



# Health on the Horizon

## Cotton County

Health is not simply the absence of disease. Health is comprised of our physical, mental, and social well-being,<sup>1</sup> and is influenced by a variety of factors called ‘determinants of health’.<sup>2</sup> These determinants include a range of personal, social, economic, and environmental factors, such as our genetics, behaviors, and access to health care. The determinants of health are inter-related; change in one area results in changes in other areas. As such, interventions and policies that target more than one determinant will have greater impact on our health.<sup>2</sup>

Oklahoma has historically ranked poorly in many key health indicators. Most of these indicators relate to conditions that Oklahomans live with every day, such as poverty and limited access to primary care. Such conditions, along with risky health behaviors like smoking and physical inactivity, contribute to the poor health status of Oklahomans.

Recently, Oklahoma has experienced improvement in some key areas, such as infant health (lower rates of pre-term births and infant deaths) and smoking (lower prevalence of adult smokers). The Oklahoma Health Improvement Plan (OHIP) encourages Oklahomans to work together across multiple health care systems to strengthen resources and infrastructure, enabling sustainable improvements in health status.<sup>3</sup> Health is on the horizon, and together we will Create a State of Health.



# State of the County's Health Report

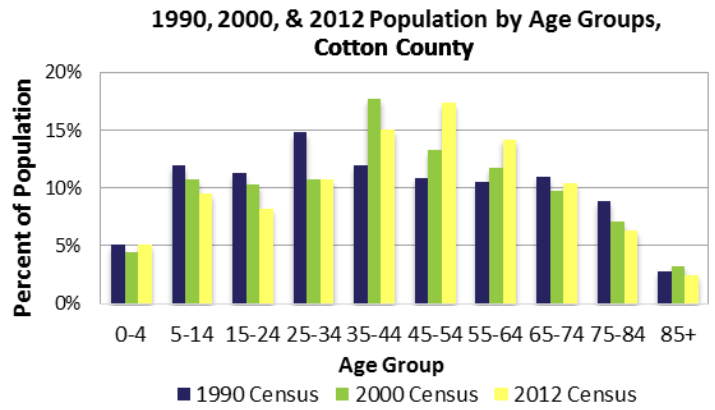
OKLAHOMA STATE  
DEPARTMENT OF HEALTH

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# County Demographics and Socioeconomic Profile

| Demographics                                     | County        |
|--|---------------|
| Population, 2012 estimate <sup>4</sup>           | 6,155         |
| Population, percent change, 2000 to 2012         | 7.2% decrease |
| Rank for growth in State                         | 71st          |
| <b>Race and Ethnicity, 2008-2012<sup>5</sup></b> |               |
| Whites alone                                     | 81.2%         |
| Blacks alone                                     | 2.1%          |
| Native Americans alone                           | 8.7%          |
| Hispanic or Latino                               | 6.0%          |
| <b>Age, 2008-2012<sup>5</sup></b>                |               |
| Less than 5                                      | 6.4%          |
| 65 and Over                                      | 17.7%         |
| Median age                                       | 40.2 years    |



| Socioeconomic Profile  | County   | State    | National |
|--|----------|----------|----------|
| Disability (ages 18 to 64), 2008-2012 <sup>5</sup>                   | 17.6%    | 14.3%    | 10.0%    |
| of disabled (ages 18 to 64) percent employed, 2008-2012 <sup>5</sup> | 46.8%    | 38.0%    | 34.7%    |
| Individuals below poverty, 2008-2012 <sup>5</sup>                    | 15.6%    | 16.6%    | 14.9%    |
| Families below poverty, 2008-2012 <sup>5</sup>                       | 10.9%    | 12.3%    | 10.9%    |
| Median household income, 2008-2012 <sup>5</sup>                      | \$48,596 | \$44,891 | \$53,046 |
| Female head of household, 2008-2012 <sup>5</sup>                     | 12.4%    | 12.2%    | 12.9%    |
| Grandparents raising their grandchildren, 2008-2012 <sup>5</sup>     | 49.0%    | 53.4%    | 39.8%    |
| High school graduates or higher, ages 25+, 2008-2012 <sup>5</sup>    | 85.7%    | 86.2%    | 85.7%    |
| Bachelor's degree or higher, ages 25+, 2008-2012 <sup>5</sup>        | 13.8%    | 23.2%    | 28.5%    |
| <b>Housing units, 2008-2012<sup>5</sup></b>                          |          |          |          |
| Occupied   | 78.4%    | 86.5%    | 87.5%    |
| Vacant   | 21.6%†   | 13.5%    | 12.5%    |
| Uninsured (ages 18-64), 2005-2010 <sup>6</sup>                       | 21.6%    | 23.9%    | 18.2%    |
| Unemployment rate, 2012 annual averages <sup>7</sup>                 | 4.7%     | 5.2%     | 8.1%     |

† The rate should be used cautiously due to the large measurement error.

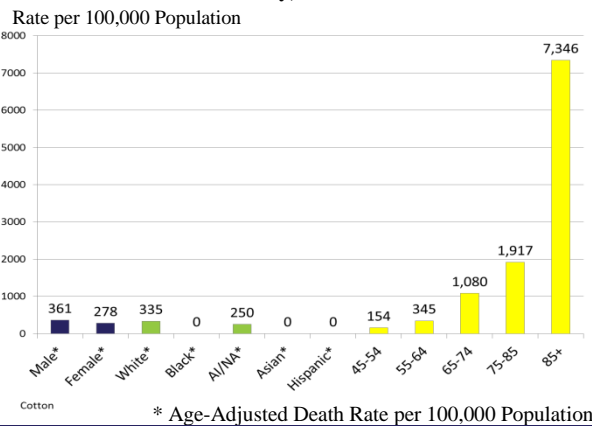
## Top 10 Leading Causes of Death

The top 10 leading causes of death table on the next page displays a broad picture of the causes of death in Cotton County.<sup>8</sup> Since many health-related issues are unique to specific ages, this table provides causes of death by age group at a glance. The causes of death that are present across almost every age group have been highlighted.

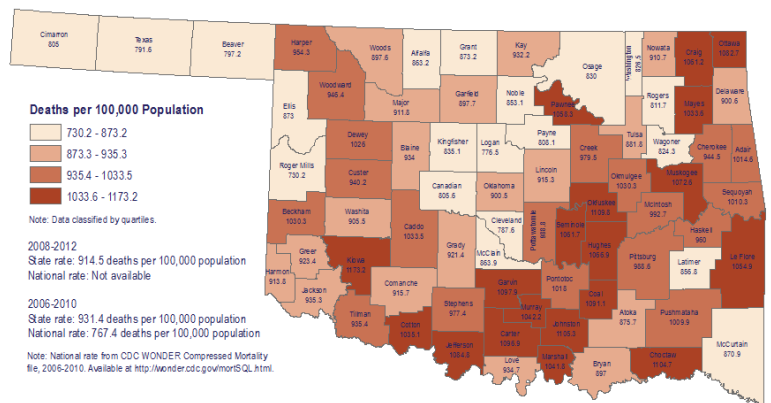
In Cotton County, heart disease is still the leading cause of death

for all ages combined. The rate declined 10.0% since the previous 5-year period, from 362.6 deaths per 100,000 population (2003-2007)<sup>9</sup> to 326.3 deaths per 100,000 population (2008-2012).<sup>8</sup> In 2010, the most recent year for which hospital discharge data are publicly available, the total charges attributable to heart disease in Cotton County were \$3.38 million, or \$47,542.55 per discharge.<sup>10</sup>

**Heart Disease Death Rates by Demographic Groups, Cotton County, 2008-2012**



**Age-Adjusted Death Rates by County, OSDH Vital Statistics, 2008-2012<sup>8</sup>**



**Top 10 Causes of Death by Age Group  
Cotton County 2008-2012**

| RANK | 0-4                 | 05-14 | 15-24 | 25-34              | 35-44               | 45-54               | 55-64               | 65+                                       | ALL AGES                                  |
|------|---------------------|-------|-------|--------------------|---------------------|---------------------|---------------------|---|---|
| 1    | OTHER CAUSES*<br><5 | 0     | 0     | OTHER CAUSES*<br>5 | OTHER CAUSES*<br>13 | CANCER<br>11        | CANCER<br>15        | HEART DISEASE<br>108                      | HEART DISEASE<br>130                      |
| 2    |                     |       |       |                    |                     | HEART DISEASE<br>7  | HEART DISEASE<br>14 | CANCER<br>52                              | CANCER<br>80                              |
| 3    |                     |       |       |                    |                     | OTHER CAUSES*<br>14 | OTHER CAUSES*<br>24 | BRONCHITIS/<br>EMPHYSEMA/<br>ASTHMA<br>22 | BRONCHITIS/<br>EMPHYSEMA/<br>ASTHMA<br>26 |
| 4    |                     |       |       |                    |                     |                     |                     | STROKE<br>14                              | UNINTENT.<br>INJURY<br>26                 |
| 5    |                     |       |       |                    |                     |                     |                     | DIABETES<br>MELLITUS<br>14                | DIABETES<br>MELLITUS<br>20                |
| 6    |                     |       |       |                    |                     |                     |                     | ALZHEIMER'S<br>DISEASE<br>14              | STROKE<br>15                              |
| 7    |                     |       |       |                    |                     |                     |                     | UNINTENT.<br>INJURY<br>13                 | ALZHEIMER'S<br>DISEASE<br>14              |
| 8    |                     |       |       |                    |                     |                     |                     | INFLUENZA/<br>PNEUMONIA<br>9              | INFLUENZA/<br>PNEUMONIA<br>9              |
| 9    |                     |       |       |                    |                     |                     |                     | OTHER CAUSES*<br>48                       | NEPHRITIS<br>6                            |
| 10   |                     |       |       |                    |                     |                     |                     |   | LIVER DISEASE<br>6                        |

\*Total deaths per age group were determined; cause of death was ordered (by frequency) when 5 or more deaths occurred for a specific cause; and the number of deaths that occurred in frequencies fewer than 5 per cause were groups together as "OTHER CAUSES." Specific causes could not be determined for those deaths in "OTHER CAUSES" because the data are suppressed on OK2SHARE (the source of this data) when there are fewer than 5 deaths per search category.

Data source: Vital Statistics, Health Care Information Division, Oklahoma State Department of Health  
Produced by: Community Epidemiology and Evaluation, Oklahoma State Department of Health

# Nutrition and Obesity

Poor diet is a primary cause of adult deaths in the U.S.<sup>11</sup> Poor diet can be characterized in many different ways, but a common proxy measure of poor diet is assessing fruit and vegetable consumption. A recent study determined that fruit and vegetable consumption is associated with reduced risk of death.<sup>12</sup> Oklahoma has typically ranked as one of the worst states for fruit and vegetable consumption among adults. In 2009, the last year data were available for every state, Oklahoma ranked last in consuming 5 or more daily servings of fruits and vegetables.<sup>13</sup> In Cotton County, there was not enough data collected in 2005, 2007, and 2009 to estimate a rate due to the small population size of the county.<sup>6</sup>

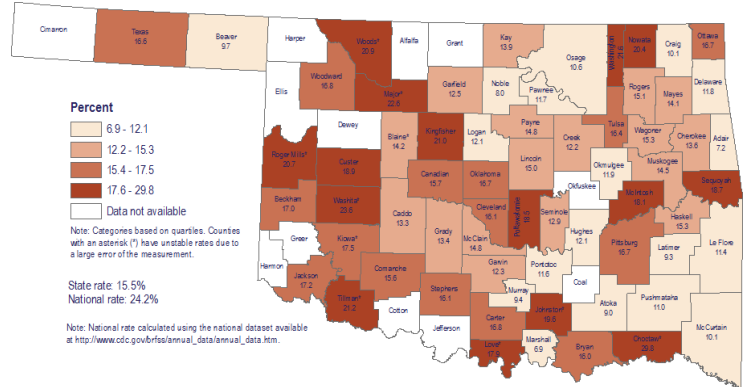
Obesity is also a primary cause of adult deaths.<sup>11</sup> Obesity is defined as having a BMI greater than 30.0 kg/m<sup>2</sup> (BMI = weight in kg/square of height in m). In addition to its association with mortality, obesity increases our risk of several chronic diseases such as heart disease and type 2 diabetes.<sup>14</sup> Obesity rates have skyrocketed in Oklahoma, with self-reported adult obesity prevalence at 32.2% in 2012<sup>6</sup> and self-reported obesity prevalence at 11.8% among high school students in 2013.<sup>15</sup> Data from 2005-2010 estimate the rate of adult obesity to be 37.9% in Cotton County (6.4% lower than the rate reported in the previous County Health Report<sup>9</sup>). However, the current rate should be used cautiously because the measurement error is very large. Medical costs for obese individuals were estimated to be \$2741 higher than per capita spending for normal weight individuals in 2005, and this economic burden can be expected to increase as the cost of health care increases.<sup>16</sup>

# Physical Activity and Fitness

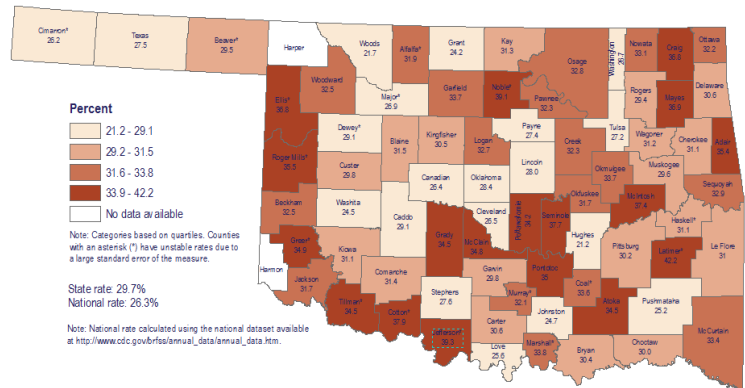
Physical inactivity was reported to be a leading contributor to almost 1 in 10 adult deaths in the U.S.<sup>14</sup> Close to 23 % of U.S. adults do not engage in any physical activity.<sup>13</sup> Adults who engage each week in 150 minutes of moderate to vigorous intensity aerobic activity in bouts of at least 10 minutes experience improved health and fitness and reduced risk of several chronic diseases.<sup>17</sup> While 30.4% of all Oklahoma adults from 2005-2010 were not engaging in any physical activity, the rate was slightly lower in Cotton County, at 29.1%.<sup>6</sup> While this rate is 18.8% higher than the county rate reported in the previous County Health Profile,<sup>9</sup> the rate should be used cautiously because the measurement error is very large.

Youth who are regularly active have a better chance of having a healthy adulthood. Children and adolescents should get at least 60 minutes of moderate intensity physical activity most days of the week, preferably every day, and three of those days should include vigorous intensity aerobic activity.<sup>18</sup> Statewide, 56.6% of high school students were physically active most days of the week in 2013.<sup>15</sup>

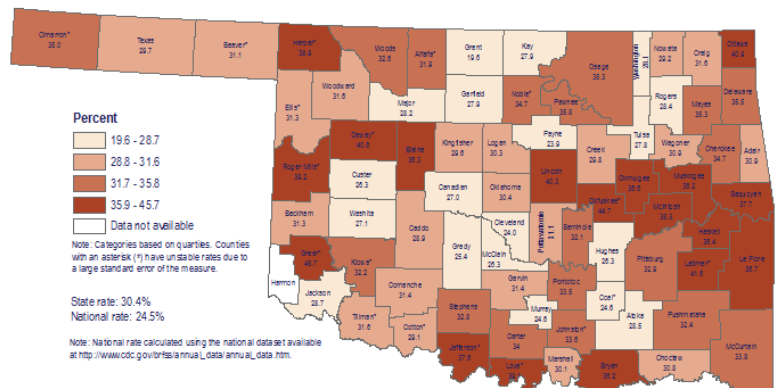
Percent of Adults Who Consume 5 or More Servings of Fruits and Vegetables by County, BRFSS 2005, 2007, 2009<sup>6</sup>



Percent of Obese Adults by County, BRFSS 2005-2010<sup>6</sup>



Percent of Physically Inactive Adults by County, BRFSS 2005-2010<sup>6</sup>



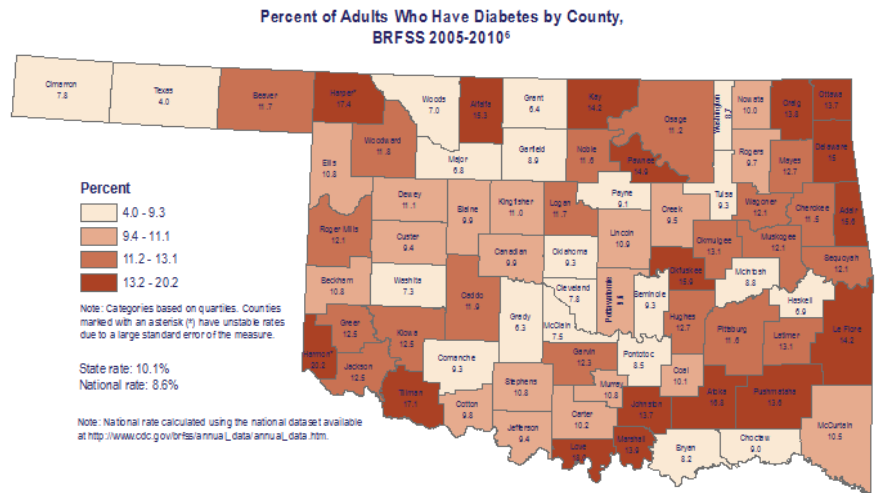


# Diabetes

Type II Diabetes Mellitus is a chronic disease characterized by high levels of sugar (i.e., glucose) in the bloodstream due to the body's resistance to insulin. If left untreated, serious complications can arise, including heart disease, renal failure, retinopathy, and neuropathies. Several risk factors may increase the likelihood of developing diabetes. Some of these risk factors cannot be changed (eg., aged 45 years and older, family history). Other risk factors relate to our behaviors, such as prediabetes, overweight/obesity, being physically inactive, and having high blood pressure.<sup>19</sup>

The prevalence of diabetes has been on the rise in Oklahoma. Slightly more than 10% of Oklahoma adults from 2005-2010 had been told by a health professional that they had diabetes.<sup>6</sup> During this same time frame in Cotton County, 9.8% of adults had diabetes,<sup>6</sup> which is more than the 9.0% of adults cited in the previous County Health Report.<sup>9</sup>

The American Diabetes Association released a report estimating the total cost of diagnosed diabetes to be \$245 billion in the U.S. in 2012.<sup>20</sup> This amount includes both direct medical costs and reduced productivity. They estimated the largest component of direct medical costs to be hospital inpatient care. There were fewer than 5 hospitalizations attributable to diabetes in Cotton County in 2010, the most recent year that hospital data were available.<sup>10</sup>

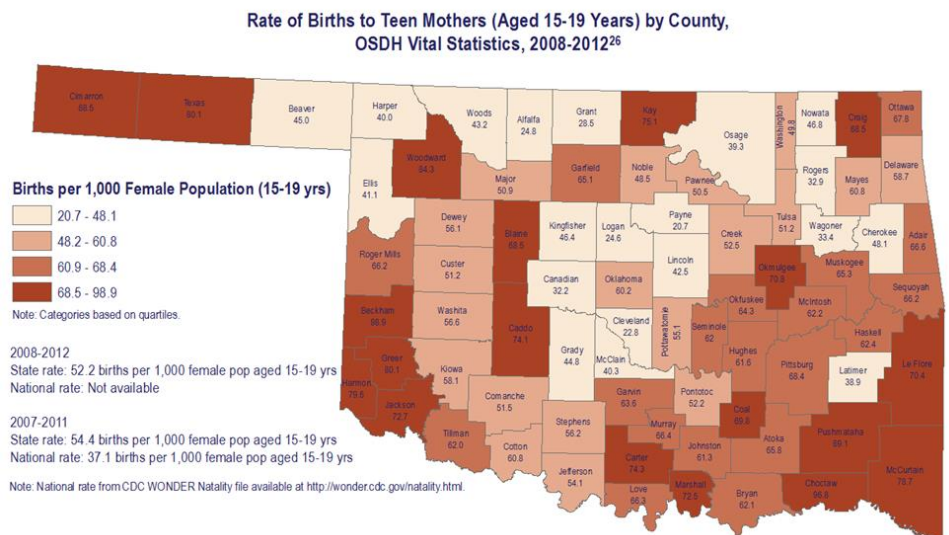


# Teen Births

Although births to teen mothers have been declining in recent years,<sup>21</sup> Oklahoma still has one of the highest teen birth rates in the country,<sup>22</sup> including a high rate of repeat births.<sup>23</sup> Pregnant teens are more likely than older pregnant females to experience medical complications, have low educational attainment, and engage in unhealthy behaviors that put their unborn child at risk.<sup>24</sup> Children of teen mothers are more likely than children of older mothers to display poor health and social outcomes, such as premature birth, low birth weight, behavioral problems, and abuse and neglect.<sup>22</sup> Additionally, infant mortality rates are highest for babies of teen mothers.<sup>25</sup>

From 2008-2012, Cotton County had a teen birth rate of 60.8 births per 1,000 female population aged 15-19 years, which is 16.5% higher than the state rate of 52.2 births per 1,000 female population aged 15-19 years.<sup>26</sup> The county rate is 15.2% lower than the rate reported in the previous County Health Report.<sup>9</sup>

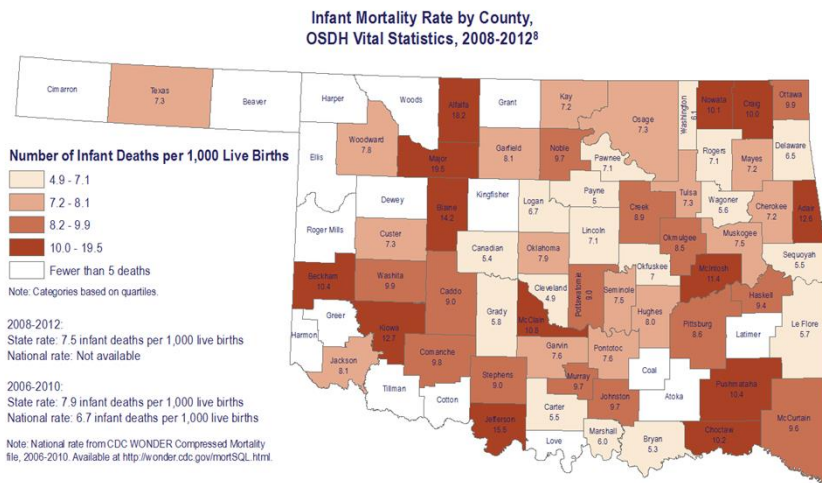
Recent estimates place the cost of teen childbearing in Oklahoma at \$190 million in 2008, and this includes only health care and other costs associated with the children, not the mothers.<sup>27</sup>



# Infant Mortality

The infant mortality rate (IMR) is an important indicator of the health of a nation, and is also a reflection of maternal health, accessibility and quality of primary health care, and the availability of supportive services in the community.<sup>28</sup> The leading causes of infant death include congenital malformations (i.e., medical conditions present at birth), disorders related to short gestation (fewer than 37 weeks of pregnancy completed) and low birth weight (less than 5 lbs., 8 oz.), and Sudden Infant Death Syndrome (SIDS).<sup>25</sup> Oklahoma's IMR has declined 12.8% from its recent high of 8.6 deaths per 1,000 live births in 2006 to 7.5 deaths per 1,000 live births in 2012.<sup>8</sup> However, the rate is still significantly higher than the national (preliminary) rate of 6.05 infant deaths per 1,000 live births in 2011.<sup>29</sup> While organizations across Oklahoma have been working together to reduce infant mortality as part of the Preparing for a Lifetime, It's Everyone's Responsibility initiative,<sup>30</sup> there is still much work to do.

Racial disparities exist in IMR, with rates among Oklahoma's Black/African American infants being more than double the rates of White and Asian/Pacific Island infants. The IMR for Black/African American infants declined between 2003-2007 and 2008-2012 (16.4 to 14.6, respectively),<sup>8</sup> but is still extremely high.



Because there were fewer than 5 infant deaths in Cotton County from 2008-2012, the IMR for this time frame is too unstable and cannot be reported.<sup>8</sup>

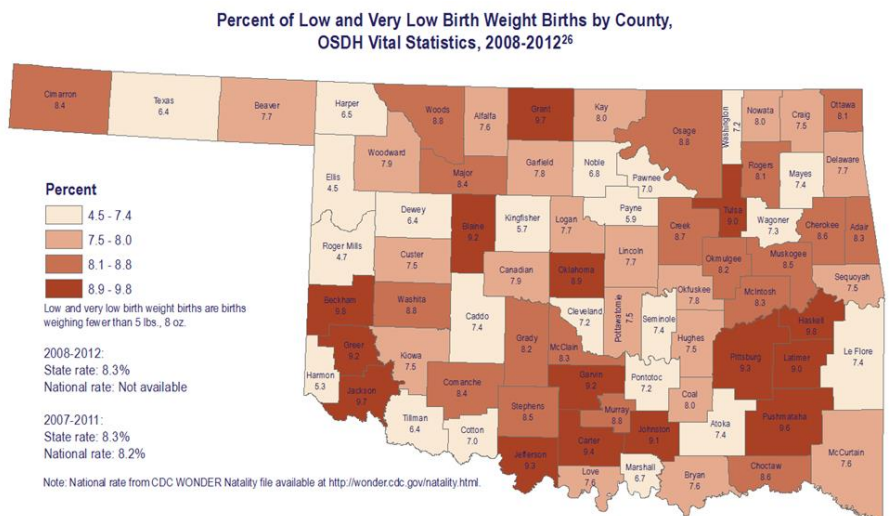
Receiving timely prenatal care is believed to reduce the risk of maternal and infant sickness and death as well as preterm delivery and low birth weight. From 2008-2012, 73.6% of women who had a live birth in Cotton County accessed prenatal care during the first trimester of their pregnancy.<sup>26</sup>

# Low Birth Weight

Low birth weight and preterm births together are the second leading cause of death among children less than 1 year of age.<sup>25</sup> Low birth weight infants are more at risk of health problems compared to infants born of normal weight, including infection, gastrointestinal problems, delayed motor and social development, and learning disabilities. Low birth weight infants may also be at higher risk of high blood pressure, diabetes, and heart disease later in life.<sup>31</sup>

The percentage of Oklahoma babies born at low birth weight (i.e., weighing fewer than 5 pounds and 8 ounces, or 2500 grams) was 8.3% across 2008-2012.<sup>26</sup> This rate is similar to the latest national data (8.2% from 2007-2011).<sup>32</sup> In Cotton County, the rate of low birth weight births was 7.0% from 2008-2012,<sup>26</sup> which is 15% lower than the rate from 2003-2007.<sup>26</sup>

As is seen with infant mortality, the percentage of low birth weight births is higher for Black/African American babies (14.1%) than babies of other races (White: 7.8%; American Indian: 7.3%; Asian/Pacific Island: 7.4%).<sup>26</sup>

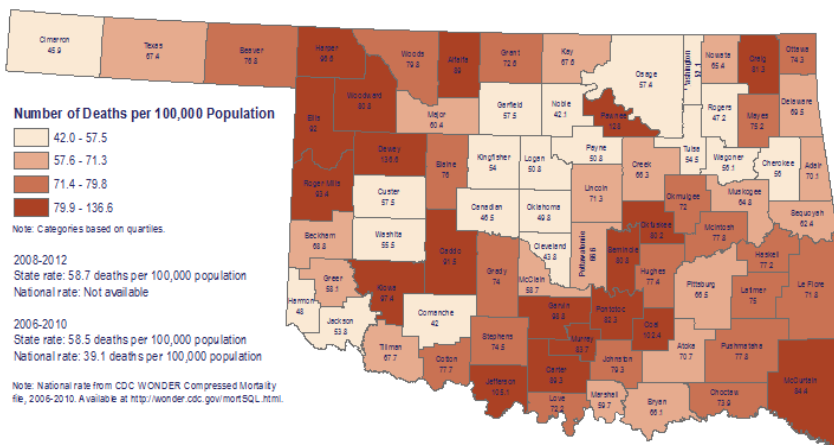


# Injury and Violence

Unintentional injury is the 4th leading cause of death in Oklahoma, and the leading cause of death among individuals aged 5-44 years.<sup>8</sup> In 2010, the most recent year that data are publicly available, injuries accounted for almost \$1.4 billion of Oklahoma's hospital inpatient charges, or almost \$34,000 per discharge.<sup>10</sup> This equates to more than 10% of total inpatient charges in 2010,<sup>10</sup> and does not consider other related medical expenses or lost productivity.

In Cotton County, unintentional injury is the 4th leading cause of death at 77.7 deaths per 100,000 population.<sup>8</sup> The county rate is higher than the rate of 66.0 which was reported in the previous County Health Report.<sup>9</sup> The current rate is higher than the state rate of 58.7 deaths per 100,000 population.<sup>8</sup>

Rate of Unintentional Injury Deaths by County, OSDH Vital Statistics, 2008-2012<sup>8</sup>



Motor-vehicle accidents account for 38% of Cotton County's unintentional injury deaths per 100,000 population, resulting in an estimated cost of \$14.2 million in 2011. This cost includes wage and productivity losses, medical expenses, administrative expenses, motor vehicle damage, and employers' uninsured costs (\$1.42 million per death).<sup>33</sup>

Violence-related deaths (suicide and homicide) are also leading causes of death in Oklahoma.<sup>8</sup> In Cotton County, the number of deaths attributable to homicide and suicide were too few to produce stable rates.<sup>8</sup>

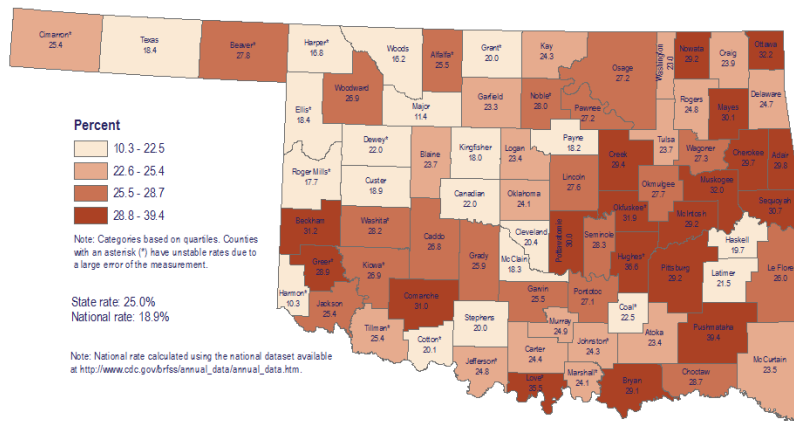
# Tobacco Use Prevention

While smoking rates continue to decline in the United States, tobacco is still the leading contributor of preventable deaths in the United States, resulting in 80-90% of lung cancer deaths, 90% of deaths from chronic lower respiratory disease, and increasing risk of coronary heart disease and stroke deaths.<sup>34</sup> Oklahoma has consistently had one of the highest rates of adult smoking in the country, with an estimated 23.3% of Oklahoma adults being smokers in 2012.<sup>6</sup> While this rate is higher than the national rate of 19.6%,<sup>13</sup> it represents a significant decline from Oklahoma's 2011 rate of 26.1%.<sup>6</sup> Total cigarette sales have remained stable the last three years (at about 71 packs per capita, each year from 2010 through 2012),<sup>35</sup> but have declined from 86.7 packs per capita in 2008 that was reported in the previous County Health Report.<sup>9</sup>

Across 2005-2010 in Cotton County, 20.1% of adults were smokers.<sup>6</sup> This rate should be used cautiously, however, because the measurement error is quite large. Given this rate, the health care costs associated with smoking were approximately \$19.4 million in Cotton County.<sup>36</sup>

Of concern are other types of tobacco use, such as smokeless tobacco and now e-cigarettes. Almost 7% of Oklahoma adults use smokeless tobacco products (6.9% in 2011 and 6.7% in 2012), with almost 70% of smokeless tobacco users also being smokers. Data are still being gathered about e-cigarettes, but their usage has increased among adults as well as middle and high school students nationally.<sup>37,38</sup>

Percent of Adult Smokers by County, BRFSS 2005-2010<sup>6</sup>



# Healthy People 2020 Table

| Healthy People 2020 Indicators <sup>1</sup>             | Comparison Data: Year(s)   |                       |                            |       |       | 2020 target <sup>1</sup> |
|---|----------------------------|-----------------------|----------------------------|-------|-------|--------------------------|
|   | Cotton County <sup>2</sup> | Oklahoma <sup>2</sup> | United States <sup>1</sup> |       |       |                          |
| Prevalence of obesity (Aged 20+)                        | N/A†                       | N/A†                  | 2009-2010                  | 35.7% | 30.5% |                          |
| No leisure-time physical activity (Aged 18+ )           | N/A†                       | N/A†                  | 2011                       | 31.6% | 32.6% |                          |
| Prevalence of smoking (Aged 18+)                        | N/A†                       | N/A†                  | 2011                       | 19.0% | 12.0% |                          |
| Infant mortality (Per 1,000 of births)                  | 2008-2012 N/A‡             | 2009 7.9              | 2009                       | 6.4   | 6.0   |                          |
| Low birth weight infants (Percent of live births)       | 2008-2012 7.0%             | 2010 8.4%             | 2010                       | 8.1%  | 7.8%  |                          |
| Very low birth weight infants (Percent of live births)  | 2008-2012 0.6%             | 2010 1.4%             | 2010                       | 1.4%  | 1.4%  |                          |
| First trimester prenatal care (Percent of births)       | 2008-2012 73.6%            | 2007 76.3%            | 2007§                      | 70.8% | 77.9% |                          |
| Prevalence of diabetes (Aged 18–84 years)               | N/A†                       | N/A†                  | 2009-2011                  | 8.1%  | 7.2%  |                          |
| Lack of health insurance (Aged <65 years)               | N/A†                       | N/A†                  | 2011                       | 17.0% | 0%    |                          |
| Prevalence of binge drinking (Aged 18+)                 | N/A†                       | N/A†                  | 2011                       | 26.7% | 24.4% |                          |
| Coronary heart disease deaths (per 100,000 population)* | 2008-2012 326.3            | 2010 234.1            | 2010                       | 113.6 | 100.8 |                          |
| Cancer deaths (per 100,000 population)*                 | 2008-2012 199.3            | 2010 190.4            | 2010                       | 172.8 | 160.6 |                          |
| Unintentional injury deaths (per 100,000 population)*   | 2008-2012 77.7             | 2010 58.8             | 2010                       | 38.0  | 36.0  |                          |
| Transportation-related deaths (per 100,000 population)* | 2008-2012 32.6             | 2010 19.8             | 2010                       | 10.7  | 12.4  |                          |

## Notes:

\*Death rate is age-adjusted to the 2000 U.S. standard population;

†Data are not available in the state or county because data are collected using a different methodology and thus are not comparable to the national rates and targets established by Healthy People 2020.

‡Fewer than five events in this category does not enable production of a stable rate.

§The most recent data available from CDC WONDER Natality Data shows that 73.7%<sup>3</sup> of women having live births in 2011 received prenatal care within the first three months of pregnancy. Not all states collect prenatal care information on the birth certificate.

## References:

- [1] U.S. Department of Health and Human Services. Healthy people 2020 – Topics and Objectives. Washington, DC. Available at <http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx>: Data for United States and 2020 Target
- [2] OSDH, OK2SHARE, Vital Statistics: Data for Oklahoma and Oklahoma Counties.
- [3] United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics, Natality public-use data 2007-2011, on CDC WONDER Online Database, November 2013. Accessed at <http://wonder.cdc.gov/natality-current.html>



# Health Care Cost Summary

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## Cardiovascular Disease (Heart Disease)

- Average hospital discharges in 2010 = 71
- Average charges = \$47,542.55 per discharge
- Total—\$3,375,521 in 2010

## Obesity

- 37.9% of adult population (1,770) from 2005-2010
- \$2,741.00 in additional medical costs per person aged 18 and over
- Total—\$6,385,743 in 2010

## Diabetes

- Data Not Available

## Teen Pregnancy

- 59 births to females aged 15-19 from 2008-2012
- \$3,807 in costs per year
- Total—\$224,613 in 2010

## Motor Vehicle-Related Injury Death

- 10 deaths from 2008-2012
- \$1,420,000.00 in economic costs per death
- Total—\$2,840,000 in 2010

## Tobacco Use

- 20.1% of adult population (5,889) from 2005-2010
- \$3,300 in health care costs per person
- Total—\$4,077,305 in 2010

## Total Annual Cost\* for Cotton County:

# \$16,903,182

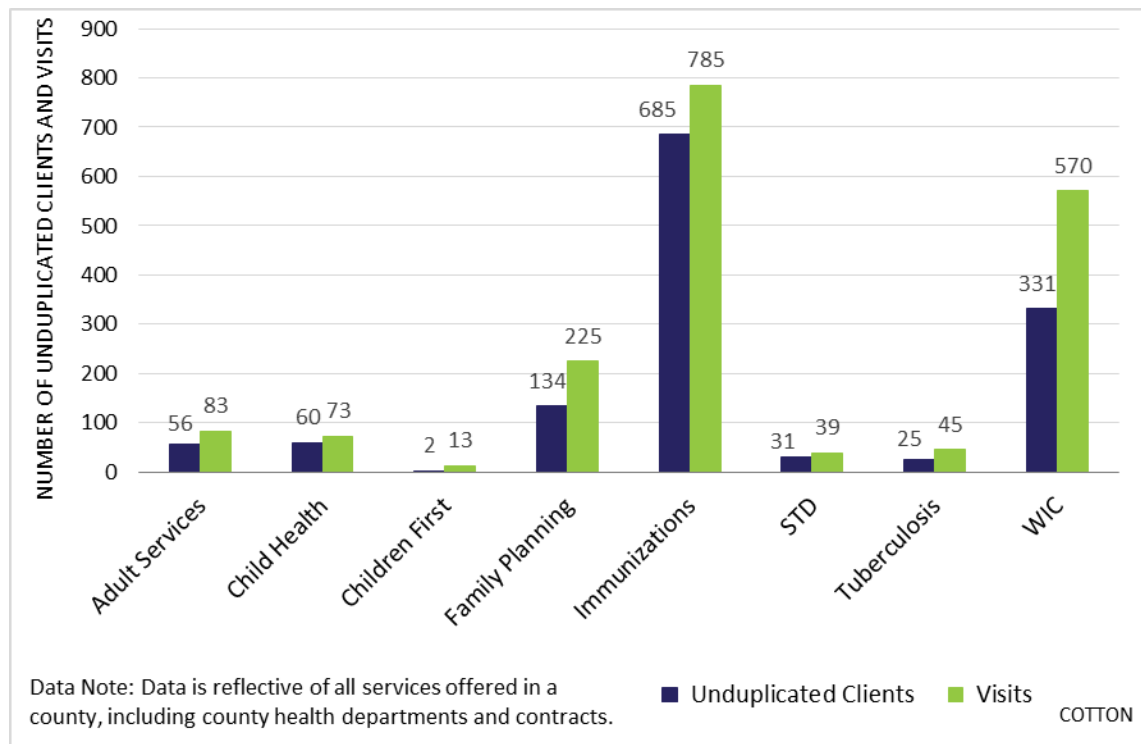


\*Total cost is the minimum cost to the county for health care related spending for the causes listed above in 2010. Other health maladies, and costs unaccounted for in this report may increase the total annual cost per county.

# County Health Department Usage

Oklahoma currently has 68 county health departments and two independent city-county health departments serving 77 counties. Each department offers a variety of services, such as immunizations, family planning, maternity education, well-baby clinics, adolescent health clinics, hearing & speech services, child developmental services, environmental health, and the SoonerStart program. Additionally, many county health departments participate in health education and community development services throughout their county. All county health departments in Oklahoma utilize the Public Health Oklahoma Client Information System (PHOCIS) to track an overview of the services provided to each citizen. In addition, PHOCIS contains a population-based module (POPS) that houses information about community-based events in which health department employees are involved. The information on this page is an accounting of services provided within the county health department and throughout the county.

**County Health Department Unduplicated Clients, and Visits by Program, Cotton County, State Fiscal Year 2013**



**Population-Based Services by Event Type, Cotton County, SFY13**

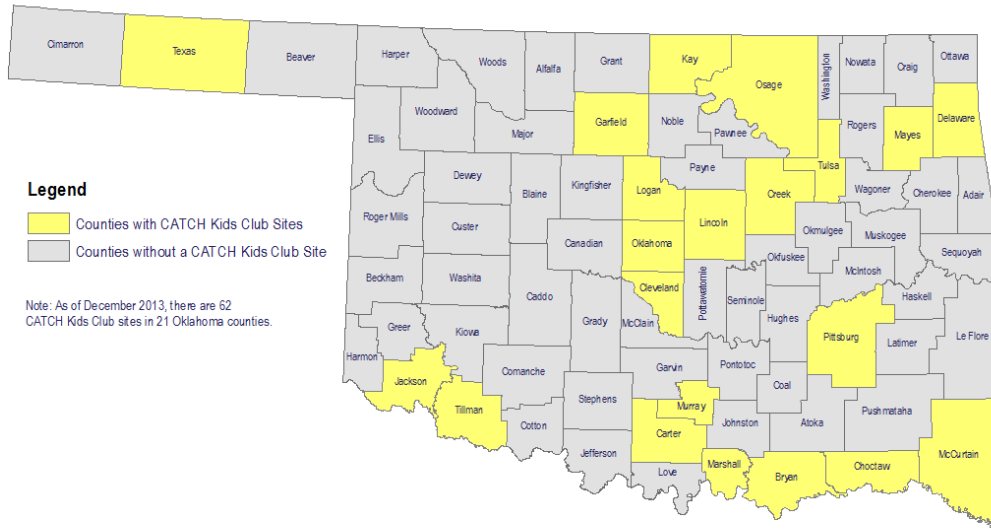
| Event Type         | Number of Events | Total Attendees |
|--------------------|------------------|-----------------|
| Health Fair        | 1                | 80              |
| <b>Grand Total</b> | <b>1</b>         | <b>80</b>       |

**Population-Based Services by Main Topic, Cotton County, SFY13**

| Topic              | Number of Events | Total Attendees |
|--------------------|------------------|-----------------|
| Immunizations      | 1                | 80              |
| <b>Grand Total</b> | <b>1</b>         | <b>80</b>       |

# Health Education

Counties with CATCH Kids Club Sites,  
2013-2014 School Year



**Legend**

- Counties with CATCH Kids Club Sites
- Counties without a CATCH Kids Club Site

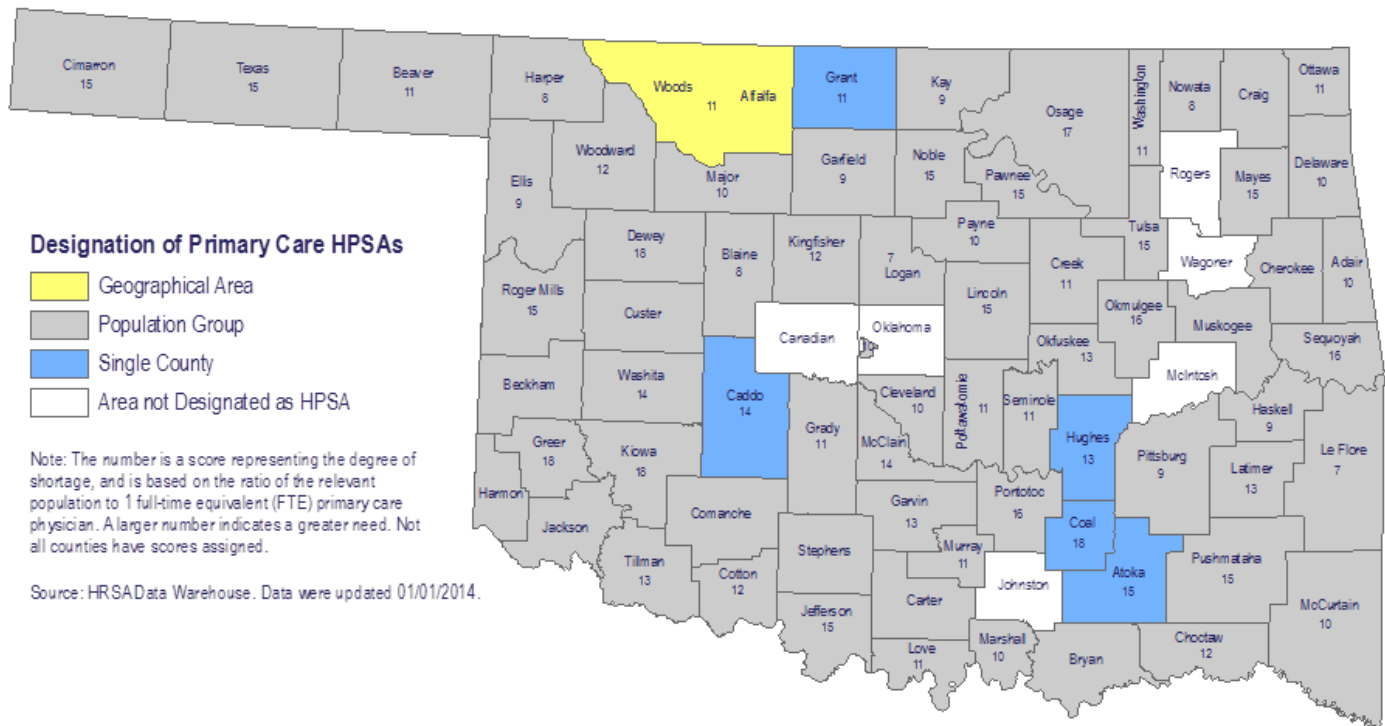
Note: As of December 2013, there are 62 CATCH Kids Club sites in 21 Oklahoma counties.

**OSDH Health Education**

Ericka Johnson,  
CATCH Coordinator  
1000 NE 10th St, room 508  
Oklahoma City, OK 73117  
(405) 271-9444 ext. 56550  
erickaw@health.ok.gov

For more information about the CATCH Kids Club or to become an after-school partner, please contact Ericka Johnson. For more information about health education, please contact your local health department (see p. 14 for the phone number).

## Primary Care – Health Professional Shortage Areas (HPSAs)



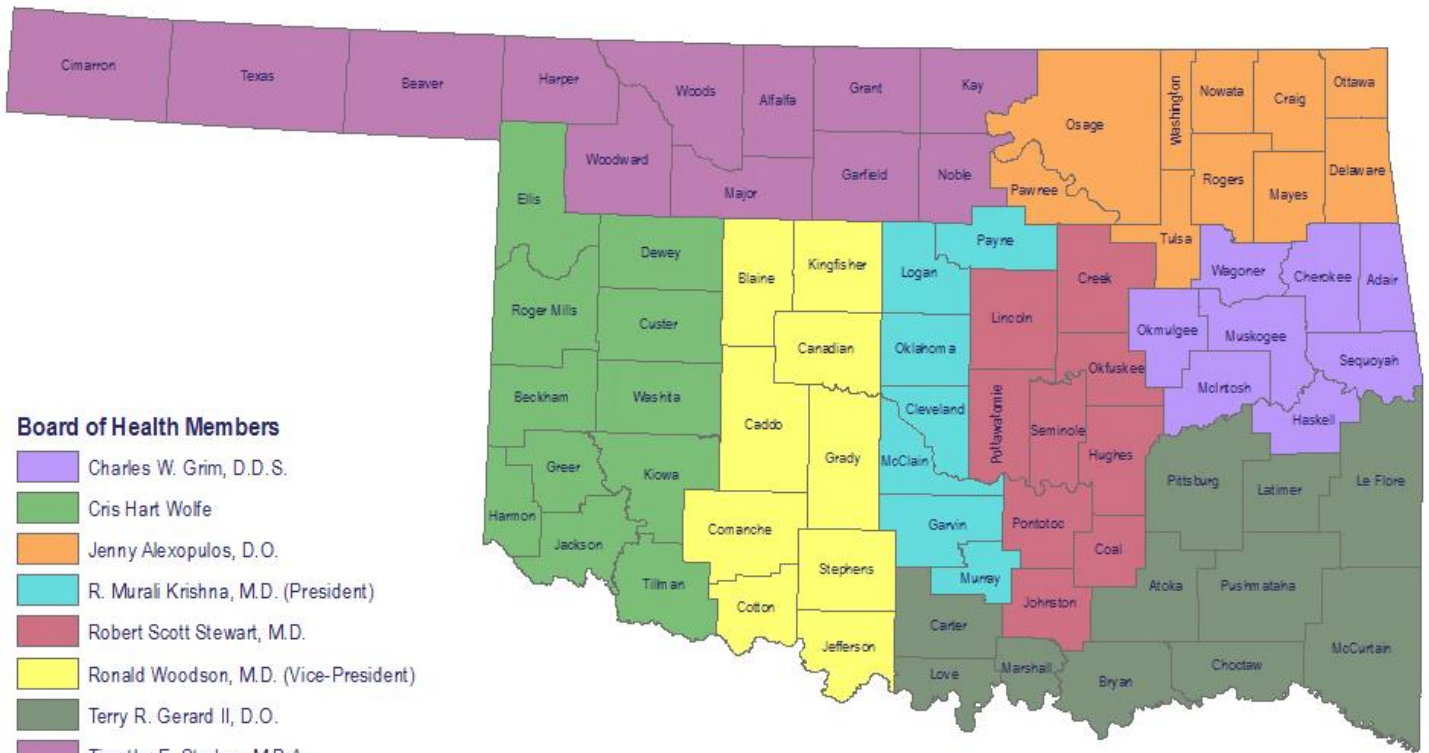
**Designation of Primary Care HPSAs**

- Geographical Area
- Population Group
- Single County
- Area not Designated as HPSA

Note: The number is a score representing the degree of shortage, and is based on the ratio of the relevant population to 1 full-time equivalent (FTE) primary care physician. A larger number indicates a greater need. Not all counties have scores assigned.

Source: HRSAData Warehouse. Data were updated 01/01/2014.

# OSDH Board of Health Map



## Board of Health Members

- Charles W. Grim, D.D.S.
- Cris Hart Wolfe
- Jenny Alexopoulos, D.O.
- R. Murali Krishna, M.D. (President)
- Robert Scott Stewart, M.D.
- Ronald Woodson, M.D. (Vice-President)
- Terry R. Gerard II, D.O.
- Timothy E. Starkey, M.B.A.
- Martha A. Burger, M.B.A. (State at Large; Secretary-Treasurer)

Created: 12.09.2013  
Source: Oklahoma State Department of Health

# Oklahoma Health Improvement Plan



For the complete OHIP, including a full list of partners, visit [www.ok.gov/health](http://www.ok.gov/health) and click the "Oklahoma Health Improvement Plan" link.



### [STRATEGIC PLANNING]

#### FLAGSHIP GOALS

- Tobacco Use Prevention
- Obesity Reduction
- Children's Health

#### INFRASTRUCTURE GOALS

- Public Health Finance
- Workforce Development
- Access to Care
- Health Systems Effectiveness

#### SOCIETAL & POLICY INTEGRATION

- Policies and Legislation
- Social Determinants of Health & Health Equity

OKLAHOMA HEALTH IMPROVEMENT PLAN



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DEPARTMENT OF HEALTH**

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Administrative Assistant (Seasonal)  
Angela Watkins, MBA, MPH  
Program Assessment and Evaluation Specialist

*Health on the Horizon*

**Cotton County Health Department  
1501-A South 7th  
Walters, OK 73572  
580-875-6121  
[www.ok.gov/health](http://www.ok.gov/health)**

The Oklahoma Turning Point Initiative is public health improvement in action. The success of the Turning Point process involves a partnership between the state and county departments of health, local communities, and policy-makers. The Oklahoma Turning Point engine is fueled by a community-based decision making process whereby local communities tap into the capacities, strengths, and vision of their citizens to create and promote positive, sustainable changes in the public health system, and the public’s health.

**We are at a cross roads in our state and in Cotton County. Please come and be part of the solutions that will lead Oklahoma and Cotton County to becoming a healthy place to live, work and learn.**

If you are interested in learning more about Turning Point or becoming involved in local activities, please contact:

Shaina Cherilus  
Comanche County  
(580) 353-9170  
Email: [ShainaC@health.ok.gov](mailto:ShainaC@health.ok.gov)  
Website: [www.okturningpoint.org](http://www.okturningpoint.org)

## Coalition for a Healthy and Drug Free Walters

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### Partnership Priorities

1. Minimize risk factors that increase the likelihood youth will abuse drugs and alcohol
2. Strengthen the coalition by recruiting youth who can positively impact other youth.

The coalition works to ensure community members are aware of the ills of substance use and abuse.

Supplement Table 1: Total Mortality Rate and Adult Prevalence of Sufficient Fruit and Vegetable Consumption (5 or More Daily Servings), Obesity, Physical Inactivity, and Diabetes by County.

| County    | Total Mortality <sup>1</sup><br>(deaths/100,000) | Fruit & Vegetable<br>Consumption <sup>2</sup><br>(percent) | Obesity <sup>3</sup><br>(percent) | Physical<br>Inactivity <sup>3</sup><br>(percent) | Diabetes <sup>3</sup><br>(percent) |
|-----------|--|--|-----------------------------------|--|------------------------------------|
| Adair     | 1,014.6  | 7.2  | 35.4                              | 30.9   | 15.6                               |
| Alfalfa   | 863.2  | -  | 31.9*                             | 31.9*  | 15.3                               |
| Atoka     | 875.7  | 9.0  | 34.5                              | 28.5   | 16.8                               |
| Beaver    | 797.2  | 9.7  | 29.5*                             | 31.1*  | 11.7                               |
| Beckham   | 1,030.3  | 17.0   | 32.5                              | 31.3   | 10.8                               |
| Blaine    | 934.0  | 14.2*  | 31.5                              | 36.3   | 9.9                                |
| Bryan     | 897.0  | 16.0   | 30.4                              | 36.2   | 8.2                                |
| Caddo     | 1,033.5  | 13.3   | 29.1                              | 28.9   | 11.9                               |
| Canadian  | 805.6  | 15.7   | 26.4                              | 27.0   | 9.9                                |
| Carter    | 1,096.9  | 16.8   | 30.6                              | 34.0   | 10.2                               |
| Cherokee  | 944.5  | 13.6   | 31.1                              | 34.7   | 11.5                               |
| Choctaw   | 1,104.7  | 29.8*  | 30.0                              | 30.8   | 9.0                                |
| Cimarron  | 805.0  | -  | 26.2*                             | 35.0*  | 7.8                                |
| Cleveland | 787.6  | 16.1   | 26.5                              | 24.0   | 7.8                                |
| Coal      | 1,091.1  | -  | 33.6*                             | 24.6*  | 10.1                               |
| Comanche  | 915.7  | 15.6   | 31.4                              | 31.4   | 9.3                                |
| Cotton    | 1,035.1  | -  | 37.9*                             | 29.1*  | 9.8                                |
| Craig     | 1,061.2  | 10.1   | 36.8                              | 31.6   | 13.8                               |
| Creek     | 979.5  | 12.2   | 32.3                              | 29.8   | 9.5                                |
| Custer    | 940.2  | 18.9   | 29.8                              | 26.3   | 9.4                                |
| Delaware  | 900.6  | 11.8   | 30.6                              | 35.5   | 15.0                               |
| Dewey     | 1,026.0  | -  | 29.1*                             | 40.6*  | 11.1                               |
| Ellis     | 873.0  | -  | 36.8*                             | 31.3*  | 10.8                               |
| Garfield  | 897.7  | 12.5   | 33.7                              | 27.9   | 8.9                                |
| Garvin    | 1,097.9  | 12.3   | 29.8                              | 31.4   | 12.3                               |
| Grady     | 921.4  | 13.4   | 34.5                              | 25.4   | 6.3                                |
| Grant     | 873.2  | -  | 24.2                              | 19.6   | 6.4                                |
| Greer     | 923.4  | -  | 34.9*                             | 45.7*  | 12.5                               |

Supplement Table 1 continued: Total Mortality Rate and Adult Prevalence of Sufficient Fruit and Vegetable Consumption (5 or More Daily Servings), Obesity, Physical Inactivity, and Diabetes by County.

| County     | Total Mortality <sup>1</sup><br>(deaths/100,000) | Fruit & Vegetable<br>Consumption <sup>2</sup><br>(percent) | Obesity <sup>3</sup><br>(percent) | Physical<br>Inactivity <sup>3</sup><br>(percent) | Diabetes <sup>3</sup><br>(percent) |
|------------|--|--|-----------------------------------|--|------------------------------------|
| Harmon     | 913.8  | -  | -                                 | -  | 20.2*                              |
| Harper     | 954.3  | -  | -                                 | 38.9*  | 17.4*                              |
| Haskell    | 960.0  | 15.3   | 31.1*                             | 36.4   | 6.9                                |
| Hughes     | 1,066.9  | 12.1   | 21.2                              | 26.3   | 12.7                               |
| Jackson    | 935.3  | 17.2   | 31.7                              | 28.7   | 12.5                               |
| Jefferson  | 1,084.8  | -  | 39.3*                             | 37.6*  | 9.4                                |
| Johnston   | 1,105.3  | 19.6*  | 24.7                              | 33.6*  | 13.7                               |
| Kay        | 932.2  | 13.9   | 31.3                              | 27.9   | 14.2                               |
| Kingfisher | 835.1  | 21.0   | 30.5                              | 29.6   | 11.0                               |
| Kiowa      | 1,173.2  | 17.5*  | 31.1                              | 32.2*  | 12.5                               |
| Latimer    | 856.8  | 9.3  | 42.2*                             | 41.6*  | 13.1                               |
| Le Flore   | 1,054.9  | 11.4   | 31.0                              | 36.7   | 14.2                               |
| Lincoln    | 915.3  | 15.0   | 28.0                              | 40.3   | 10.9                               |
| Logan      | 776.5  | 12.1   | 32.7                              | 30.3   | 11.7                               |
| Love       | 934.7  | 17.9*  | 25.6                              | 39.1*  | 18.0                               |
| Major      | 911.8  | 14.8   | 26.9*                             | 28.2   | 6.8                                |
| Marshall   | 1,041.8  | 10.1   | 33.8*                             | 30.1   | 13.9                               |
| Mayes      | 1,033.6  | 18.1   | 36.9                              | 35.3   | 12.7                               |
| McClain    | 863.9  | 22.6*  | 34.8                              | 26.3   | 7.5                                |
| McCurtain  | 870.9  | 6.9  | 33.4                              | 33.8   | 10.5                               |
| McIntosh   | 992.7  | 14.1   | 37.4                              | 38.3   | 8.8                                |
| Murray     | 1,042.2  | 9.4  | 32.1*                             | 24.6   | 10.8                               |
| Muskogee   | 1,072.6  | 14.5   | 29.6                              | 36.2   | 12.1                               |
| Noble      | 853.1  | 8.0  | 39.1*                             | 34.7*  | 11.6                               |
| Nowata     | 910.7  | 20.4   | 33.1                              | 29.2   | 10.0                               |
| Okfuskee   | 1,109.8  | -  | 31.7                              | 44.7*  | 15.9                               |
| Oklahoma   | 900.5  | 16.7   | 28.4                              | 30.4   | 9.3                                |
| Okmulgee   | 1,030.3  | 11.9   | 33.7                              | 36.6   | 13.1                               |



Supplement Table 1 continued: Total Mortality Rate and Adult Prevalence of Sufficient Fruit and Vegetable Consumption (5 or More Daily Servings), Obesity, Physical Inactivity, and Diabetes by County.

| County         | Total Mortality <sup>1</sup><br>(deaths/100,000) | Fruit & Vegetable<br>Consumption <sup>2</sup><br>(percent) | Obesity <sup>3</sup><br>(percent) | Physical<br>Inactivity <sup>3</sup><br>(percent) | Diabetes <sup>3</sup><br>(percent) |
|----------------|--|--|-----------------------------------|--|------------------------------------|
| Osage          | 830.0  | 10.6   | 32.8                              | 35.3   | 11.2                               |
| Ottawa         | 1,082.7  | 16.7   | 32.2                              | 40.9   | 13.7                               |
| Pawnee         | 1,058.3  | 11.7   | 32.3                              | 35.8   | 14.9                               |
| Payne          | 808.1  | 14.8   | 27.4                              | 23.9   | 9.1                                |
| Pittsburg      | 988.6  | 16.7   | 30.2                              | 32.9   | 11.6                               |
| Pontotoc       | 1,018.0  | 11.6   | 35.0                              | 33.5   | 8.5                                |
| Pottawatomie   | 988.8  | 18.5   | 34.2                              | 31.1   | 9.6                                |
| Pushmataha     | 1,009.9  | 11.0   | 25.2                              | 32.4   | 13.6                               |
| Roger Mills    | 730.2  | 20.7*  | 35.5*                             | 39.2*  | 12.1                               |
| Rogers         | 811.7  | 15.1   | 29.4                              | 28.4   | 9.7                                |
| Seminole       | 1,061.7  | 12.9   | 37.7                              | 32.1   | 9.3                                |
| Sequoyah       | 1,010.3  | 18.7   | 32.9                              | 37.7   | 12.1                               |
| Stephens       | 977.4  | 16.1   | 27.6                              | 32.8   | 10.8                               |
| Texas          | 791.6  | 16.6   | 27.5                              | 29.7   | 4.0                                |
| Tillman        | 935.4  | 21.2*  | 34.5*                             | 31.6*  | 17.1                               |
| Tulsa          | 881.8  | 16.4   | 27.2                              | 27.8   | 9.3                                |
| Wagoner        | 824.3  | 15.3   | 31.2                              | 30.9   | 12.1                               |
| Washington     | 826.5  | 21.6   | 26.7                              | 28.1   | 8.7                                |
| Washita        | 905.5  | 23.6*  | 24.5                              | 27.1   | 7.3                                |
| Woods          | 897.6  | 20.9*  | 21.7                              | 32.6   | 7.0                                |
| Woodward       | 946.4  | 16.8   | 32.5                              | 31.6   | 11.8                               |
| Oklahoma State | 914.5  | 15.5   | 29.7                              | 30.4   | 10.1                               |

\*Rate is unstable due to the large measurement error associated with the estimate.

Data Sources:

1. Oklahoma State Department of Health, Health Care Information, OK2SHARE, Death Statistics – Final: 2008-2012. [www.health.ok.gov/ok2share](http://www.health.ok.gov/ok2share).
2. Oklahoma State Department of Health, Health Care Information, Behavioral Risk Factor Surveillance System (BRFSS): 2005, 2007, 2009.
3. Oklahoma State Department of Health, Health Care Information, Behavioral Risk Factor Surveillance System (BRFSS): 2005-2010.

Supplement Table 2: Teen Birth Rate, Infant Mortality Rate, Prevalence of Low Birth Weight (Births Weighing < 5 lb., 8 oz.), Unintentional Injury Mortality, and Prevalence of Adult Smokers by County.

| County    | Teen Births <sup>1</sup><br>(births/1,000<br>females 15-19 yrs) | Infant Mortality <sup>2</sup><br>(deaths/1,000 live<br>births) | Low Birth<br>Weight <sup>1</sup><br>(percent) | Unintentional<br>Injury Mortality <sup>2</sup><br>(deaths/100,000) | Adult Smokers <sup>3</sup><br>(percent) |
|-----------|---|--|---|--|---|
| Adair     | 66.6  | 12.6   | 8.3   | 70.1   | 29.8                                    |
| Alfalfa   | 24.8  | 18.2   | 7.6   | 89.0   | 25.5*                                   |
| Atoka     | 65.8  | -  | 7.4   | 70.7   | 23.4                                    |
| Beaver    | 45.0  | -  | 7.7   | 76.8   | 27.8*                                   |
| Beckham   | 98.9  | 10.4   | 9.8   | 68.8   | 31.2                                    |
| Blaine    | 68.5  | 14.2   | 9.2   | 76.0   | 23.7                                    |
| Bryan     | 62.1  | 5.3  | 7.6   | 66.1   | 29.1                                    |
| Caddo     | 74.1  | 9.0  | 7.4   | 91.5   | 26.8                                    |
| Canadian  | 32.2  | 5.4  | 7.9   | 46.5   | 22.0                                    |
| Carter    | 74.3  | 5.5  | 9.4   | 89.3   | 24.4                                    |
| Cherokee  | 48.1  | 7.2  | 8.6   | 56.0   | 29.7                                    |
| Choctaw   | 96.8  | 10.2   | 8.6   | 73.9   | 28.7                                    |
| Cimarron  | 68.5  | -  | 8.4   | 45.9   | 25.4*                                   |
| Cleveland | 22.8  | 4.9  | 7.2   | 43.8   | 20.4                                    |
| Coal      | 69.8  | -  | 8.0   | 102.4  | 22.5*                                   |
| Comanche  | 51.5  | 9.8  | 8.4   | 42.0   | 31.0                                    |
| Cotton    | 60.8  | -  | 7.0   | 77.7   | 20.1*                                   |
| Craig     | 68.5  | 10.0   | 7.5   | 81.3   | 23.9                                    |
| Creek     | 52.5  | 8.9  | 8.7   | 66.3   | 29.4                                    |
| Custer    | 51.2  | 7.3  | 7.5   | 57.5   | 18.9                                    |
| Delaware  | 58.7  | 6.5  | 7.7   | 69.5   | 24.7                                    |
| Dewey     | 56.1  | -  | 6.4   | 136.6  | 22.0*                                   |
| Ellis     | 41.1  | -  | 4.5   | 92.0   | 18.4*                                   |
| Garfield  | 65.1  | 8.1  | 7.8   | 57.5   | 23.3                                    |
| Garvin    | 63.6  | 7.6  | 9.2   | 98.8   | 25.5                                    |
| Grady     | 44.8  | 5.8  | 8.2   | 74.0   | 25.9                                    |
| Grant     | 28.5  | -  | 9.7   | 72.6   | 20.0*                                   |
| Greer     | 80.1  | -  | 9.2   | 58.1   | 28.9*                                   |

Supplement Table 2 continued: Teen Birth Rate, Infant Mortality Rate, Prevalence of Low Birth Weight (Births Weighing < 5 lb., 8 oz.), Unintentional Injury Mortality, and Prevalence of Adult Smokers by County.

| County     | Teen Births <sup>1</sup><br>(births/1,000<br>females 15-19 yrs) | Infant Mortality <sup>2</sup><br>(deaths/1,000 live<br>births) | Low Birth<br>Weight <sup>1</sup><br>(percent) | Unintentional<br>Injury Mortality <sup>2</sup><br>(deaths/100,000) | Adult Smokers <sup>3</sup><br>(percent) |
|------------|---|--|---|--|---|
| Harmon     | 79.6  | -  | 5.3   | 48.0   | 10.3*                                   |
| Harper     | 40.0  | -  | 6.5   | 96.6   | 16.8*                                   |
| Haskell    | 62.4  | 9.4  | 9.8   | 77.2   | 19.7                                    |
| Hughes     | 61.6  | 8.0  | 7.5   | 77.4   | 36.6*                                   |
| Jackson    | 72.7  | 8.1  | 9.7   | 53.8   | 25.4                                    |
| Jefferson  | 54.1  | 15.5   | 9.3   | 105.1  | 24.8*                                   |
| Johnston   | 61.3  | 9.7  | 9.1   | 79.3   | 24.3*                                   |
| Kay        | 75.1  | 7.2  | 8.0   | 67.6   | 24.3                                    |
| Kingfisher | 46.4  | -  | 5.7   | 54.0   | 18.0                                    |
| Kiowa      | 58.1  | 12.7   | 7.5   | 97.4   | 26.9*                                   |
| Latimer    | 38.9  | -  | 9.0   | 75.0   | 21.5                                    |
| Le Flore   | 70.4  | 5.7  | 7.4   | 71.8   | 26.0                                    |
| Lincoln    | 42.5  | 7.1  | 7.7   | 71.3   | 27.6                                    |
| Logan      | 24.6  | 6.7  | 7.7   | 50.8   | 23.4                                    |
| Love       | 66.3  | -  | 7.6   | 72.2   | 35.5*                                   |
| Major      | 50.9  | 19.5   | 8.4   | 60.4   | 11.4                                    |
| Marshall   | 72.5  | 6.0  | 6.7   | 59.7   | 24.1*                                   |
| Mayes      | 60.8  | 7.2  | 7.4   | 75.2   | 30.1                                    |
| McClain    | 40.3  | 10.8   | 8.3   | 58.7   | 18.3                                    |
| McCurtain  | 78.7  | 9.6  | 7.6   | 84.4   | 23.5                                    |
| McIntosh   | 62.2  | 11.4   | 8.3   | 77.8   | 29.2                                    |
| Murray     | 66.4  | 9.7  | 8.8   | 83.7   | 24.9                                    |
| Muskogee   | 65.3  | 7.5  | 8.5   | 64.8   | 32.0                                    |
| Noble      | 48.5  | 9.7  | 6.8   | 42.1   | 28.0*                                   |
| Nowata     | 46.8  | 10.1   | 8.0   | 65.4   | 29.2                                    |
| Okfuskee   | 64.3  | 7.0  | 7.8   | 80.2   | 31.9*                                   |
| Oklahoma   | 60.2  | 7.9  | 8.9   | 49.8   | 24.1                                    |
| Okmulgee   | 70.8  | 8.5  | 8.2   | 72.0   | 27.7                                    |

Supplement Table 2 continued: Teen Birth Rate, Infant Mortality Rate, Prevalence of Low Birth Weight (Births Weighing < 5 lb., 8 oz.), Unintentional Injury Mortality, and Prevalence of Adult Smokers by County.

| County         | Teen Births <sup>1</sup><br>(births/1,000<br>females 15-19 yrs) | Infant Mortality <sup>2</sup><br>(deaths/1,000 live<br>births) | Low Birth<br>Weight <sup>1</sup><br>(percent) | Unintentional<br>Injury Mortality <sup>2</sup><br>(deaths/100,000) | Adult Smokers <sup>3</sup><br>(percent) |
|----------------|---|--|---|--|---|
| Osage          | 39.3  | 7.3  | 8.8   | 57.4   | 27.2                                    |
| Ottawa         | 67.8  | 9.9  | 8.1   | 74.3   | 32.2                                    |
| Pawnee         | 50.5  | 7.1  | 7.0   | 128.0  | 27.2                                    |
| Payne          | 20.7  | 5.0  | 5.9   | 50.8   | 18.2                                    |
| Pittsburg      | 68.4  | 8.6  | 9.3   | 66.5   | 29.2                                    |
| Pontotoc       | 52.2  | 7.6  | 7.2   | 82.3   | 27.1                                    |
| Pottawatomie   | 55.1  | 9.0  | 7.5   | 66.6   | 30.0                                    |
| Pushmataha     | 69.1  | 10.4   | 9.6   | 77.8   | 39.4                                    |
| Roger Mills    | 66.2  | -  | 4.7   | 93.4   | 17.7*                                   |
| Rogers         | 32.9  | 7.1  | 8.1   | 47.2   | 24.8                                    |
| Seminole       | 62.0  | 7.5  | 7.4   | 80.8   | 28.3                                    |
| Sequoyah       | 66.2  | 5.5  | 7.5   | 62.4   | 30.7                                    |
| Stephens       | 56.2  | 9.0  | 8.5   | 74.5   | 20.0                                    |
| Texas          | 80.1  | 7.3  | 6.4   | 67.4   | 18.4                                    |
| Tillman        | 62.0  | -  | 6.4   | 67.7   | 25.4*                                   |
| Tulsa          | 51.2  | 7.3  | 9.0   | 54.5   | 23.7                                    |
| Wagoner        | 33.4  | 5.6  | 7.3   | 56.1   | 27.3                                    |
| Washington     | 49.8  | 6.1  | 7.2   | 52.1   | 23.0                                    |
| Washita        | 56.6  | 9.9  | 8.8   | 55.5   | 28.2*                                   |
| Woods          | 43.2  | -  | 8.8   | 79.8   | 16.2                                    |
| Woodward       | 84.3  | 7.8  | 7.9   | 80.8   | 26.9                                    |
| Oklahoma State | 52.2  | 7.5  | 8.3   | 58.7   | 25.0                                    |

\*Rate is unstable due to the large measurement error associated with the estimate.

Data Sources:

1. Oklahoma State Department of Health, Health Care Information, OK2SHARE, Birth Statistics,—Final: 2008-2012. [www.health.ok.gov/ok2share](http://www.health.ok.gov/ok2share).
2. Oklahoma State Department of Health, Health Care Information, OK2SHARE, Death Statistics – Final: 2008-2012. [www.health.ok.gov/ok2share](http://www.health.ok.gov/ok2share).
3. Oklahoma State Department of Health, Health Care Information, Behavioral Risk Factor Surveillance System (BRFSS): 2005-2010.