

## 2012 Oklahoma Epidemiological Profile

Epidemiology, the science of public health, provides vital information about disorders that threaten the health and well-being of populations. Epidemiological data identify problems, help determine what areas and who are affected by the problems—knowledge that is essential for effective intervention—and measure the success of interventions aimed at preventing or reducing these problems. Engagement in a thoughtful planning process, including careful assessments of needs, resources, capacity, readiness, and contextual conditions—prior to selecting strategies—is essential to successful prevention efforts.

This data focus—collection, analysis, and use—is entrenched in each step of the SPF and continually informs the process. The formal assessment of contextual conditions, needs, resources, readiness, and capacity is used to identify priority issues in Step 1. In Step 2, data are shared to generate awareness, spur mobilization, and leverage resources. In Step 3, assessment data are used to drive the development of a strategic plan and guide the selection of evidence-based strategies. Data are used in Step 4 to inform (and, if necessary, revise) the implementation plan. And finally, data are collected to monitor progress toward outcomes, and findings are used to make adjustments and develop sustainable prevention efforts.

The Oklahoma State Epidemiological Outcomes Workgroup (SEOW) is a multidisciplinary workgroup whose members are connected to key decision-making and resource allocation bodies in the state. This workgroup, funded through a Federal grant from Substance Abuse and Mental Health Services Administration (SAMHSA)/Center for Substance Abuse and Prevention (CSAP), was established by the Oklahoma Department of Mental Health and Substance Abuse Services in 2006 and is patterned after the National Institute on Drug Abuse (NIDA) community epidemiological workgroup. Oklahoma's SEOW is charged with improving prevention assessment, planning, implementation, and monitoring efforts through data collection and analysis that accurately assesses the causes and consequences of the use of alcohol, tobacco, and other drugs and drives decisions concerning the effective and efficient use of prevention resources throughout the state.

To study the nature and extent of the problem of alcohol, tobacco, and other drug use in Oklahoma, the state's SEOW utilized the CSAP model of consumption and consequence constructs and indicators. Table 1 provides a complete listing of alcohol, tobacco, and illicit and prescription drug consumption and consequence constructs. For each construct, one or more identifiable indicators (measures) were used to quantify consumption and substance-related consequences. Unlike the underlying constructs, these indicators are precisely defined and determined by specific data sources. Thus, while "alcohol-related mortality" is a relevant construct for monitoring trends of an important consequence of use, it does not provide a precise definition of how this construct can be measured. However, a number of indicators do provide specific measures of this construct (e.g., annual incidence rate of deaths attributable to alcohol-related chronic liver disease, suicide, or crash fatalities).

The Center for Substance Abuse and Prevention (CSAP) recommendations were not available for prescription drugs, so Oklahoma used the same data sources CSAP recommended for the other constructs and indicators.

**Table 1. Alcohol, Tobacco, Illicit Drugs, and Prescription Drug Consumption and Consequence Constructs**

	<b>Alcohol</b>	<b>Tobacco</b>	<b>Illicit Drugs</b>	<b>Prescription Drugs</b>
<b>Consumption</b>	<ul style="list-style-type: none"> <li>• Current use</li> <li>• Current binge drinking</li> <li>• Heavy drinking</li> <li>• Age of initial use</li> <li>• Drinking and driving</li> <li>• Alcohol use during pregnancy</li> <li>• Apparent per capita alcohol</li> </ul>	<ul style="list-style-type: none"> <li>• Current use</li> <li>• Age of initial use</li> <li>• Tobacco use during pregnancy</li> <li>• Total cigarette use consumption per capita</li> </ul>	<ul style="list-style-type: none"> <li>• Current use</li> <li>• Lifetime use</li> <li>• Age of initial use</li> </ul>	<ul style="list-style-type: none"> <li>• Current use</li> </ul>
<b>Consequence</b>	<ul style="list-style-type: none"> <li>• Alcohol-related mortality</li> <li>• Alcohol-related motor vehicle crashes</li> <li>• Alcohol-related Crime</li> <li>• Dependence or abuse</li> </ul>	<ul style="list-style-type: none"> <li>• Tobacco-related mortality</li> </ul>	<ul style="list-style-type: none"> <li>• Illicit drug-related mortality</li> <li>• Illicit drug-related crime</li> <li>• Dependence or abuse</li> </ul>	<ul style="list-style-type: none"> <li>• Prescription opioid-related mortality</li> </ul>

The SEOW required data indicators for each substance to be readily available and accessible, with the measure available in disaggregated form at the State or lower geographic level. The method or means of collecting and organizing the data also had to be consistent over time; if for any reason the method of measurement had changed, reliable data had to be available to allow adjustment for differences resulting from data collection changes. In addition, research-based evidence had to support that the indicator accurately measured the specific construct and yielded a true representation of the phenomenon at the time of assessment, with data collected—preferably on an annual, or at minimum, a biennial basis—for the preceding 3 to 5 years. And each indicator had to be sufficiently sensitive to detect change over time that might be associated with changes in alcohol, tobacco, or illicit drug use.

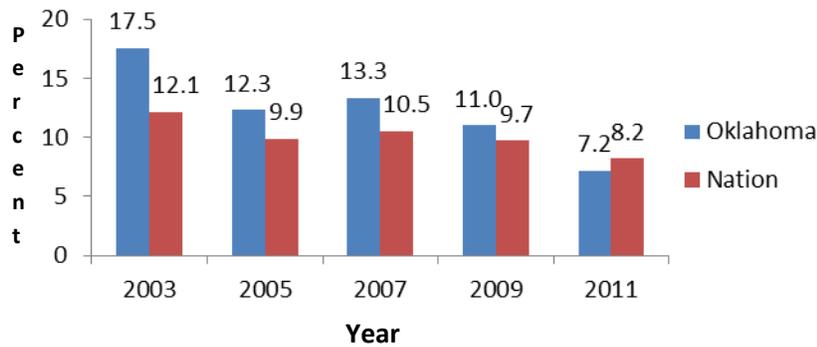
### **Alcohol Consumption**

Since 2003, alcohol consumption by Oklahoma youth has decreased among several indicators, including: current consumption, binge drinking, lifetime consumption, drinking and riding, and drinking and driving. According to Oklahoma’s Youth Risk Behavior Survey (YRBS), in 2011, 38.3 percent of students in grades 9–12 reported current alcohol consumption, which has been decreasing since 2003.<sup>[1]</sup> The National Survey on Drug Use and Health (NSDUH) for the population aged 12 and older showed 42.5 percent of respondents were current drinkers in 2011. NSDUH data from 2011 indicated 38.2 percent of 18- to 25-year-olds and 7.0 percent of 12- to 17-year-olds were binge drinkers. YRBS data also showed 23.3 percent of adolescents were binge drinkers at the time of the survey.<sup>[1,3]</sup>

The 2011 YRBS showed 19.4 percent of Oklahoma students in grades 9–12 reported early initiation of alcohol; a continued indication of a steady decline in that behavior since the 2003 YRBS report of 26.8 percent. Although these indicators are trending in the right direction, still 71.0 percent of YRBS respondents reported they had consumed alcohol on at least one day of their life.<sup>[1]</sup>

Adolescent drinking and driving is also decreasing. Data from the 2011 YRBS show there has been a significantly significant decrease since 2003 in youth riding with a driver who had been drinking and youth who drove while drinking.<sup>[1]</sup>

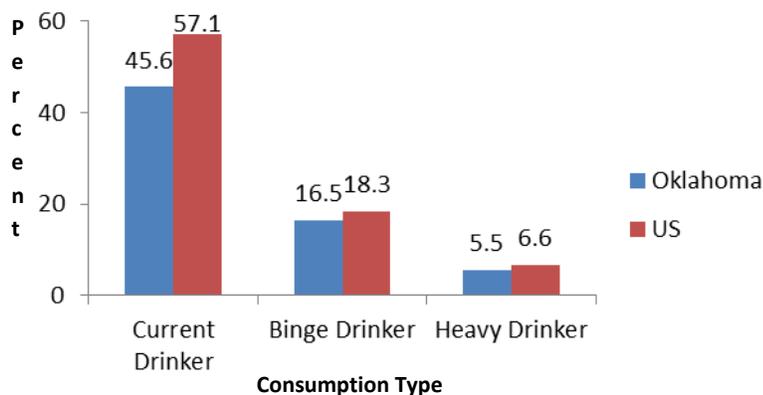
**Figure 1. YRBS 2003–2011 Percentage of Students in Grades 9–12 Who Reported Driving When They Had Been Drinking**



Indicators from the 2011 Behavioral Risk Factor Surveillance System (BRFSS)\* show Oklahoma is lower than the national average in current alcohol consumption, heavy consumption, and binge drinking among adults. In 2011, 45.6 percent of Oklahoma adults reported current alcohol consumption compared to the national average of 57.1 percent. <sup>[2]</sup>

\* The BRFSS 2011 prevalence data should be considered a baseline year for data analysis and is not directly comparable to previous years of BRFSS data because of the changes in weighting methodology and the addition of the cell phone sampling frame, therefore no trend data is available.

**Figure 2. BRFSS 2011 Alcohol Consumption Categories**

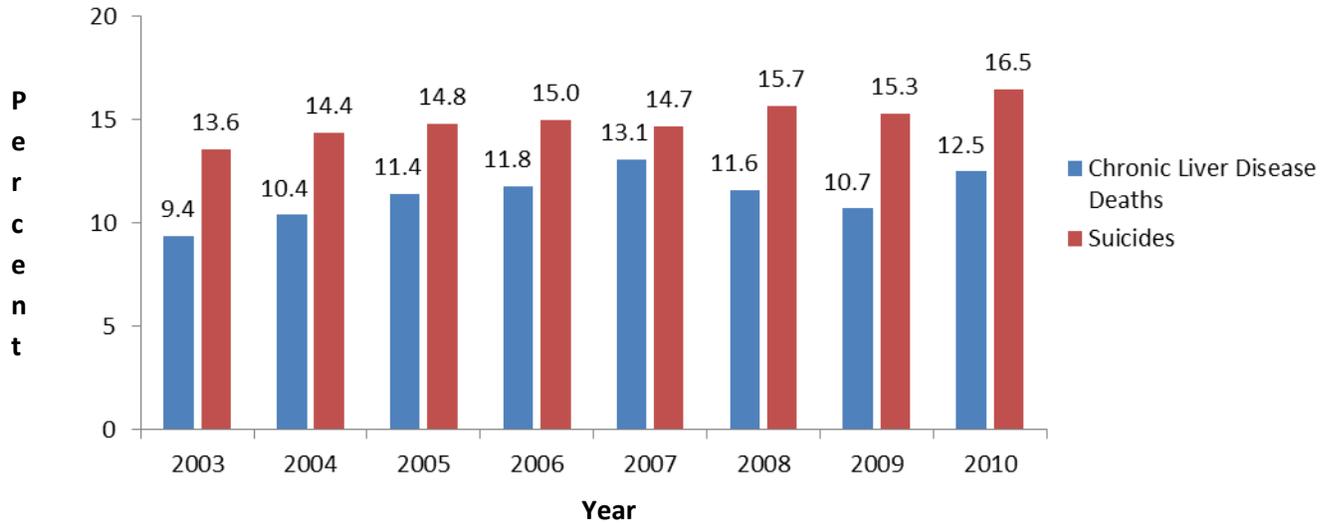


Data from the Pregnancy Risk Assessment Monitoring Survey (PRAMS) show that alcohol use among pregnant women has increased in Oklahoma since 2003 when 2.5 percent of pregnant women had consumed alcohol during the last 3 months of their pregnancy. This percentage peaked in 2008 when 6.1 percent of pregnant women reported this behavior. In 2009, the percentage was 4.8. <sup>[4]</sup>

### Alcohol Consequences

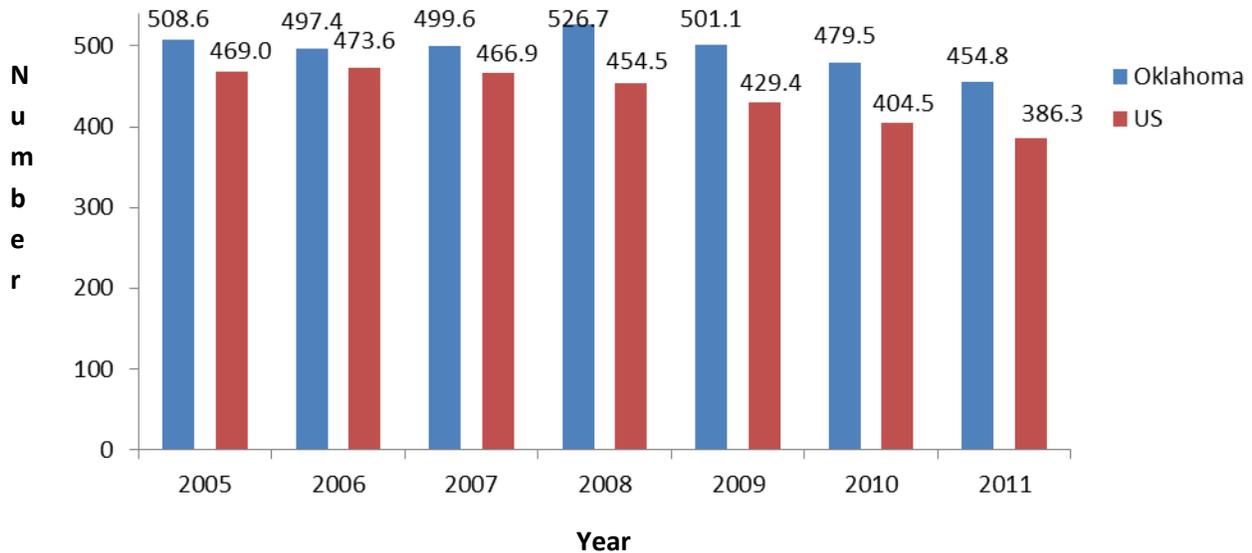
Oklahoma is consistently above the national average in alcohol-related mortality. Long-term alcohol consumption is associated with chronic liver disease and the relationship between alcohol use and suicide is also well documented, according to CSAP. Both chronic liver deaths and suicide deaths have been on the rise in Oklahoma since 2003. <sup>[5]</sup>

**Figure 3. National Vital Statistics System (NVSS) 2003-2011 Age-Adjusted Oklahoma Chronic Liver Disease and Suicide Mortality Data Deaths per 100,000**



According to the Uniform Crime Report, the rate of crimes related to alcohol use has decreased in Oklahoma since 2005; however, Oklahoma has consistently higher rates than the United States. Crimes related to alcohol use include aggravated assaults, sexual assaults, and robberies.<sup>[6]</sup>

**Figure 4. UCR 2005-2011 Rate of Violent Crimes Reported to Police Per 100,000 Population**



Fatality Analysis Reporting System (FARS) data for Oklahoma show that there has been an increase in the percentage of fatal crashes involving an alcohol-impaired driver. In 2007, Oklahoma's alcohol-

impaired driver fatality percent was 31.7, and in 2010, it was 37.1; surpassing the national percentage of 36.3.<sup>[7]\*</sup>

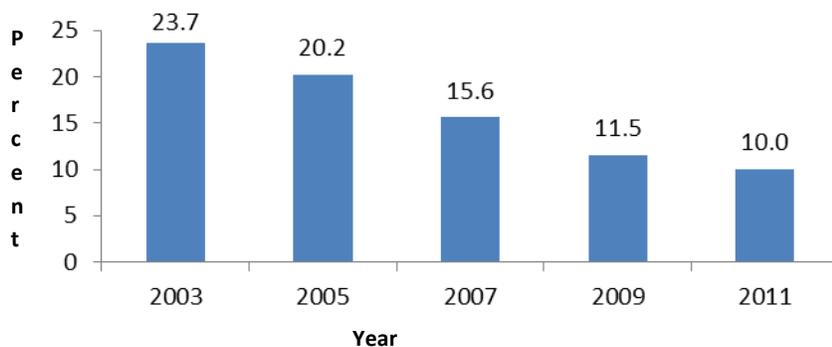
\* In August 2011, starting with 2009 data, the Federal Highway Administration implemented an enhanced methodology for estimating registered vehicles and vehicle miles traveled by vehicle type. In addition, revisions were made to 2007 and 2008 data using this enhanced methodology. As a result of the Federal Highway Administration's changes, involvement rates may differ, and in some cases significantly, from previously published rates.

### **Tobacco Consumption**

According to the 2011 NSDUH, 29.0 percent of Oklahomans aged 12 and older were current cigarette smokers, which was above the national average of 22.5 percent. Data from the 2011 BRFSS also showed Oklahomans' daily cigarette smoking exceeded that of the United States population as a whole (26.1 percent vs. 21.2 percent, respectively).<sup>[2,3]</sup>

The YRBS indicates tobacco use among adolescents has been falling in Oklahoma since 2003, with students who smoked their first cigarette before the age of 13 decreasing by more than half.<sup>[1]</sup>

**Figure 5. YRBS 2003–2011 Percentage of Oklahoma Students in Grades 9–12 Who Reported Smoking a Whole Cigarette for the First Time Before the Age of 13.**

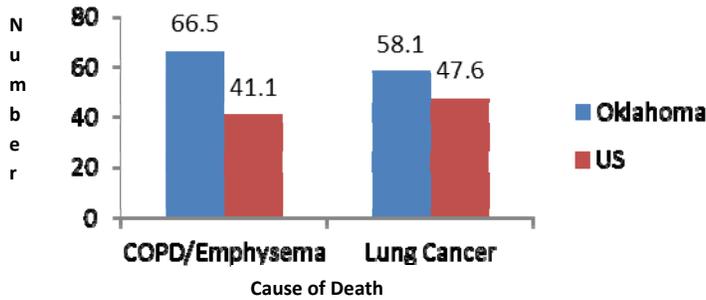


Smoking among pregnant women increased during 2003-2007, according to PRAMS, but decreased from 2007-2008. In 2003, 16.2 percent of pregnant women reported they had smoked during the last 3 months of their pregnancy, compared to 21.3 percent in 2007 and 16.9 percent in 2008.

### **Tobacco Consequences**

National Vital Statistics System (NVSS) data show mortality rates for Oklahoma from both chronic obstructive pulmonary disease (COPD) and emphysema are above the national average.<sup>[5]</sup>

**Figure 6. NVSS 2010 Age-Adjusted COPD/Emphysema and Lung Cancer Deaths Per 100,000**

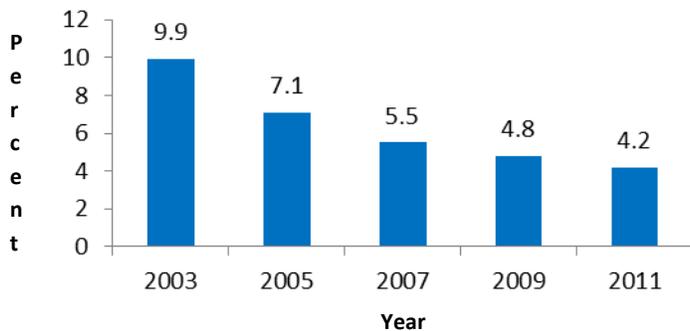


### Illicit Drug Consumption

The YRBS showed current marijuana use decreased from 22.0 percent in 2003 to 15.9 percent in 2007. In 2009, the percentage was 17.2 percent and 19.1 percent in 2011.<sup>[1]</sup> Data from NSDUH show the same trend. In 2009, 14.2 percent of adults aged 18 to 25 years old reported using marijuana in the past year compared to 24.7 percent in 2011.<sup>[3]</sup>

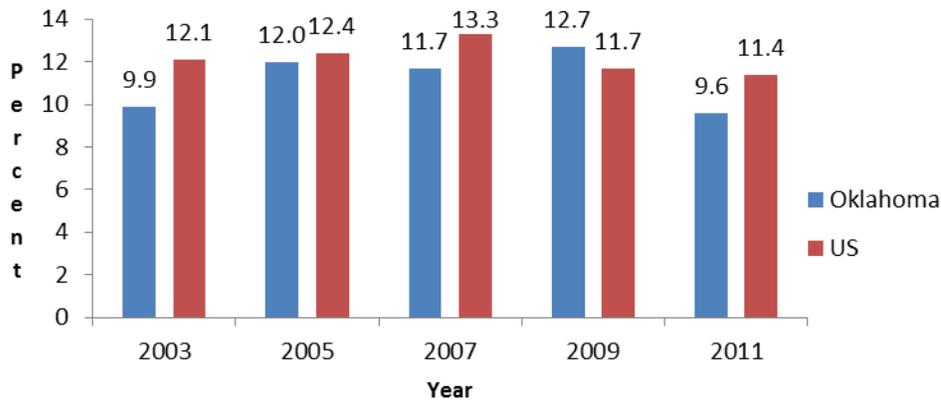
Youth methamphetamine use continues to decline in Oklahoma according to the YRBS. Since 2003, the percentage of youth methamphetamine users has dropped by more than half.<sup>[1]</sup>

**Figure 7. YRBS 2003-2011 Percentage of Oklahoma Students in Grades 9–12 Who Reported Ever Using Methamphetamines**



Since beginning in 2003, the YRBS indicates a statistically significant decrease in cocaine use (9.2 percent in 2003 and 5.2 percent in 2011). Students reported use of steroid pills and shots without a doctor’s prescription had been declining, but rose in 2011. In 2009 the percent was 2.1; in 2011, it was 5.3.<sup>[1]</sup> Although initially below the national average in 2003–2007, adolescent use of inhalants was on a steady ascent. In 2009, 12.7 percent of Oklahoma adolescents reported inhalant use, compared to the national average of 11.7 percent. Although, it was not lower at a statistically significant level, the 2011 YRBS showed inhalant use in Oklahoma to be 9.6 percent.<sup>[1]</sup>

**Figure 8. 2003-2009 YRBS Percent of Students in Grades 9–12 Who Reported Ever Using Any Form of Inhalant**



### Illicit Drug Consequences

The latest NVSS data show that Oklahoma exceeds the nation in the rate of deaths due to drug-related behavior. In 2010, the rate per 100,000 was 19.6 for Oklahoma and 12.4 for the United States.<sup>[5]</sup>

The rate of drug-related crimes (larceny, burglary, motor vehicle theft) in Oklahoma also outstripped that of the nation; in 2011, Oklahoma reported 3,356.2 drug-related crimes per 100,000 population compared to the national rate of 2,908.7 per 100,000. However, Oklahoma's 2011 rate does represent a decline from 3526.4.0 drug-related crimes per 100,000 population in 2007.<sup>[6]</sup>

### Prescription Drug Consumption

According to data from the 2010 NSDUH, Oklahoma ranked number one nationally for the nonmedical use of pain relievers in the past year for all age categories: 12 years and older, 12-17 years, 18-25 years and 26 and older. Oklahoma has been above the national average for the percentage of residents reporting nonmedical use of pain relievers since 2004.<sup>[3]</sup>

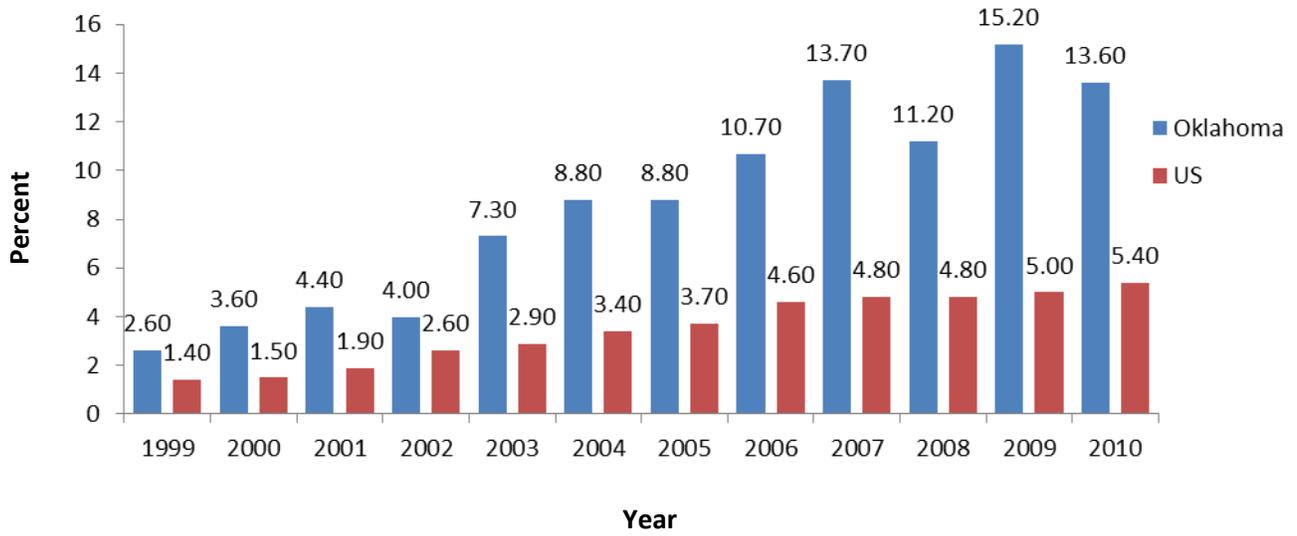
### Prescription Drug Consequences

Although hospital inpatient discharge data were not indicators used in scoring, they were presented to the State Epidemiological Outcomes Workgroup (SEOW) due to the paucity of indicators regarding prescription drug uses. In Oklahoma, inpatient discharges with a diagnosis code of poisoning by opiates and related narcotics increased 91.0 percent from 2003-2008. Although this is a general category and not exclusive to prescription opioid pain relievers, heroin is the only illicit opiate included.<sup>[8]\*</sup>

NVSS data show a 423.0 percent increase in opioid pain reliever-related deaths of all intents in Oklahoma since 1999. In 2010 (the latest data), Oklahoma ranked 3<sup>rd</sup> in the nation for opioid pain reliever-related overdose deaths, exceeding the national average by 152.0 percent.<sup>[9]</sup>

\*Most recent data available

**Figure 9. NVSS 1999-2010 Opioid Pain Reliever-Related Overdose Deaths Per 100,000 Population- All Intents**



## Epidemiological Data Sources

**Alcohol Epidemiologic Data System (AEDS)** • AEDS is responsible for maintaining, and extending an alcohol-related epidemiologic databank. AEDS also compiles the Alcohol Epidemiologic Data Directory which is a current listing of surveys and other relevant data suitable for epidemiologic research on alcohol.

**Behavioral Risk Factor Surveillance Survey (BRFSS)** • Established in 1984 by the Centers for Disease Control and Prevention (CDC), the Behavioral Risk Factor Surveillance System (BRFSS) is a state-based system of health surveys that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. For many states, the BRFSS is the only available source of timely, accurate data on health-related behaviors. Oklahoma has participated in BRFSS since 1995. This report focused on 2007 BRFSS data to give a current picture of substance use/abuse in Oklahoma. <http://www.cdc.gov/brfss/about.htm>

**Bureau of Justice** • The Bureau of Justice Statistics was first established on December 27, 1979 under the Justice Systems Improvement Act of 1979. The Bureau of Justice Statistics (BJS) is a component of the Office of Justice Programs in the U.S. Department of Justice.

**Center for Disease Control and Prevention (CDC)** • The CDC, a part of the U.S. Department of Health and Human Services, is the primary Federal agency for conducting and supporting public health activities in the United States. CDC's focus is not only on scientific excellence but also on the essential spirit that is CDC – to protect the health of all people. CDC keeps humanity at the forefront of its mission to ensure health protection through promotion, prevention, and preparedness.

**Fatal Analysis Reporting System (FARS)** • FARS contains data on all fatal traffic crashes within the 50 states, the District of Columbia, and Puerto Rico. The data system was conceived, designed, and developed by the National Center for Statistics and Analysis (NCSA) to assist the traffic safety community in identifying traffic safety problems, developing and implementing vehicle and driver countermeasures, and evaluating motor vehicle safety standards and highway safety initiatives.

**National Survey on Drug Use and Health (NSDUH)** • The National Survey on Drug Use and Health (NSDUH) provides annual data on drug use in the United States. The NSDUH is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), an agency of the U.S. Public Health Service and a part of the Department of Health and Human Services (DHHS). The survey provides yearly national and state-level estimates of alcohol, tobacco, illicit drug, and non-medical prescription drug use. Other health-related questions also appear from year to year, including questions about mental health. The NSDUH findings were used to evaluate substance use/abuse from the age of 12. This survey is not a school based survey so it provides a different perspective than the YRBS for youth. <https://nsduhweb.rti.org>

**National Vital Statistics System (NVSS)** • 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 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.

**Oklahoma Bureau of Narcotics and Dangerous Drugs (OBND)** • The Oklahoma State Bureau of Narcotics and Dangerous Drugs Control is a law enforcement agency with a goal of minimizing the abuse of controlled substances through law enforcement measures directed primarily at drug trafficking, illicit drug manufacturing, and major suppliers of illicit drugs.

**Oklahoma Department of Corrections (ODOC)** • Following the enacting of the Oklahoma Corrections Act of 1967, the new Department of Corrections was created on July 1, 1967. The ODOC is a network of facilities comprised of 17 institutions, seven Community Corrections Centers, and 15 Community Work Centers. The incarcerated women data was obtained from the ODOC.

**Oklahoma Department of Mental Health and Substance Abuse Services (ODMHSAS)** • The ODMHSAS was established in 1953 and continues to evolve to meet the needs of all Oklahomans. Collaborating with leaders from multiple state agencies, advocacy organizations, consumers and family members, providers, community leaders and elected officials, the way has been paved for meaningful mental health and substance abuse services transformation in Oklahoma. The ODMHSAS is responsible for providing services to Oklahomans who are affected by mental illness and substance abuse.

**Oklahoma Prevention Needs Assessment Survey (OPNA)** • The Oklahoma Prevention Needs Assessment is a paper/pencil survey administered in opposite years of the YRBS in schools to 6th, 8th, 10th and 12th grade students. The survey is designed to assess students' involvement in a specific set of problem behaviors, as well as their exposure to a set of scientifically validated risk and protective factors. In 2008, 60,720 students were surveyed from 686 schools across 74 of Oklahoma's 77 counties.\* The major limitation of this survey is that it is not a random sample; schools choose whether or not they participate, making it a convenience sample.

**Oklahoma State Bureau of Investigation (OSBI)** • The Oklahoma State Bureau of Investigation Uniform Crime Reporting (UCR) Program is part of a nationwide, cooperative statistical effort.

**Oklahoma State Department of Health (OSDH)** • The OSDH is a department of the government of Oklahoma responsible for protecting the health of all Oklahomans and providing other essential human services and through its system of local health services delivery, is ultimately responsible for protecting and improving the public's health status through strategies that focus on preventing disease. The OSDH serves as the primary public health protection agency in the state.

**Oklahoma Tax Commission** • Since 1931, the Oklahoma Tax Commission has held the responsibility of the collection and administration of taxes, licenses and fees that impact every Oklahoman. Under the direction of the state legislature, the Tax Commission manages not only the collection of taxes and fees, but also the distribution and apportionment of revenues to various state funds. The collected revenues fuel such state projects as education, transportation, recreation, social welfare and a myriad of other services.

**Oklahoma Violent Death Reporting System (OKVDRS)** • Oklahoma and 16 other states (Massachusetts, Maryland, New Jersey, Oregon, South Carolina, North Carolina, Virginia, Alaska, Colorado, Georgia, Wisconsin, Rhode Island, Kentucky, Utah, New Mexico and California) participate in the National Violent Death Reporting System. Violent deaths include homicides, suicides, deaths from legal intervention, unintentional firearm deaths, deaths of undetermined manner and deaths from acts of terrorism. Data for OKVDRS are collected from death certificates, medical examiner reports, police reports, supplemental homicide reports and crime labs. Standardized methodology and coding are used to collect the data and enter into a database that is housed at the Oklahoma State Department of Health (OSDH). The OSDH partners with the Oklahoma State Bureau of Investigation and the Oklahoma Medical Examiner's Office to collect the data.

**Oklahoma Youth Tobacco Survey (OYTS)** • Designed to provide comprehensive data for planning and evaluating progress toward reducing tobacco use among youth. Items measured as part of the OYTS survey include correlates of tobacco use such as demographics, minors' access to tobacco, and exposure to secondhand smoke. It provides data representative of Oklahoma middle school and high school youth's tobacco-related beliefs, attitudes and behaviors, and exposure to pro- and anti-tobacco influences such as curricula and media. The data can be compared to results from the National Youth Tobacco Survey and results from other states.

**Pacific Institute for Research and Evaluation (PIRE)** • PIRE is one of the Nation's preeminent independent, nonprofit organizations focusing on individual and social problems associated with the use of alcohol and other drugs. PIRE is dedicated to merging scientific knowledge and proven practice to create solutions that improve the health, safety, and well-being of individuals, communities, nations, and the world.

**Pregnancy Risk Assessment Monitoring System (PRAMS)** • PRAMS was initiated in 1987 with a goal to improve the health of mothers and infants by reducing adverse outcomes such as low birth weight, infant mortality and morbidity, and maternal morbidity. PRAMS provides state-specific data for planning and assessing health programs and for describing maternal experiences that may contribute to maternal and infant health.

**Smoking Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)** • SAMMEC is an internet-based, computational application. SAMMEC calculates annual state- and national-level smoking-attributable deaths and years of potential life lost for adults and infants in the United States. The Adult application also calculates medical expenditures and productivity costs among adults. Likewise, Maternal and Child Health (MCH) SAMMEC estimates annual state- and national-level smoking-attributable deaths and years of potential life lost for infants.

**Substance Abuse and Mental Health Services Administration (SAMHSA)** • The Substance Abuse and Mental Health Services Administration (SAMHSA), part of the U.S. Department of Health and Human Services (HHS), focuses attention, programs and funding on promoting a life in the community with jobs, homes and meaningful relationships with family and friends for people with or at risk for mental or

substance use disorders. The Agency is achieving that vision through an action-oriented, measurable mission of building resilience and facilitating recovery.

**The Uniform Crime Report (UCR)** • The UCR was conceived, developed, and implemented by law enforcement for the express purpose of serving as a tool for operational and administrative purposes. Under the auspices of the International Association of Chiefs of Police, the UCR Program was developed in 1930. Prior to that date, no comprehensive system of crime information on a national scale existed. The Oklahoma State Bureau of Investigation assumed the statewide administration of the UCR Program on September 1, 1973. Statistical information was collected and compiled through the year 2007 with a comparative analysis of the years 2006 and 2005.

**United States Census Bureau** • The Census Bureau serves as the leading source of quality data about the Nation's people and economy. The bureau of the Commerce Department, responsible for taking the census, provides demographic information and analyses about the population of the United States. Census data was used for all Oklahoma demographics.  
<http://www.census.gov/main/www/aboutus.html>

**Youth Risk Factor Behavioral Survey (YRBS)** • The Youth Risk Behavior Surveillance System (YRBSS) monitors six categories of priority health-risk behaviors among youth and young adults, including behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infections; unhealthy dietary behaviors; and physical inactivity. YRBSS includes a national school-based survey conducted by CDC and state and local school-based surveys conducted by state and local education and health agencies. Oklahoma has participated in the YRBS since 2003.

## References

1. Centers for Disease Control and Prevention (CDC). *2003–2011 Youth Risk Behavior Survey*. Access: [www.cdc.gov/yrbss](http://www.cdc.gov/yrbss)
2. CDC. *Behavioral Risk Factor Surveillance System Survey Data [2003-2011]*. Atlanta, Georgia: CDC.
3. Substance Abuse and Mental Health Services Administration, Office of Applied Studies. *National Survey on Drug Use and Health, [2003–2007]*. Rockville, MD: SAMHSA/OAS.
4. CDC. *Pregnancy Risk Assessment Monitoring System [2003–2009]*. Access: <http://www.cdc.gov/prams/CPONDER.htm>
5. CDC. National Center for Health Statistics. Underlying Cause of Death 1999-2010 on CDC WONDER Online Database, released 2012.
6. U.S. Department of Justice, Federal Bureau of Investigation. *Uniform Crime Reporting Program Data, 2003–2009*.
7. National Highway Traffic Safety Administration. *Fatality Analysis Reporting System 2003–2008*. Washington, D.C.: Department of Transportation, National Highway Traffic Safety Administration.
8. Oklahoma State Department of Health, Health Care Information Division. *Oklahoma Hospital Inpatient Data 2003–2008. Hospitalizations associated with Opiates ICD9 Code 965.0*.
9. CDC. National Center for Health Statistics. Multiple Cause of Death 1999-2010 on CDC WONDER Online Database, released 2012