



State of the County's Health Report

OKLAHOMA STATE
DEPARTMENT OF HEALTH

Working Together For Health

Lincoln County

Oklahoma ranks near the bottom in many key health status indicators. Most of these outcomes are related to conditions that Oklahomans must live with every day. Poverty, lack of insurance, limited access to primary care, and inadequate prenatal care, along with associated risky health behaviors (low fruit/vegetable consumption, low physical activity, a high prevalence of smoking) all contribute to the poor health status of our citizens.

The vision of the Oklahoma Health Improvement Plan (OHIP) involves local partnerships and communities working together to improve and sustain the physical, social, and mental well-being of all people in Oklahoma. The targeted flagship initiatives of children's health improvement, tobacco use prevention, and obesity reduction will help to maximize opportunities for all Oklahomans to lead healthy lives. If you would like more information about OHIP, please visit the Oklahoma State Department of Health website at http://www.ok.gov/health/Organization/Board_of_Health/OHIP.html.

This report focuses on health factors and demographics in Lincoln County. Awareness and thoughtful application of this health data can assist us in our joint endeavors to improve the health status of our local citizens.



Together We Can Move Forward

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Top 10 Causes of Death by Age Group Lincoln County 2002-2006

Rank	0-4	05-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	PERINATAL PERIOD 10	HEART DISEASE < 4	UNINTENT. INJURY 16	CANCER 6	UNINTENT. INJURY 18	HEART DISEASE 45	CANCER 84	HEART DISEASE 424	HEART DISEASE 541
2	CONGENITAL ANOMALIES 5	HOMICIDE < 4	SUICIDE 9	UNINTENT. INJURY 5	CANCER 9	CANCER 32	HEART DISEASE 59	CANCER 268	CANCER 399
3	UNINTENT. INJURY < 4	UNINTENT. INJURY < 4	APPENDICITIS < 4	HEART DISEASE < 4	HEART DISEASE 8	UNINTENT. INJURY 18	BRONCHITIS/ EMPHYSEMA/ ASTHMA 14	STROKE 106	STROKE 114
4	BENIGN NEOPLASM < 4	COMPLICATIONS OF PREGNANCY/ CHILDBIRTH < 4	SUICIDE < 4	SUICIDE < 4	SUICIDE 8	LIVER DISEASE 7	DIABETES MELLITUS 11	BRONCHITIS/ EMPHYSEMA/ ASTHMA 77	UNINTENT. INJURY 110
5	HOMICIDE < 4	HEART DISEASE < 4	HEART DISEASE < 4	DIABETES MELLITUS < 4	BRONCHITIS/ EMPHYSEMA/ ASTHMA < 4	STROKE 6	UNINTENT. INJURY 9	INFLUENZA/ PNEUMONIA 46	BRONCHITIS/ EMPHYSEMA/ ASTHMA 95
6	SIDS < 4	HOMICIDE < 4	HOMICIDE < 4	HOMICIDE < 4	TEN CAUSES TIED < 4	SUICIDE 6	HOMICIDE < 4	UNINTENT. INJURY 41	INFLUENZA/ PNEUMONIA 47
7		SEPTICEMIA (BLOOD POISONING) < 4	SEPTICEMIA (BLOOD POISONING) < 4			DIABETES MELLITUS 4	LIVER DISEASE < 4	ALZHEIMER'S DISEASE 32	DIABETES MELLITUS 35
8						SEPTICEMIA (BLOOD POISONING) 4	FOUR CAUSES TIED < 4	NEPHRITIS 32	SUICIDE 35
9						HOMICIDE < 4		DIABETES MELLITUS 19	NEPHRITIS 34
10						VIRAL HEPATITIS < 4		TWO CAUSES TIED 18	ALZHEIMER'S DISEASE 32

Note: The numbers less than 4 have been shown as "< 4" to protect the privacy of the subjects

Data source: Vital Statistics, Health Care Information Division, Oklahoma State Department of Health

Produced by: Community Development Service, Oklahoma State Department of Health

March 2009

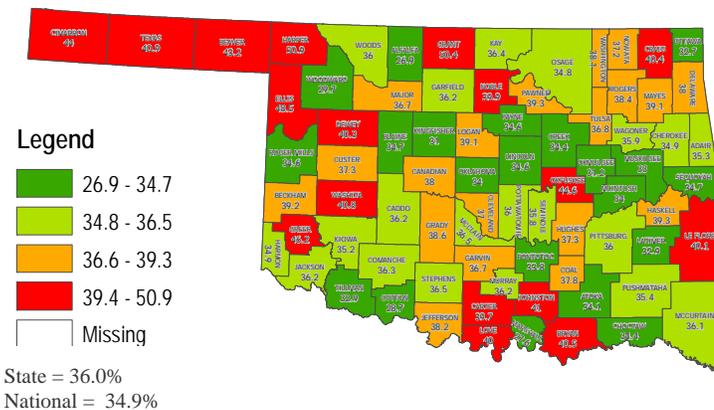
Nutrition & Overweight

With obesity at epidemic levels, steps need to be taken to control this issue. Surveillance systems have improved and been expanded to obtain more accurate county-level data. While efforts continue on this front, communities must utilize this information to improve the problem itself. With health care costs being, on average, \$395 more for a person under the age of 65 who is obese than a person of the same age who is not obese⁶, estimated health care costs related to obesity for Lincoln County soar to almost \$2.9 million. These costs only go up when the 65 and over population are included.

The Youth Risk Behavior Surveillance System (YRBS)⁷, while not producing county-level data, shows that in 2005, 2007, and 2009 combined, 15.8% of high school children participating in the survey classified themselves as overweight. Further, 14.7% classified themselves as obese. Interestingly, 8.9% of the males said they were obese compared to 5.8% of females. This trend was reversed in the overweight category with 8.0% of females and 7.8% of males, statewide. Although, neither weight category is statistically significant by gender.

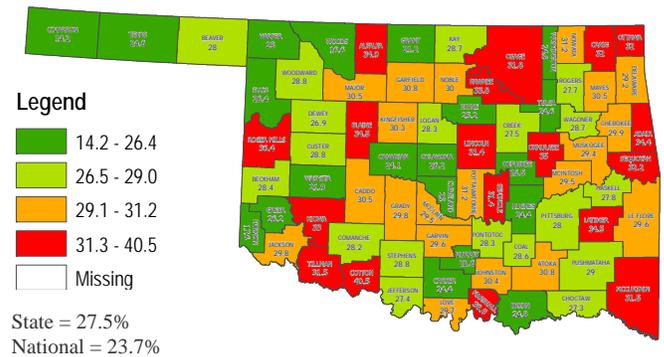
According to the Behavioral Risk Factor Surveillance System (BRFSS, 2003 & 2005)⁸, 84.4% of Lincoln County adults did not eat the recommended 5 servings of fruits and vegetables a day. Increasing fruit and vegetable consumption is an economical way to control many health-related issues such as obesity and diabetes.

Percent of Adults who are Overweight, BRFSS, 2003-2008⁸



* Note: Data classified by Quartiles

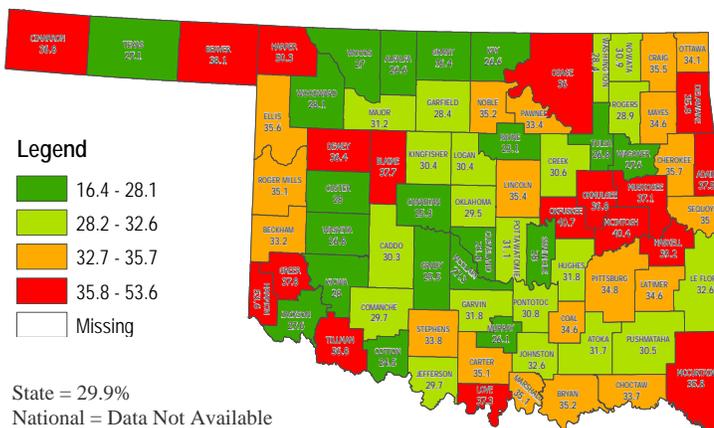
Percent of Adults who are Obese, BRFSS, 2003-2008⁸



* Note: Data classified by Quartiles

Physical Activity & Fitness

Percent of Adults with No Physical Activity Within Past Month, BRFSS, 2003-2008⁸



* Note: Data classified by Quartiles

The increasing inactivity of the U.S. population is contributing to an increase in numerous poor health-related outcomes. Physical inactivity robs the body of precious energy needed to function properly, in turn health declines, and rates of various chronic diseases escalate.

According to the 2003-2008 BRFSS⁸, it is estimated that 35.4% (8,353) of people in Lincoln County had no leisure activity in the past month (at the time they were surveyed) and over half of the adults (56.5%) did not reach the recommended physical activity level.

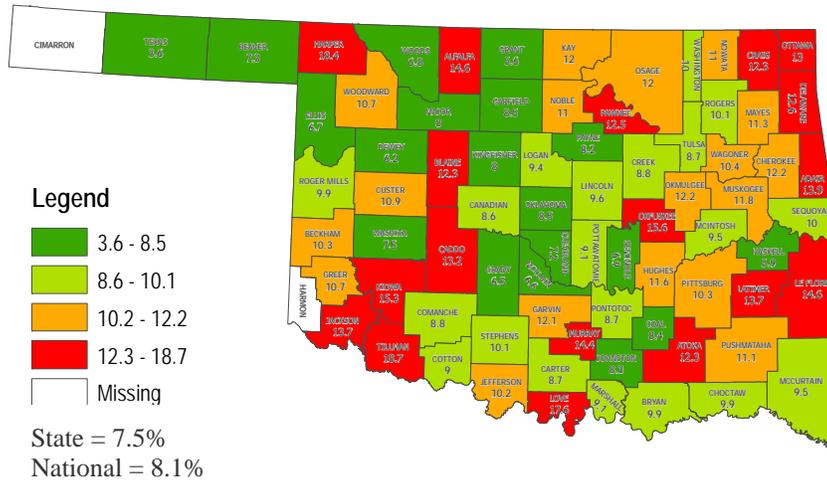
Statewide, 55% of high school students did not participate in physical activity for at least 60 minutes per day on five or more days in a week.⁷ Efforts need to be made to increase physical activity for our youth to build long-term healthy habits.

Diabetes

As stated previously, poor nutrition and lack of physical activity are linked to many chronic issues including diabetes. It is often hard to distinguish between Type I and Type II diabetes in large datasets but looking at the overall impact of diabetes is necessary to examine a community's health.

From 2006 to 2008, there were 182 hospital discharges for diabetes among Lincoln County residents.⁵ This accounted for a total of 777 days in the hospital and \$2,630,515.00 in total charges.⁵ This was an average of 4.3 days and \$14,453.38 in charges.⁵

Percent of Adults Who Have Ever Been Told They Have Diabetes, BRFSS, 2004-2008⁸



According to the 2004-2008 BRFSS, it is estimated that 9.6% (2,265) of Lincoln County citizens have been diagnosed by a health professional as having diabetes.

In 2007, the per capita annual healthcare costs for people with diabetes was \$11,744 compared to \$5,106 for people without diabetes.⁹ Persons with diabetes accumulate an estimated \$29,998,255.49 in health care costs in one year for Lincoln County. Actual hospital charges account for only 2.3% of the total health care impact of diabetes.

* Note: Data classified by Quartiles

Teen Births

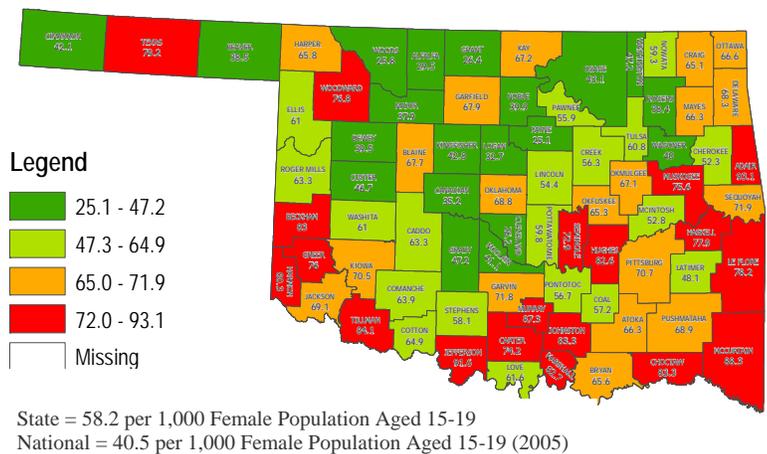
While births to teen mothers (age 15 to 19) have been on the decline in both the U.S. and Oklahoma, Oklahoma has moved down in the rankings according to the United Health Foundation.¹⁰ In 1993, the rate for teen births in the U.S. was 60.3 per 1,000 15-19 year old females and 67.1 in Oklahoma, ranking 35th in the country.¹⁰ In 2003, the rate decreased to 47.7 in the U.S. and 59.7 in Oklahoma, accounting for a decrease of 21% and 11%, respectively.¹⁰ However, while the rate decreased, Oklahoma continued to fall in the rankings (41st). In 2009, the rate of teen births stayed the same for Oklahoma (59.6) but the state ranked 45th in the country.¹⁰

Children of teen mothers are more likely to display poor health and social outcomes than those of older mothers, such as premature birth, low birth weight, higher rates of abuse and neglect, and are more likely to go into foster care or do poorly in school.¹¹

According to Oklahoma Vital Statistics, Lincoln County had a teen birth rate of 54.1 in 2007, which accounted for no change from 2003 (52.8) and a 22% decrease from 1993 (69.3)¹². The map represents a five-year average of teen birth rates, 2003-2007.¹²

On average in Oklahoma, births to teen mothers accumulate \$3,807 a year for each teenage birth¹³, which is often passed on to citizens. With an average of 61.4 births per year (2003-2007)¹², teen pregnancy costs the citizens of Lincoln County \$196,480.00 a year.

Rate of Births to Teen Mothers (Age 15-19), OSDH Vital Statistics, 2003-2007¹²



* Note: Data classified by Quartiles

Injury and Violence

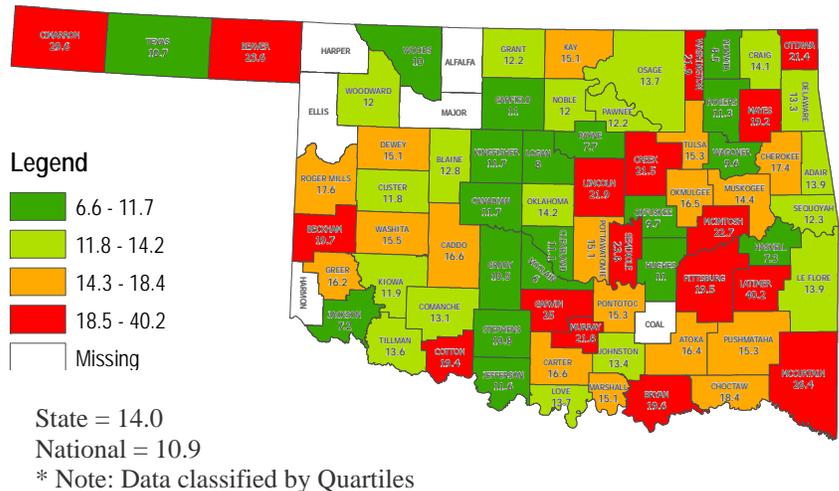
Across the nation and the state of Oklahoma, unintentional and violence-related injuries are on the rise. Unintentional injuries account for the 5th leading cause of death in the United States and Oklahoma for 2002-2006. For persons ages 1 to 44 in Oklahoma, unintentional injuries are the leading cause of death.⁴

This trend does not change much in Lincoln County. Unintentional injuries are the leading cause of death for ages 15 to 24 and 35 to 44 in Lincoln County.

It is estimated that for every motor vehicle-related death \$1.3 million in economic costs are incurred (2008 data).¹⁶ For Lincoln County, which has an average of 11.0 motor vehicle-related deaths a year⁴, the estimated economic costs are almost \$14.3 million a year.

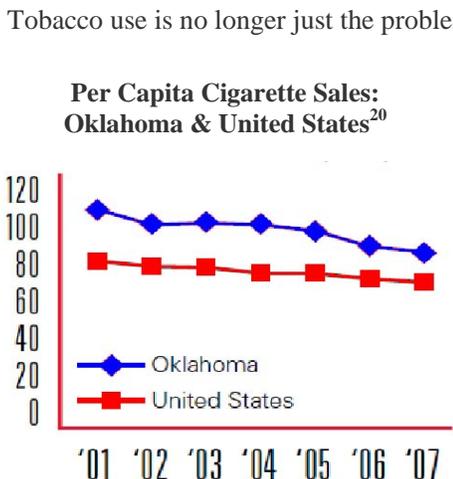
Violence-related injuries (homicide and suicide) in Lincoln County are ranked in the top 10 causes of death for persons from birth to age 64 and suicide is the 8th leading cause of death for all ages.⁴

Age-Adjusted Suicide Rate by County, OSDH Vital Statistics, 2002-2006⁴

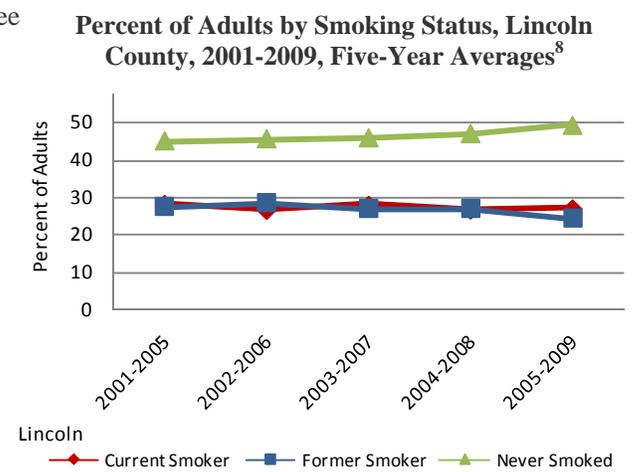


Tobacco Use Prevention

According to the 2005 State of the State's Health Report¹⁹, tobacco use among Oklahomans has remained fairly stable from 1990 to 2002. The good news is that total cigarette sales in Oklahoma (tribal and non-tribal combined) have dropped from 98.2 packs per capita in fiscal year 2005 to 86.7 packs per capita during fiscal year 2008. The national average dropped during this same time period.²⁰



Tobacco use is no longer just the problem of the individual but also the community as a whole. With health care costs on the rise, targeting areas such as tobacco use is an effective way to control those costs. The Oklahoma Tobacco Helpline (1-800-QUIT-NOW), supported jointly by the Oklahoma Tobacco Settlement Endowment Trust and the Oklahoma State Department of Health, continues to experience high call volume. Over 37,800 Oklahomans received free cessation assistance through the Helpline in fiscal year 2009.²⁰ Since inception of the Helpline in August 2003, over 110,000 Oklahomans have received free cessation assistance.²⁰



The CDC estimated that a person who used tobacco accrued over \$3,300 in health care costs per year.²¹ According to the BRFSS (2005-2009)⁸, it is estimated that 26.7% (6,300) of adults in Lincoln County use tobacco of some sort. Medical costs accumulated by those persons are over \$20.8 million a year for Lincoln County.

Healthy People 2010 Table

Healthy People 2010 Indicators	Most Recent Data: Year(s)						2010 Target
	Lincoln County		Oklahoma		United States		
Prevalence of Obese (Aged 18+)	2002-2008	31.3%	2008	31.0%	2008	26.7%	15%
No Leisure-Time Physical Activity (Aged 18+)	2002-2008	36.1%	2008	31.5%	2008	24.6%	20%
Prevalence of Smoking (Aged 18+)	2002-2008	24.9%	2008	24.7%	2008	18.4%	12%
Infant Mortality (Per 1,000 of births)	2002-2006	9.9	2006	8.1	2006	6.8	4.5
Low Birth Weight Infants (Percent of live births)	2002-2007	7.9%	2006	8.3%	2006	8.3%	5%
Very Low Birth Weight Infants (Percent of live births)	2002-2007	1.2%	2006	1.6%	2006	1.5%	0.9%
First Trimester Prenatal Care (Percent of births)	2002-2007	75.3%	2006	75.6%	2006	83.2%	90%
Prevalence of Diabetes (Aged 18+)	2002-2008	9.1%	2008	11.3%	2008	9.2%	2.5%
Lack of Health Insurance (Aged 18-64)	2002-2008	22.2%	2008	22.8%	2008	17.1%	0%
Prevalence of Binge Drinking (Aged 18+)	2002-2008	10.9%	2008	12.2%	2008	15.6%	6%
Coronary Heart Disease Death *	2002-2006	211.7	2006	184.5	2006	144.4	166.0
Cancer Death *	2002-2006	221.3	2006	194.9	2006	180.8	159.9
Unintentional Injury Death *	2002-2006	66.4	2006	55.6	2006	39.3	17.5
Transportation-Related Death *	2002-2006	34.2	2006	21.0	2006	14.5	9.2

Note: * means (Age-adjusted death per 100,000 to the 2000 U.S. standard population).

Reference:

- [1] Healthy People 2010 volume I and II, U.S. Department of Health and Human Services, November 2000.
- [2] Centers for Disease Control and Prevention (CDC), Wide-Ranging Online Data for Epidemiologic Research: Data for Oklahoma and United States.
- [3] CDC, National Center for Chronic Disease Prevention and Health Promotion, the Behavioral Risk Factor Surveillance System (BRFSS): Data for Oklahoma and United States.
- [4] Oklahoma State Department of Health (OSDH), OK2SHARE, BRFSS: Data for Oklahoma Counties.
- [5] OSDH, OK2SHARE, Vital Statistics: Data for Oklahoma Counties.

Health Care Cost Summary

Cardiovascular Disease (Heart Disease)

- Average hospital discharges per year⁵ = 470
- Average charges⁵ = \$39,782.94
- Total—\$18,686,048.76 a year

Obesity

- 31.4% of population⁸ (7,409)
- \$395 in additional medical costs per person aged 18-64⁶
- Total—\$2,926,555.00

Diabetes

- Average hospital discharges per year⁵ = 60.7
- Average charges⁵ = \$14,453.38
- Total—\$876,838.33 a year

Teen Pregnancy

- Average 61 births to females aged 15-19 a year¹²
- \$3,200 in costs a year¹³
- Total—\$196,480.00 a year

Motor Vehicle-Related Injury Death

- Average 11.0 deaths per year⁴
- \$1,300,000.00 in economic costs per death¹⁶
- Total—\$14,300,000.00 a year

Tobacco Use

- 26.7% of population⁸ (6,300)
- \$3,300 in health care costs²¹
- Total—\$20,790,000.00 a year

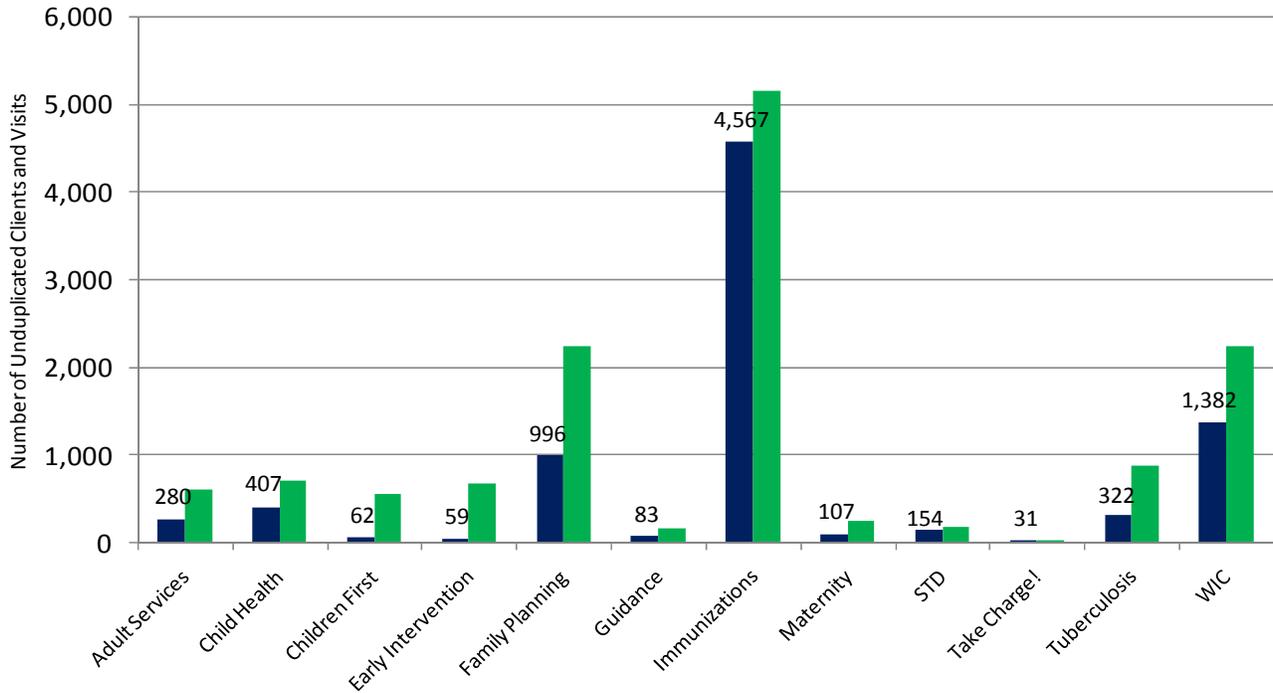
Grand Total for
Lincoln County:

\$57,775,922.10



County Health Department Usage

County Health Department Unduplicated Clients, and Visits by Program, Lincoln County, State Fiscal Year 2009



Data Note: Data is reflective of all services offered in a county, including county health departments and contracts.

■ Unduplicated Clients ■ Visits

LINCOLN

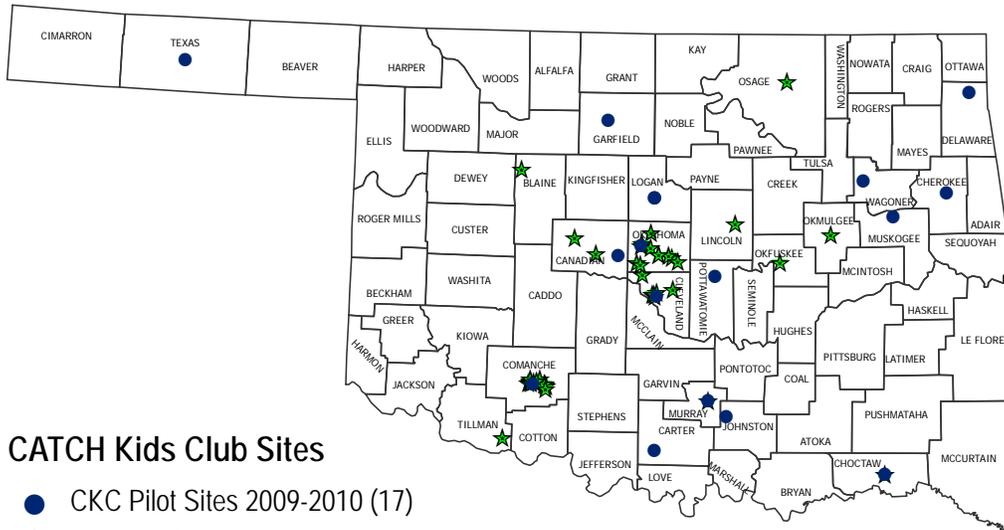
Population-Based Services by Event Type, Lincoln County, SFY09

Event Type	Number of Events	Total Attendees
Conference/Display	2	100
Focus Groups	12	925
Health Fair	2	413
Meeting/Taskforce/Coalition	5	70
Presentation/Class	27	1,482
Surveys/Assessment	27	135
Grand Total	75	3,125

Population-Based Services by Main Topic, Lincoln County, SFY09

Topic	Number of Events	Total Attendees
Developmental Stages	1	45
Discipline/Behavior Management	2	50
Family Relationships	1	1
General Health Department Services	19	1,086
Human Relationships	27	248
Immunizations	1	75
Infectious Disease	3	180
Injury Prevention	1	75
Nutrition and Overweight	15	1,180
Physical Activity/Fitness	1	75
STD/HIV/AIDS	5	262
Tobacco Education	4	88
Grand Total	80	3,365

Health Education



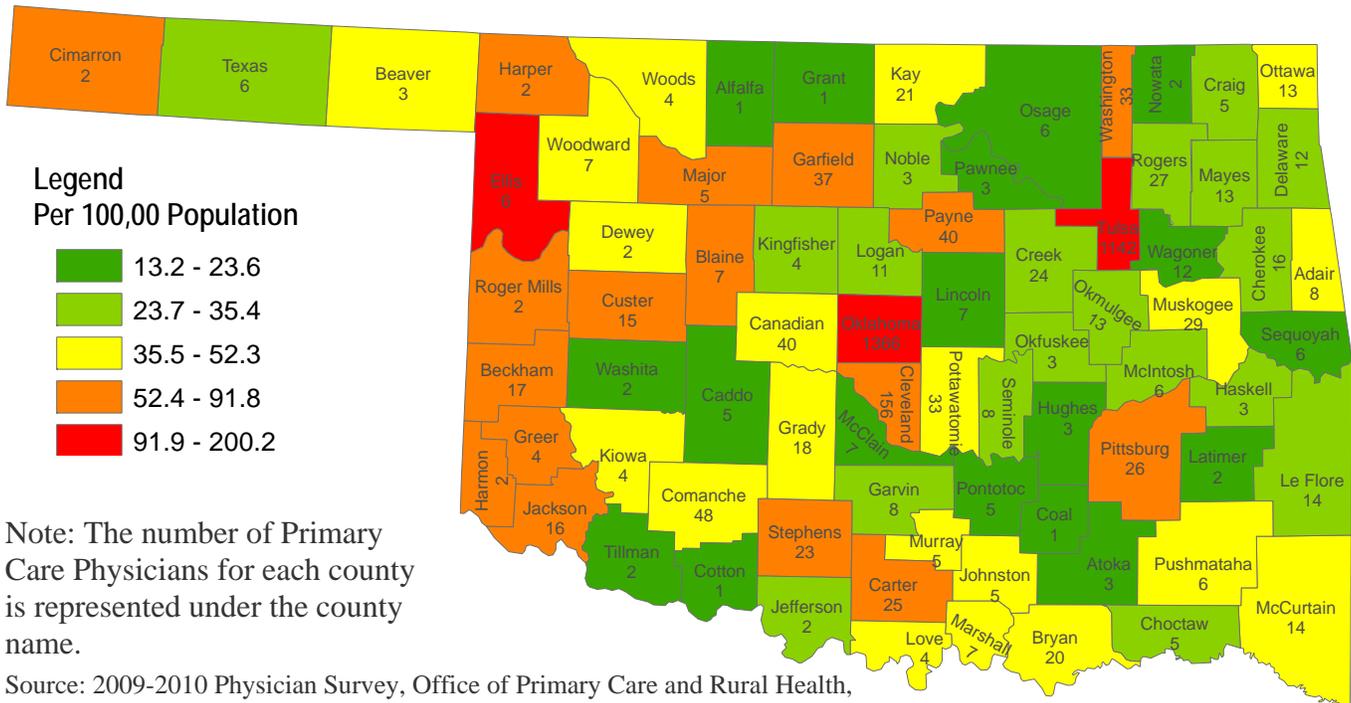
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OSDH Health Education
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 Oklahoma City, OK 73117
 405-271-6127
 KPayne@health.ok.gov

If you have an after-school program that is interested in learning more about CATCH Kids Club, a physical activity and nutrition program for children grades K-5, please contact the local health educator or Kathy Payne for information.

Primary Care Coverage Map

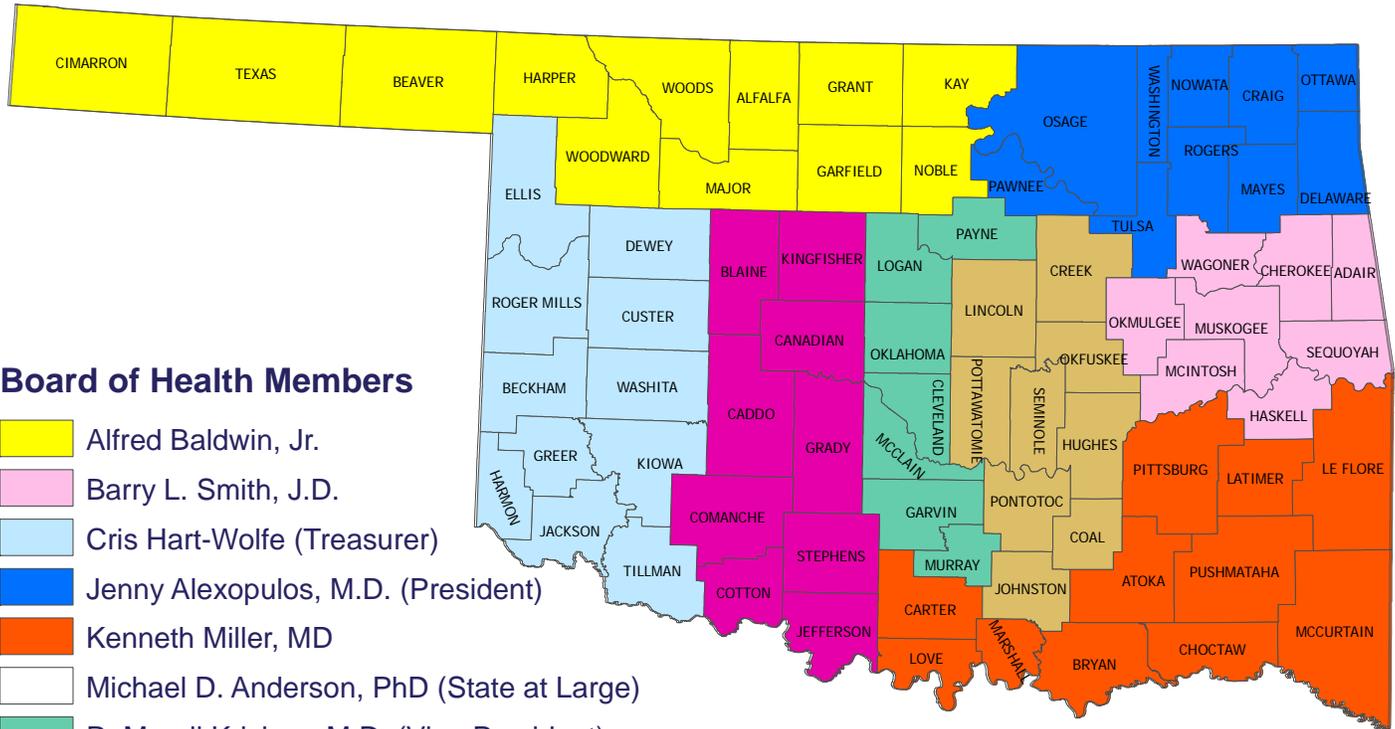
Rate of Primary Care Physicians per 100,000 Population, 2009 - 2010



Note: The number of Primary Care Physicians for each county is represented under the county name.

Source: 2009-2010 Physician Survey, Office of Primary Care and Rural Health, Community Development Service, Oklahoma State Department of Health

OSDH Board of Health Map



Board of Health Members

- Alfred Baldwin, Jr.
- Barry L. Smith, J.D.
- Cris Hart-Wolfe (Treasurer)
- Jenny Alexopoulos, M.D. (President)
- Kenneth Miller, MD
- Michael D. Anderson, PhD (State at Large)
- R. Murali Krishna, M.D. (Vice-President)
- Richard G. Davis, DDS
- Ronald Woodson, MD

Created: 11.03.2010
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 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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The Oklahoma Turning Point Initiative is public health improvement in action involving partnerships 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 Lincoln County. Please come and be part of the solutions that will lead Oklahoma and Lincoln County to becoming a healthy place to live, work and learn.

“If we are together nothing is impossible.
 If we are divided all will fail.” - [Winston Churchill](#)

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

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 Shawnee, OK 74801
 (405) 273-2157
 Email: BrandiM@health.ok.gov
 Website: www.okturningpoint.org

Lincoln County Turning Point Coalition

Coalition Priorities:

1. Underage Drinking Prevention.
2. Youth Bullying Prevention.
3. Rx Drug Abuse Prevention.

2009 Significant Outcomes:

- ◆ Implementing the Steps To Respect Bullying Curriculum in the Prague Schools for 2009/2010 school year in 4th, 6th, 7th grades.
- ◆ Choose to Win Camp, 1 week long with 65 kids in attendance.
- ◆ Crystal Darkness Campaign/Watch Party 120 in attendance.
- ◆ Steps To Respect/ Bullying Prevention Faculty Training, 70 in attendance.
- ◆ Steps To Respect Poster Contest; Students in 3rd, 5th, and 6th grade classes were asked to participate. Winner of poster contest 6th grader Bethany Richardson.