 2010, although there was some fluctuation in rates during this time period. Blacks had the highest percentage of births to teens 17 and younger (6.8 percent), followed by American Indians (5.2 percent). Asians/Pacific Islanders had the lowest percentage with 1.9 percent. Additionally, 6.4 percent of births to Hispanic women were to teens 17 and younger, as compared to 3.3 percent in non-Hispanic mothers.

In 2010, the percentage of births to teens 17 and younger in Tulsa County was 3.6 percent. This was slightly lower than Oklahoma (3.8 percent) and higher than the United States (2.8 percent).

ZIP codes with the highest percentages of births to teens 17 and younger were concentrated in north Tulsa (74106, 74110, 74115, 74116, and 74126).

Data Source:
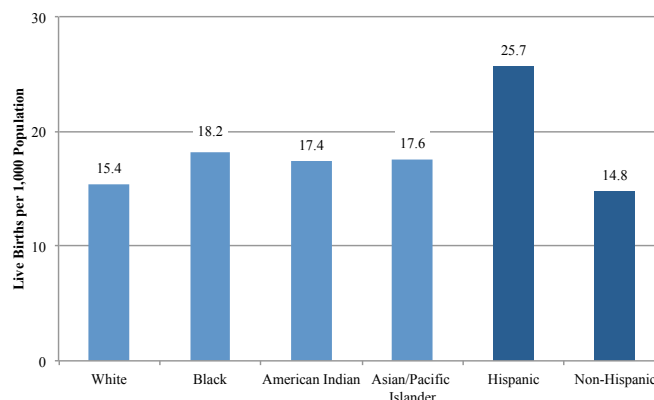Teen Pregnancy: About Teen Pregnancy. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
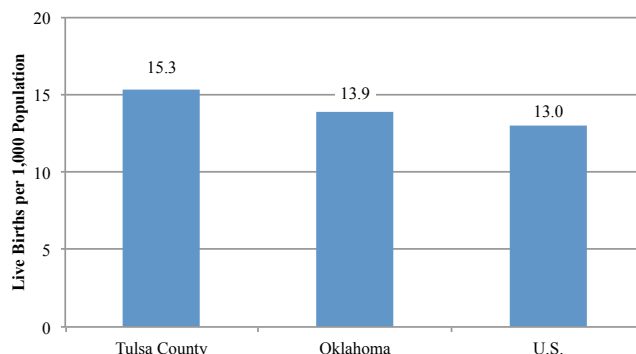
Martin JA, Hamilton BE, Ventura SJ, et al. Births: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 1. Hyattsville, MD: National Center for Health Statistics. 2012.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Percentage of Births to Teens <18**
**Tulsa County | 2000 – 2010**
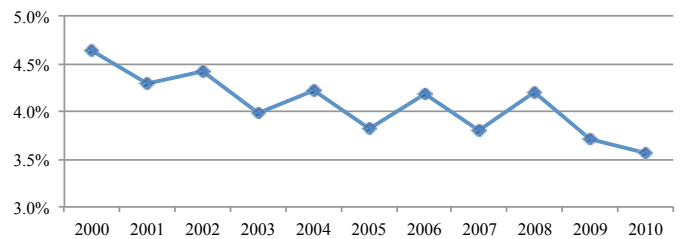


**Percentage of Births to Teens <18 by Race/Ethnicity of Mother**
**Tulsa County | 2008 – 2010**
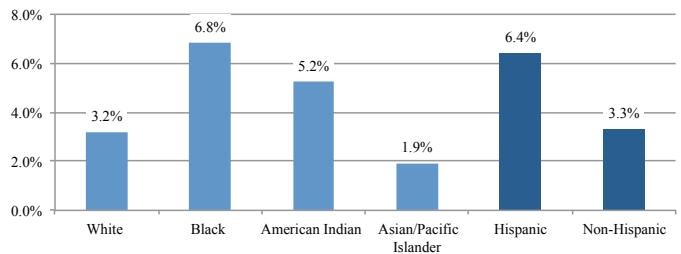


**Percentage of Births to Teens <18 by Region | 2010**

# Births to Teens 17 and Younger

*Tulsa County | 2008 – 2010*

**Percentage of Births to Teens 17 and Younger**

- 1.2% – 1.9%
- 2.0% – 2.7%
- 2.8% – 3.8%
- 3.9% – 6.0%
- 6.1% – 9.2%
- Rate not calculated

# Births to Teens 19 and Younger

This indicator is presented as births to Tulsa County teenagers age 19 and younger as a percentage of total births, averaged over the years 2008 – 2010.

## 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. The children of teens are also more likely to depend on publicly-provided healthcare.

## How Are We Doing?

Of the 28,597 live births to Tulsa County residents from 2008 – 2010, 3,364 (11.8 percent) were to teens age 19 and younger. The overall trend of teen pregnancy has declined from 13.8 percent in 2000 to 10.8 percent in 2010. Blacks had the highest percentage of births to teens (20.4 percent), followed by American Indians (15.0 percent). Asians/Pacific Islanders had the lowest percentage with 4.4 percent. Additionally, 15.7 percent of births to Hispanic women were to teens, as compared to 11.0 percent in non-Hispanic mothers.

In 2010, the percentage of births to teens 19 and younger in Tulsa County was 10.8 percent. This was lower than Oklahoma (12.4 percent) and higher than the United States (9.3 percent).

ZIP codes with the highest percentages of births to teens 19 and younger were primarily concentrated in north Tulsa (74106, 74110, 74116, and 74126).

Data Source:
Teen Pregnancy and Other Health Issues. The National Campaign to Prevent Teen and Unplanned Pregnancy. Retrieved from: http://www.thenationalcampaign.org.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.

Martin JA, Hamilton BE, Ventura SJ, et al. Births: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 1. Hyattsville, MD: National Center for Health Statistics. 2012.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.
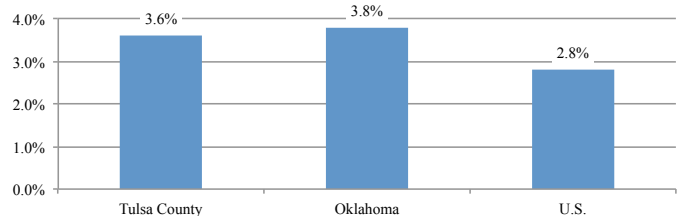
**Percentage of Births to Teens <20**
**Tulsa County | 2000 – 2010**
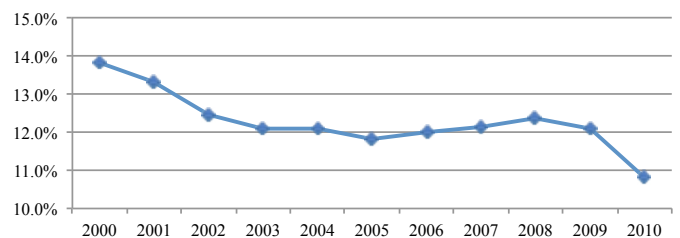
**Percentage of Births to Teens <20 by Race/Ethnicity of Mother**
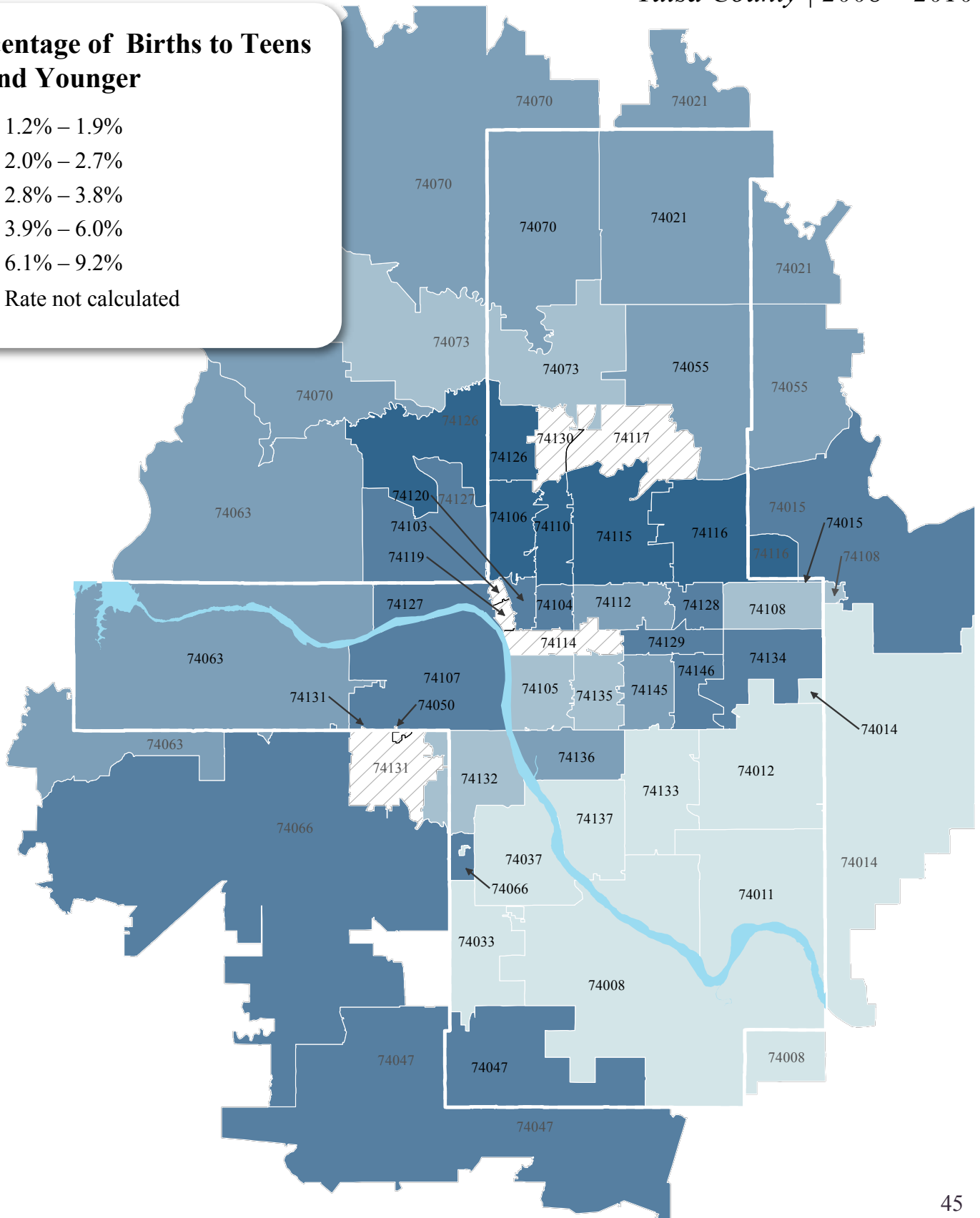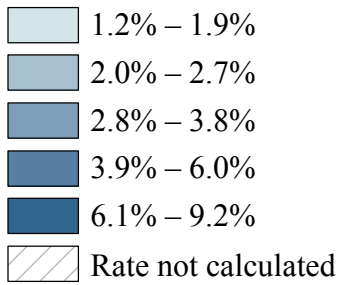**Tulsa County | 2008 – 2010**
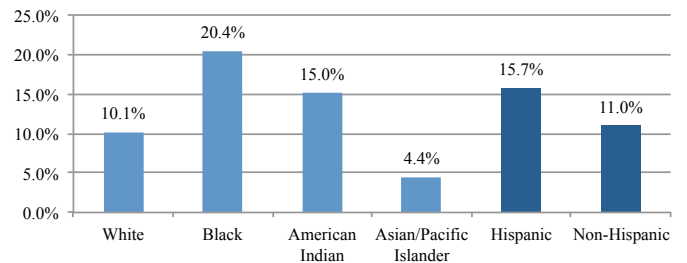
**Percentage of Births to Teens <20 by Region | 2010**
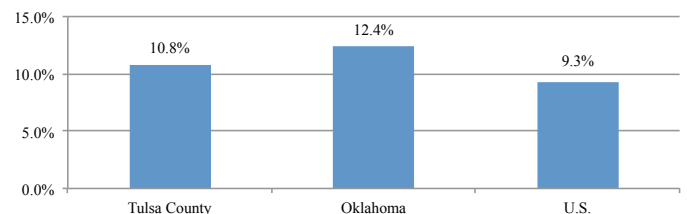
# Births to Teens 19 and Younger

*Tulsa County | 2008 – 2010*

**Percentage of Births to Teens 19 and Younger**

- 2.8% – 6.6%
- 6.7% – 10.2%
- 10.3% – 14.0%
- 14.1% – 18.6%
- 18.7% – 23.5%
- Rate not calculated

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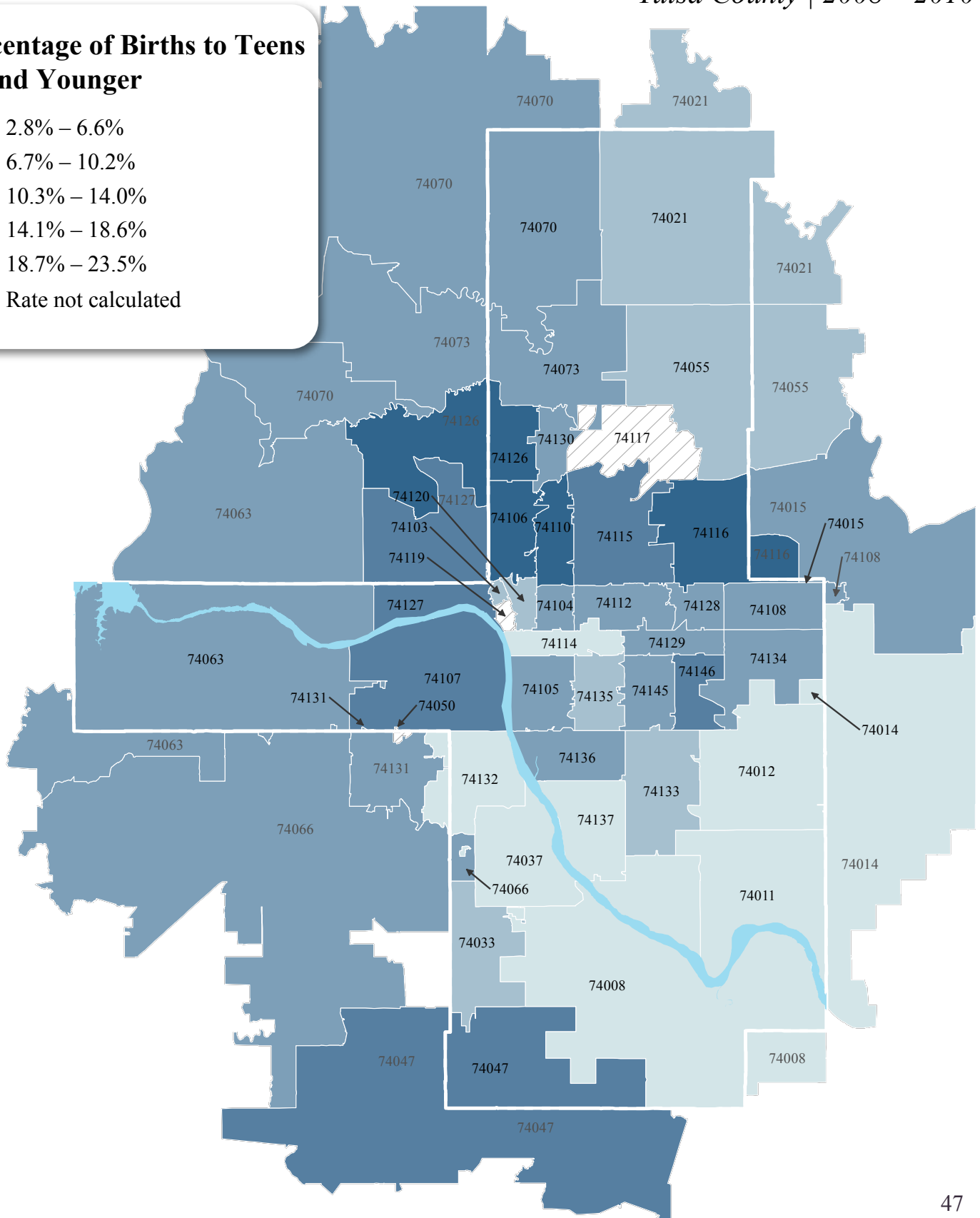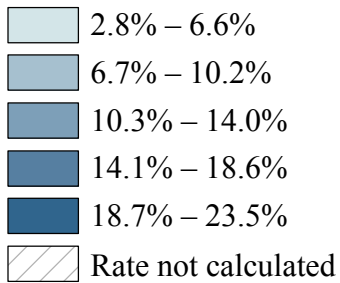
# Late or No Prenatal Care

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 (months 1 through 3). It is presented as a percentage of all births, averaged over the years 2008 – 2010.

## 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. 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.

## How Are We Doing?

From 2008 – 2010, a total of 36.5 percent of Tulsa County mothers did not receive prenatal care or received delayed prenatal care (after the first trimester). Blacks had the highest percentage of late or no prenatal care (47.7 percent), followed by Asians/Pacific Islanders (45.7 percent). Late or no prenatal care was lowest among white mothers (33.6 percent). Additionally, 41.9 percent of Hispanic mothers did not receive prenatal care or received delayed care.

In 2010, 59.9 percent of Tulsa County mothers received prenatal care during the first trimester. This was significantly lower than the rate of prenatal care in both Oklahoma (65.0 percent) and the United States (73.1 percent). Tulsa County, Oklahoma, and the U.S. all fell short of the Healthy People 2020 first trimester prenatal care goal of 77.9 percent.

The highest rates of late or no prenatal care were primarily concentrated in north and east Tulsa.

Data Source:
Maternal and Child Health: Prenatal Services. Health Resources and Services Administration. U.S. Department of Health and Human Services. Retrieved from: http://mchb.hrsa.gov.

Maternal and Child Health. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.

National Vital Statistics System. Centers for Disease Control and Prevention. 2010.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Percentage of Births with No First Trimester Prenatal Care by Race/Ethnicity of Mother Tulsa County | 2008 – 2010**

| Race/Ethnicity | Percentage |
|---|---|
| White | 33.6% |
| Black | 47.7% |
| American Indian | 41.4% |
| Asian/Pacific Islander | 45.7% |
| Hispanic | 41.9% |

**Percentage of Births with First Trimester Prenatal Care by Region | 2010**

| Region | Percentage |
|---|---|
| Tulsa County | 59.9% |
| Oklahoma | 65.0% |
| U.S. | 73.1% |
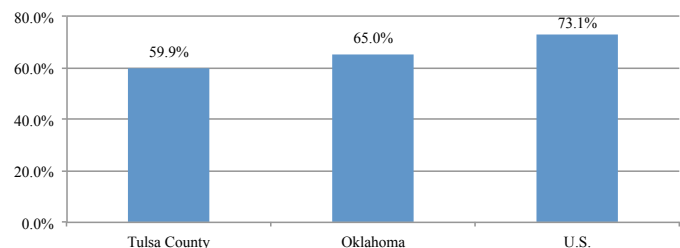
# Late or No Prenatal Care

*Tulsa County | 2008 – 2010*

**Percentage of Births with Late or No Prenatal Care**

- 20.9% – 27.1%
- 27.2% – 33.1%
- 33.2% – 37.5%
- 37.6% – 40.8%
- 40.9% – 47.2%
- Rate not calculated

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# Tobacco Use During Pregnancy

Maternal smoking is defined as tobacco use during pregnancy, regardless of frequency/quantity or during what trimester(s). Tobacco use during pregnancy is expressed as a percentage of all Tulsa County births, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?

Prenatal tobacco use has been linked to pregnancy complications and poor birth outcomes, including low birth weight and preterm delivery, stillbirth, SIDS, and birth defects. Exposure to secondhand smoke can also cause health complications for mothers and infants.

## How Are We Doing?

From 2008 – 2010, a total of 12.1 percent of births were to mothers who reported using tobacco during pregnancy. American Indian mothers had the highest rate of tobacco use during pregnancy (19.3 percent), followed by black mothers (14.7 percent). Asians/Pacific Islanders had the lowest rate (2.9 percent). Additionally, smoking during pregnancy was low among Hispanic mothers (2.4 percent).

In 2010, the smoking rate among pregnant women in Tulsa County (13.0 percent) was lower than that of Oklahoma (17.1 percent) but higher than the United States (9.2 percent). The Healthy People 2020 national goal is to increase abstinence from cigarettes to 98.6 percent among pregnant women (or to reduce the percentage of pregnant women who smoke to 1.4 percent). Tulsa County, Oklahoma, and the U.S. did not meet this goal.

The ZIP codes with the highest rates of tobacco use during pregnancy were concentrated in west Tulsa (74050, 74107, and 74127).

Data Source:
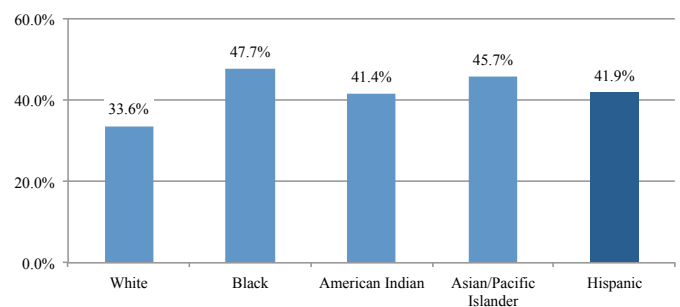Reproductive Health: Tobacco Use and Pregnancy. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Maternal and Child Health. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from http://www.health.ok.gov/ok2share.

National Vital Statistics System. Centers for Disease Control and Prevention. 2010.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

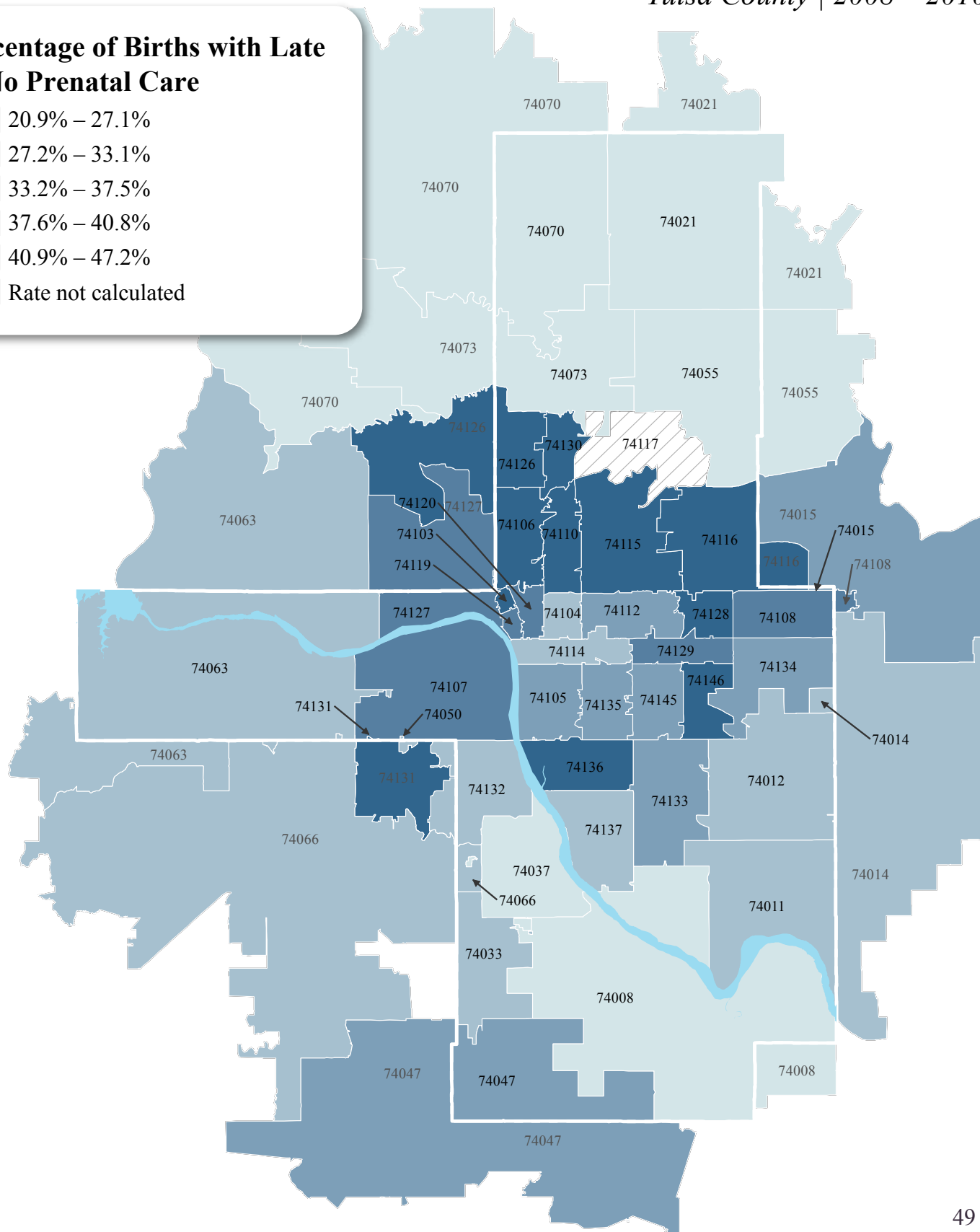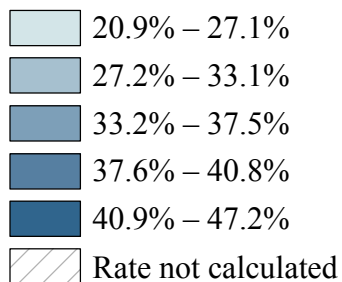**Percentage of Births to Mothers who Smoked During Pregnancy by Race/Ethnicity of Mother Tulsa County | 2008 – 2010**

| Race/Ethnicity | Percentage |
| --- | --- |
| White | 11.2% |
| Black | 14.7% |
| American Indian | 19.3% |
| Asian/Pacific Islander | 2.9% |
| Hispanic | 2.4% |
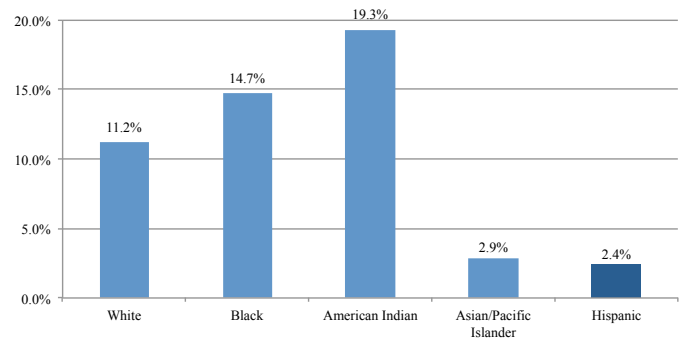
**Percentage of Births to Mothers who Smoked During Pregnancy by Region | 2010**

| Region | Percentage |
| --- | --- |
| Tulsa County | 13.0% |
| Oklahoma | 17.1% |
| U.S. | 9.2% |
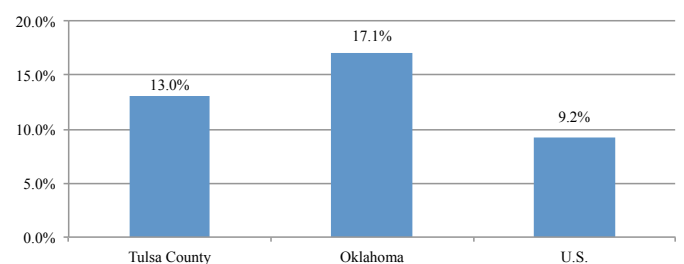
# Tobacco Use During Pregnancy

*Tulsa County | 2008 – 2010*

**Percentage of Mothers Who Smoked During Pregnancy**

- 4.9% – 9.1%
- 9.2% – 13.6%
- 13.7% – 17.1%
- 17.2% – 19.7%
- 19.8% – 33.3%
- Rate not calculated

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# Premature Births

This indicator is defined as births that occur before the 37th week of pregnancy. It is presented as a percentage of all births to Tulsa County mothers, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?

Premature (preterm) birth is a leading cause of infant mortality and is a predictor for increased risk of illness and disability in all stages of life. Although the causes of preterm delivery are complex, risk factors include maternal age, race, low maternal income or socioeconomic status, infections, previous preterm birth, carrying more than one baby, high blood pressure during pregnancy, tobacco and alcohol use, substance abuse, late prenatal care, and obesity.

## How Are We Doing?

Overall, 12.3 percent of infants born to Tulsa County mothers were premature from 2008 – 2010. This was highest among black mothers (17.0 percent) followed by American Indian mothers (12.2 percent). The rate of premature births was lowest among mothers who were Asian/Pacific Islanders (8.1 percent). Among Hispanic mothers, 11.0 percent of births were premature.

In 2010, 12.8 percent of live births in Tulsa County were premature, compared to 11.2 percent in Oklahoma and 12.0 percent in the U.S. The Healthy People 2020 goal is to reduce the premature birth rate to 11.4 percent. Although Oklahoma met this target, Tulsa County and the U.S. did not.

The ZIP codes with the highest rates of premature birth were primarily concentrated in north Tulsa (74103, 74106, 74126, 74115, 74116, and 74131).

Data Source:
Reproductive Health: Preterm Birth. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.

Martin JA, Hamilton BE, Ventura SJ, et al. Births: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 1. Hyattsville, MD: National Center for Health Statistics. 2012.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Percentage of Premature Births by Race/Ethnicity of Mother Tulsa County | 2008 – 2010**

| White | Black | American Indian | Asian/Pacific Islander | Hispanic |
|-------|-------|-----------------|------------------------|----------|
| 11.6% | 17.0% | 12.2% | 8.1% | 11.0% |
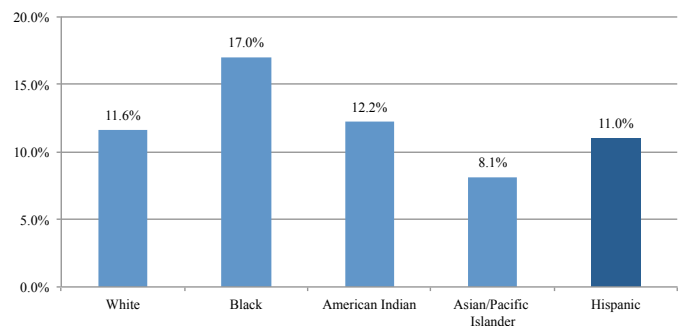
**Percentage of Premature Births by Region | 2010**

| Tulsa County | Oklahoma | U.S. |
|--------------|----------|------|
| 12.8% | 11.2% | 12.0% |

# Premature Births

**Percentage of Premature Births**

- 7.4% – 9.4%
- 9.5% – 11.6%
- 11.7% – 13.3%
- 13.4% – 15.1%
- 15.2% – 18.0%
- Rate not calculated

# Low Birth Weight

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) at birth. This indicator is expressed as a percentage of all births to Tulsa County mothers, averaged over the years 2008 – 2010.

## *Why Is This Indicator Important?*

Low birth weight is the single most important factor affecting neonatal mortality and is a significant determinant of postneonatal mortality. Low birth weight infants who survive are at increased risk for health problems ranging from neurodevelopmental disabilities to respiratory disorders. Risk factors for pregnant women that can lead to low birth weight include smoking, alcohol use, lack of weight gain, age, low income, low education level, stress, domestic violence or other abuse, being unmarried, previous preterm birth, and exposure to air pollution or drinking water contaminated by lead. Prevention includes early and regular prenatal care to help identify conditions and behaviors that can result in low birth weight infants.

## *How Are We Doing?*

Overall, 8.7 percent of Tulsa County infants were born weighing less than 2,500 grams from 2008 – 2010. The percentage of very low birth weight (less than 1,500 grams) was 1.6 percent. Racial disparity was evident with black mothers having almost twice the percentage of low birth weight infants as white mothers (14.6 percent compared to 7.7 percent). The percentage of low birth weight infants was 7.3 percent among Hispanic mothers.

In 2010, 8.8 percent of infants in Tulsa County weighed less than 2,500 grams at birth. This was higher than both Oklahoma and the United States (8.4 percent and 8.1 percent, respectively). None of these regions met the Healthy People 2020 target of 7.8 percent.

The ZIP codes with the highest rates of low birth weight infants were 74103, 74106, 74119, and 74130, which are located in north and downtown Tulsa.

Data Source:
Is Low Birth Weight a Health Problem? Pediatric and Pregnancy Nutrition Surveillance System. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Low Birth Weight and the Environment. Centers for Disease Control and Prevention. Retrieved from: http://ephtracking.cdc.gov.

Maternal and Child Health. Healthy People 2020. Centers for Disease Control and Prevention. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
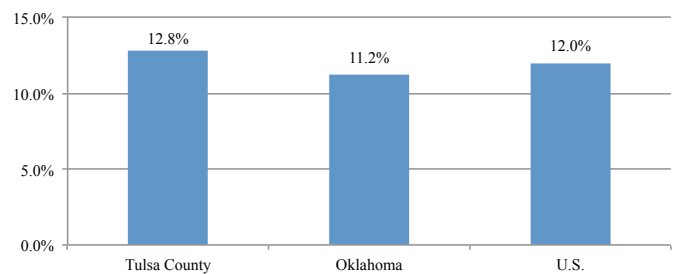
Martin JA, Hamilton BE, Ventura SJ, et al. Births: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 1. Hyattsville, MD: National Center for Health Statistics. 2012.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

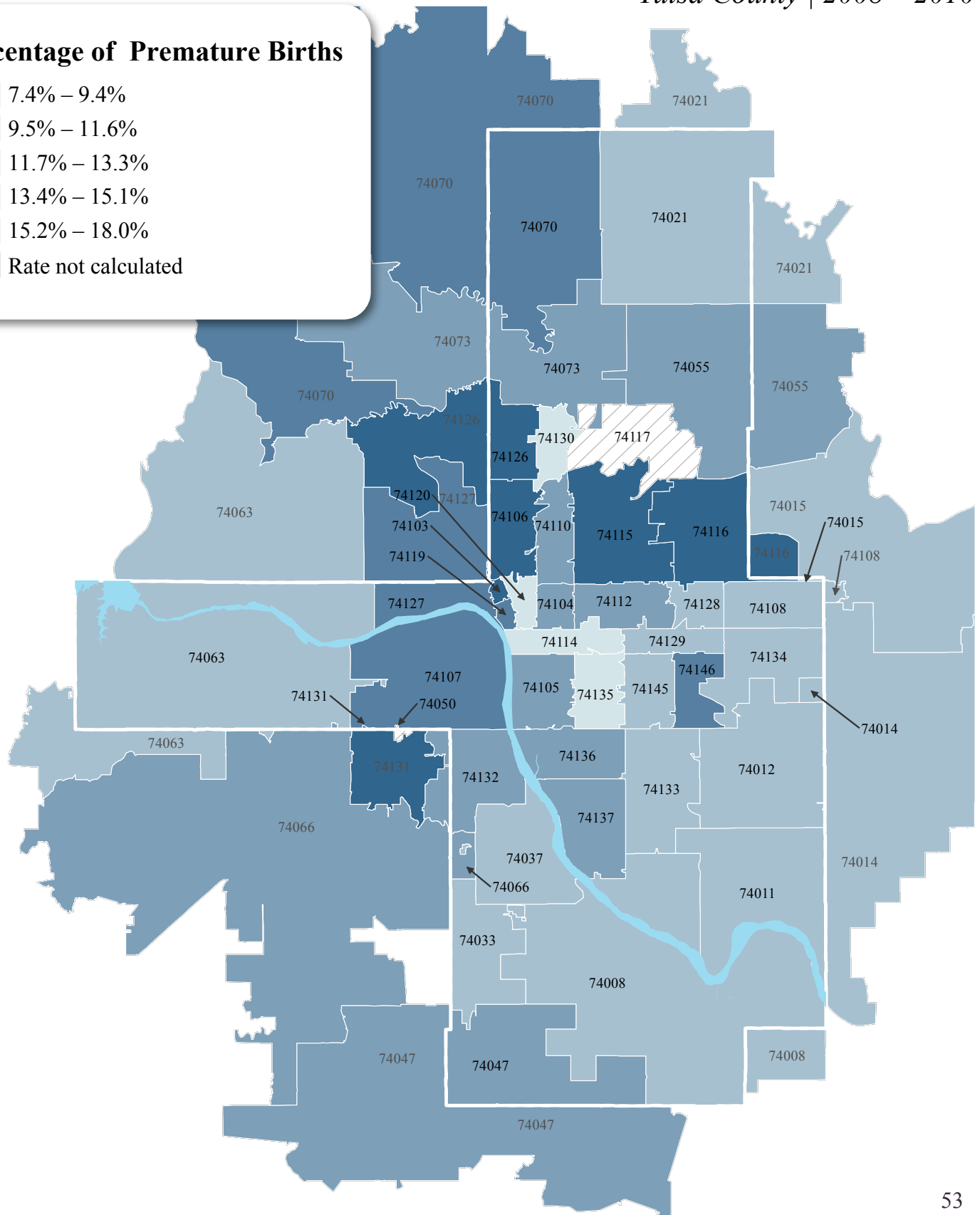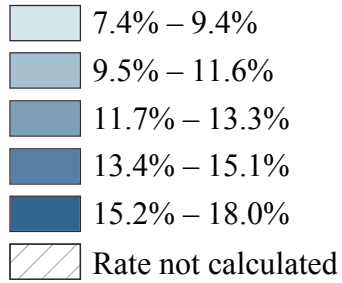**Percentage of Low Birth Weight Births by Race/Ethnicity of Mother**
**Tulsa County | 2008 – 2010**



| White | Black | American Indian | Asian/Pacific Islander | Hispanic |
|-------|-------|-----------------|------------------------|----------|
| 7.7% | 14.6% | 8.4% | 6.2% | 7.3% |
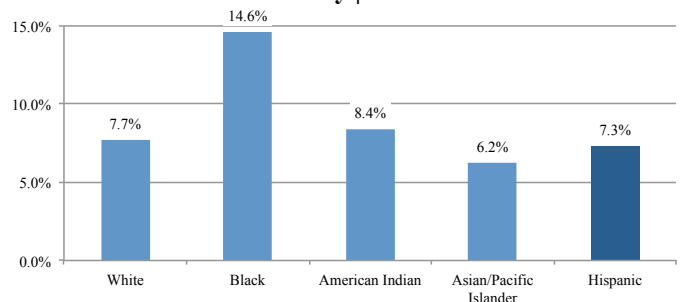
**Percentage of Low Birth Weight Births by Region | 2010**



| Tulsa | Oklahoma | U.S. |
|-------|----------|------|
| 8.8% | 8.4% | 8.1% |

# Low Birth Weight

**Percentage of Low Birth Weight Births**

- 5.0% – 6.5%
- 6.6% – 8.0%
- 8.1% – 9.9%
- 10.0% – 11.9%
- 12.0% – 18.6%
- Rate not calculated

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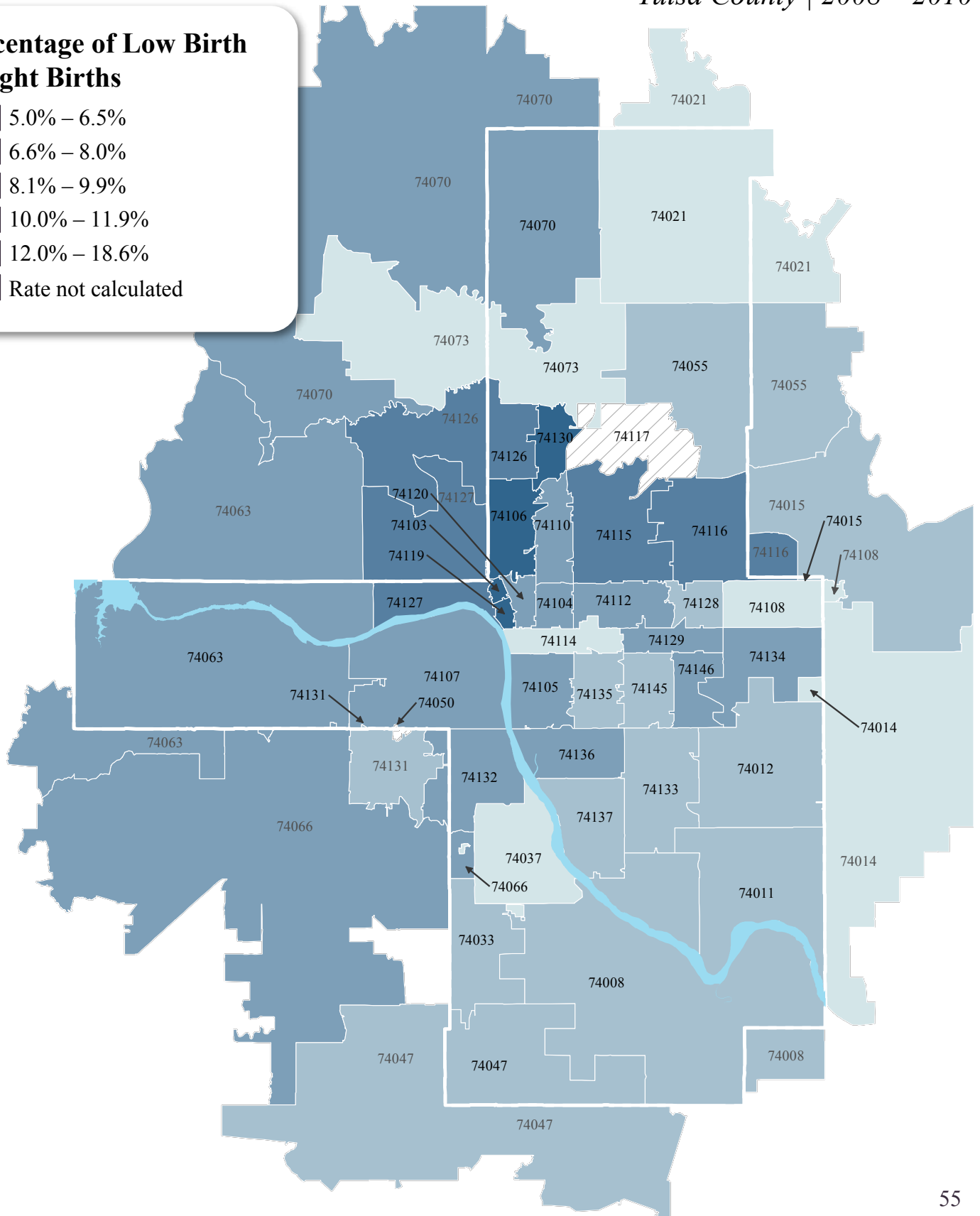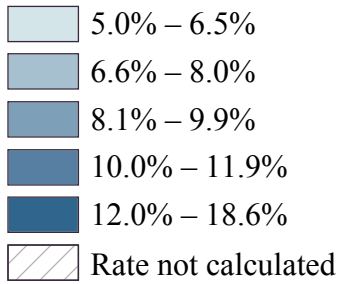
# Maternal Education

This indicator is defined as births to Tulsa County mothers with less than a 12th grade education. It is presented as a percentage of all births, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?

Maternal education is related to the types of jobs an individual can obtain and to income, both of which affect opportunities for healthier living and the ability to access health care. A woman working full time and year-round with at least a high school education makes almost twice as much as a woman who has not earned her high school diploma. Educational attainment is also correlated with health literacy, which impacts an individual's ability to communicate with health care providers, understand and follow instructions, and navigate the health care system. Women with less than a high school education also have poorer health outcomes, including higher rates of infant mortality, smoking, and diabetes than women with a high school diploma.

## How Are We Doing?

From 2008 – 2010, the average percentage of birth mothers in Tulsa County with less than a 12th grade education was 24.1 percent. With regard to race, this was slightly higher among American Indian and black mothers (25.5 percent and 24.5 percent, respectively). When looking at ethnicity, nearly 60 percent of Hispanic mothers did not have a 12th grade education.

In 2010, 23.9 percent of Tulsa County birth mothers had less than a 12th grade education, compared to 21.6 percent in Oklahoma and 20.1 percent in the United States.

The ZIP codes with the highest rates of low maternal education were primarily concentrated in north and east Tulsa (74050, 74110, 74115, 74116, 74128, and 74146).

Data Source:
Social Determinants. Putting Women's Health Care Disparities on The Map: Examining Racial and Ethnic Disparities at the State Level. The Henry J. Kaiser Family Foundation. Retrieved from: http://kaiserfamilyfoundation.files.wordpress.com.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
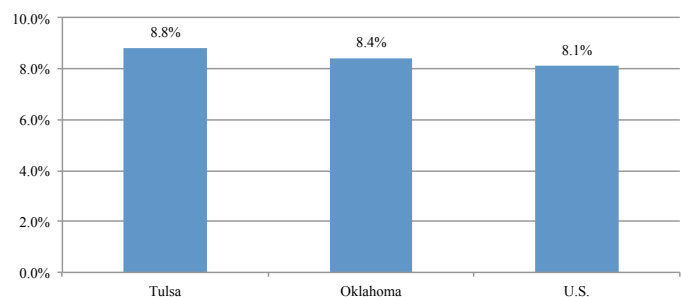
Kids Count Data Center. 2010.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Percentage of Birth Mothers with <12th Grade Education by Race/Ethnicity**
**Tulsa County | 2008 – 2010**

| Race/Ethnicity | Percentage |
|---|---|
| White | 24.0% |
| Black | 25.4% |
| American Indian | 25.5% |
| Other | 21.0% |
| Hispanic | 59.0% |
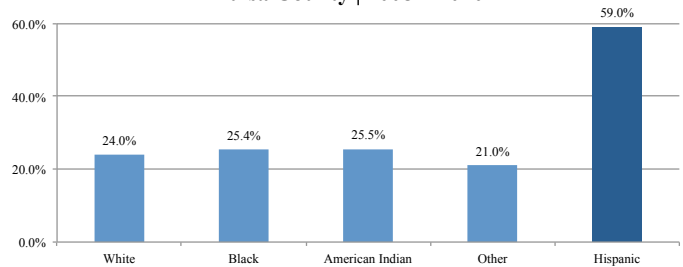
**Percentage of Birth Mothers with <12th Grade Education by Region | 2010**

| Region | Percentage |
|---|---|
| Tulsa County | 23.9% |
| Oklahoma | 21.6% |
| U.S. | 20.1% |

# Maternal Education

**Percentage of Mothers with Less Than a 12th Grade Education**

- 4.5% – 11.4%
- 11.5% – 19.0%
- 19.1% – 27.7%
- 27.8% – 39.7%
- 39.8% – 54.0%
- Rate not calculated

74070
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74110
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# Births to Unmarried Women

Unmarried birth mothers include those who have never been married, are widowed, or are divorced. It also includes births to cohabiting parents. This indicator is presented as births to unmarried Tulsa County mothers as a percentage of all births, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?
Children born to unmarried mothers have higher rates of infant mortality and an increased likelihood of adverse birth outcomes such as low birth weight. They are also more likely to live in poverty than children of married mothers. As they reach adolescence, children of unmarried mothers are more likely to have low educational attainment, engage in sex at a younger age, and have a birth outside of marriage. In the U.S., a majority of unmarried births now occur to cohabiting parents; however, these children still experience higher levels of socioeconomic disadvantage and have poor behavioral and emotional outcomes compared to those born to married parents.

## How Are We Doing?
An average of 36.7 percent of births in Tulsa County were to unmarried mothers from 2008 – 2010. Births to unmarried mothers was highest among blacks (78.2 percent), followed by American Indians (55.3 percent). The rate was lowest among Asians/Pacific Islanders (16.7 percent). Almost half (49.1 percent) of Hispanic births were to unmarried mothers.

In 2010, 42.6 percent of Tulsa County births were to unmarried mothers. This was slightly higher than in Oklahoma (41.7 percent), but lower than the national percentage (47.6 percent).

The ZIP codes with the highest percentage of births to unmarried women included 74106, 74126, and 74130.

Data Source:
Births to Unmarried Women. Child Trends. Retrieved from: http://www.childtrends.org.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
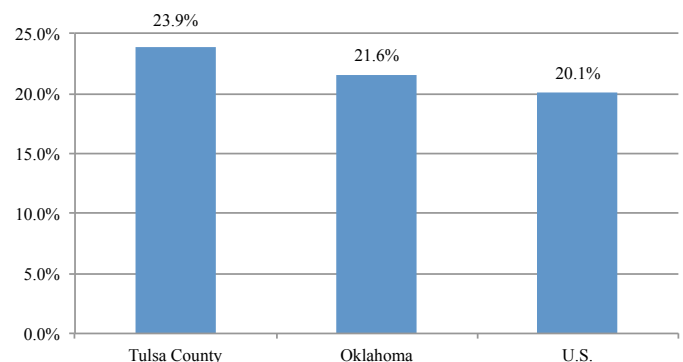
Martin JA, Hamilton BE, Ventura SJ, et al. Births: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 1. Hyattsville, MD: National Center for Health Statistics. 2012.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

### Percentage of Births to Unmarried Mothers by Race/Ethnicty of Mother Tulsa County | 2008 – 2010



- White: 36.2%
- Black: 78.2%
- American Indian: 55.3%
- Asian/Pacific Islander: 16.7%
- Hispanic: 49.1%
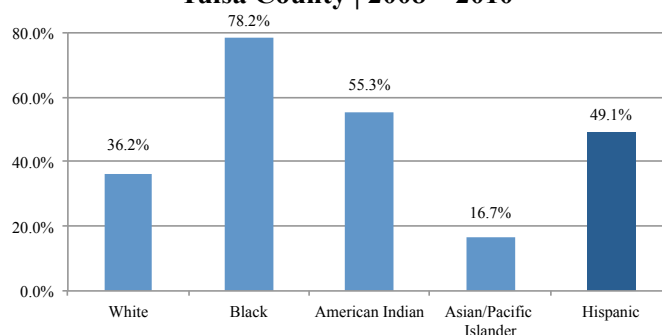
### Percentage of Total Births to Unmarried Mothers by Region | 2010



- Tulsa County: 42.6%
- Oklahoma: 41.7%
- U.S.: 47.6%

# Births to Unmarried Women

**Percentage of Births to Unmarried Women**

- 13.0% – 22.3%
- 22.4% – 31.4%
- 31.5% – 41.3%
- 41.4% – 52.4%
- 52.5% – 64.2%
- Rate not calculated

# Infant Mortality Rate

Infant mortality is defined as the death of a child in the first year of life. The infant mortality rate is presented as the number of infant deaths per 1,000 live births, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?

Infant mortality is often used as an indicator to measure the health and well-being of a community because factors affecting the health of an entire population can also influence the mortality rate of infants. There are obvious disparities in infant mortality by age, race, and ethnicity. 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.

## How Are We Doing?

Between 2008 and 2010, 205 Tulsa County infants died before the age of 1, which is an average rate of 7.2 deaths per 1,000 live births. Black infant mortality was significantly higher than other races (13.2 deaths per 1,000 live births). In comparison, the rate for whites was 6.0 deaths per 1,000 live births. Among Hispanics, the infant mortality rate was 7.4 deaths per 1,000 live births. The infant mortality rate for Asians/Pacific Islanders is not shown because it is based on a relatively small number of deaths.

The infant mortality rate in Tulsa County in 2010 was 6.7 deaths per 1,000 live births. This was lower than Oklahoma (7.7) but slightly higher than the U.S. overall (6.2). The Healthy People 2020 goal for infant mortality is 6.0 deaths per 1,000 live births, which was not met by any of these regions.

The ZIP codes with the highest rates of infant mortality were 74106 and 74108.

Data Source:
Reproductive Health: Infant Mortality. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov

Maternal and Child Health. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
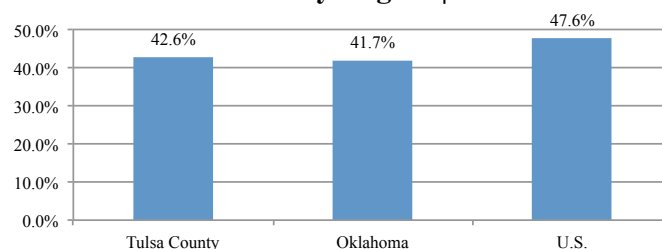
Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Infant Mortality Rate by Race/Ethnicity of Mother Tulsa County | 2008 – 2010**

(Deaths per 1,000 Live Births)
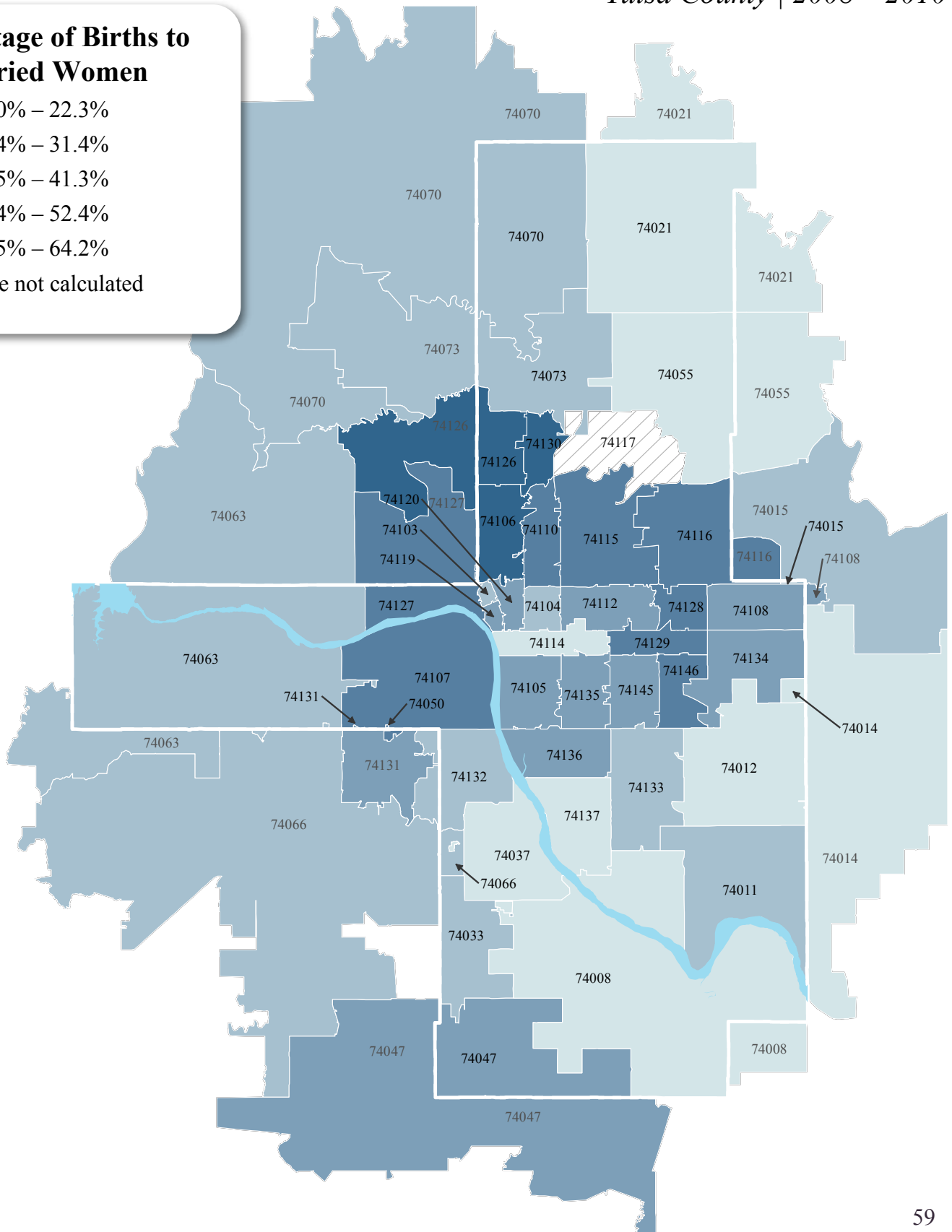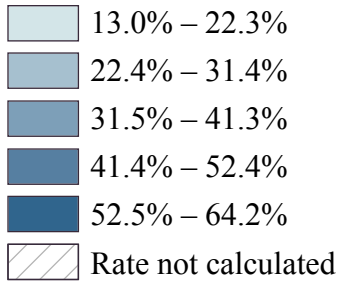- White: 6.0
- Black: 13.2
- American Indian: 9.2
- Hispanic: 7.4
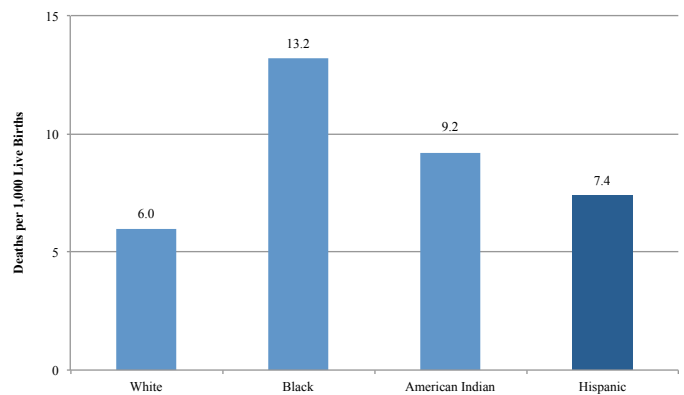


**Infant Mortality Rate by Region | 2010**

(Deaths per 1,000 Live Births)
- Tulsa County: 6.7
- Oklahoma: 7.7
- U.S.: 6.2
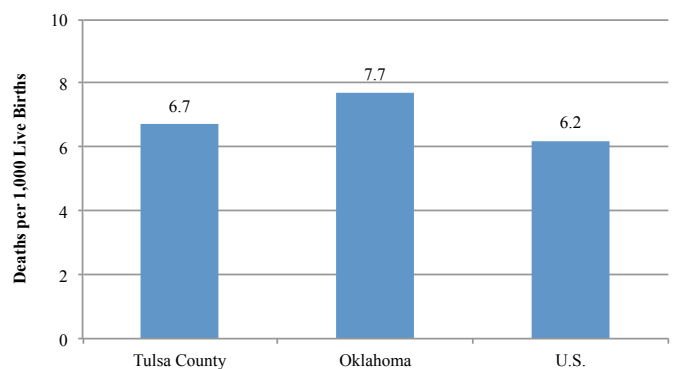
# Infant Mortality Rate

*Tulsa County | 2008 – 2010*

**Infant Deaths per 1,000 Live Births**

- 3.8 – 4.9
- 5.0 – 6.0
- 6.1 – 7.2
- 7.3 – 10.2
- 10.3 – 17.6
- Rate not calculated

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# Fertility Rate

The fertility rate is presented as the number of live births to women ages 15 – 44 years per 1,000 females in this age group, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?
The fertility rate, which is calculated using only females of childbearing age, is a more sensitive indicator than the crude birth rate to show how the population may be growing naturally through reproduction. Sustained high fertility rates lead to a disproportionately young population, while sustained low fertility rates can lead to an aging population. Each of these scenarios requires planning and anticipation of current and future needs which can place burdens on certain social services.

## How Are We Doing?
The average fertility rate for Tulsa County between 2008 and 2010 was 77.2 live births per 1,000 females ages 15 – 44 years. Fertility rates were similar between races, although whites had a slightly higher rate (77.5). The fertility rate was lowest among Asians/Pacific Islanders (68.9). Hispanics had a significantly higher fertility rate than non-Hispanics (111.1 compared to 72.3).

In 2010, Tulsa County had a fertility rate of 74.0 live births per 1,000 females ages 15 – 44 years. This rate was higher than both Oklahoma (70.8) and the United States (64.1).

The ZIP codes with the highest fertility rates were in north and east Tulsa.

**Fertility Rates by Race/Ethnicity of Mother Tulsa County | 2008 – 2010**

Live Births per 1,000 Females Ages 15 – 44

| White | Black | American Indian | Asian/Pacific Islander | Hispanic | Non-Hispanic |
|-------|-------|-----------------|------------------------|----------|--------------|
| 77.5 | 76.5 | 75.4 | 68.9 | 111.1 | 72.3 |
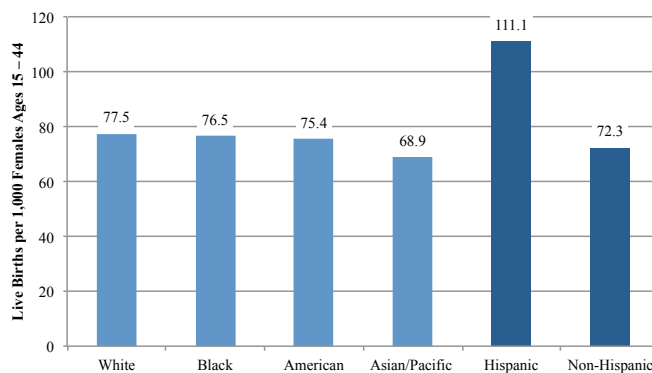
**Fertility Rates by Region | 2010**

Live Births per 1,000 Females Ages 15 – 44

| Tulsa County | Oklahoma | U.S. |
|--------------|----------|------|
| 74.0 | 70.8 | 64.1 |

# Fertility Rate

**Live Births per 1,000 Females Ages 15 – 44**

- 24.0 – 27.0
- 27.1 – 60.1
- 60.2 – 70.2
- 70.3 – 80.9
- 81.0 – 120.8
- Rate not calculated

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# Infectious Disease

# Chlamydia

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 can lead to blindness.

## How Are We Doing?

In 2010, there were 3,146 new cases of Chlamydia reported in Tulsa County, which was a rate of 521.4 cases per 100,000 population. This was a decrease from the incidence rate in Tulsa County in 2009.

The Chlamydia incidence rate in Tulsa County in 2010 was significantly higher than the rate in Oklahoma (387.9 cases per 100,000 population) and in the United States (423.6 cases per 100,000 population).

Data Source:
Chlamydia Fact Sheet 2011. Oklahoma State Department of Health. Retrieved from: http://www.ok.gov.

HIV/STD Service. Oklahoma State Department of Health.

STD Surveillance. Centers for Disease Control and Prevention.

**Chlamydia Incidence Rate by Region | 2002 – 2010**
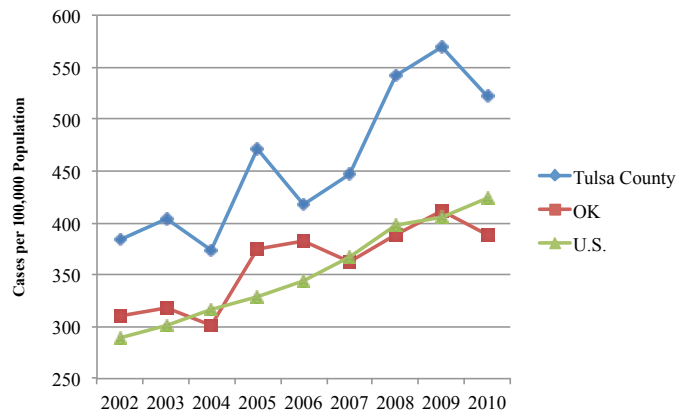
# Gonorrhea

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.

## *How Are We Doing?*

In 2010, Tulsa County reported an incidence rate of 220.3 cases of gonorrhea per 100,000 population (1,329 total cases). This rate has been decreasing in Tulsa County since 2008.

In 2010, Tulsa County's gonorrhea incidence rate was significantly higher than Oklahoma (116.5 cases per 100,000 population) and the United States (100.2 cases per 100,000 population).

Data Source:
Gonorrhea Fact Sheet 2011. Oklahoma State Department of Health. Retrieved from: http://www.ok.gov.

HIV/STD Service. Oklahoma State Department of Health.

STD Surveillance. Centers for Disease Control and Prevention.

**Gonorrhea Incidence Rate by Region | 2002 – 2010**



67
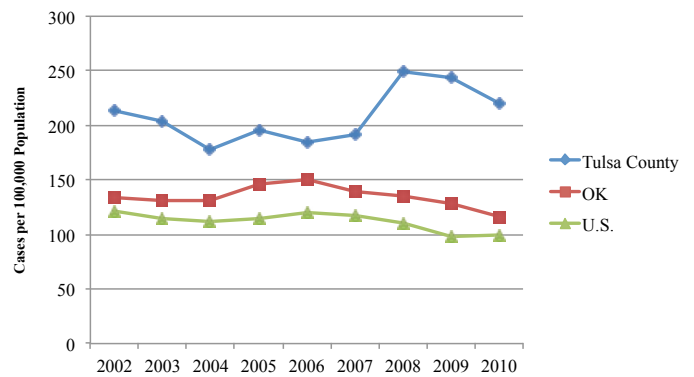
# Tuberculosis

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. Drug resistant TB is much more difficult and expensive to treat. Worldwide, over nine million individuals become sick with TB each year.

## *How Are We Doing?*

In 2011, the incidence rate of tuberculosis in Tulsa County was 2.5 new cases per 100,000 population. This was the same as the rate in Oklahoma. These regions did not meet the Healthy People 2020 goal of 1.0 new cases of tuberculosis per 100,000 individuals. The incidence of TB in Tulsa County increased in 2011 after declining from 2007 to 2010.

From 2008 – 2010, the greatest percentage of new TB cases were reported in adults age 65 and older (22.7 percent). The majority of cases were male (65.9 percent). Additionally, the majority were white (43.2 percent) and non-Hispanic (61.4 percent).

The highest tuberculosis case rate was in ZIP code 74103 (37.9 cases per 100,000 population). However, cases cannot be mapped due to confidentially concerns because of a small number of cases in each ZIP code.

Data Source:
Tuberculosis Fact Sheet. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Immunization and Infectious Disease. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Acute Disease Service. Oklahoma State Department of Health.



**Tuberculosis Incidence Rate by Region | 2002 – 2011**
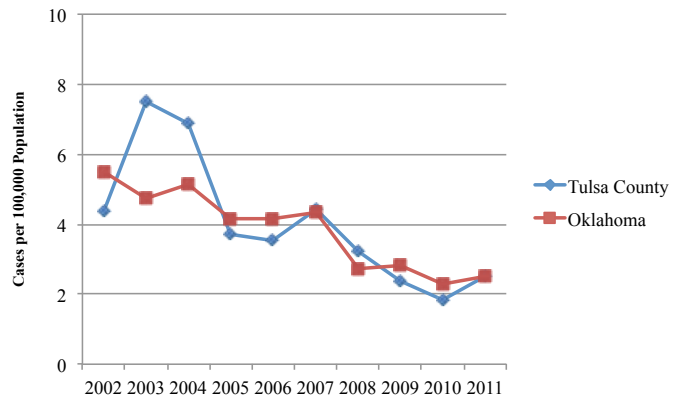


**Tuberculosis Cases by Age***
**Tulsa County | 2008 – 2010**
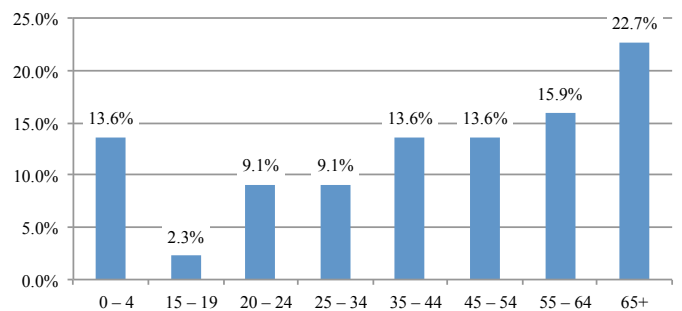
*Graph shows percentage of total cases within each age group; percentages add up to 100%



**Tuberculosis Cases by Race**
**Tulsa County | 2008 – 2010**
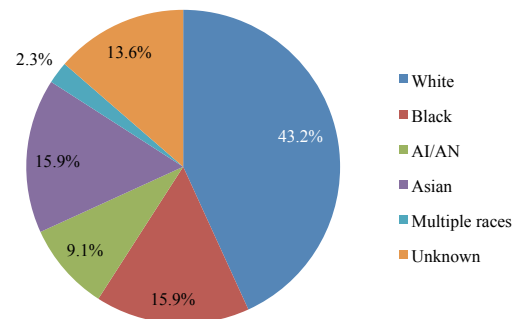
This indicator is presented as the number of reported cases of hepatitis A per 100,000 population.

## Why Is This Indicator Important?

Hepatitis A is an acute liver disease that can range in severity from a mild illness lasting a few weeks to a severe illness lasting several months. Hepatitis A is generally spread through ingestion of fecal matter from contact with objects, food, or drinks that have been contaminated by an infected person. Hepatitis A can also be spread through contaminated food or water and has been associated with restaurant outbreaks. Vaccination is the most effective way to prevent the transmission of hepatitis A.

## How Are We Doing?

There were less than 5 cases of hepatitis A from 2008 – 2010. Because of confidentiality concerns, cases were not mapped or broken down by demographics.

In 2010, the hepatitis A incidence rate was 0.17 cases per 100,000 population, compared to 0.16 cases per 100,000 in Oklahoma and 0.5 cases per 100,000 in the United States. Tulsa County and Oklahoma both met the Healthy People 2020 target incidence rate of 0.3 cases per 100,000 population. The incidence rate in Tulsa County remained the same from 2008 – 2010 after decreasing from 2006 – 2008.

Data Source:
Hepatitis A Fact Sheet. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Immunization and Infectious Disease. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Acute Disease Service. Oklahoma State Department of Health.

National Notifiable Diseases Surveillance System. Centers for Disease Control and Prevention.

Viral Hepatitis Surveillance. Centers for Disease Control and Prevention.

**Hepatitis A Incidence Rate by Region | 2002 – 2010**
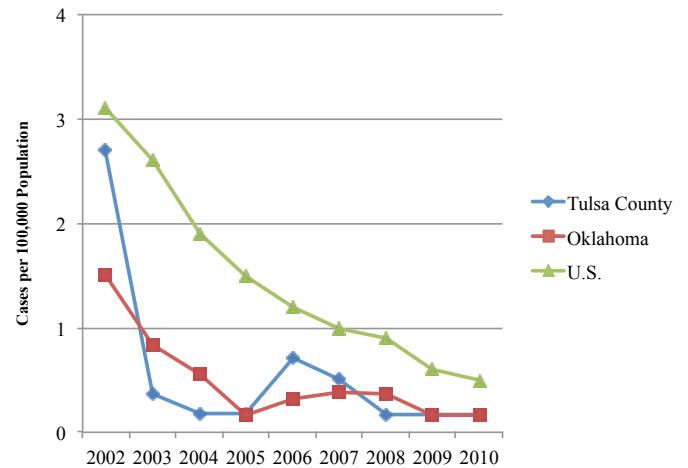
# Hepatitis B

This indicator is presented as the number of acute cases of hepatitis B per 100,000 population.

## Why Is This Indicator Important?

Hepatitis B is a contagious liver disease that can cause acute or chronic infection. The hepatitis B virus is 50 – 100 times more infectious than HIV and is usually spread through blood, semen, or other bodily fluids. Approximately 15 – 25 percent of individuals with chronic hepatitis B develop serious liver complications, including liver damage, cirrhosis, liver failure, and liver cancer. Each year, about 3,000 people die in the United States from hepatitis B-related liver disease.

## How Are We Doing?

There were 25 cases of acute hepatitis B in Tulsa County in 2010, which was an incidence rate of 4.2 cases per 100,000 population. This rate was a decrease from 2009, when there was a significant spike in the rate in Tulsa County.

The incidence rate of acute hepatitis B in Tulsa County in 2010 was higher than in Oklahoma (3.1 cases per 100,000 population) and the United States (1.1 cases per 100,000).

Data Source:
Hepatitis B Fact Sheet. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

HIV/ STD Service. Oklahoma State Department of Health.

National Notifiable Diseases Surveillance System. Centers for Disease Control and Prevention.

Viral Hepatitis Surveillance. Centers for Disease Control and Prevention.

**Hepatitis B Incidence Rate by Region | 2002 – 2010**
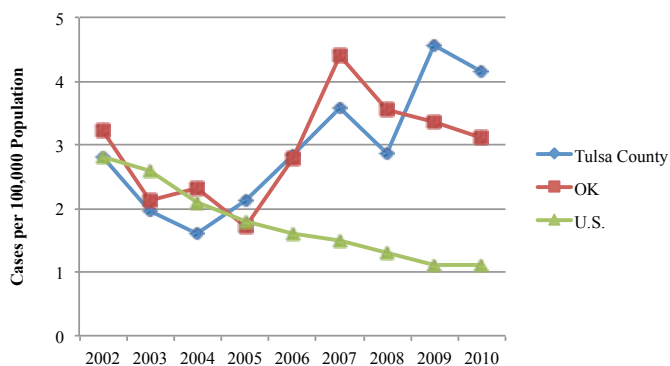
This indicator is presented as the number of cases of acute hepatitis C per 100,000 population.

## *Why Is This Indicator Important?*

Hepatitis C is a contagious liver disease that can cause acute or chronic infection. Approximately 75 – 85 percent of people who are infected with hepatitis C develop chronic (lifelong) infection. Hepatitis C is transmitted through contact with the blood of an infected person. Currently, most people become infected with hepatitis C by sharing needles or other equipment used to inject drugs. Hepatitis C cases (acute and chronic) account for the majority of the cases investigated by Tulsa Health Department epidemiologists.

## *How Are We Doing?*

In 2010, there were 9 confirmed acute hepatitis C cases in Tulsa County. This was an incidence rate of 1.5 cases per 100,000 population. The rate of hepatitis C in Tulsa County doubled from 2009 – 2010.

The incidence rate of hepatitis C in Tulsa County in 2010 was higher than the rate in Oklahoma (1.1 cases per 100,000 population) and the United States (0.3 cases per 100,000). None of these regions met the Healthy People 2020 target incidence rate of 0.25 acute cases per 100,000 individuals.

Data Source:
Hepatitis C Fact Sheet. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Immunization and Infectious Disease. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

HIV/ STD Service. Oklahoma State Department of Health.

National Notifiable Diseases Surveillance System. Centers for Disease Control and Prevention.

Viral Hepatitis Surveillance. Centers for Disease Control and Prevention.

**Hepatitis C Incidence Rate by Region | 2002 – 2010**
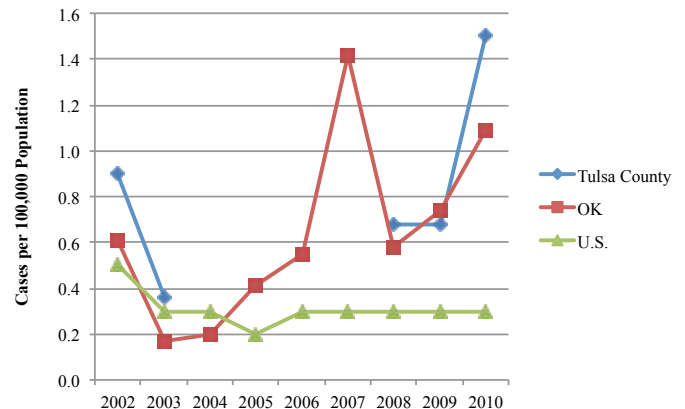
# Foodborne Illness

This indicator includes reported cases of disease caused by the following bacteria—*Campylobacter* species, *Escherichia coli*, *Salmonella* species and *Listeria monocytogenes*. It is presented as the rate of reported foodborne illness cases per 100,000 population, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?
Consumption of contaminated food causes an estimated 48 million foodborne illnesses and 3,000 deaths each year in the United States. Although everyone is at risk of getting a foodborne illness, certain populations, such as infants, young children, pregnant women, the elderly, and individuals with weakened immune systems, are at a greater risk of developing more serious illness or death.

## How Are We Doing?
Of the 483 key foodborne illnesses diagnosed in Tulsa County in 2008 – 2010, 58 percent were Salmonellosis, 28 percent were Campylobacteriosis, 14 percent were caused by *E. coli*, and less than 1 percent were Listeriosis. The majority of cases (70.4 percent) were white and the most common age group was 0 – 4 years old (23.6 percent). Overall, a total of 11.2 percent of individuals with foodborne illnesses were Hispanic.

In 2010, the rates of Salmonellosis and Campylobacteriosis per 100,000 population in Tulsa County were 11.1 and 8.8, respectively. These were both significantly lower than the rates in Oklahoma overall, which were 12.2 and 20.1. Tulsa County met the Healthy People 2020 target of 11.4 cases of Salmonellosis per 100,000 individuals, but did not meet the target of 8.5 cases of Campylobacteriosis per 100,000 population. Oklahoma did not meet either of these goals. The rate of *E. coli* was 2.8 cases per 100,000 population. This was the same as the rate in Oklahoma.

The rates of both Campylobacteriosis and *E. coli* increased in Tulsa County from 2009 – 2010, while the rate of Salmonellosis decreased from 2008 – 2010.

The ZIP code with the highest rate of foodborne illness was 74134.

### Key Foodborne Bacterial Illnesses by Type
### Tulsa County | 2008 – 2010



27.5% — Campylobacteriosis
14.3% — *E.coli*
0.6% — Listeriosis
57.6% — Salmonellosis
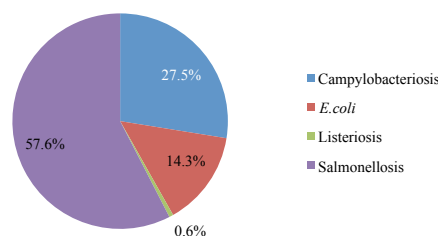
### Key Foodborne Bacterial Illnesses by Race*
### Tulsa County | 2008 – 2010



White 70.4%, Black 7.5%, AI/AN 5.6%, Asian 1.0%, NH/PI 0.2%, Multiracial 2.5%, Unknown 12.8%
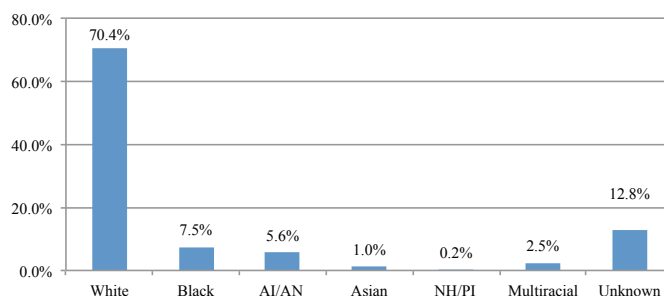
*Graph shows percentage of total cases within each race; percentages add up to 100%.

### Rates of Key Bacterial Foodborne Illnesses
### Tulsa County | 2000 – 2010



Salmonellosis
Campylobacteriosis
*E. coli*
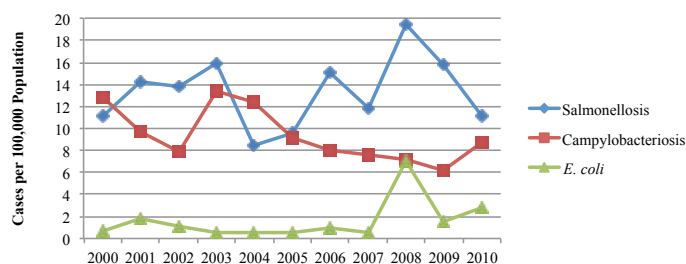
# Foodborne Illness

*Tulsa County | 2008 – 2010*

**Foodborne Illness Cases per 100,000**

- 13.9 – 16.1
- 16.2 – 22.4
- 22.5 – 31.7
- 31.8 – 42.7
- 42.8 – 56.0
- Rate not calculated
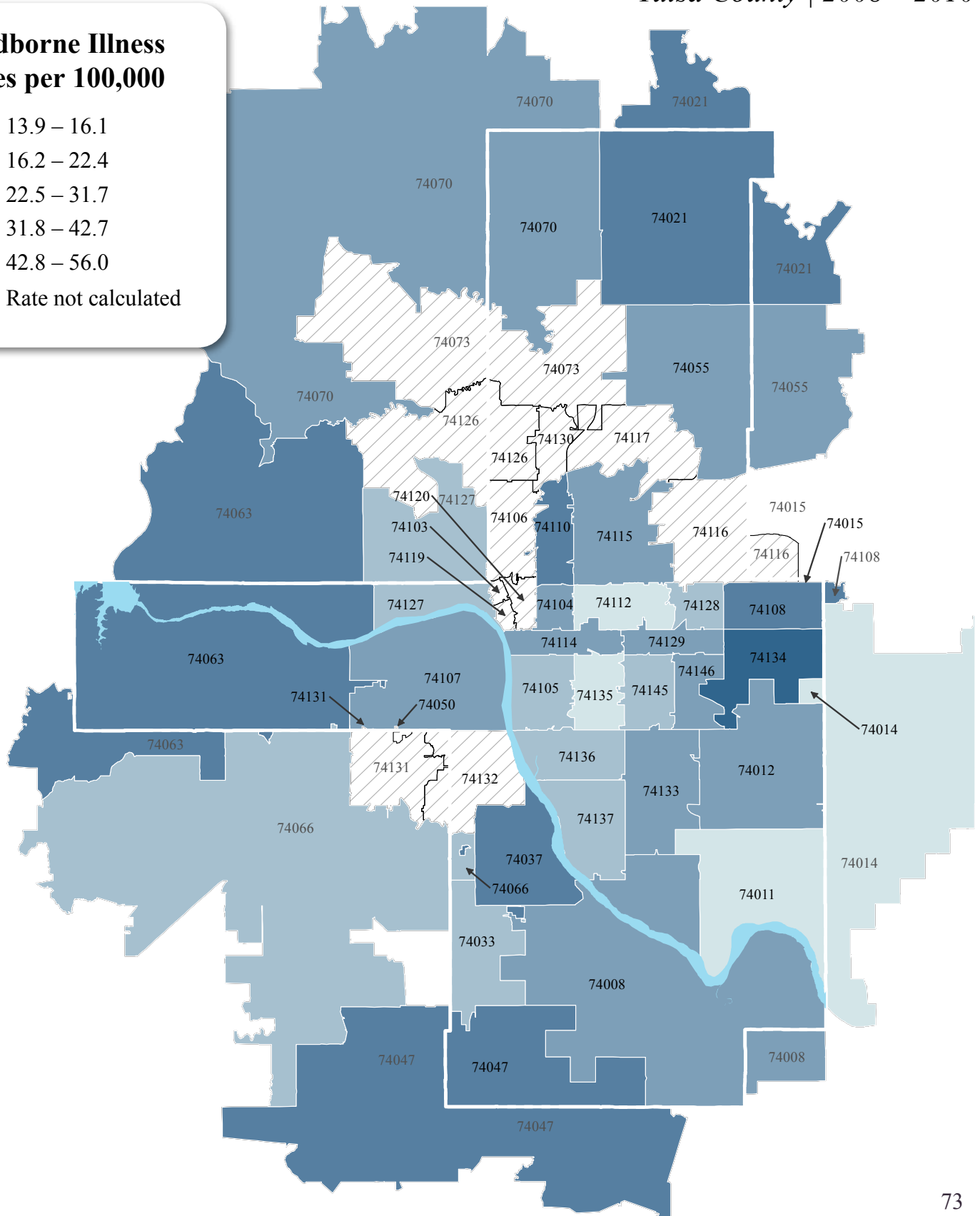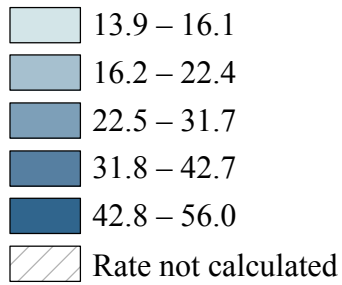
# Social &
# Mental Health

# Mental Health

According to the World Health Organization, mental health is defined as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community." This indicator is shown as the average number of poor mental health days in the past 30 days.

## 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. 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. 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 2010, Tulsa County adults experienced an average of 4.2 poor mental health days in the past 30 days. This was the same as the average in Oklahoma and higher than the average in the United States (3.5 poor mental health days in the past month). The average number of poor mental health days stayed relatively stable in Tulsa County from 2008 – 2010.

Females had a higher average number of poor mental health days compared to males (5.2 days compared to 3.2 days). Also, adults ages 45 – 54 had a higher average number of poor mental health days (5.3 days). With regard to race, adults who identified their race as "other" had a significantly higher average

number of poor mental health days compared to other races. Hispanics had an average of 3.0 poor mental health days in the past month.

In general, the average number of poor mental health days decreased as income and education levels increased. Adults who were separated had a significantly higher average number of poor mental health days than other individuals.

Data Source:
Mental Health: Strengthening Our Response. World Health Organization. Retrieved from: http://www.who.int.

Mental Health and Mental Disorders. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

SMART: BRFSS City and County Data. Centers for Disease Control and Prevention.

Behavioral Risk Factor Surveillance System. Centers for Disease Control and Prevention.

**Average Number of Poor Mental Health Days in the Past Month by Region | 2007 – 2010**
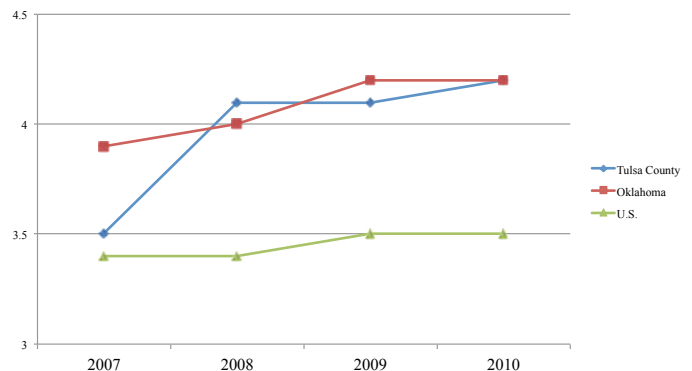
**Average Number of Poor Mental Health Days in the Past Month by Age and Race/Ethnicity**
**Tulsa County | 2010**

| Category | Value |
|----------|-------|
| 18 – 24 | 3.5 |
| 25 – 34 | 4.4 |
| 35 – 44 | 4.4 |
| 45 – 54 | 5.3 |
| 55 – 64 | 4.8 |
| 65+ | 2.5 |
| White | 3.8 |
| Black | 6.0 |
| AI/AN | 8.9 |
| Asian | 1.6 |
| NH/PI | 2.0 |
| Other | 16.8 |
| Multiracial | 4.6 |
| Hispanic | 3.0 |

**Average Number of Poor Mental Health Days in the Past Month by Income and Education**
**Tulsa County | 2010**

| Category | Value |
|----------|-------|
| <$10,000 | 12.0 |
| $10,000 – $14,999 | 7.7 |
| $15,000 – $19,999 | 9.2 |
| $20,000 – $24,999 | 5.1 |
| $25,000 – $34,999 | 3.6 |
| $35,000 – $49,999 | 3.0 |
| $50,000 – $74,999 | 3.2 |
| $75,000+ | 1.8 |
| less than HS | 5.6 |
| High School | 5.4 |
| Some College | 4.6 |
| College | 2.2 |
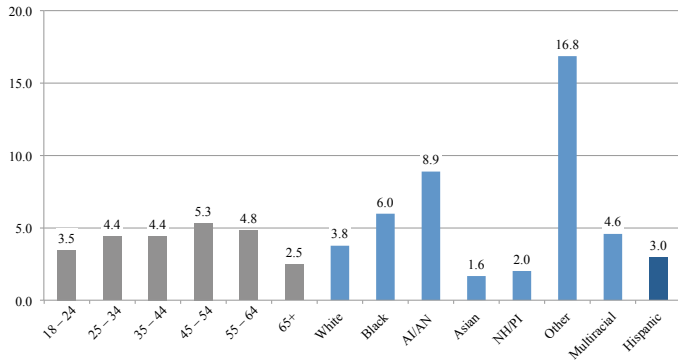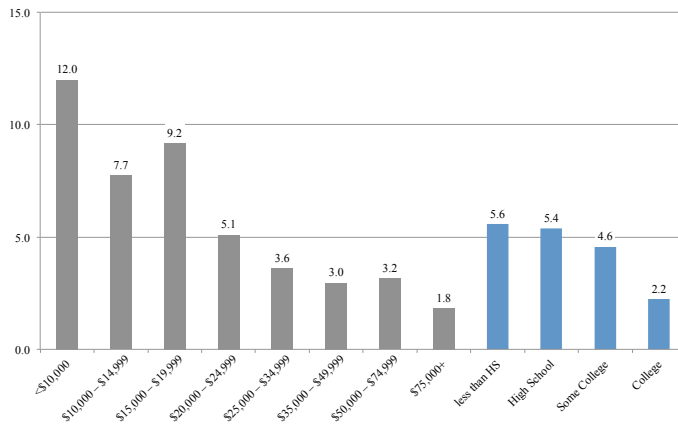
**Average Number of Poor Mental Health Days in the Past Month by Marital Status**
**Tulsa County | 2010**

| Category | Value |
|----------|-------|
| Married | 2.9 |
| Divorced | 7.1 |
| Widowed | 3.9 |
| Separated | 12.2 |
| Never married | 5.2 |
| A member of an unmarried couple | 5.6 |
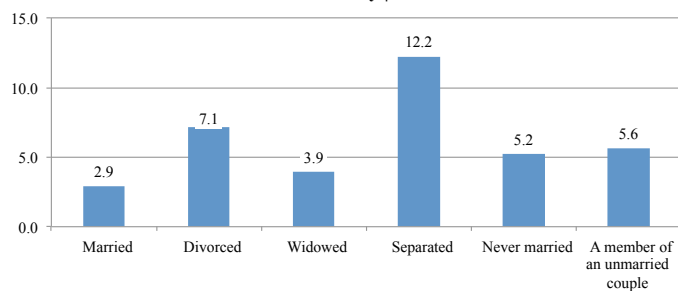
# Excessive Alcohol Abuse

Excessive alcohol abuse includes heavy drinking and binge drinking. Heavy drinking is defined as drinking more than two drinks per day on average for men and more than one drink per day on average for women. Binge drinking is defined as drinking five or more drinks during a single occasion for men and four or more drinks during a single occasion for women.

## Why Is This Indicator Important?

Excessive alcohol abuse is the third leading lifestyle related cause of death in the United States. Health risks stemming from excessive alcohol abuse include both immediate and long-term risks. Immediate risks include unintentional injuries, violence, increased chance of risky sexual behaviors, miscarriage and stillbirth among pregnant women, and alcohol poisoning. Long-term health risks include neurological, cardiovascular, psychiatric and social problems, certain cancers, liver diseases, and other gastrointestinal problems.

## How Are We Doing?

### Heavy Drinking

According to the 2010 Behavioral Risk Factor Surveillance System (BRFSS), 3.5 percent of Tulsa County adults reported heavy drinking, as compared to 3.8 percent of Oklahomans and 5.0 percent of U.S. adults. Men reported slightly higher rates of heavy drinking compared to women (3.7 percent compared to 3.1 percent). Additionally, more adults ages 25 – 34 and 45 – 64 reported heavy drinking compared to other age groups. Tulsa County residents who were white or multiracial also reported higher percentages of heavy drinking. Less than 1 percent of Hispanics reported heavy drinking.

With regard to income and education levels, adults who had an income of $35,000 – $49,999 had a significantly higher prevalence of heavy drinking. Also, adults with some college had increased levels of heavy drinking. Additionally, adults who were separated or a member of an unmarried couple reported significantly lower rates of heavy drinking as compared to other individuals.

**Prevalence of Heavy Drinking by Region | 2002 – 2010**
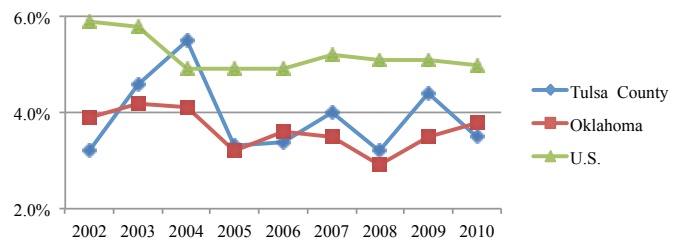
Tulsa County · Oklahoma · U.S.

**Prevalence of Heavy Drinking by Age and Race/Ethnicity Tulsa County | 2010**

18 – 24: 1.2%; 25 – 34: 4.6%; 35 – 44: 1.7%; 45 – 54: 4.3%; 55 – 64: 5.0%; 65+: 2.9%; White: 4.3%; Black: 1.8%; AI/AN: 0.0%; Other: 0.0%; Multiracial: 5.8%; Hispanic: 0.6%

**Prevalence of Heavy Drinking by Income and Education Tulsa County | 2010**

<$10,000: 1.1%; $10,000 – $14,999: 2.3%; $15,000 – $19,999: 0.9%; $20,000 – $24,999: 1.2%; $25,000 – $34,999: 3.8%; $35,000 – $49,999: 7.4%; $50,000 – $74,999: 3.5%; $75,000 or more: 4.7%; less than HS: 2.4%; High School: 3.4%; Some College: 4.0%; College: 3.3%

**Prevalence of Heavy Drinking by Marital Status Tulsa County | 2010**
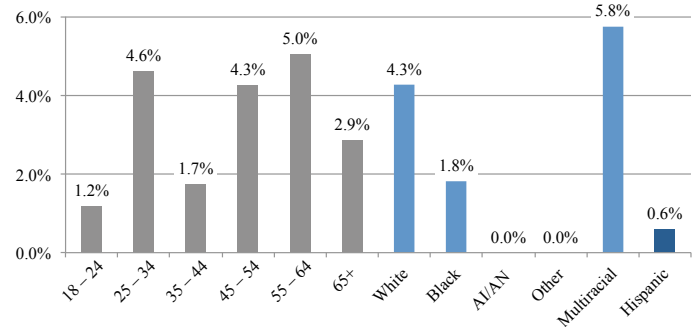
Married: 3.7%; Divorced: 4.0%; Widowed: 2.9%; Separated: 0.0%; Never married: 3.5%; A member of an unmarried couple: 0.0%
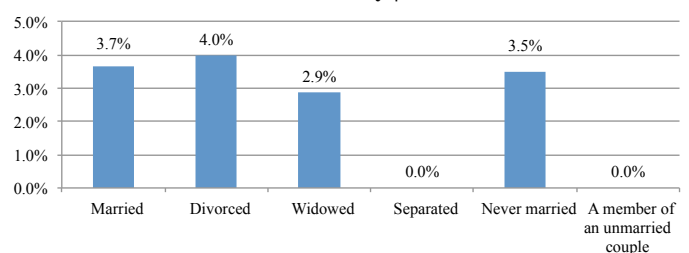
# Excessive Alcohol Abuse

**Binge Drinking**

In Tulsa County, 14.1 percent of residents reported binge drinking in 2010, which was slightly higher than Oklahoma (13.0 percent) but lower than the U.S. (15.1 percent). All of these regions met the Healthy People 2020 target of 24.2 percent. Males reported significantly higher rates of binge drinking than women (19.9 percent compared to 8.6 percent). Adults age 18 – 34 also had much higher rates of binge drinking than other age groups. Additionally, multiracial adults reported significantly higher rates of binge drinking. Among Hispanics, the prevalence of binge drinking was 12 percent.

Adults with incomes of $15,000 – $19,999, $25,000 – $34,999, or $50,000 – $74,999 reported higher rates of binge drinking compared to other individuals. Also, adults with less than high school, high school, or some college education reported higher levels of binge drinking. Regarding marital status, individuals who were separated, never married, or a member of an unmarried couple had higher rates of binge drinking compared to other individuals.

Data Source:
Alcohol Use and Health Fact Sheet. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Substance Abuse. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

SMART: BRFSS City and County Data. Centers for Disease Control and Prevention.

Behavioral Risk Factor Surveillance System. Centers for Disease Control and Prevention.
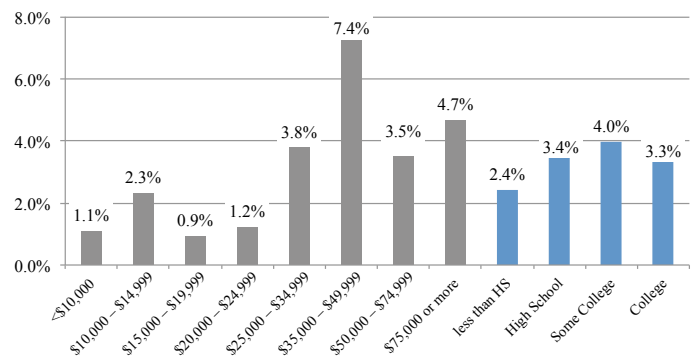
**Prevalence of Binge Drinking by Region | 2001 – 2010**
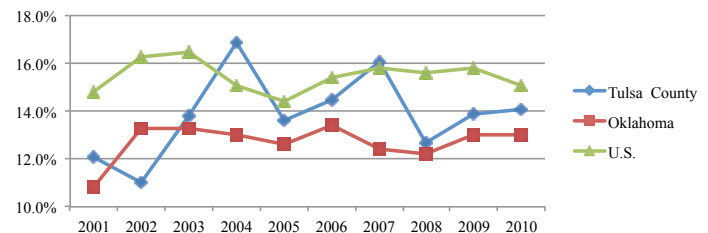


**Prevalence of Binge Drinking by Age and Race/Ethnicity Tulsa County | 2010**
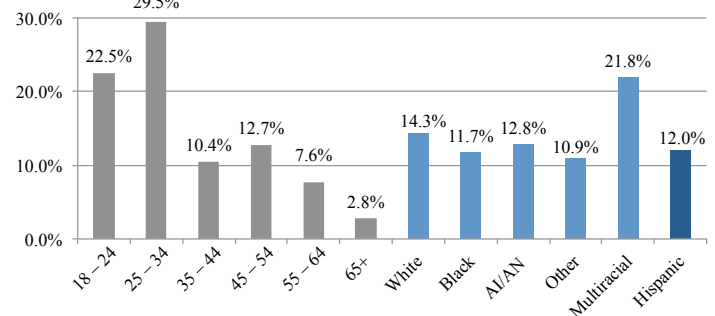


**Prevalence of Binge Drinking by Income and Education Tulsa County | 2010**
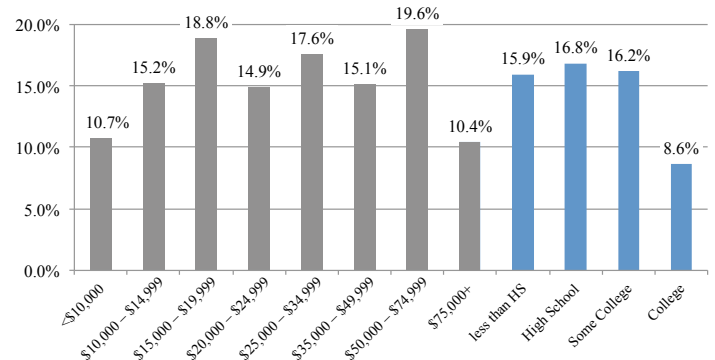


**Prevalence of Binge Drinking by Marital Status Tulsa County | 2010**
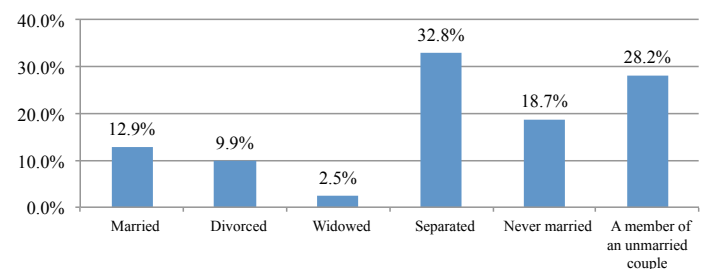
# Child Abuse and Neglect

The Oklahoma Department of Human Services (OKDHS) investigates or assesses all accepted reports of alleged child abuse and neglect by the person 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.

## 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 and adult criminality, alcohol and other drug abuse, and abusive behavior.

## How Are We Doing?

During fiscal year 2010, there were a total of 8,606 reports of child abuse or neglect received in Tulsa County. After screening, 3,811 referrals were accepted for assessment or investigation.

Overall, there were 6.6 confirmed cases of child abuse or neglect per 1,000 children in Tulsa County during fiscal year 2010. This was a decrease from fiscal year 2009 when there were 8.0 confirmed cases per 1,000 children. Tulsa County had a lower rate of confirmed child abuse cases than both Oklahoma (7.9 confirmed cases per 1,000 children) and the U.S. (9.3 confirmed cases per 1,000 children).

**Confirmed Child Abuse Case Rate by Region | FY 2009 – FY 2010**

Y-axis: Confirmed Child Abuse Cases per 1,000 Children

| | Tulsa County | Oklahoma | U.S. |
|---|---|---|---|
| FY 2009 | 8.0 | 9.5 | 9.3 |
| FY 2010 | 6.6 | 7.9 | 9.3 |
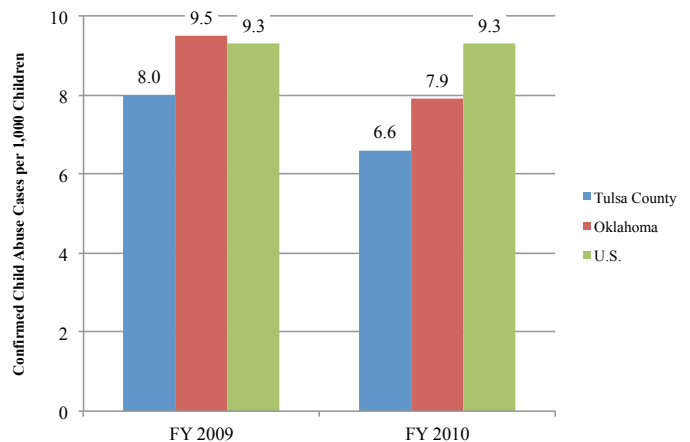
# Homelessness

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 homeless individuals and collects demographic information about homeless persons sleeping in emergency shelters, transitional housing, or other sites, as well as the number of non-sheltered people. The information is provided to the Department of Housing and Urban Development. This indicator presents results from the 2010 point-in-time survey.

## 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, homeless people are three to four times more likely to die and their life expectancy is estimated to be about 25 – 35 years shorter than the general population.

## How Are We Doing?

On January 26, 2010, there were 1,058 homeless persons in Tulsa County, 124 of which were children under 18. Data suggest that the number of homeless individuals is increasing. In 2009, there were 1,016 homeless individuals, 115 of which were children.

The majority of homeless adults were male (68.3 percent). The majority were also Caucasian (59.2 percent) and non-Hispanic (95.3 percent). The primary age groups reported were 41 – 50 and 51 – 65 (29.3 percent and 29.0 percent, respectively). Forty-one percent reported never being married and 30.2 percent reported being divorced. Of the female respondents, 4.9 percent were pregnant at the time of the survey.

When asked about length of homelessness, the largest percentage of individuals reported that they had been homeless for 1 – 6 months (37.1 percent). Survey respondents were asked to report the condition(s) that contributed to their homelessness. The top three reported conditions were job loss,

mental health diagnosis, and substance abuse. 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.

Data Source:
Health Care and Homelessness. National Coalition for the Homeless. Retrieved from: http://www.nationalhomeless.org.

Tulsa City- County Continuum of Care Point-in-Time Survey. 2010.
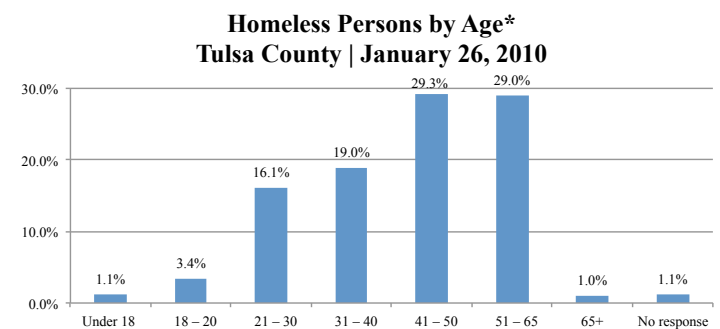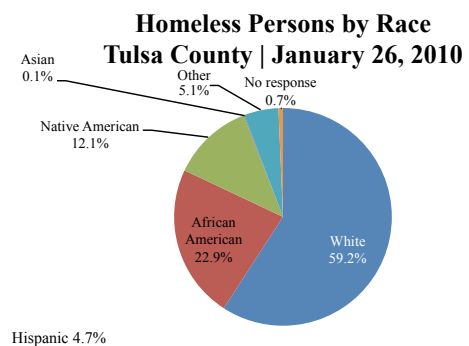


Homeless Persons by Race
Tulsa County | January 26, 2010

Asian 0.1%
Other 5.1%
No response 0.7%
Native American 12.1%
African American 22.9%
White 59.2%
Hispanic 4.7%



Homeless Persons by Age*
Tulsa County | January 26, 2010

| Age | Percentage |
|---|---|
| Under 18 | 1.1% |
| 18 – 20 | 3.4% |
| 21 – 30 | 16.1% |
| 31 – 40 | 19.0% |
| 41 – 50 | 29.3% |
| 51 – 65 | 29.0% |
| 65+ | 1.0% |
| No response | 1.1% |

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



Length of Homelessness*
Tulsa County | January 26, 2010

| Interval | Percentage |
|---|---|
| <30 days | 11.5% |
| 1 – 6 months | 37.1% |
| 7 – 11 months | 11.2% |
| 1 – 2 years | 17.2% |
| 3 – 5 years | 7.7% |
| 5+ years | 4.7% |
| No response | 10.7% |
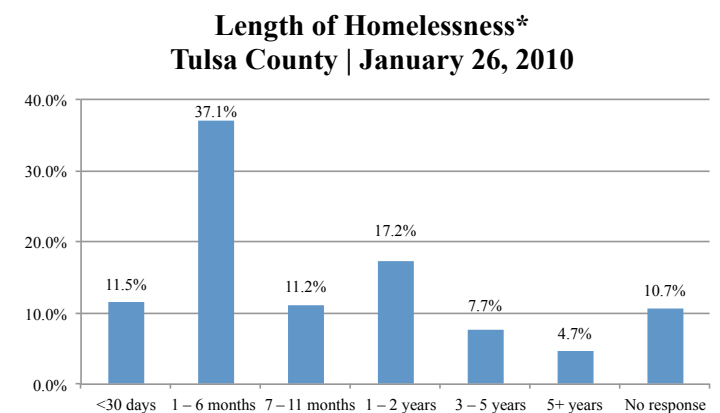
*Graph shows percentage of total homeless persons within each time interval; percentages add up to 100%

81

# Deaths from Suicide

The mortality rate from suicide is presented as the number of deaths from suicide per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## Why Is This Indicator Important?

Suicide was the ninth leading cause of death in Tulsa County from 2008 – 2010. 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 or alcohol 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. Prevention aims to address all levels of influence (individual, relationship, community, and societal).

## How Are We Doing?

From 2008 – 2010, 317 Tulsa County residents committed suicide, which was an age-adjusted death rate of 17.8 deaths per 100,000 individuals. The suicide death rate was highest in whites (19.1), followed by American Indians (17.7). Among Hispanics, it was 7.9 deaths per 100,000.

In 2010, Tulsa County had a suicide death rate of 19.1, which was higher than that of Oklahoma (16.5) and the United States (12.1). None of these regions met the Healthy People 2020 goal of 10.2 deaths from suicide per 100,000 population.

The ZIP codes with the highest overall suicide death rates were 74119 and 74130. These ZIP codes are in downtown and north Tulsa.

Data Source:
Injury Prevention and Control: Suicide: Risk and Protective Factors. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Mental Health and Mental Disorders. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.

Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Age-Adjusted Suicide Death Rate by Race/Ethnicity**
**Tulsa County | 2008 – 2010**



**Age-Adjusted Suicide Death Rate by Region | 2010**

# Deaths from Suicide

**Suicide Crude Death Rates per 100,000**

- 5.5 – 6.5
- 6.6 – 17.1
- 17.2 – 23.7
- 23.8 – 30.6
- 30.7 – 78.6
- Rate not calculated

74070
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74130
74117
74126
74120
74127
74106
74110
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74137
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74047

83

# Deaths from Homicide

The mortality rate from homicide (murder) is presented as the number of deaths from homicide per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates. Rates were based on the residence of the victim, not the location of the crime.

## Why Is This Indicator Important?

Violence is a major concern in Tulsa County. About two-thirds of all homicides during this time period were caused by assault with firearms. 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. Additionally, homicide is the second leading cause of death for 15 – 24 year olds nationally.

## How Are We Doing?

From 2008 – 2010, 169 Tulsa County residents were victims of homicide, which was an age-adjusted death rate of 9.5 deaths per 100,000 individuals. There was clear racial disparity, with blacks dying from homicide at a rate seven times that of whites (38.4 compared to 5.2). The homicide death rate for Hispanics was 6.0 deaths per 100,000 population.

In 2010, Tulsa County had a homicide death rate of 9.6, which was higher than that of Oklahoma (5.7) and the United States (5.3). The Healthy People 2020 national goal is to reduce the homicide death rate to 5.5 deaths per 100,000 population. The United States overall met this target, but Tulsa County and Oklahoma did not.

The ZIP codes with the highest overall homicide death rates were 74106 and 74126. These ZIP codes are in north Tulsa.

Data Source:
Health Disparities in Homicides Fact Sheet. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Injury Prevention and Control: Key Data and Statistics. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Injury and Violence Prevention. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
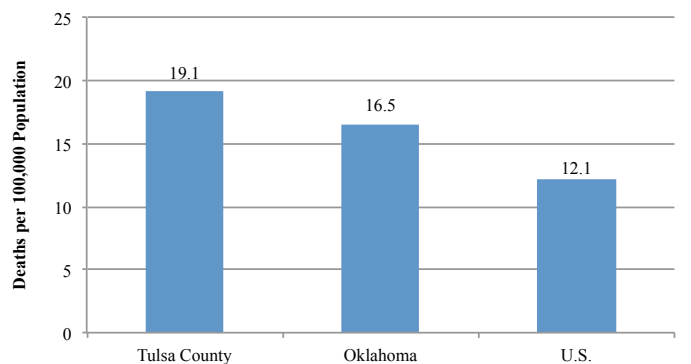
Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

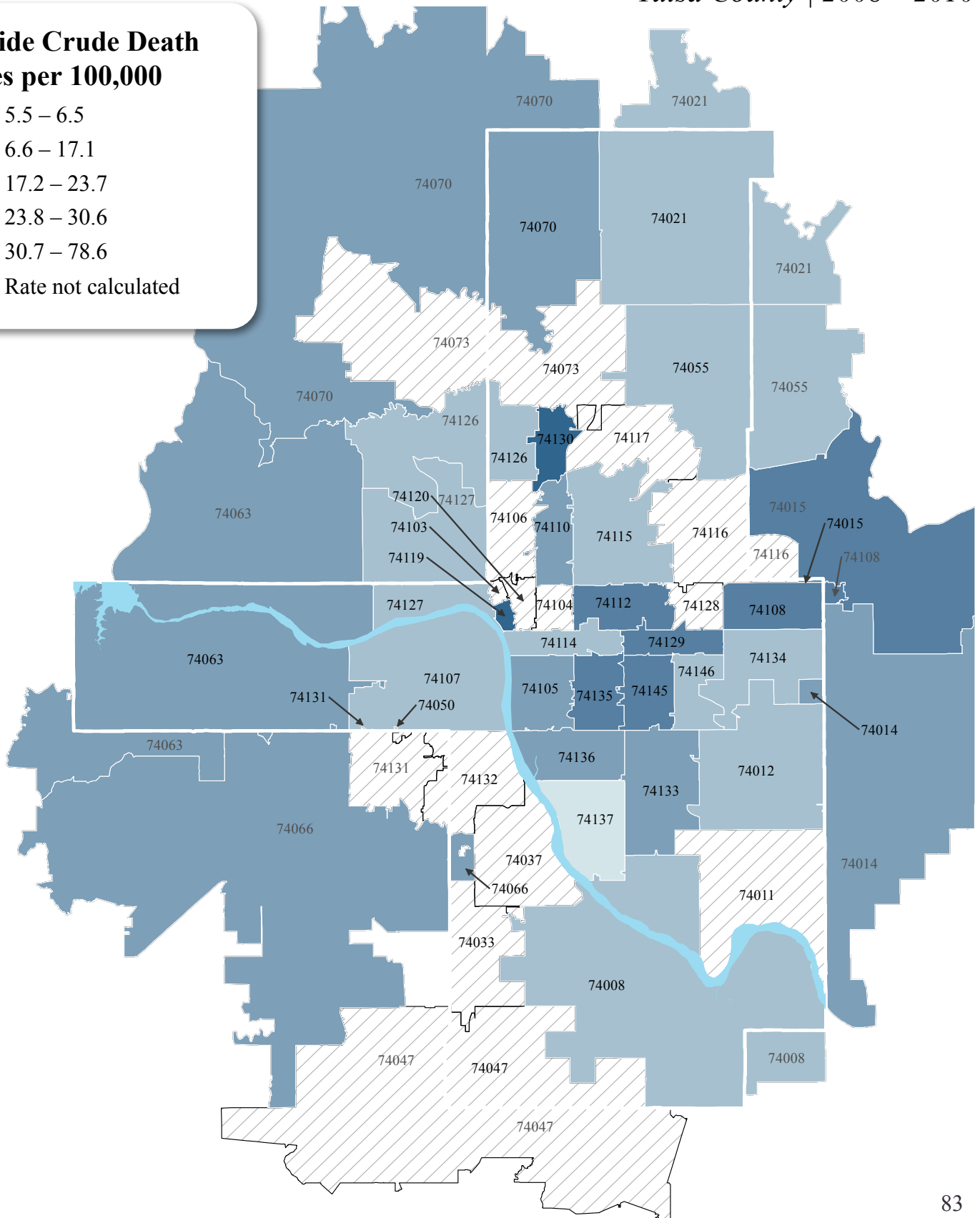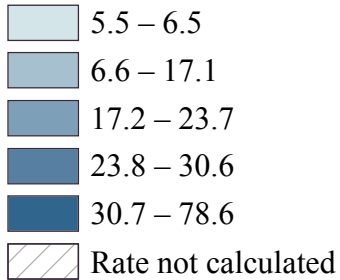**Age-Adjusted Homicide Death Rate by Race/Ethnicity Tulsa County | 2008 – 2010**

White: 5.2
Black: 38.4
American Indian: 6.4
Hispanic: 6.0

(Deaths per 100,000 Population)

**Age-Adjusted Homicide Death Rate by Region | 2010**

Tulsa County: 9.6
Oklahoma: 5.7
U.S.: 5.3

(Deaths per 100,000 Population)

# Deaths from Homicide

**Homicide Crude Death Rates per 100,000**

- 9.0 – 10.2
- 10.3 – 14.1
- 14.2 – 15.7
- 15.8 – 27.1
- 27.2 – 55.8
- Rate not calculated



74070

74021

74070

74021

74070

74073

74055

74073

74055

74070

74055

74126

74126

74130

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74127

74015

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74110

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74011

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74008

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74008

74047

85

# Mortality

# Deaths From All Causes

The mortality rate from all causes is presented as the number of deaths per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## Why Is This Indicator Important?

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

## How Are We Doing?

There were approximately 16,200 deaths in Tulsa County from 2008 – 2010. 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.

With regard to race and ethnicity, blacks had the highest age-adjusted death rate (1,122.8 per 100,000 population), followed by American Indians (1,050.9). Hispanics had an age-adjusted death rate of 519.1.

From 2008 – 2010, Tulsa County consistently had an age-adjusted death rate that was lower than Oklahoma but higher than the U.S. In 2010, the rate was 865.3 in Tulsa County, 912.2 in Oklahoma, and 747.0 in the U.S.

The ZIP codes with the highest overall mortality rates included 74106, 74119, 74127, and 74135.

Data Source:
Why are Mortality Data Important?. Australian Institute of Health and Welfare. Retrieved from: http://www.aihw.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
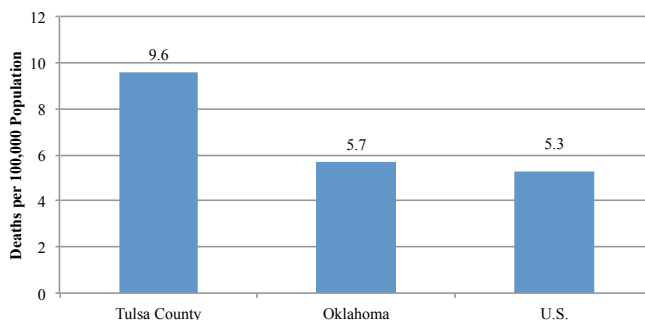
Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

CDC WONDER. Centers for Disease Control and Prevention.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

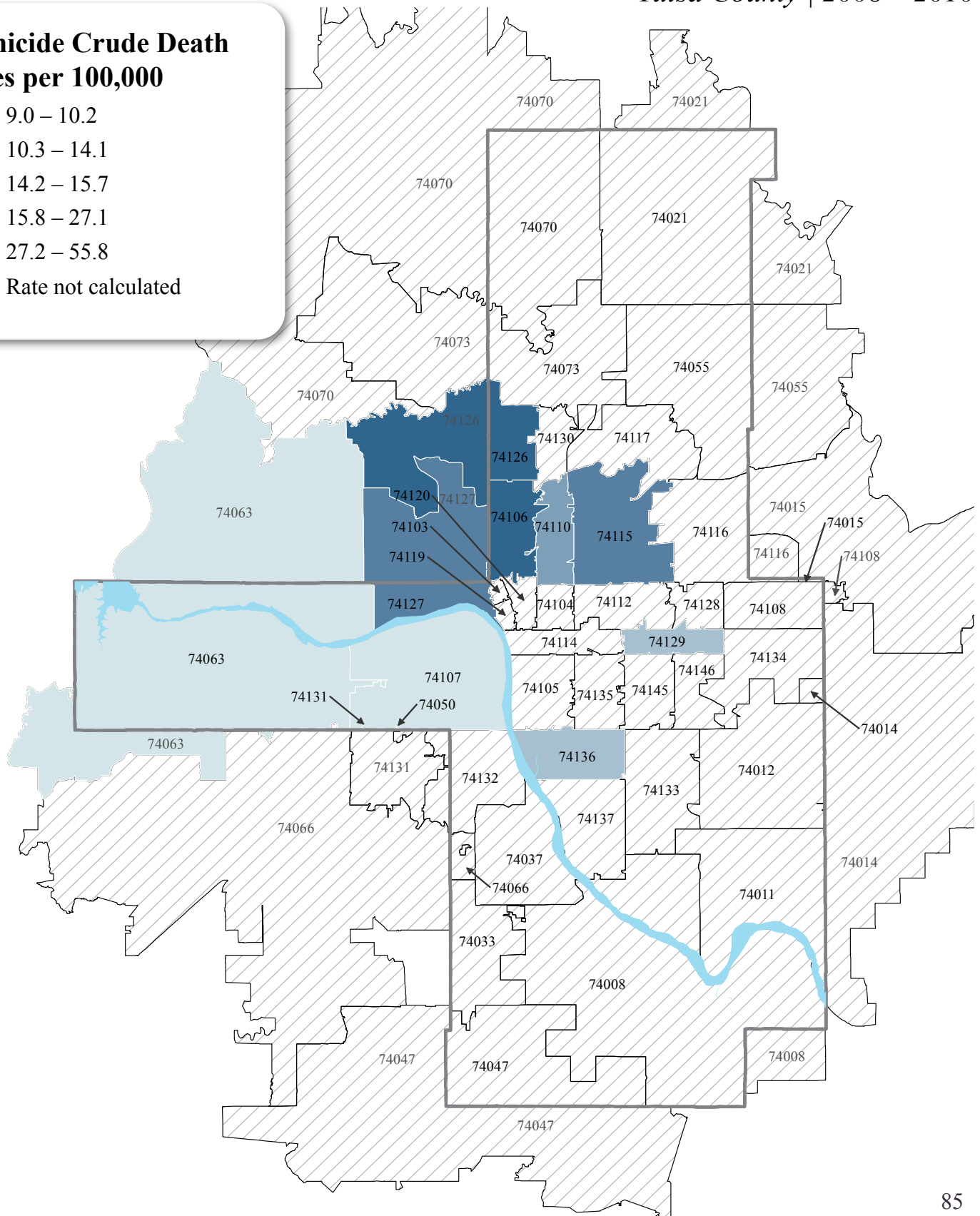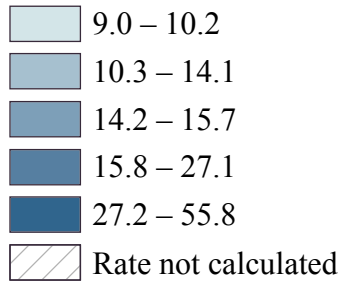### Age-Adjusted Death Rates by Race/Ethnicity
### Tulsa County | 2008 – 2010



| Race/Ethnicity | Deaths per 100,000 Population |
| --- | --- |
| White | 871.1 |
| Black | 1122.8 |
| American Indian | 1050.9 |
| Asian/Pacific Islander | 540.0 |
| Hispanic | 519.1 |

### Top Ten Causes of Death
### Tulsa County | 2008 – 2010



| Cause | Number of Deaths |
| --- | --- |
| Heart Disease | 4,170 |
| Cancer | 3,309 |
| Chronic Lower Respiratory Disease | 1,091 |
| Accidents | 1,012 |
| Stroke | 999 |
| Alzheimer's Disease | 455 |
| Influenza & Pneumonia | 373 |
| Diabetes | 369 |
| Suicide | 317 |
| Kidney Disease | 275 |

### Age-Adjusted Death Rates
### by Region | 2000 – 2010



Legend: Tulsa County, Oklahoma, U.S.
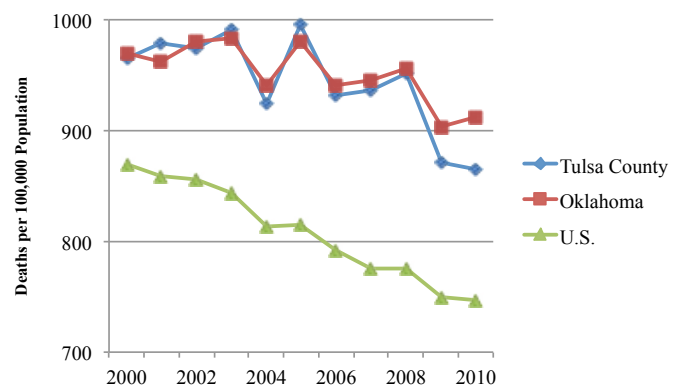
# Deaths From All Causes

*Tulsa County | 2008 – 2010*

**Crude Death Rates per 100,000**

- 448.2 – 677.9
- 678.0 – 845.9
- 846.0 – 1002.3
- 1002.4 – 1131.4
- 1131.5 – 1420.7
- Rate not calculated

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# Deaths From Heart Disease

The mortality rate from heart disease is presented as the number of deaths from heart disease per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## 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, as well as medications when necessary.

## How Are We Doing?

From 2008 – 2010, the average age-adjusted death rate from heart disease in Tulsa County was 229.0 deaths per 100,000 individuals. The heart disease death rate was highest in the black population (312.4 per 100,000), followed by American Indians (263.9 per 100,000). Among Hispanics, it was 141.0 per 100,000.

In 2010, Tulsa County had a heart disease death rate of 224.2, which was slightly lower than that of Oklahoma (234.1). However, it was higher than the death rate in the United States, which was 179.1. None of these regions met the Healthy People 2020 target of 100.8 deaths per 100,000 population.

The ZIP codes with the highest overall heart disease death rates were 74106, 74112, 74119, 74127, and 74135.

Data Source:
Heart Disease. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Heart Disease and Stroke. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.
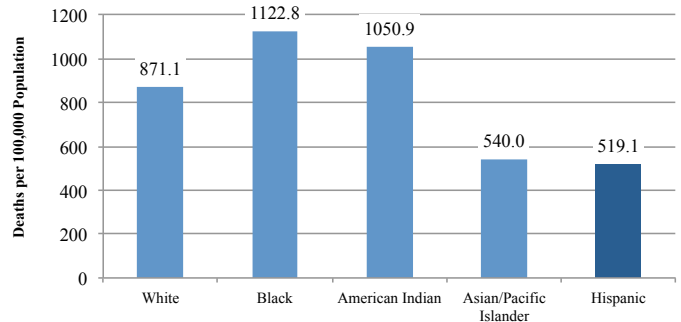
Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.

Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.
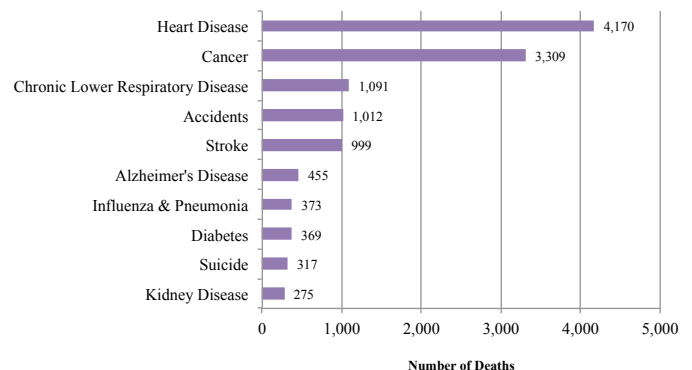
Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.



**Age-Adjusted Heart Disease Death Rates by Race/Ethnicity Tulsa County | 2008 – 2010**



**Age-Adjusted Heart Disease Death Rates by Region | 2010**

# Deaths From Heart Disease

**Heart Disease Crude Death Rates per 100,000**

- 107.6 – 157.4
- 157.5 – 195.1
- 195.2 – 248.1
- 248.2 – 300.9
- 301.0 – 394.2
- Rate not calculated



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# Deaths From Cancer

The mortality rate from cancer is presented as the number of deaths from all cancers per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## Why Is This Indicator Important?

Cancer was the second leading cause of death from 2008 – 2010. 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.  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 the hepatitis B virus.

## How Are We Doing?

From 2008 – 2010, the average death rate due to cancer in Tulsa County was 182.1 deaths per 100,000 individuals. The cancer death rate was highest among blacks (226.5 deaths per 100,000) and American Indians (223.4 per 100,000). Among Hispanics, it was 100.2 deaths per 100,000 population.

In 2010, the cancer mortality rate was 179.6 deaths per 100,000 population in Tulsa County. This was lower than Oklahoma (190.4) and higher than the United States (172.8). None of these regions met the Healthy People 2020 national target of 160.6 cancer deaths per 100,000 individuals.

The ZIP codes with the highest overall cancer death rates were 74015, 74066, 74073, 74106, 74119, 74126, 74127, 74135, and 74145.

Data Source:
Cancer. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from; http://www.health.ok.gov/ok2share.
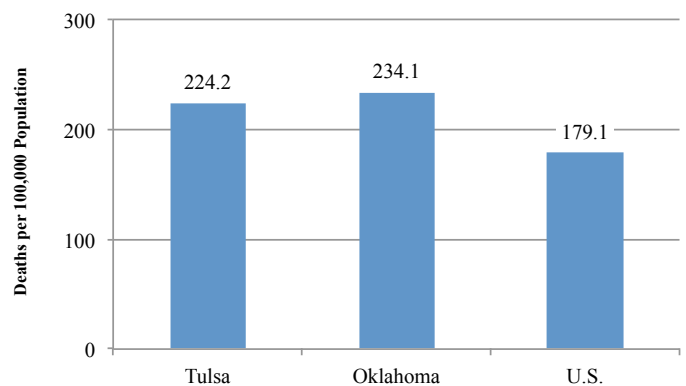
Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

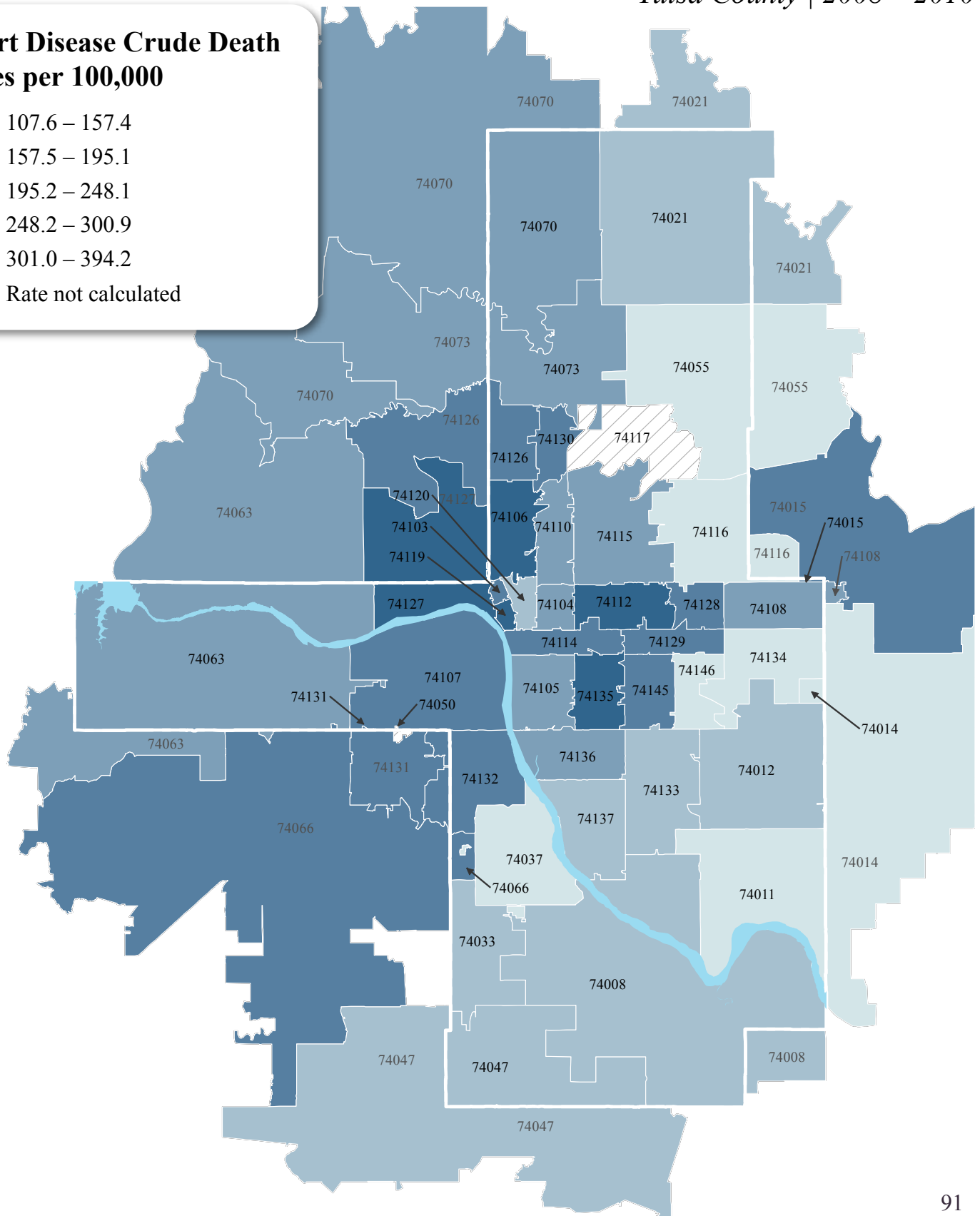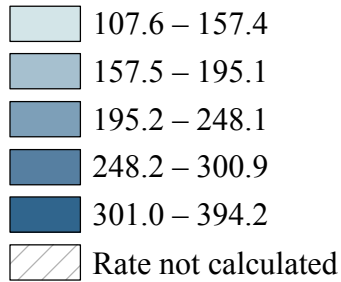Age-Adjusted Cancer Death Rates by Race/Ethnicity Tulsa County | 2008 – 2010

| Race/Ethnicity | Deaths per 100,000 Population |
| --- | --- |
| White | 177.8 |
| Black | 226.5 |
| American Indian | 223.4 |
| Asian/Pacific Islander | 115.2 |
| Hispanic | 100.2 |



Age-Adjusted Cancer Death Rates by Region | 2010

| Region | Deaths per 100,000 Population |
| --- | --- |
| Tulsa County | 179.6 |
| Oklahoma | 190.4 |
| U.S. | 172.8 |

# Deaths From Cancer

*Tulsa County | 2008 – 2010*

**Cancer Crude Death Rates per 100,000**

- 93.2 – 116.6
- 116.7 – 158.8
- 158.9 – 188.8
- 188.9 – 214.0
- 214.1 – 264.8
- Rate not calculated
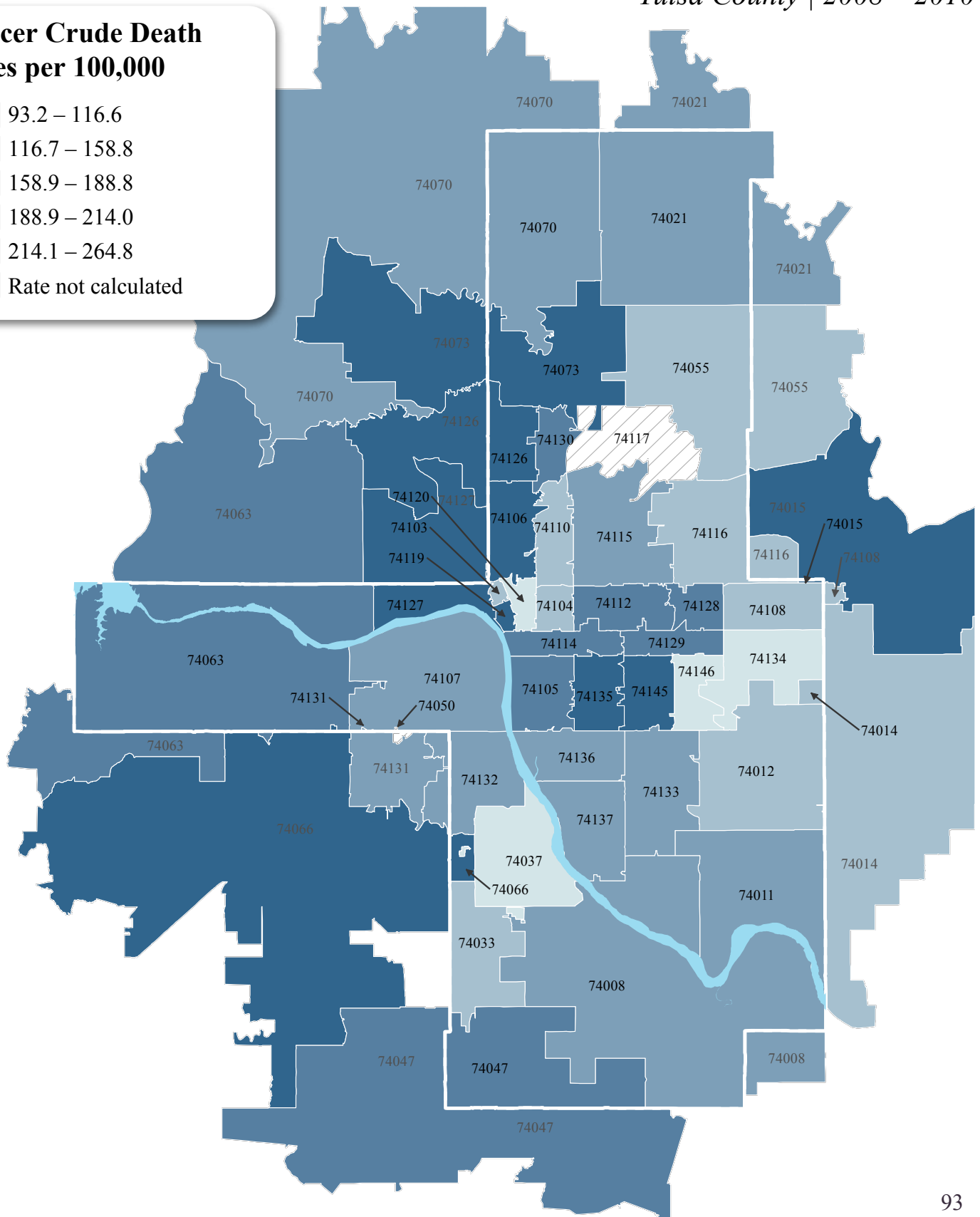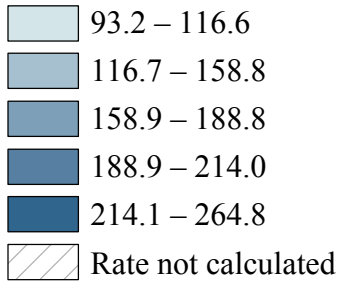
# Deaths From Stroke

The mortality rate from stroke (cerebrovascular disease) is presented as the number of deaths from stroke per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## Why Is This Indicator Important?

Stroke was the third leading cause of death from 2008 – 2010 in Tulsa County and is a major cause of long term disability. Major risk factors for stroke include medical conditions such as previous stroke or transient ischemic attack (mini-stroke), high blood pressure, high cholesterol, heart disease, diabetes and sickle cell disease, behaviors such as an unhealthy diet, physical inactivity, obesity, excessive alcohol and tobacco use, and genetic/demographic factors. Risk factors for stroke can be minimized by making healthy lifestyle choices and managing existing medical conditions appropriately.

## How Are We Doing?

From 2008 – 2010, the average death rate due to stroke in Tulsa County was 55.3 deaths per 100,000 individuals. The stroke death rate was significantly higher among blacks (92.9 deaths per 100,000) compared to other races. The stroke death rate among Hispanics was 32.9.

In 2010, the stroke mortality rate was 51.6 deaths per 100,000 population in Tulsa County. This was higher than both Oklahoma and the U.S. (49.8 and 39.0, respectively). The Healthy People 2020 national target of 33.8 deaths per 100,000 population was not met by any of these regions.

The ZIP codes with the highest overall stroke death rates were 74055, 74047, 74105, 74106, 74114, 74127, and 74135.
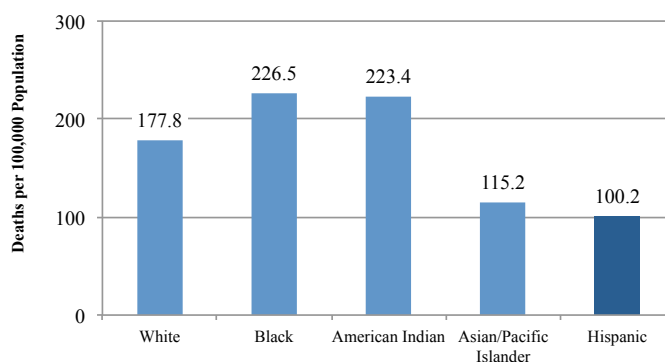
Data Source:
Stroke. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Heart Disease and Stroke. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
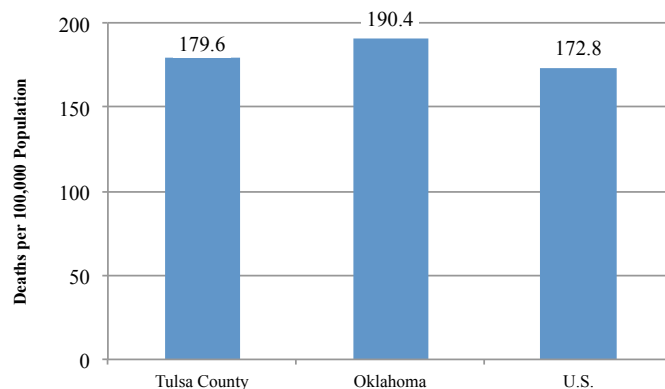
Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Age-Adjusted Stroke Death Rates by Race/Ethnicity Tulsa County | 2008 – 2010**

Deaths per 100,000 Population

| Race/Ethnicity | Rate |
|---|---|
| White | 52.3 |
| Black | 92.9 |
| American Indian | 36.6 |
| Asian/Pacific Islander | 50.4 |
| Hispanic | 32.9 |

**Age-Adjusted Stroke Death Rates by Region | 2010**

Deaths per 100,000 Population

| Region | Rate |
|---|---|
| Tulsa County | 51.6 |
| Oklahoma | 49.8 |
| U.S. | 39.0 |

# Deaths From Stroke

*Tulsa County | 2008 – 2010*

**Stroke Crude Death Rates per 100,000**

- 19.9 – 31.7
- 31.8 – 44.9
- 45.0 – 58.0
- 58.1 – 71.0
- 71.1 – 92.3
- Rate not calculated
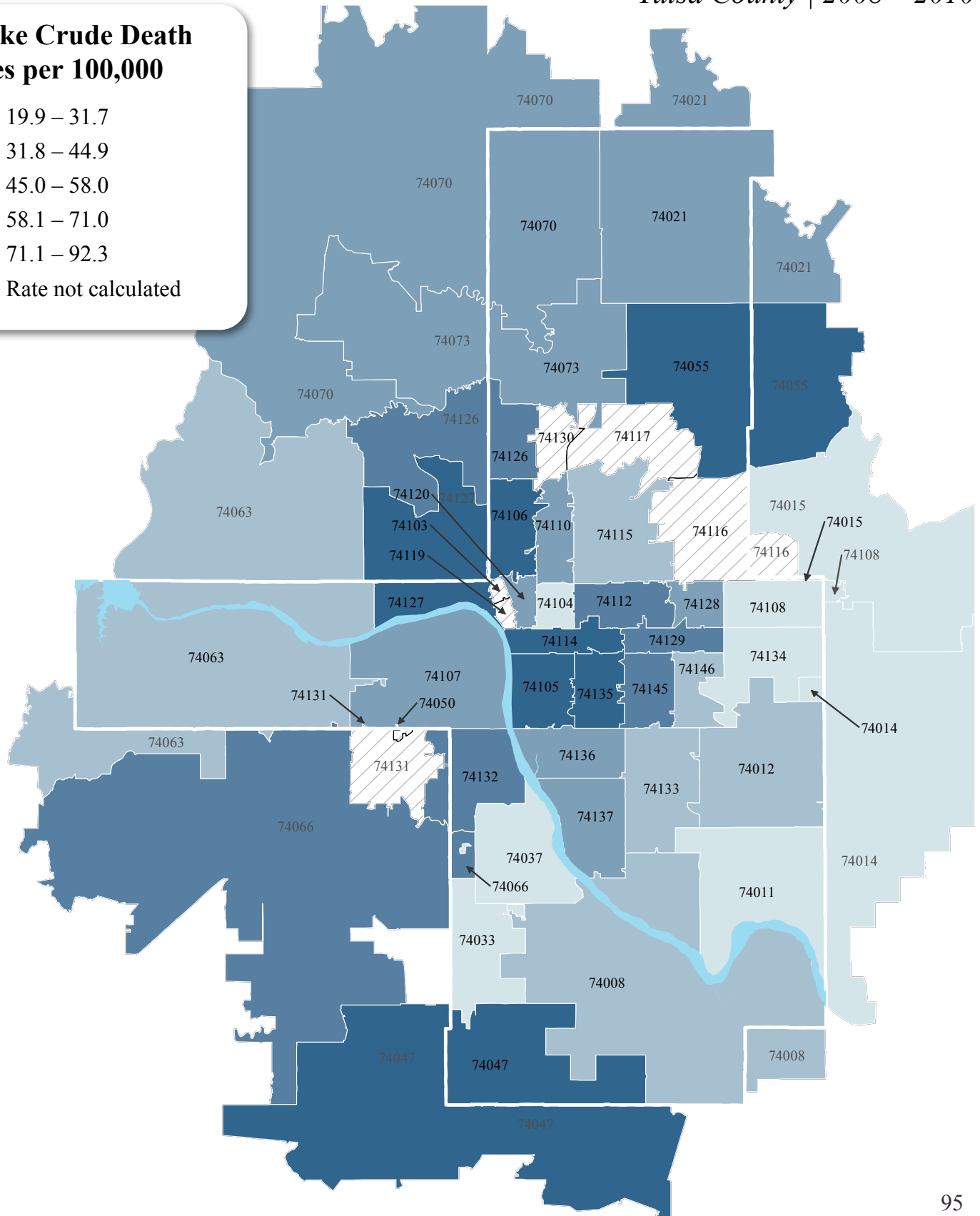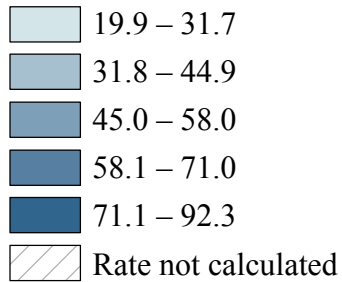
# Deaths From Chronic Lower Respiratory Disease

Chronic lower respiratory disease (CLRD) includes chronic bronchitis and emphysema (collectively referred to as chronic obstructive pulmonary disease or COPD), and asthma. The death rate from CLRD is presented as the number of deaths from CLRD per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## Why Is This Indicator Important?

CLRD was the fourth leading cause of death in Tulsa County from 2008 – 2010. Tobacco smoke (including secondhand smoke) is a key factor for the development of COPD, although exposure to air pollutants, genetic factors, and respiratory factors can also play a role. Asthma causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. Asthma can be controlled through medication and avoiding the triggers that cause attacks. Triggers vary among individuals, but may include tobacco smoke, dust mites, air pollution, cockroach allergens, pets, mold, smoke from burning wood or grass, as well as other triggers.

## How Are We Doing?

From 2008 – 2010, there were 1,091 deaths due to chronic lower respiratory disease in Tulsa County, which was an age-adjusted rate of 61.4 deaths per 100,000 individuals. The death rate due to CLRD was highest among American Indians (67.8), followed by whites (63.2). The age-adjusted rates for Asians/Pacific Islanders and Hispanics are not shown because they are based on a relatively small number of deaths.

In 2010, the CLRD death rate was 59.3 deaths per 100,000 population in Tulsa County. This was lower than in Oklahoma (67.1) but higher than the rate in the United States (42.2).

The ZIP code with the highest overall CLRD death rate was 74073.

**Age-Adjusted Chronic Lower Respiratory Disease Death Rates by Race/Ethnicity Tulsa County | 2008 – 2010**



**Age-Adjusted Chronic Lower Respiratory Disease Death Rates by Region | 2010**

# Deaths From Chronic Lower Respiratory Disease

*Tulsa County | 2008 – 2010*

**CLRD Crude Death Rates per 100,000**

- 24.7 – 33.0
- 33.1 – 42.0
- 42.1 – 49.0
- 49.1 – 75.4
- 75.5 – 110.8
- Rate not claculated

# Deaths From All Accidents

Unintentional injuries (accidents) include motor vehicle accidents, accidental falls, drownings, fires, and poisonings. The death rate from unintentional injuries is the number of deaths from accidents per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## *Why Is This Indicator Important?*

Accidents were the fifth leading cause of death in Tulsa County from 2008 – 2010. However, accidents were the number one cause of death among younger age groups. 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, and focus on high risk groups such as child passengers, teen drivers, and older adult drivers.

## *How Are We Doing?*

Accidents killed 1,012 Tulsa County residents from 2008 to 2010, for an average age-adjusted death rate of 56.4 deaths per 100,000 individuals. With regard to race, the death rate was highest among American Indians (77.2 deaths per 100,000 population), followed by whites (58.3). The age-adjusted rate for Asians/Pacific Islanders is not shown because it is based on a relatively small number of deaths. The unintentional injury death rate was 25.2 for Hispanics.

In 2010, Tulsa County had an age-adjusted unintentional injury death rate of 53.4. This was slightly lower than Oklahoma (58.8) and significantly higher than the US (38.0). None of these regions met the Healthy People 2020 target of 36.0 deaths from unintentional injuries per 100,000 population.

The ZIP codes with the highest overall unintentional injury death rates were 74103 and 74119 which are located in downtown Tulsa.

Data Source:
Motor Vehicle Safety. Centers for Disease Control and Prevention. Retrieved from: http://www.cdc.gov.

Injury and Violence Prevention. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.

Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

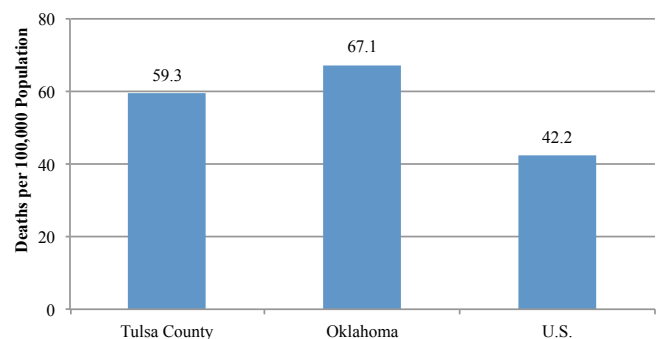Age-Adjusted Unintentional Injury (Accident) Death Rates by Race/Ethnicity Tulsa County | 2008 – 2010
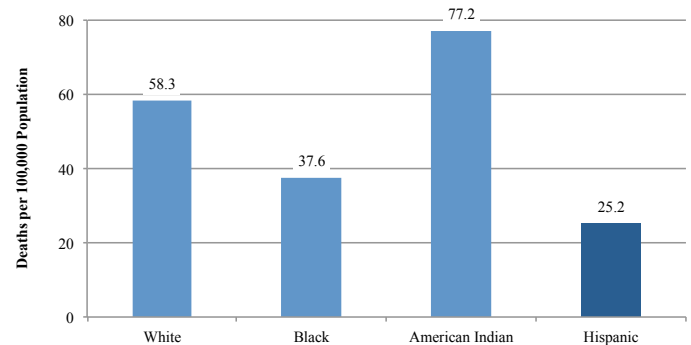


Age-Adjusted Unintentional Injury (Accident) Death Rates by Region | 2010

# Deaths From All Accidents

**All Accidents Crude Death Rates per 100,000**

- 32.7 – 44.8
- 44.9 – 56.5
- 56.6 – 72.7
- 72.8 – 90.4
- 90.5 – 148.8
- Rate not calculated

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# Deaths From Alzheimer's Disease

The Alzheimer's death rate is the number of deaths due to Alzheimer's disease per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## Why Is This Indicator Important?

Alzheimer's disease was the sixth leading cause of death in Tulsa County from 2008 – 2010. Experts suggest that up to 5.1 million Americans age 65 and older have Alzheimer's disease. These numbers are predicted to more than double by 2050 unless more effective ways to treat and prevent this disease are found. Risk factors for Alzheimer's disease include age, family history, and access to health services for prompt diagnosis.

## How Are We Doing?

From 2008 – 2010, the average age-adjusted death rate due to Alzheimer's disease was 25.4 deaths per 100,000 individuals in Tulsa County. The age-adjusted death rate was highest among blacks and whites (25.8 and 25.7, respectively). The age-adjusted rate for Asians/Pacific Islanders is not shown because it is based on a relatively small number of deaths. Hispanics had a rate of 21.8 deaths per 100,000 population.

In 2010, Tulsa County had an age-adjusted Alzheimer's death rate of 21.9. This was lower than both Oklahoma and the U.S. overall (26.0 and 25.1, respectively).

The ZIP codes with the highest overall Alzheimer's death rates were primary concentrated in south and midtown Tulsa (74137, 74114, 74132, 74145, 74135, and 74136).

Data Source:
Dementias, Including Alzheimer's Disease. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
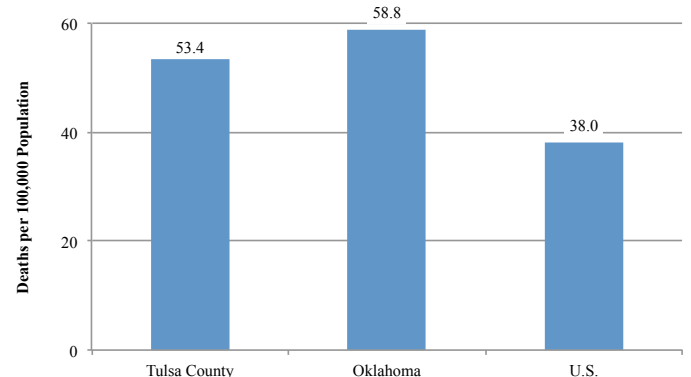
Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

**Age-Adjusted Alzheimer's Death Rate by Race/Ethnicity Tulsa County | 2008 – 2010**



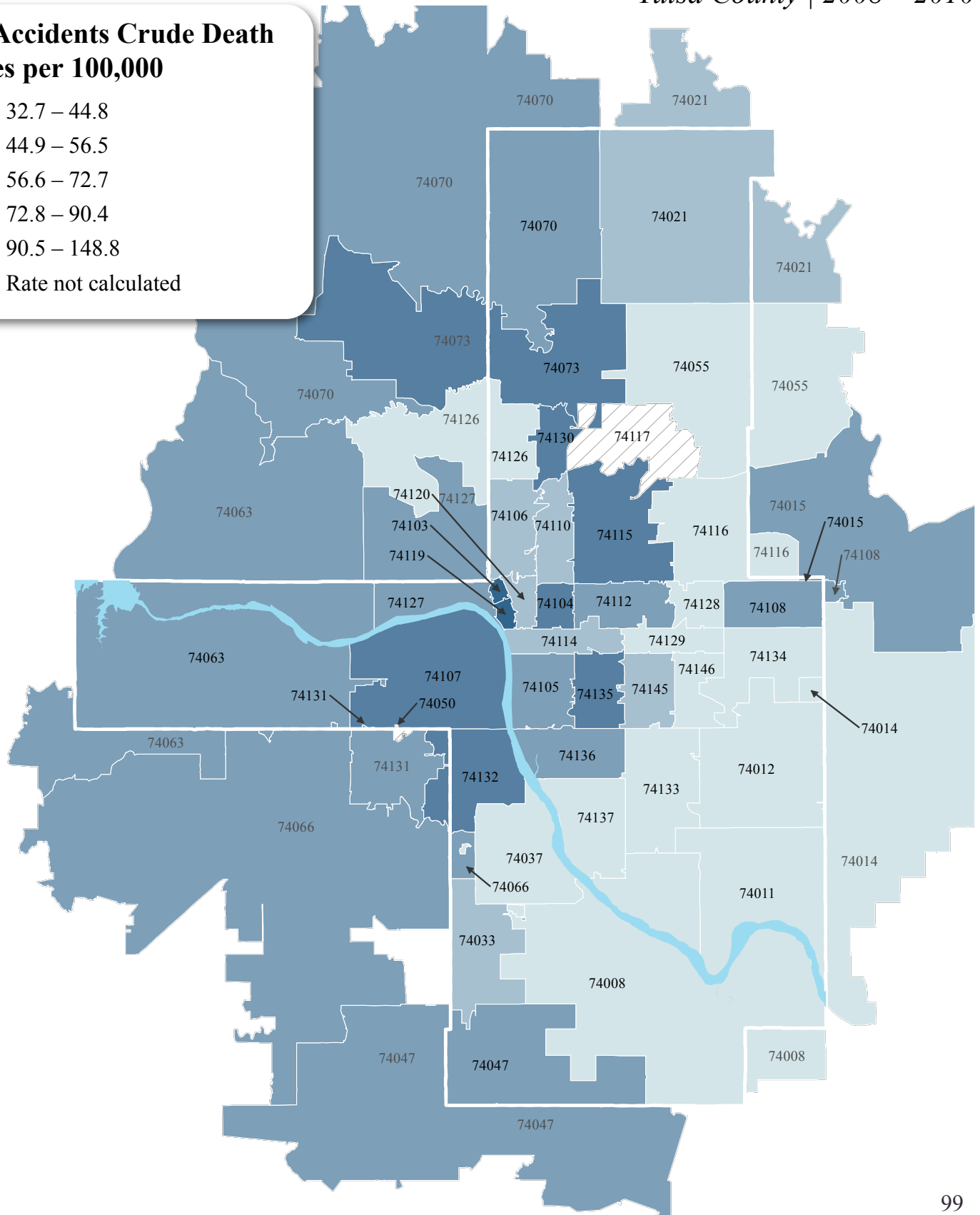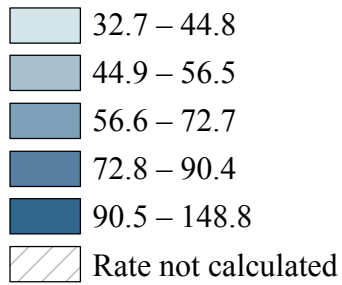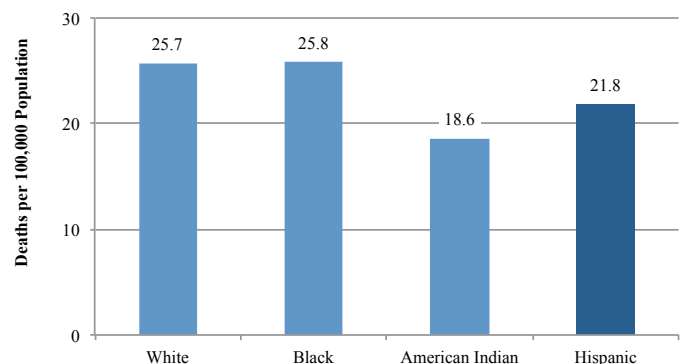Bar chart, Deaths per 100,000 Population: White 25.7, Black 25.8, American Indian 18.6, Hispanic 21.8.

**Age-Adjusted Alzheimer's Death Rates by Region | 2010**



Bar chart, Deaths per 100,000 Population: Tulsa County 21.9, Oklahoma 26.0, U.S. 25.1.

# Deaths From Alzheimer's Disease

**Alzheimer's Disease Crude Death Rates per 100,000**

- 13.0 – 15.9
- 16.0 – 20.9
- 21.0 – 27.4
- 27.5 – 37.4
- 37.5 – 62.1
- Rate not calculated



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# Deaths From Influenza and Pneumonia

The influenza/pneumonia death rate is the number of deaths due to either influenza or pneumonia per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## Why Is This Indicator Important?

Influenza/pneumonia was the seventh leading cause of death in Tulsa County from 2008 – 2010. Influenza is a highly contagious viral infection that often causes fever, headache, cough, chills, sore throat, nasal congestion, muscle aches, loss of appetite, and a general achy feeling. It can be complicated by pneumonia, which is a serious infection of the lungs. The air sacs fill with pus and other liquid, blocking oxygen from reaching the bloodstream. If there is too little oxygen in the blood, the body's cells cannot work properly, which can lead to death. Influenza/pneumonia can be especially dangerous in individuals who are immunocompromised, such as the elderly or persons with underlying medical conditions.

## How Are We Doing?

There were 373 deaths attributed to influenza/pneumonia among Tulsa County residents from 2008 – 2010, which was an age-adjusted rate of 20.7 deaths per 100,000 individuals. Age-adjusted death rates were very similar among racial groups with a rate of 21.0 for whites, 19.6 for blacks, and 19.4 for American Indians. The age-adjusted rate for Asians/Pacific Islanders is not shown because it is based on a relatively small number of deaths. Among Hispanics, the age-adjusted death rate was 26.1.

In 2010, Tulsa County had an age-adjusted influenza/pneumonia death rate of 20.4 deaths per 100,000 population. This was higher than both Oklahoma and the United States (19.5 and 15.0, respectively).

The ZIP codes with the highest overall influenza/pneumonia death rates were 74037, 74105, 74110, and 74135.

Data Source:
Influenza and Pneumonia. American Lung Association. Retrieved from: http://www.lung.org.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
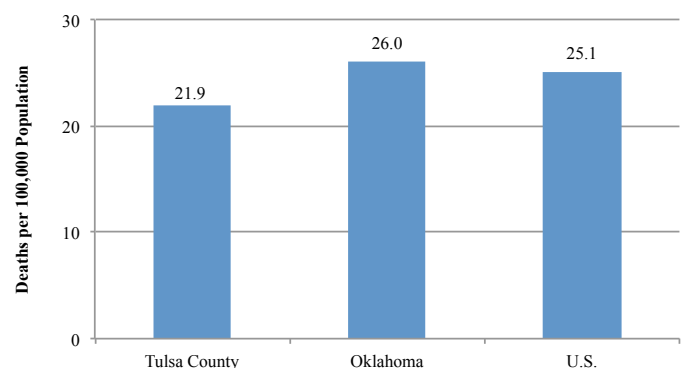
Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

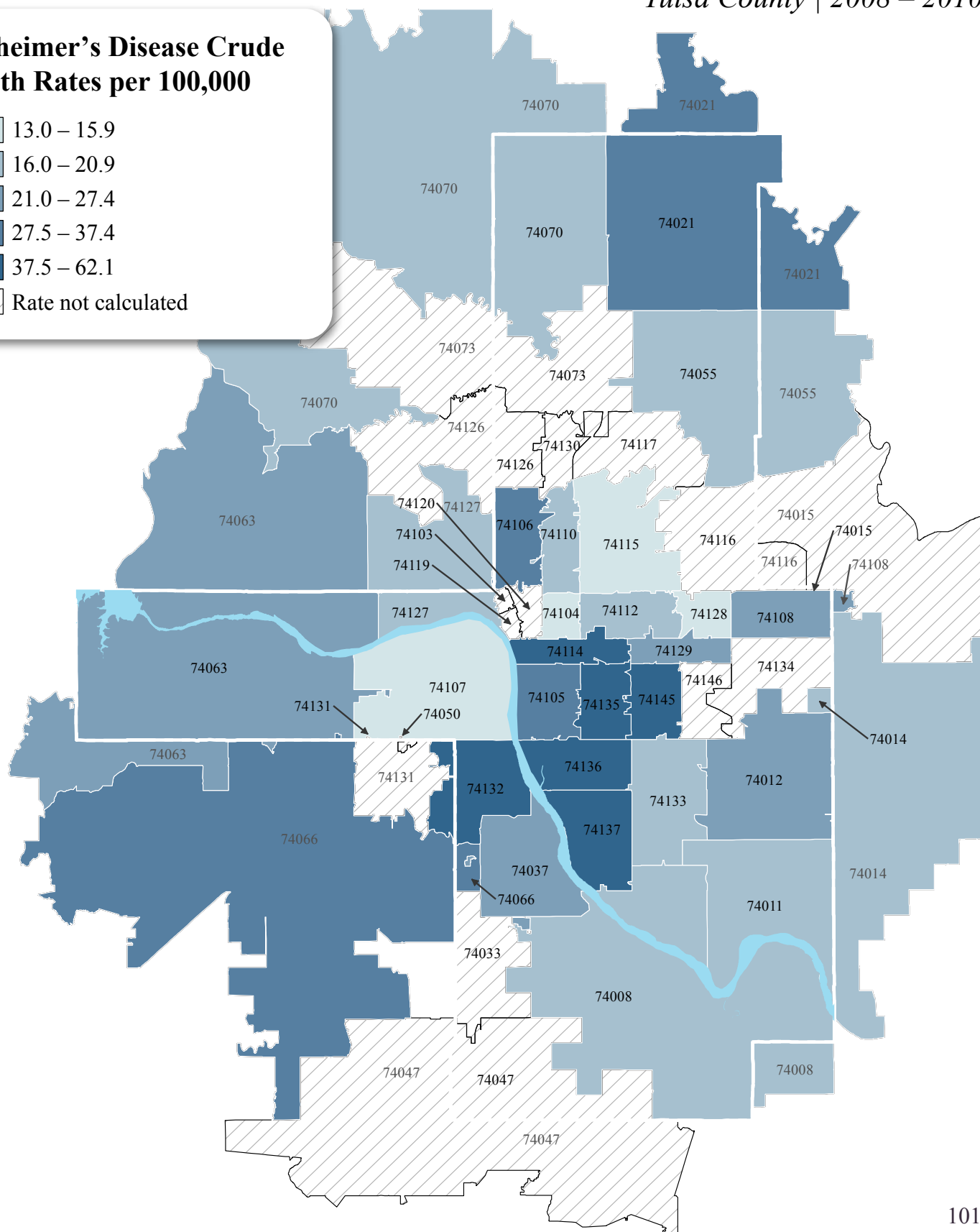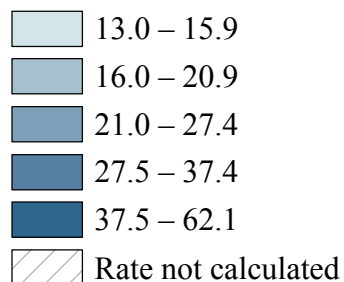**Age-Adjusted Influenza/Pneumonia Death Rates by Race/Ethnicity Tulsa County | 2008 – 2010**



| Race/Ethnicity | Deaths per 100,000 Population |
|---|---|
| White | 21.0 |
| Black | 19.6 |
| American Indian | 19.4 |
| Hispanic | 26.1 |

**Age-Adjusted Influenza/Pneumonia Death Rates by Region | 2010**
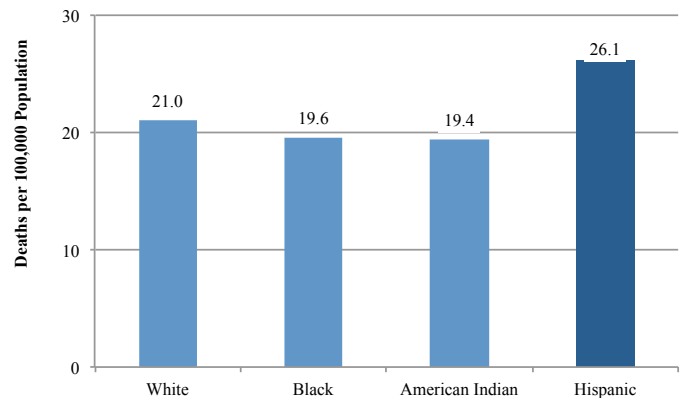


| Region | Deaths per 100,000 Population |
|---|---|
| Tulsa County | 20.4 |
| Oklahoma | 19.5 |
| U.S. | 15.0 |

# Deaths From Influenza and Pneumonia

**Influenza and Pneumonia Crude Death Rates per 100,000**

- 5.0 – 13.8
- 13.9 – 19.4
- 19.5 – 24.5
- 24.6 – 27.3
- 27.4 – 32.2
- Rate not calculated



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# Deaths From Diabetes

The diabetes death rate is the number of deaths due to diabetes mellitus per 100,000 population, averaged over the years 2008 – 2010. The rates were age-adjusted to account for differences in age distribution among regions and races/ethnicities. ZIP code maps were prepared using crude death rates.

## Why Is This Indicator Important?

Diabetes mellitus (commonly known as diabetes) was the eighth leading cause of death in Tulsa County from 2008 – 2010. Diabetes affects an estimated 23.6 million people in the United States and is the seventh leading cause of death nationally. It lowers life expectancy by up to 15 years, increases the risk of heart disease by 2 to 4 times, and is the leading cause of kidney failure, lower limb amputations, and adult-onset blindness.

## How Are We Doing?

A total of 369 Tulsa County residents died from diabetes from 2008 – 2010. This is an average age-adjusted rate of 20.4 deaths per 100,000 individuals. The age-adjusted death rate for blacks was significantly higher than the rate of whites (56.1 compared to 16.4). The age-adjusted rate for Asians/Pacific Islanders is not shown because it is based on a relatively small number of deaths. Among Hispanics, the death rate due to diabetes was 25.0 deaths per 100,000.

In 2010, Tulsa County had an age-adjusted diabetes death rate of 18.7. This was lower than both Oklahoma and the United States (26.3 and 20.8, respectively). All of these regions met the Healthy People 2020 national goal of 65.8 deaths per 100,000 population.

The ZIP codes with the highest diabetes death rates were primarily concentrated in north and west Tulsa.

Data Source:
Diabetes. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
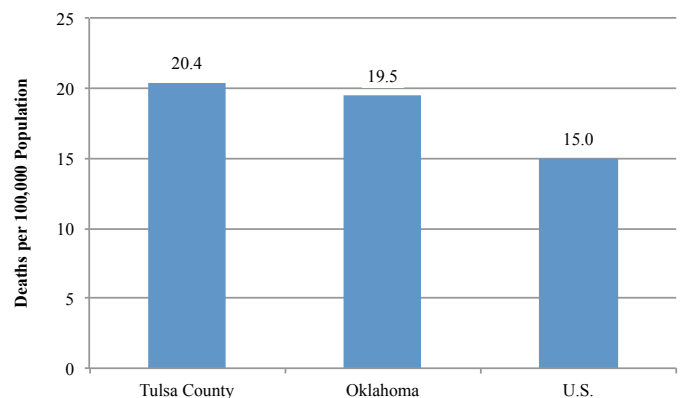
Murphy SL, Xu JQ, Kochanek KD. Deaths: Final Data for 2010. National Vital Statistics Reports; Vol 61 No 4. Hyattsville, MD: National Center for Health Statistics. 2013.

Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

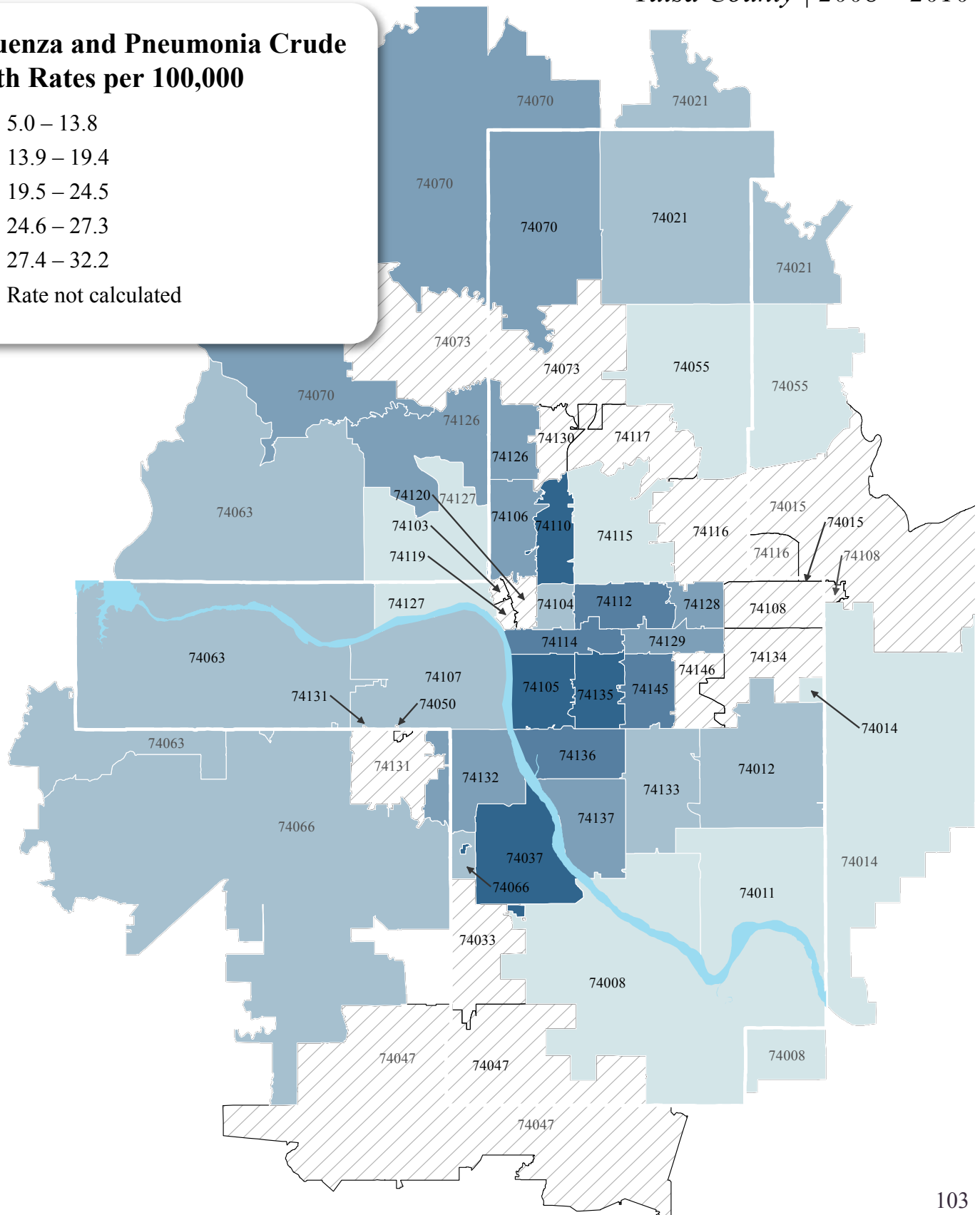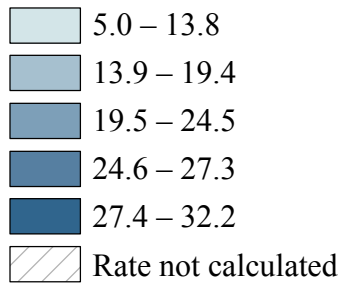**Age-Adjusted Diabetes Death Rates by Race/Ethnicity Tulsa County | 2008 – 2010**

Deaths per 100,000 Population

- White: 16.4
- Black: 56.1
- American Indian: 42.1
- Hispanic: 25.0

**Age-Adjusted Diabetes Death Rates by Region | 2010**

Deaths per 100,000 Population

- Tulsa County: 18.7
- Oklahoma: 26.3
- U.S.: 20.8

# Deaths From Diabetes

**Diabetes Crude Death Rates per 100,000**

- 9.7 – 13.0
- 13.1 – 17.7
- 17.8 – 23.2
- 23.3 – 27.4
- 27.5 – 49.0
- Rate not calculated

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# Years of Potential Life Lost

Years of potential life lost (YPLL) is the number of years people would have lived had they not died prematurely. It is calculated as the age at death subtracted from the expected lifespan (assumed to be 75). Each infant death (under one year of age) was counted as 75 YPLL. The YPLL rate is presented as the total YPLL per 1,000 population age 75 and younger, averaged over the years 2008 – 2010.

## Why Is This Indicator Important?

Unlike the crude mortality rate, which is heavily influenced by the large number of deaths occurring in the older population, the YPLL emphasizes losses suffered as a result of people who died young. Disease-specific YPLLs provide an important perspective on the significance of the causes of premature death.

## How Are We Doing?

The total YPLL for Tulsa County from 2008 – 2010 was 153,269 years, which is an average rate of 85.5 YPLL per 1,000 individuals. The rate for males was significantly higher than the rate for females (110.7 compared to 61.6). Blacks had a significantly higher rate than other races (123.2). American Indians had the next highest rate (94.7). Hispanics had an average YPLL of 42.8 per 1,000.

In 2010, cancer was responsible for 18.3 percent of all YPLL. Accidental deaths and heart disease were the next highest percentages (17.3 percent and 17.0 percent, respectively).

The ZIP codes with the highest YPLL were 74106, 74119, 74126, and 74127, which are located in north and downtown Tulsa.

Data Source:
Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics 2008 to 2010, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE). Retrieved from: http://www.health.ok.gov/ok2share.
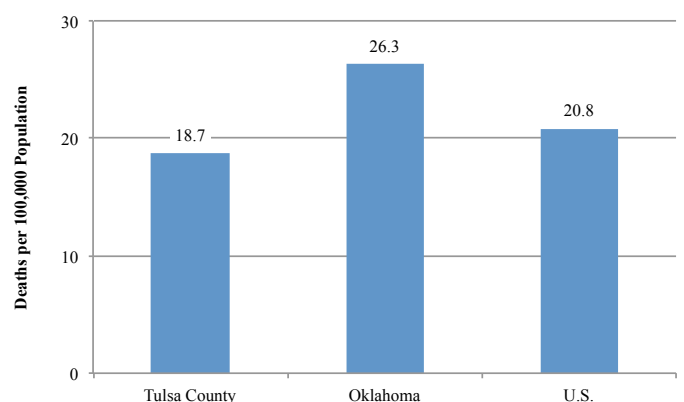
Vital Statistics (2008 – 2010). Center for Health Information. Oklahoma State Department of Health.

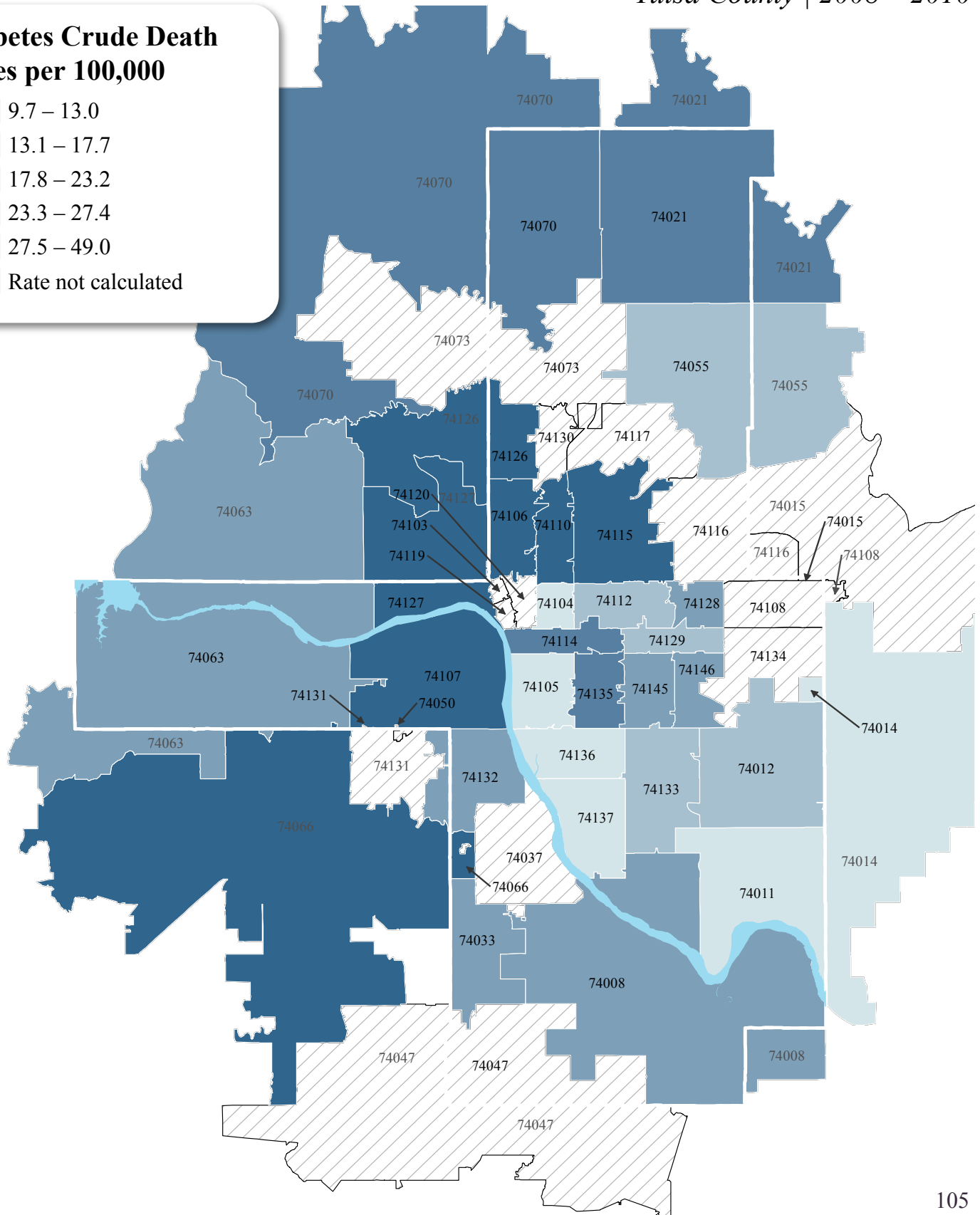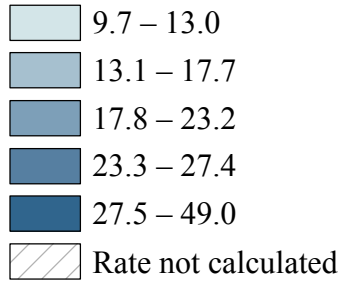**Years of Potential Life Lost by Race/Ethnicity**
**Tulsa County | 2008 – 2010**

| Race/Ethnicity | YPLL per 1,000 Population |
| --- | --- |
| White | 80.8 |
| Black | 123.2 |
| American Indian | 94.7 |
| Asian/Pacific Islander | 30.1 |
| Hispanic | 42.8 |
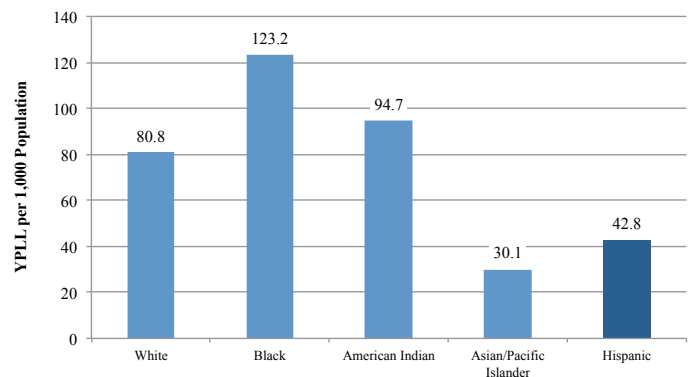
**Years of Potential Life Lost by Cause**
**Tulsa County | 2010**

| Cause | Percentage of all YPLL |
| --- | --- |
| Cancer | 18.3% |
| Accidental Deaths | 17.3% |
| Heart Disease | 17.0% |
| Suicide | 7.1% |
| Assault | 4.8% |
| Birth Defects | 4.5% |
| Chronic Liver Disease and Cirrhosis | 3.2% |
| Stroke | 3.1% |
| Chronic lower respiratory diseases | 2.7% |
| Diabetes Mellitus | 1.7% |
| Pneumonia | 1.7% |
| All Other | 18.5% |
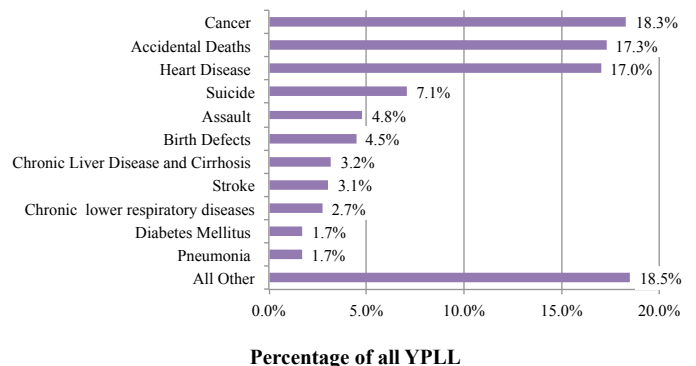
# Years of Potential Life Lost



*Tulsa County | 2008 – 2010*

**Years of Potential Life Lost per 1,000**

- 38.4 – 65.3
- 65.4 – 81.9
- 82.0 – 93.7
- 93.8 – 117.7
- 117.8 – 158.8
- Rate not calculated

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# Health Care Access

# Hospital Utilization

This indicator is an estimate of the use of short-stay hospitals by Tulsa County residents during 2010. 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 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 2010 was 130.5 discharges per 1,000 population. This was slightly lower than the rate in Oklahoma, which was 132.9 discharges per 1,000 population. Females accounted for the majority of hospital discharges (59.6 percent). Whites made up the majority of discharges (75.1 percent), followed by blacks (13.8 percent). The largest percentage of hospital stays were paid for by Medicare (36.9 percent), followed by private insurance (28.2 percent) and Medicaid (24.9 percent).

Circulatory conditions made up 12.9 percent of all hospital stays in 2010. This includes heart diseases such as congestive heart failure, heart attack, coronary artery disease, and irregular heartbeat. Conditions related to pregnancy and childbirth were the second most common reason for hospitalization (12.4 percent).

Hospital admissions were highest in ZIP codes 74103, 74106, 74126, and 74130, which are in downtown and north Tulsa.

Data Source:
Center for Health Information. Oklahoma State Department of Health. 2010.

**Hospital Utilization by Race***
**Tulsa County | 2010**



| Race | Percentage |
|------|------------|
| White | 75.1% |
| Black | 13.8% |
| American Indian | 4.6% |
| Asian/Pacific Islander | 1.2% |
| Other | 1.1% |
| Unknown | 4.3% |
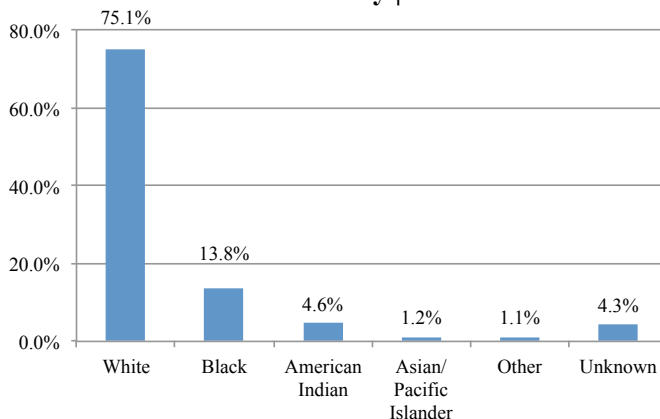
*Graph shows percentage of total hospital discharges within each race; percentages add up to 100%.

**Expected Primary Payer for Hospital Discharges**
**Tulsa County | 2010**



Other 3.4%
Uninsured/self- pay 6.7%
Private Insurance 28.2%
Medicaid 24.9%
Medicare 36.9%
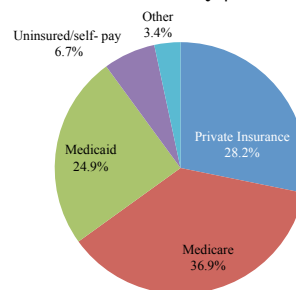
**Top Ten Reasons for Hospital Stay**
**Tulsa County | 2010**



| Reason | Percentage |
|--------|------------|
| Circulatory System | 12.9% |
| Pregnancy and Childbirth | 12.4% |
| Newborns | 11.1% |
| Digestive System | 8.8% |
| Respiratory System | 8.7% |
| Other | 8.4% |
| Injury and Poisoning | 8.0% |
| Musculoskeletal System and Connective Tissue | 6.5% |
| Genitourinary System | 4.8% |
| Endocrine, Nutritional & metabolic dis. & immunity disorders | 3.7% |
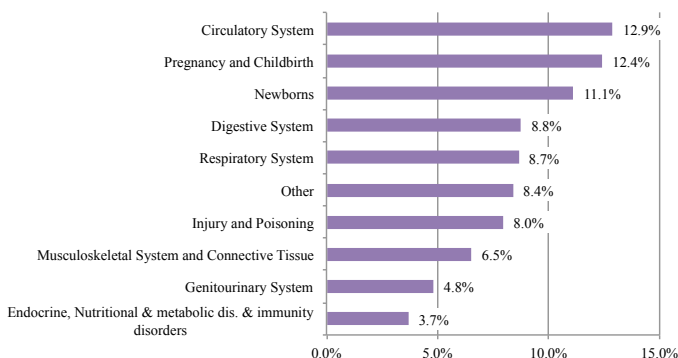
*Tulsa County | 2010*

**Hospital Utilization Rate per 1,000**

- 99.0 – 106.2
- 106.3 – 126.9
- 127.0 – 144.0
- 144.1 – 168.6
- 168.7 – 216.6
- Rate not calculated
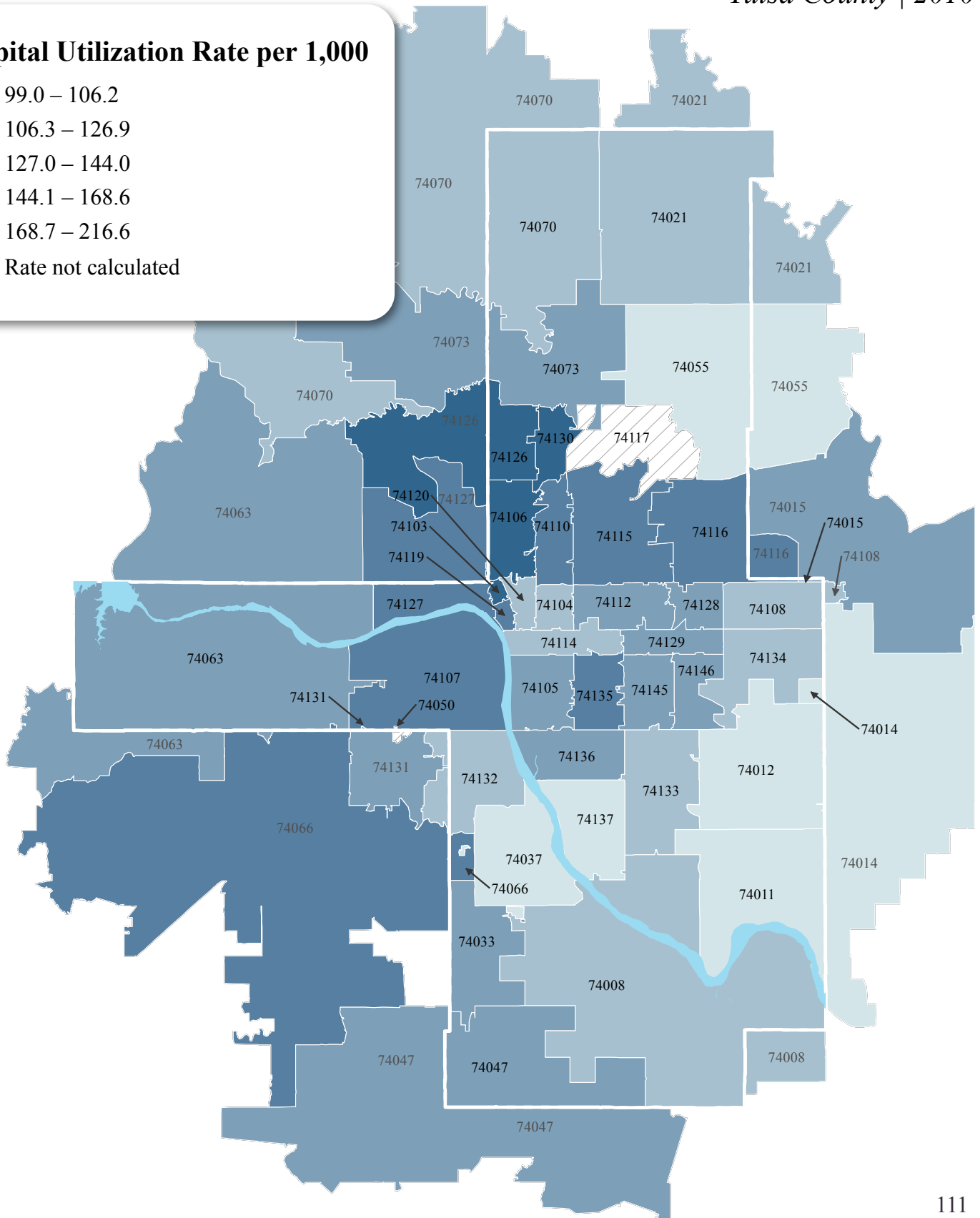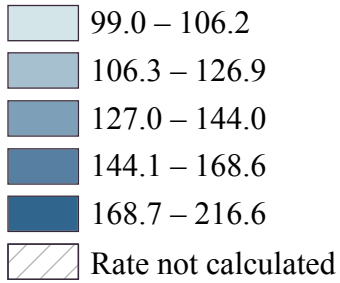
# Emergency Room Visits

This indicator is the number of emergency room (ER) visits to the nine area hospitals by Tulsa County residents in 2010. It is presented as a rate per 1,000 population.

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

## How Are We Doing?

In 2010, over 306,000 visits were made to the nine Tulsa County ERs for an approximate overall rate of 509 visits per 1,000 population. This could be an overestimate for county residents because ZIP code information was unknown for 12 percent of visits. Adults age 24 – 34 accounted for the largest percentage of emergency room visits (18.3 percent), followed by adults age 65 and older (14.7 percent).

Tulsa County's rate of 509 visits per 1,000 population was higher than Oklahoma and the United States in 2010. ER visit rates were 469 and 411 per 1,000 population for Oklahoma and the United States, respectively.

The highest rate of emergency room visits was in the ZIP code 74103.

Data Source:
Gindi RM, Cohen RA, Kirzinger WK. 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. May 2012. Retrieved from: http://www.cdc.gov.

Tulsa Area Syndromic Surveillance System (TASSS). Tulsa Health Department. 2010.

Hospital Emergency Room Visits per 1,000 Population. Kaiser Family Foundation. 2010. Retrieved from: http://kff.org.

**Emergency Room Visits by Age***
**Tulsa County | 2010**
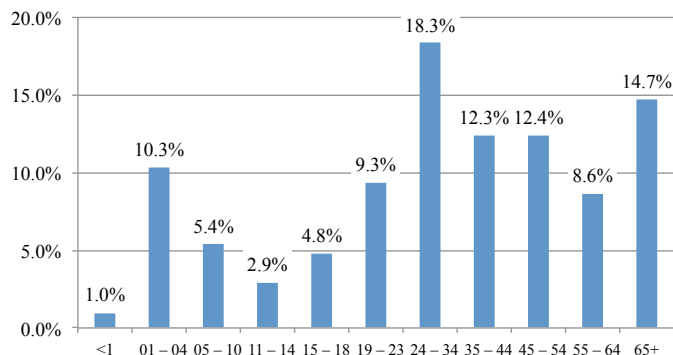


*Graph shows percentage of total emergency room visits within each age group; percentages add up to 100%.

**Emergency Room Visit Rates**
**by Region | 2010**

# Emergency Room Visits

**Emergency Room Visits per 1,000**

- 176.4 – 237.7
- 237.8 – 324.9
- 325.0 – 505.7
- 505.8 – 784.7
- 784.8 – 1412.3
- Rate not calculated

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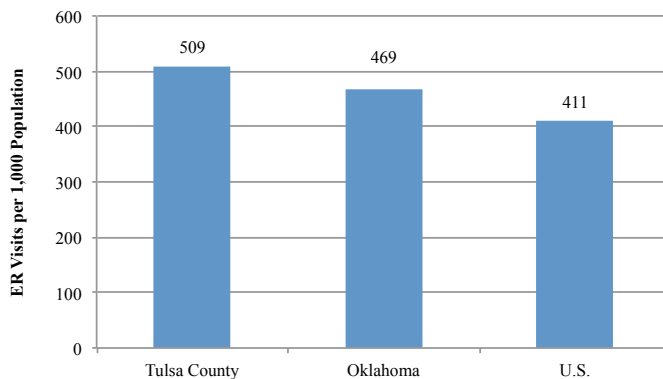
# Medicaid

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 2010.

## Why Is This Indicator Important?

Medicaid provides health coverage for certain low-income individuals, such as families and children, pregnant women, the elderly, and people with disabilities. It covers 1 in 5 Americans, including more than 1 in 3 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, especially as Medicaid coverage expands.

## How Are We Doing?

Tulsa County had 129,750 unduplicated Medicaid enrollees during fiscal year 2010, which represents 21.5 percent of the total population. During the same time period, 22.7 percent and 17.7 percent of the population in Oklahoma and the United States was enrolled in Medicaid, respectively.

In December 2010, 62.4 percent of Medicaid enrollees were white, followed by 25.5 percent who were black.

The ZIP codes with the highest percentages of Medicaid enrollees were primarily concentrated in the north region of Tulsa.

**Medicaid Enrollees by Race**
**Tulsa County | December 2010**



- White — 62.4%
- Black — 25.5%
- American Indian — 6.6%
- Asian or Pacific Islander — 2.5%
- Multiple races — 3.0%
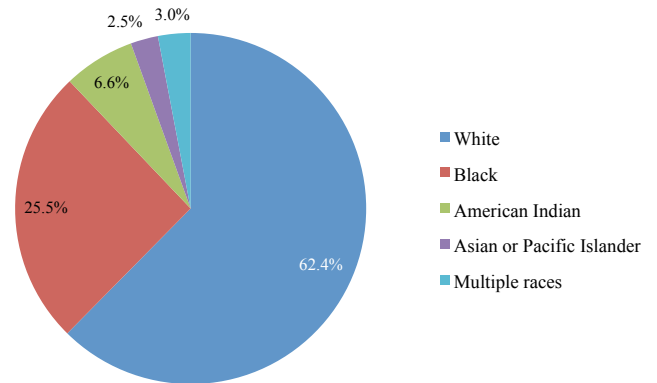
**Percentage of the Population Enrolled in Medicaid by Region | FY 2010**



| Region | Percentage |
|---|---|
| Tulsa County | 21.5% |
| Oklahoma | 22.7% |
| U.S. | 17.7% |

# Medicaid

**Percentage of the Population Enrolled in Medicaid**

- 7.4% – 13.1%
- 13.2% – 17.9%
- 18.0% – 24.5%
- 24.6% – 31.1%
- 31.2% – 46.0%
- Rate not calculated

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# Physicians and Dentists

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. This indicator is presented as a rate per 100,000 population, based on 2012 population estimates.

## 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 health care services.

## How Are We Doing?

Based on 2012 population estimates, there were 598.4 physicians and dentists per 100,000 population in Tulsa County. Address mapping of these physicians and dentists showed that the largest numbers of providers were located in 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 Medical Center (ZIP code 74104).

Within Tulsa County, 87.1 percent of providers were physicians or surgeons, while 12.9 percent were dentists. The top specialties among providers were Family Practice (14.3 percent), Internal Medicine (12.4 percent), and General Dentistry (10.3 percent).

Data Source:
Boccuti, C, Swoope, C, Damico, A, & Neuman, P. (Dec 2013). Medicare Patients' Access to Physicians: A Synthesis of the Evidence. The Henry J. Kaiser Family Foundation. Retrieved from: http://kaiserfamilyfoundation.files.wordpress.com.

Reference USA. Physicians in Tulsa County. 2013.

**Top Ten Provider Specialties**
**Tulsa County | 2013**

| Specialty | Percent |
|-----------|---------|
| Family Practice | 14.3% |
| Internal Medicine | 12.4% |
| General Dentistry | 10.3% |
| Pediatrics | 7.2% |
| Surgery | 5.2% |
| Cardiology | 4.8% |
| OB/GYN | 4.6% |
| Anesthesiology | 4.3% |
| Emergency Medicine | 4.2% |
| Psychiatry | 3.7% |
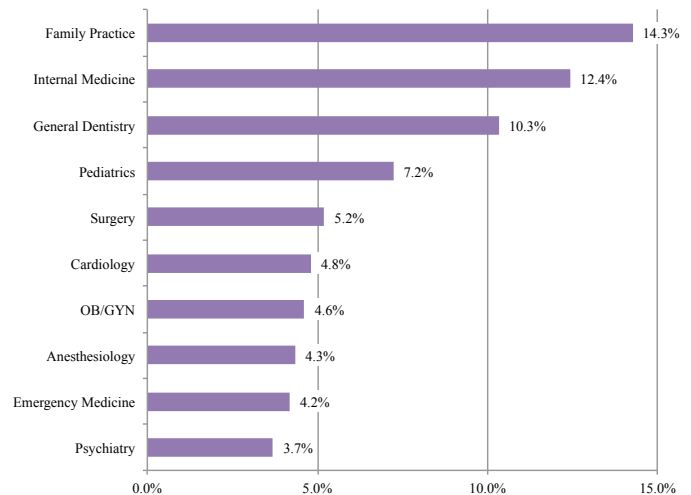
# Physicians and Dentists

**Number of Physicians and Dentists**

| | |
|---|---|
| ⊠ | None |
| | 1 – 37 |
| | 38 – 88 |
| | 89 – 157 |
| | 158 – 486 |
| | 487 – 719 |

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# Behavioral Risk Factors & Quality of Life

# Overweight and Obesity

This indicator is presented as the percentage of Tulsa County residents who were overweight or obese (total overweight) in 2010. 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/obesity. Individuals who are overweight or obese have an increased risk of the following conditions: heart disease, type 2 diabetes, certain cancers, hypertension, and dyslipidemia, 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, and early death.

## How Are We Doing?

In 2010, 66.3 percent of Tulsa County residents were overweight or obese (36.1 percent overweight; 30.2 percent obese), compared to 67.3 percent of Oklahomans and 63.7 percent of residents of the United States. The prevalence of total overweight increased from 2009 to 2010 after being relatively stable from 2004 to 2009.

Males were more likely to be overweight/obese than females (73.5 percent compared to 59.1 percent). The prevalence of total overweight was also highest among middle-age individuals (35 – 64). Additionally, total overweight was most prevalent among Native Hawaiians/Pacific Islanders. About 73 percent of Hispanics were overweight or obese.

With regard to socioeconomic factors, total overweight was most common among adults who had an income of less than $10,000. It was also most common among adults who had a high school education or less. Additionally, adults who were married or divorced were more likely to be overweight or obese.

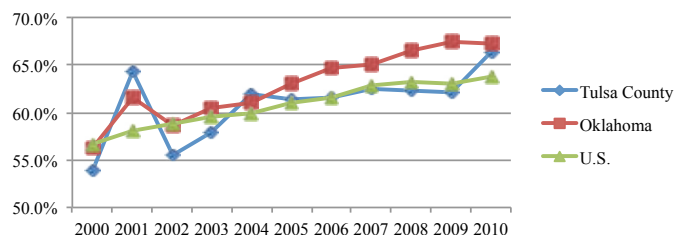Total Overweight by Region | 2000 – 2010



Total Overweight by Age and Race/Ethnicity Tulsa County | 2010
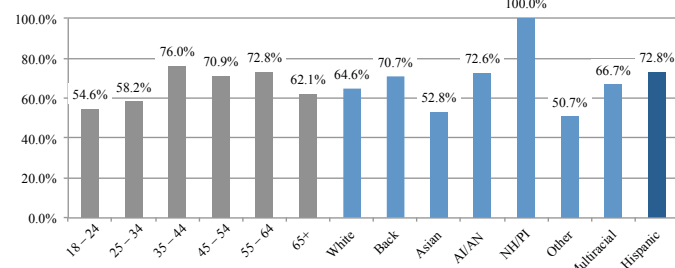


Total Overweight by Income and Education Tulsa County | 2010
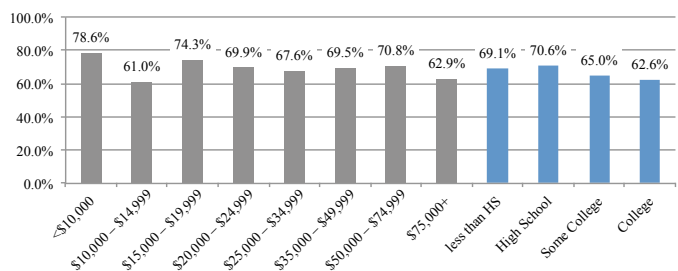
# Physical Activity

This indicator is presented as the percentage of adults 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 Americans 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, 27.7 percent of Tulsa County adults reported no leisure time physical activity in the previous month in 2010. This was lower than in Oklahoma (29.9 percent), but significantly higher than the United States (23.9 percent). All of these regions met the Healthy People 2020 national goal of 32.6 percent of adults reporting no leisure time physical activity. Additionally, the prevalence of "no physical activity" decreased in Tulsa County from 2008 – 2010.

Females were more likely than males to have no leisure time physical activity (30.8 percent compared to 24.3 percent). Additionally, adults age 55 and older had higher rates of no physical activity. With regard to race, blacks had higher rates of no physical activity. About one-third of Hispanics reported no physical activity in the past month.

In general, rates of no physical activity decreased as income and education levels increased. Individuals who were widowed, separated, or a member of an unmarried couple also had higher rates of no leisure time physical activity.

Data Source:
Physical Activity. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov

SMART: BRFSS City and County Data. Centers for Disease Control and Prevention.

Behavioral Risk Factor Surveillance System. Centers for Disease Control and Prevention.



**No Leisure Time Physical Activity in the Past Month by Region | 2000 – 2010**
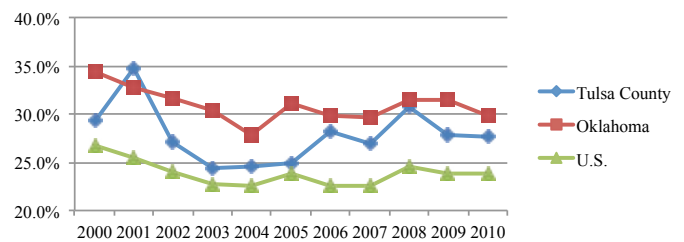


**No Leisure Time Physical Activity in the Past Month by Age and Race/Ethnicity Tulsa County | 2010**
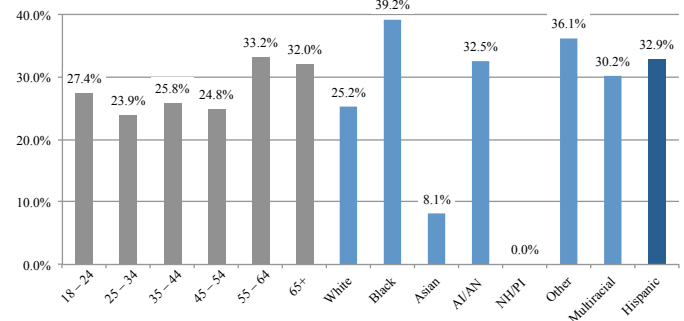


**No Leisure Time Physical Activity in the Past Month by Income and Education Tulsa County | 2010**
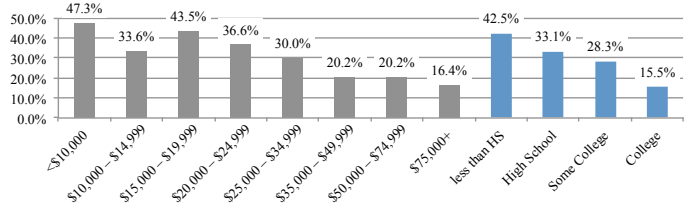
# Tobacco Use

This indicator is presented as the percentage of Tulsa County residents who currently smoked cigarettes in 2010.

## Why Is This Indicator Important?

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

## How Are We Doing?

In 2010, 23.6 percent of Tulsa County residents reported smoking cigarettes on some days or every day. This was almost identical to Oklahoma (23.7 percent) but significantly higher than the United States (17.3 percent). None of these regions met the Healthy People 2020 national goal of reducing the smoking prevalence to 12.0 percent. However, cigarette smoking declined in Tulsa County from 2009 to 2010 (26.1 percent to 23.6 percent).

Males in Tulsa county were more likely to smoke cigarettes than females (25.9 percent compared to 21.6 percent). Also, adults ages 25 – 34 and 45 – 54 had a higher prevalence of cigarette smoking. With regard to race, blacks, American Indians/Alaska Natives, and multiracial individuals had higher rates of cigarette smoking. Smoking prevalence was 16.7 percent among Hispanics.

Additionally, the prevalence of cigarette smoking decreased as income and education levels increased. Individuals who were separated were also more likely to regularly smoke cigarettes.

Data Source:
Tobacco Use. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

SMART: BRFSS City and County Data. Centers for Disease Control and Prevention.

Behavioral Risk Factor Surveillance System. Centers for Disease Control and Prevention.

### Smoking Prevalence by Region | 2000 – 2010
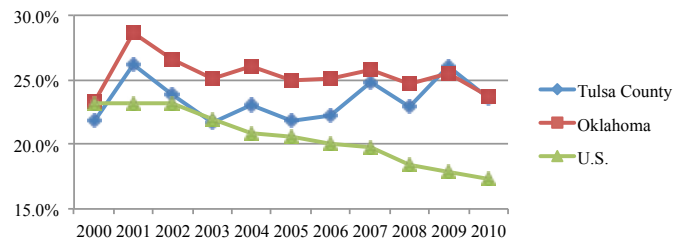


### Smoking Prevalence by Age and Race/Ethnicity Tulsa County | 2010
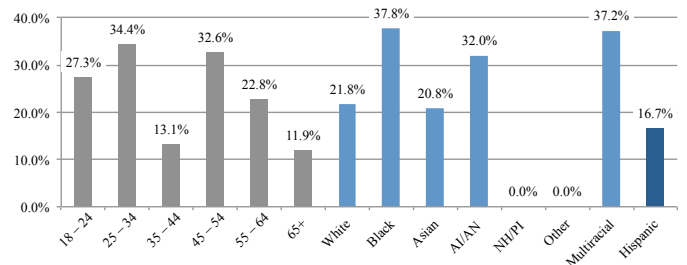


### Smoking Prevalence by Income and Education Tulsa County | 2010
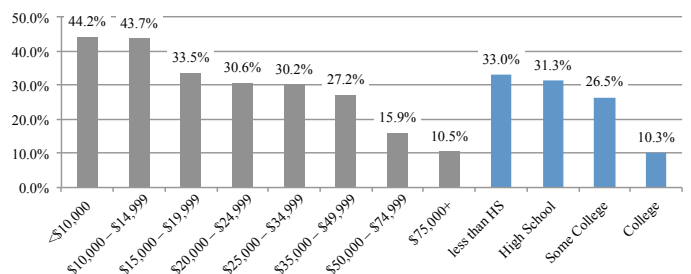
This indicator is presented as the percentage of Tulsa County residents who had been diagnosed with high blood pressure in 2009.

## *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 damage to the heart and coronary arteries, such as heart attack, heart disease, congestive heart failure, aortic dissection and atherosclerosis, stroke, kidney damage, vision loss, erectile dysfunction, memory loss, angina, and peripheral artery disease. Risk factors for high blood pressure include family history, age, low physical activity, poor diet, overweight/obesity, and high alcohol consumption.

## *How Are We Doing?*

In 2009, 33.8 percent of Tulsa County residents reported having high blood pressure. This was slightly lower than in Oklahoma (34.9 percent) but significantly higher than the United States (28.7 percent). 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.  High blood pressure rates increased significantly in Tulsa County from 2007 – 2009 (28.2 percent to 33.8 percent).

Males in Tulsa County were more likely to have high blood pressure than females (35.0 percent compared to 31.9 percent). Also, high blood pressure prevalence increased with age. Native Hawaiians/Pacific Islanders had a significantly higher prevalence of high blood pressure. Among Hispanics, prevalence of high blood pressure was 16.1 percent.

With regard to income, individuals who had an income of less than $10,000 were more likely to have high blood pressure. Additionally, the prevalence was higher in individuals who had less than a high school education. Individuals who were widowed were more likely to have high blood pressure.

Data Source:
High Blood Pressure. American Heart Association. Retrieved from: http://www.heart.org.

Heart Disease and Stroke. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

SMART: BRFSS City and County Data. Centers for Disease Control and Prevention.

Behavioral Risk Factor Surveillance System. Centers for Disease Control and Prevention.

**High Blood Pressure Prevalence by Region | 2001 – 2009**
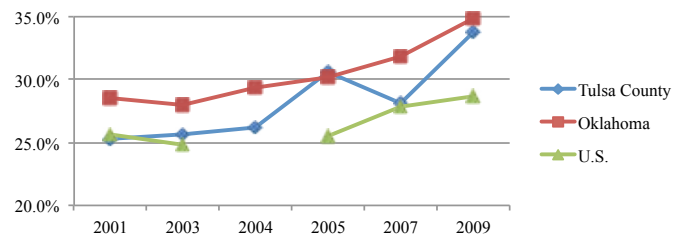


**High Blood Pressure Prevalence by Age and Race/Ethnicity Tulsa County | 2009**
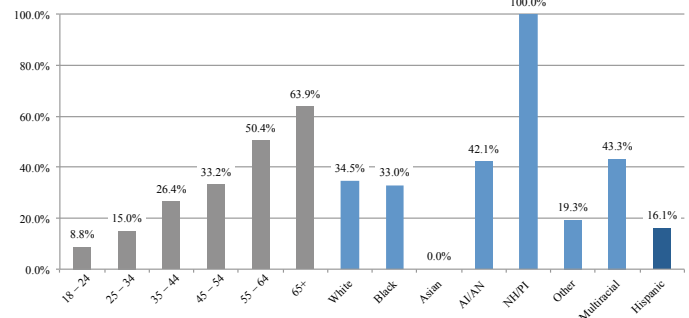


**High Blood Pressure Prevalence by Income and Education Tulsa County | 2009**



123
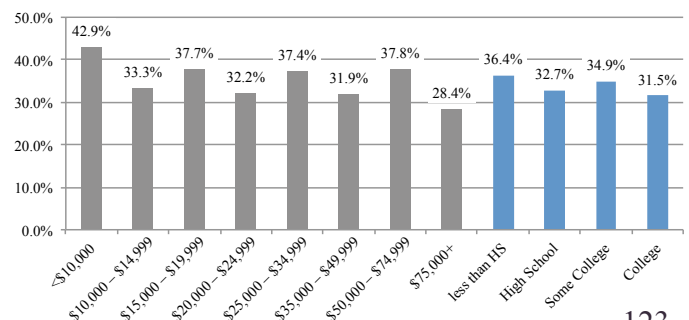
# Diabetes

This indicator is presented as the percentage of Tulsa County residents who had been diagnosed with diabetes in 2010.

## *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. Few people receive effective preventative care, which makes DM an immense and complex public health challenge.

## *How Are We Doing?*

In 2010, 10.0 percent of Tulsa County residents reported that they had been diagnosed with diabetes. This was almost the same as the rate in Oklahoma (10.4 percent) and was slightly higher than the rate in the U.S. (8.7 percent). Overall, the rate of diabetes in Tulsa County stayed relatively stable from 2009 to 2010 after increasing from 2007 to 2009.

Males had a higher prevalence of diabetes than females (10.6 percent compared to 9.4 percent). Also, adults age 55 and older had higher rates of diabetes. With regard to race, blacks and Asians had a higher prevalence. The prevalence of diabetes among Hispanics was 10.2 percent.

Additionally, adults who had an income of less than $15,000 or who had a high school education or less were more likely to have been diagnosed with diabetes. Individuals who were widowed were also more likely to be diabetic.

Data Source:
Diabetes. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

SMART: BRFSS City and County Data. Centers for Disease Control and Prevention.

Behavioral Risk Factor Surveillance System. Centers for Disease Control and Prevention.

### Diabetes Prevalence by Region | 2004 – 2010
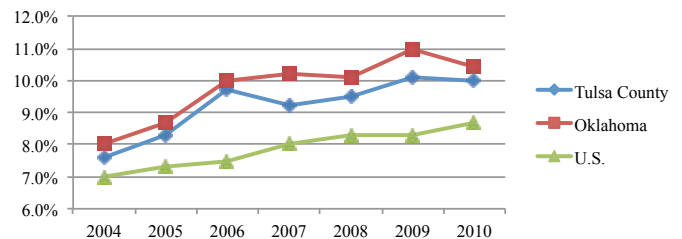


### Diabetes Prevalence by Age and Race/Ethnicity Tulsa County | 2010
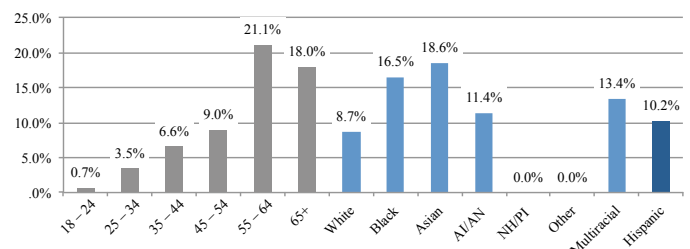


### Diabetes Prevalence by Income and Education Tulsa County | 2010
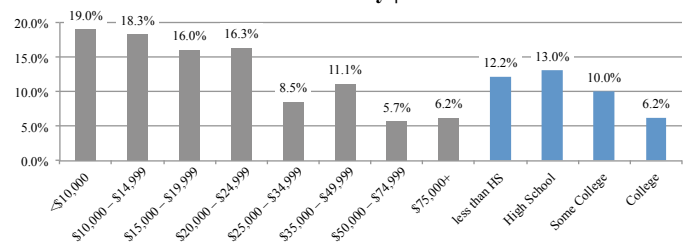
This indicator is presented as the percentage of Tulsa County residents who did not have any type of healthcare coverage in 2010.

## Why Is This Indicator Important?

Access to comprehensive, quality health care services is important for the achievement of health equity and for increasing the quality of life for everyone. Disparities in access to these health services limit people's ability to reach their full potential and negatively affect their quality of life. 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.

## How Are We Doing?

In 2010, 24.3 percent of Tulsa County residents did not have any type of healthcare coverage. This was slightly higher than Oklahoma (23.3 percent) and significantly higher than the United States (17.8 percent). The Healthy People 2020 goal is 100 percent coverage (0 percent uninsured). The uninsured rate in Tulsa County increased from 2008 to 2010.

The uninsured rate was slightly higher among females (25.3 percent) compared to males (23.7 percent). It also decreased as age increased, with 18 – 24 year olds having the highest rate of no insurance (38.2 percent). Adults age 65 and older were not included in these demographics, thus excluding the Medicare population. With regard to race, blacks and adults who identified their race as "other" had the highest uninsured rates. Among Hispanics, 53.7 percent lacked health insurance coverage.

When looking at income levels, adults who had an income of $10,000 – $14,999 had the highest uninsured rate (58.1 percent). As income increased from this point, lack of healthcare coverage decreased. Additionally, the uninsured rate decreased as education level increased. Also, adults who were separated or a member of an unmarried couple were more likely to lack healthcare coverage.

Data Source:
Access to Health Services. Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from: http://www.healthypeople.gov.

SMART: BRFSS City and County Data. Centers for Disease Control and Prevention.

Behavioral Risk Factor Surveillance System. Centers for Disease Control and Prevention.

**No Health Insurance Coverage by Region | 2002 – 2010**

**No Health Insurance Coverage by Age and Race/Ethnicity Tulsa County | 2010**

**No Health Insurance Coverage by Income and Education Tulsa County | 2010**

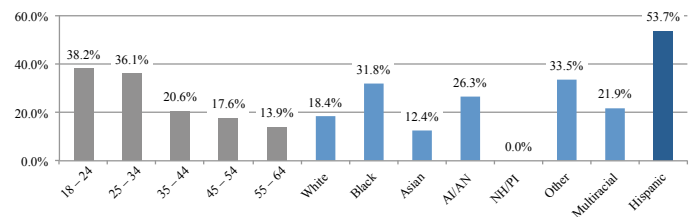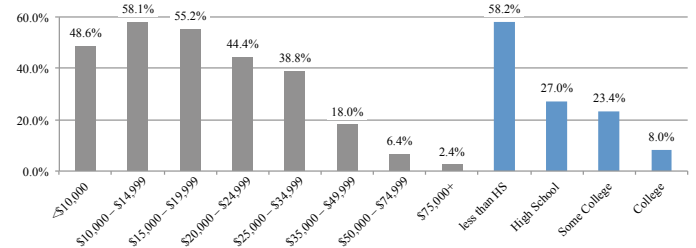| Indicator | | Socioeconomic | | | | | Maternal & Child Health | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ZIP Code | Average Rating | Median Household Income | Population below Poverty | Female Headed Household | Education Attainment | Unemployment Rate | Births to Teens 17 and Younger | Births to Teens 19 and Younger | Late or No Prenatal Care | Tobacco Use During Pregnancy | Premature Births | Low Birth Weight | Maternal Education | Births to Unmarried Women | Infant Mortality Rate |
| 74014 | 1.29 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 |
| 74037 | 1.36 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | ** |
| 74011 | 1.38 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | ** |
| 74008 | 1.63 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | ** |
| 74012 | 1.64 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 4 |
| 74055 | 1.64 | 2 | 1 | 2 | 1 | 1 | 3 | 2 | 1 | 1 | 3 | 2 | 1 | 1 | 1 |
| 74137 | 1.71 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 2 | 1 | 1 | 4 |
| 74133 | 1.86 | 3 | 1 | 2 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 2 |
| 74033 | 2.00 | 2 | 1 | 3 | 2 | 3 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | ** |
| 74021 | 2.14 | 2 | 1 | 2 | 2 | 1 | 3 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 3 |
| 74114 | 2.15 | 2 | 1 | 2 | 1 | 1 | ** | 1 | 2 | 1 | 1 | 1 | 1 | 1 | ** |
| 74134 | 2.20 | 3 | 3 | 3 | 3 | 2 | 4 | 3 | 3 | 1 | 2 | 3 | 3 | 3 | 1 |
| 74104 | 2.58 | 5 | 4 | 3 | 3 | 2 | 4 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | ** |
| 74132 | 2.62 | 3 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 3 | 3 | 1 | 2 | ** |
| 74063 | 2.62 | 3 | 1 | 2 | 3 | 2 | 3 | 3 | 2 | 4 | 2 | 3 | 2 | 2 | 2 |
| 74073 | 2.65 | 2 | 1 | 1 | 3 | 1 | 2 | 3 | 1 | 3 | 3 | 1 | 2 | 2 | ** |
| 74070 | 2.67 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 1 | 3 | 4 | 3 | 2 | 2 | ** |
| 74015 | 2.79 | 3 | 2 | 3 | 2 | 2 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | ** |
| 74120 | 2.83 | 5 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | 4 | 1 | 3 | 4 | 3 | ** |
| 74047 | 2.83 | 3 | 2 | 2 | 3 | 2 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | ** |
| 74105 | 2.93 | 4 | 2 | 3 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 |
| 74131 | 3.05 | 3 | 1 | 1 | 3 | 5 | ** | 3 | 5 | 3 | 5 | 2 | 1 | 3 | ** |
| 74129 | 3.07 | 4 | 3 | 4 | 4 | 3 | 4 | 3 | 4 | 2 | 2 | 3 | 4 | 4 | 1 |
| 74146 | 3.08 | 5 | 4 | 5 | 4 | 2 | 4 | 4 | 5 | 2 | 4 | 3 | 5 | 4 | 4 |
| 74145 | 3.11 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 4 |
| 74108 | 3.12 | 4 | 3 | 4 | 4 | 3 | 2 | 3 | 4 | 4 | 2 | 1 | 4 | 3 | 5 |
| 74136 | 3.14 | 4 | 3 | 4 | 2 | 4 | 3 | 3 | 5 | 2 | 3 | 3 | 3 | 3 | 4 |
| 74066 | 3.18 | 4 | 2 | 2 | 3 | 4 | 4 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| 74117 | 3.20 | 4 | 5 | 1 | 5 | 1 | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| 74112 | 3.32 | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 2 |
| 74135 | 3.32 | 4 | 2 | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 1 | 2 | 3 | 3 | 3 |
| 74128 | 3.33 | 4 | 2 | 3 | 4 | 4 | 4 | 3 | 5 | 3 | 2 | 2 | 5 | 4 | 4 |
| 74103 | 3.52 | 1 | 5 | 1 | 5 | 5 | ** | 2 | 5 | 4 | 5 | 5 | 4 | 2 | ** |
| 74107 | 3.66 | 5 | 4 | 4 | 3 | 5 | 4 | 4 | 4 | 5 | 4 | 3 | 4 | 4 | 4 |
| 74119 | 3.67 | 5 | 3 | 2 | 2 | 3 | ** | ** | 4 | 2 | 4 | 5 | 3 | 3 | ** |
| 74116 | 3.73 | 5 | 5 | 4 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | ** |
| 74115 | 3.83 | 5 | 4 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 3 |
| 74110 | 3.90 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | 3 | 3 | 5 | 4 | 3 |
| 74130 | 3.95 | 5 | 4 | 3 | 4 | 5 | ** | 3 | 5 | 3 | 1 | 5 | 4 | 5 | ** |
| 74127 | 4.07 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | ** |
| 74050 | 4.25 | 5 | 5 | 2 | 4 | 4 | ** | 5 | 2 | 5 | 5 | 5 | 5 | 4 | ** |
| 74126 | 4.32 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 4 | 5 | 4 |
| 74106 | 4.57 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |

| | | Mortality | | | | | | | | | | Health Care Access | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Deaths from Suicide | Deaths from Homicide | Deaths from All Causes | Deaths from Heart Disease | Deaths from Cancer | Deaths from Stroke | Deaths from Chronic Lower Respiratory | Deaths from All Accidents | Deaths from Alzheimer's | Deaths from Influenza & Pneumonia | Deaths from Diabetes | Years of Potential Life Lost | Hospital Admissions | Emergency Room Visits | Population on Medicaid |
| 3 | ** | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| ** | ** | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 5 | ** | 1 | 1 | 1 | 1 |
| ** | ** | 1 | 1 | 3 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | ** | 2 | 2 | 3 | 2 | 4 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 |
| 2 | ** | 1 | 2 | 2 | 2 | 1 | 1 | 3 | 2 | 2 | 1 | 1 | 1 | 2 |
| 2 | ** | 1 | 1 | 2 | 5 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 |
| 1 | ** | 2 | 2 | 3 | 3 | 1 | 1 | 5 | 3 | 1 | 1 | 1 | 1 | 1 |
| 3 | ** | 2 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 |
| ** | ** | 1 | 2 | 2 | 1 | 2 | 2 | ** | ** | 3 | 2 | 3 | 2 | 3 |
| 2 | ** | 2 | 2 | 3 | 3 | 4 | 2 | 4 | 2 | 4 | 2 | 2 | 2 | 2 |
| 2 | ** | 4 | 4 | 4 | 5 | 2 | 2 | 5 | 4 | 4 | 1 | 2 | 1 | 1 |
| 2 | ** | 1 | 1 | 1 | 1 | 1 | 1 | ** | ** | ** | 2 | 2 | 2 | 4 |
| ** | ** | 2 | 3 | 2 | 1 | 2 | 4 | 1 | 2 | 1 | 3 | 2 | 3 | 2 |
| ** | ** | 4 | 4 | 3 | 4 | 4 | 4 | 5 | 3 | 3 | 3 | 2 | 2 | 2 |
| 3 | 1 | 3 | 3 | 4 | 2 | 4 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 |
| ** | ** | 3 | 3 | 5 | 3 | 5 | 4 | ** | ** | ** | 4 | 3 | 3 | 3 |
| 3 | ** | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 4 | 2 | 2 | 3 | 3 |
| 4 | ** | 3 | 4 | 5 | 1 | 2 | 3 | ** | ** | ** | 3 | 3 | 2 | 3 |
| ** | ** | 1 | 2 | 1 | 3 | 2 | 2 | ** | ** | ** | 2 | 2 | 3 | 2 |
| ** | ** | 2 | 2 | 4 | 5 | 4 | 3 | ** | ** | ** | 2 | 3 | 1 | 3 |
| 3 | ** | 3 | 3 | 4 | 5 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 3 | 2 |
| ** | ** | 4 | 4 | 3 | 2 | ** | 3 | ** | ** | 5 | 4 | 3 | 1 | 3 |
| 4 | 2 | 3 | 4 | 4 | 4 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 4 |
| 2 | ** | 1 | 1 | 1 | 2 | 1 | 1 | ** | ** | 3 | 2 | 3 | 3 | 5 |
| 4 | ** | 4 | 4 | 5 | 4 | 4 | 2 | 5 | 4 | 3 | 2 | 3 | 3 | 3 |
| 4 | ** | 2 | 3 | 2 | 1 | 4 | 3 | 3 | ** | ** | 4 | 2 | 3 | 4 |
| 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 4 | 1 | 3 | 3 | 3 | 3 |
| 3 | ** | 4 | 4 | 5 | 4 | 4 | 3 | 4 | 2 | 5 | 4 | 4 | 1 | 3 |
| ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| 4 | ** | 4 | 5 | 4 | 4 | 4 | 3 | 2 | 4 | 2 | 4 | 3 | 3 | 3 |
| 4 | ** | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 4 | 3 | 4 | 3 | 3 |
| ** | ** | 4 | 4 | 4 | 3 | 4 | 1 | 1 | 3 | 3 | 4 | 3 | 3 | 4 |
| ** | ** | 2 | 4 | 2 | 2 | ** | 5 | ** | ** | ** | 4 | 5 | 5 | 1 |
| 2 | 1 | 4 | 4 | 3 | 3 | 4 | 4 | 1 | 2 | 5 | 4 | 4 | 4 | 4 |
| 5 | ** | 5 | 5 | 5 | 2 | ** | 5 | ** | ** | ** | 5 | 4 | 3 | 2 |
| ** | ** | 1 | 1 | 2 | 1 | ** | 1 | ** | ** | ** | 3 | 4 | 4 | 5 |
| 2 | 4 | 3 | 3 | 3 | 2 | 4 | 4 | 1 | 1 | 5 | 4 | 4 | 4 | 5 |
| 3 | 3 | 3 | 3 | 2 | 3 | 4 | 2 | 2 | 5 | 5 | 4 | 4 | 4 | 5 |
| 5 | ** | 4 | 4 | 4 | 1 | ** | 4 | ** | ** | ** | 4 | 5 | 4 | 5 |
| 2 | 4 | 5 | 5 | 5 | 5 | 4 | 3 | 2 | 1 | 5 | 5 | 4 | 4 | 5 |
| ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** | ** |
| 2 | 5 | 4 | 4 | 5 | 4 | 4 | 1 | ** | 3 | 5 | 5 | 5 | 4 | 5 |
| ** | 5 | 5 | 5 | 5 | 5 | 3 | 2 | 4 | 3 | 5 | 5 | 5 | 4 | 5 |

# Glossary

**Accidents (Unintentional Injuries)**
ICD-10 codes V01-X59, Y85-Y86

**Age-adjusted mortality**
A summary of age-specific death rates standardized to one age distribution (such as the 2000 standard population). Since the summary method has the effect of removing the influence of age from the overall mortality picture, it allows more meaningful comparisons to be made between populations with different age distributions.

**AI/AN**
American Indian/Alaska Native

**Alzheimer's disease**
ICD-10 code G30

**American Community Survey (ACS)**
ACS is an ongoing nationwide survey that provides population, housing, and economic data each year.

**Assault**
ICD-10 codes X85-Y09, Y87.1

**Birth defects**
ICD-10 codes Q00-Q99

**Behavorial Risk Factor Surveillance System (BRFSS)**
BRFSS, which is supported by the CDC, is the world's largest, on-going telephone health survey system. It tracks health conditions and behaviors in adults (18+ years of age) in all 50 states as well as many local areas. Information is gathered on issues such as health care access, alcohol use, cholesterol awareness, nutrition, and obesity.

**Cancer (Malignant neoplasms)**
ICD-10 codes C00-C97

**CDC**
Centers for Disease Control and Prevention

**Chronic liver disease and cirrhosis**
ICD-10 codes K70, K73-K74

**Chronic Lower Respiratory Disease (CLRD)**
ICD-10 codes J40-J47

**Crude mortality rate**
The total number of deaths per unit of population reported during a given time interval, often expressed as the number of deaths per 100,000 persons.

**Diabetes mellitus**
ICD-10 codes E10-E14

**Ethnicity**
A social group characterized by a distinctive social and cultural tradition, maintained within the group from generation to generation. For reporting purposes, it is a separate category from race. The U.S. Census currently tracks Hispanic/non-Hispanic.

**Frequency**
The number of times an event occurs within a stated period of time.

**Healthy People 2020**
Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. For 3 decades, Healthy People has established benchmarks and monitored progress over time in order to encourage collaborations across communities and sectors, empower individuals toward making informed health decisions, and measure the impact of prevention activities. Where applicable, these objectives are used as indicators of areas for improvement.

**Heart disease**
ICD-10 codes I00-I09, I11, I13, I20-I51

**Hispanic Origin**
Based on self-identification by respondents. People of Hispanic origin are those who indicated that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Hispanic origin. People of Hispanic origin may be of any race.

# Glossary

**ICD codes**
The International Classification of Diseases and Related Health Problems (ICD) was designed to promote international comparability in the collection, processing, classification, and presentation of disease and death statistics. It is a collaborative effort of the World Health Organization and ten international centers. ICD codes translate verbal descriptions of diseases and procedures into numbers. There have been 10 versions of ICD, with the tenth version currently used to track death statistics (e.g., it is used to code cause of death on death certificates).

**Incidence rate**
A measure of the number of new cases of disease occurring in a specific population over a specific period of time, usually one year.

**Indicator**
A measure of health status or a health outcome.

**Infectious disease**
Any disease caused by the entrance, growth, and multiplication of microorganisms or other agents, such as bacteria, fungi, or viruses, in the body.

**Influenza/pneumonia**
ICD-10 codes J10-J18

**Kidney disease**
ICD-10 codes N00-N07, N17-N19, N25-N27

**Life expectancy**
An expected number of years of life based on statistical probability.

**Mean**
A measure of central location commonly called the average. It is calculated by taking the sum of all values divided by the number of values recorded.

**Median**
A measure of central location which divides a set of data into two equal parts. Half of the values lie below the median, half above the median.

**Mortality**
The event or rate of death.

**National Notifiable Diseases Surveillance System**
The Centers for Disease Control and Prevention (CDC)'s National Notifiable Diseases Surveillance System (NNDSS) is a multifaceted public health disease surveillance system that allows public health officials to monitor the occurrence and spread of diseases. State, local, territorial, and tribal health departments notify CDC of cases of specific diseases and conditions that they identify in their jurisdictions. Every year, the nation's epidemiologists determine which of these diseases and conditions should be notifiable and how to define a case.

**National Vital Statistics System**
The National Vital Statistics System is the oldest and most successful example of inter-governmental data sharing in Public Health and the shared relationships, standards, and procedures form the mechanism by which National Center for Health Statistics (NCHS) collects and disseminates the Nation's official vital statistics. These data are provided through contracts between NCHS and vital registration systems operated in the various jurisdictions legally responsible for the registration of vital events – births, deaths, marriages, divorces, and fetal deaths.

**NH/PI**
Native Hawaiian/Pacific Islander

**Non-Hispanic Origin**
All individuals who did not self-identify that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Hispanic origin. People of non-Hispanic origin may be of any race.

# Glossary

**Oklahoma Statistics on Health Available for Everyone (OK2SHARE)**
OK2SHARE is a web-based data query system containing data that supports the information needs of the Oklahoma State Department of Health and other data users. OK2SHARE contains data from Vital Statistics, Hospitals and ASCs, Health Surveys, and Health Registries, as well as links to external data sources.

**OSDH**
Oklahoma State Department of Health

**Race**
Based on self-identification by respondents. Current U.S. Census categories include African American, Asian and Pacific Islander, Native American and Native Alaskan, Hawaiian, White, and Other. It is reported separately from ethnicity.

**Rate**
An expression of the frequency with which an event occurs in a defined population for a specified amount of time, often one year. Rates are generally calculated per 1,000 or 100,000 population.

**Stroke**
ICD-10 codes I60-I69

**Suicide**
ICD-10 codes X60-X84, Y87.0

**Tulsa Area Syndromic Surveillance System (TASSS)**
TASSS is THD's emergency room surveillance system. Chief complaint data is transmitted electronically to THD where it is analyzed daily to identify clusters of syndromes (such as fever, vomit, and diarrhea). The purpose is to monitor population-level data in order to identify patterns of illness and detect early signs of impending disease so that physicians can be alerted in regards to potential outbreaks and bioterrorism events before a large number of patients become sick.

**THD**
Tulsa Health Department

**U.S. Census**
The U.S. Census is a decennial survey that is used to collect population data. It is used to determine the number of seats each state has in the U.S. House of Representatives and is also used to distribute billions in federal funds to local communities.
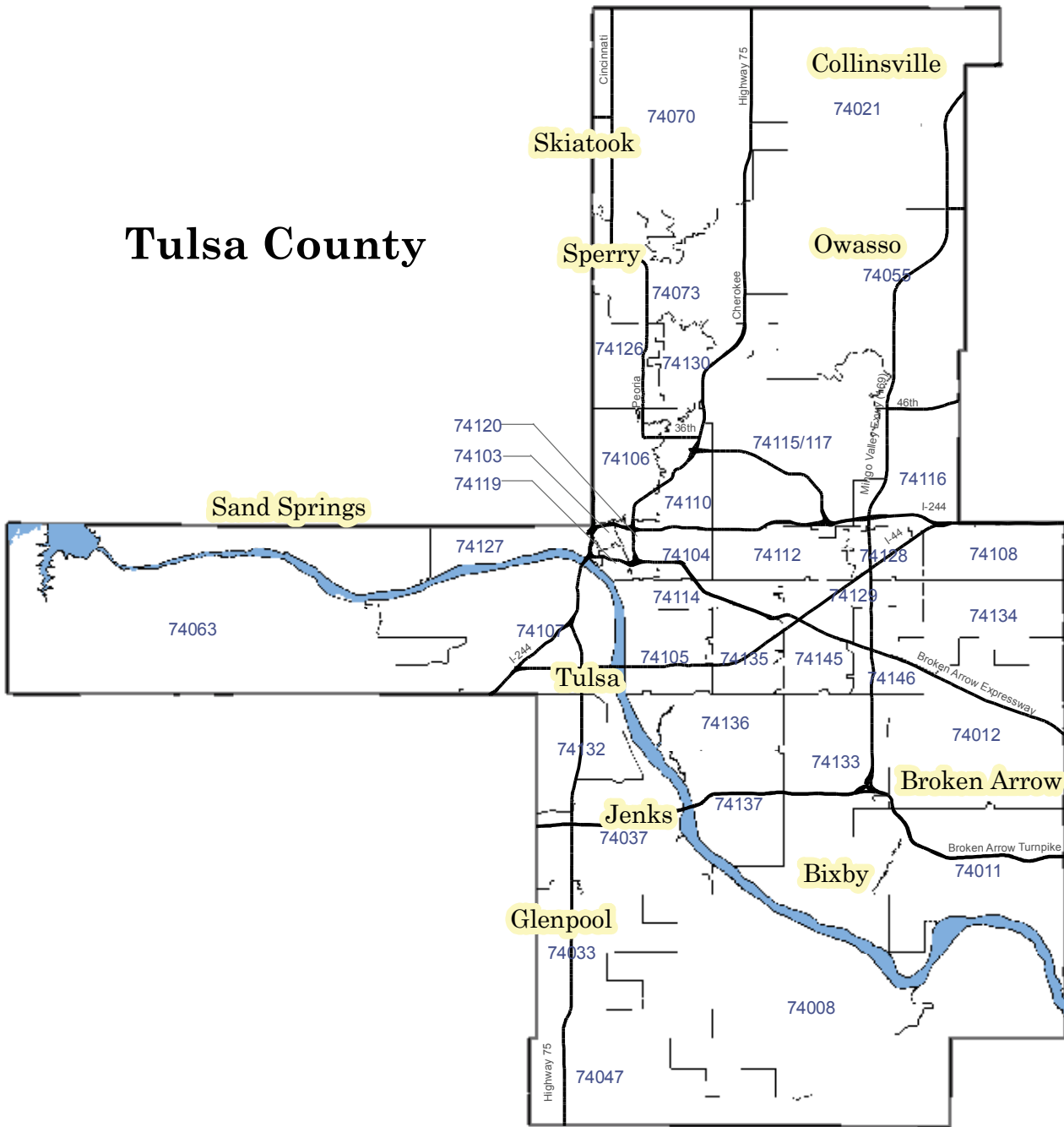
**WHO**
World Health Organization

**Wide-ranging Online Data for Epidemiologic Research (WONDER)**
CDC WONDER is an easy-to-use, menu-driven system that makes the information resources of the CDC available to public health professionals and the public at large. It provides access to a wide array of public health information. CDC WONDER is valuable in public health research, decision making, priority setting, program evaluation, and resource allocation.

**Tulsa County**

Collinsville
74021

Skiatook

74070

Sperry

Owasso
74055

74073

74126
74130

74120
74103
74119

Sand Springs

74106

74115/117

74116

74110

74127

74104
74112
74128
74108

74063

74102

74114
74129

74134

Tulsa

74105
74135
74145
74146

74132

74136

74012

74133

Broken Arrow

Jenks
74037

74137

Bixby

74011

Glenpool
74033

74008

74047

# Acknowledgments

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**TULSA HEALTH**
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# Tulsa County
# Health Profile
# 2014

# THD

## TULSA HEALTH

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