State Epidemiological Outcomes Workgroup

Alcohol, tobacco and illicit drug consumption and consequences in Oregon

2007 Executive summary

Initial Report of Oregon's State Epidemiological Outcomes Workgroup

DHS

Initial Report

of

Oregon's State Epidemiological Outcomes Workgroup

Prepared by:

Alcohol, Tobacco and Illicit Drug Consumption and Consequences in Oregon

Addictions and Mental Health Division
500 Summer Street NE
Salem, OR 97301-1118

To the reader,

This report is the Executive Summary for three epidemiological profiles on substance use in Oregon. The purpose of the Executive Summary is to present an overview of how substance use and its consequences were assessed and highlight what was learned in each profile.

The profile reports are the product of collaborative efforts of Oregon's State Epidemiological Outcomes Workgroup. The SEOW includes representatives of agencies that supply or use data regarding alcohol, tobacco or other drugs. Members represent federal, state, county and tribal government; research organizations and universities; Governor-appointed committees; and addictions-related professional organizations.

The purpose of the epidemiological profiles is to summarize the nature, magnitude and distribution of alcohol, tobacco and illicit drug use and related consequences. Compilation of the information presented in each profile is one of a series of steps to promote data-driven decision-making for prevention efforts in Oregon. Epidemiological profiles are:

- Alcohol Consumption and Consequences in Oregon
- Tobacco Consumption and Consequences in Oregon
- Illicit Drug Consumption and Consequences in Oregon

Each profile is written as a stand-alone document. Additional information can be obtained by reviewing individual profiles. The appendices in each report include data tables that detail trend data for the indicators reviewed by the SEOW.

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For more information: If you have questions about this document or any of the Epidemiological Profiles, contact Geralyn Brennan, 503-947-2319 or e-mail *geralyn.brennan@state.or.us.*

This document can be obtained in an alternate format for individuals with disabilities upon request by contacting: Geralyn Brennan, 503-947-2319. Available formats are: large print, Braille, audio tape recording, electronic format and oral presentation.

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Introduction

In March 2006, the State of Oregon received funding from the Federal Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Prevention to establish a state epidemiological outcomes workgroup (SEOW). The mission of the SEOW is to facilitate the use of data in policymaking and program decision-making for substance abuse prevention at the state, county, tribal and community level.

The Department of Human Services (DHS) substance abuse prevention programs serve people who have not been diagnosed with a substance abuse disorder. Services may target an entire population (Universal Prevention), specific groups of people who are at above-average risk of involvement with alcohol, tobacco or other substances (Selective Prevention), or specific individuals who show signs of involvement with addictive substances but who have not been diagnosed with abuse or dependence (Indicated Prevention).

In the first year of this three-year project the workgroup focused on data about the nature and magnitude of substance use and related consequences at the state level. This executive summary presents key findings from three epidemiological profiles:

- Alcohol Consumption and Consequences in Oregon;
- Tobacco Consumption and Consequences in Oregon; and
- Illicit Drug Consumption and Consequences in Oregon.

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About the State Epidemiological Outcomes Workgroup

In spring 2006, the Oregon Department of Human Services, Addictions and Mental Health Division invited a diverse group of stakeholders to participate in the SEOW. Representatives are:

- Agencies that supply or use data regarding alcohol, tobacco or illicit drugs;
- State, county and tribal substance-abuse prevention coordinators;
- Research organizations and universities;
- Governor-appointed councils and committees; and
- Substance-related professional associations.

The SEOW is responsible for compiling information, analyzing and reporting substance use incidence, prevalence and related data valuable for decision-making regarding addictions-related prevention services by DHS. Epidemiological profiles and other work products will be used to:

- Inform the development of DHS prevention plans based on identified trends and priorities;
- Provide grants to communities based on profile data;
- Provide standardized indicator data that can be used for local planning and outcome measurement;
- Provide professionally created graphics and documents that support prevention efforts statewide;
- Provide data that is brief, precise and logical; and
- Increase information available about the adult population.

About the Epidemiological Profiles

Each profile is a stand-alone document providing an assessment of trend data on the consumption and consequences related to alcohol, tobacco and illicit drugs. Substance-related consequences include adverse social, health and safety impacts associated with use. Although a specific substance may not be the single cause of the consequence, indicators were included only if there was strong research evidence supporting a link to alcohol, tobacco and/or illicit drug use as a contributing factor.

Consumption indicators were included if they were sensitive enough to be effective in monitoring real changes in use over time.

Indicators based on the provision of services or enforcement of laws was excluded because funding, policy and other administrative or institutional factors can heavily influence year-to-year results. As a result, these service or response indicators are a more accurate reflection of the resources devoted to addressing a problem rather than the underlying magnitude of the problem itself.

Methodology

The workgroup began by compiling an inventory of data sources and indicators related to substance use. The SEOW chose to develop epidemiological profiles that build on data and reports currently being produced with existing state resources. Indicators that met most of the criteria listed below were prioritized for inclusion:

- Indicators are valid measures yielding a true snapshot of the phenomenon at the time of assessment.
- At least three years of data are reported and, when available, data could be compiled for a 10-year period beginning with 1996.
- Current infrastructure is in place to support regular data collection in the future.
- Data is readily available and accessible to the public, preferably posted online.
- The method or means of collecting, organizing and presenting the indicator data has been consistent over time.
- Disaggregated data is available for the indicator based on one or more of the following: geography, age, gender and/or race/ethnicity.

Through this process a set of data sources and indicators was identified. Each profile is organized around a set of constructs that may include indicators from one or more data sources. Table 1 below lists the sources for consequence and consumption data associated with each construct. A complete list of indicators for alcohol, tobacco and illicit drugs can be found in Appendices A, B and C, respectively.

Table 1. Constructs and data sources

Consequence constructs	Data sources
Mortality	• Fatality Analysis Reporting System • Oregon Medical Examiners Annual Reports • Oregon Vital Statistics Annual Reports
Abuse and dependence	• National Survey on Drug Use and Health
Crime and criminal justice	• National Survey on Drug Use and Health • Oregon Behavioral Risk Factor Surveillance System Reports • Oregon Healthy Teens Survey Reports • Oregon State Police Annual Crime Reports
Consumption constructs	**Data sources**
Per capita consumption	• Alcohol Epidemiologic Data System • Oregon Department of Revenue Cigarette Tax Receipts • Oregon Liquor Control Commission
Adult behavior • Age of initial use • Current, 30-day use • Past year use • Use during pregnancy	• National Survey on Drug Use and Health • Oregon Behavioral Risk Factor Surveillance System Reports • Oregon Vital Statistics Annual Reports • Pregnancy Risk Assessment Monitoring System
Youth behavior • Age of initial use • Current, 30-day use • Lifetime use	• National Survey on Drug Use and Health • Oregon Healthy Teens Survey Reports

Examining and assessing the data

In each profile, the SEOW examines data about preventable consequences first and then focuses on indicators that have a causal relationship. Starting with an examination of consequences helps focus the profiles on issues that are meaningful to decision makers and the public. In this way prevention efforts can preferentially target the substance use behaviors that lead to negative consequences.

Whenever indicator data could be disaggregated, the SEOW examined the distribution of substance use and related consequences across the lifespan and between genders. The profiles use easy-to-understand approaches in identifying and assessing patterns. Findings are described based on:

- The magnitude or size of the of the problems;
- Changes over time that reveal improving or worsening trends;
- Comparison of Oregon results to those of the nation and comparison of the direction of Oregon trends to the direction of U.S. trends;
- Differences in the magnitude of consequences and consumption through subgroup analyses based on age and gender; and
- Consequences or consumption patterns that have the potential to more severely affect individuals and society.

Limitations encountered

The SEOW encountered a number of limitations in developing the epidemiological profiles, mostly due to the rural nature of parts of the state.

Oregon is a Pacific Northwest state with 36 counties and 3.6 million residents. About a quarter of the population can be found in the three counties that are part of the Portland metropolitan area. Many people live in rural or frontier counties. In rural areas data is commonly limited due to small sample size or lack of data to report.

- Rates and percentages based on full population counts can be subject to big fluctuations from random variation. As a result of the small numbers of deaths in rural counties, the Center for Health Statistics and Fatality Analysis Report Systems provide limited county-level data. For the initial reports, the SEOW decided to postpone county-level data analyses until the data for the initial set of indicators was compiled.

- Since Oregon is 85 percent white, surveys require considerable over sampling of minority populations to get meaningful results with reasonable confidence intervals. Because the accuracy, stability and reliability of survey estimates are related to the size of the sample from which they are estimated, analyses based on race and ethnicity were not attempted for the initial report.
- Even though the Oregon Healthy Teens Survey is widely used, combining two years of data produces reports for rural counties. Even then, data from multiple frontier counties must be combined and reported as a region.
- Oregon is lacking adequate adult survey data at the county level. The Center for Health Statistics recently combined five years of data to generate county-level reports. It is necessary to use a much larger sample size for the Oregon Behavioral Risk Factor Survey before adult trend data is available.

Some consequence and consumption data was not readily available or simply not collected at all:

- The National Survey on Drug Use and Health was the only source of adult illicit drug consumption data. The Oregon Healthy Teens survey provides a fuller picture of eighth- and 11th-grade students' drug use, but there are no questions regarding marijuana or other illicit drug use on the Oregon Behavioral Risk Factor Survey, so there are data voids for adult illicit drug use.
- Emergency department data would be valuable in showing the impact of substance abuse, primarily alcohol use, on health and health care costs. And although emergency department data is collected, it did not meet the SEOW criteria of being consistently analyzed, readily accessible and reported for at least three years. Thus there was no well-defined indicator available to use in the initial analysis and profiles.

Executive Summary

What we learned about alcohol

Alcohol is the most widely used addictive substance in Oregon. Oregonians consume more alcohol per capita than the nation and the Oregon Behavioral Risk Factor Surveillance System shows adults older than age 21 exhibit higher rates of current alcohol use and heavy drinking.

Excessive drinking in the form of heavy drinking or binge drinking is associated with numerous health problems, including chronic diseases of the liver, various cancers, high blood pressure and psychological disorders. As might be predicted by state consumption rates, vital statistics data shows Oregon's rate of death from alcohol-related disease is higher than the nation's.

Research has shown that youth who use alcohol before age 15 are four times more likely to become alcohol-dependent than adults who begin drinking at age 21. Since 1999, America's youth have seen declining rates of alcohol use. Unfortunately, Oregon's youth have not experienced these declines. Oregon Healthy Teens survey data reveals worsening trends among eighth-grade youth.

Consequences of alcohol use in Oregon

- Alcohol-induced deaths are one of the five leading causes of death for men and women 35 to 64 years.
- Based on age-adjusted death rates, Oregon ranked fourth in the nation for alcohol-induced deaths (7.0 deaths per 100,000 for the U.S.; 13.5 deaths per 100,000 for Oregon). More than twice as many males die from alcohol-induced deaths as females every year (8.6 females per 100,000 vs. 20.0 males per 100,000).

- In 2004, the life expectancy for Oregonians was 78 years; for persons dying of alcohol-induced deaths, the median age of death was 55 years.
    - The average life expectancy for women in Oregon was 80 years. On average a woman who died of alcohol-induced disease would die at 53, a loss of 27 years of life.
    - The average life expectancy for Oregon men was 76 years. On average a man who died of alcohol-induced disease would die at 56, a loss of 20 years of life.
- Deaths due to chronic alcoholic liver disease increased 56 percent from 5.4 deaths per 100,000 in 1999 to 8.4 deaths per 100,000 in 2004.
    - Males have much higher rates of death than females, 10.6 per 100,000 in 2004.
    - However, the rate of chronic alcoholic liver disease doubled for females in five years (2.9 per 100,000 in 1999 to 6.3 per 100,000 in 2004).
- Based on the 2005 results of the National Survey on Drug Use and Health, about 234,000 Oregonians suffered from alcohol abuse or dependence.
    - More than one out of 20 youth ages 12 to 17 (about 19,000 persons annually);
    - At least 1 out of 6 young adults 18 to 25 years old (about 71,000 persons annually); and
    - Approximately 144,000 adults 26 or older meet DSM-IV criteria for alcohol abuse or dependence.
- Since 1997 the Oregon Healthy Teens survey has shown a steady decline in the percentage of 11th-grade students who report driving a car after they had been drinking alcohol (13.6 percent in 1997; 8.2 percent in 2006). The decrease has been largest for boys (15.7 percent in 1997; 8.7 percent in 2006). In 2006 11th-grade students in Oregon had considerably lower rates of drinking and driving than the U.S. average (8.2 percent vs. 12.1 percent).
- The Oregon Behavioral Risk Factor Surveillance System shows adult patterns of drinking and driving have not changed significantly since the mid-1990s. In 2004, 3.5 percent of Oregon adults reported that sometime in the past month they drove after perhaps drinking too much. Men were twice as likely to report drinking and

driving as women (4.7 percent vs. 2.1 percent). Ten percent of adults 18 to 24 years reported they drove after drinking (males, 11.8 percent; females, 7.1 percent).

- In the past 10 years the fatal motor vehicle crash rate decreased from 7.0 per 100,000 persons in 1997 to 4.5 per 100,000 persons in 2003. Despite these declines, the percentage of motor vehicle fatalities that involve drivers who were legally drunk has changed little. In 2005, 33.8 percent of Oregon's motor vehicle fatalities involved alcohol.

Alcohol consumption in Oregon

In 2003, approximately 77,369,146 gallons of beer, 10,557,869 gallons of wine and 4,831,713 gallons of spirits were sold. Per capita alcohol consumption is higher in Oregon than in the nation.

Despite the fact that the National Minimum Drinking Age Law prohibits persons younger than 21 years of age from purchasing alcohol, a substantial portion of Oregon youth consume alcohol each month. Trends in alcohol use by youth in Oregon are not following national trends. Nationally, there has been a decrease in drinking by 11th-grade and eighth-grade students. This is not the case in Oregon.

- In 2005, the rate of past month alcohol use by Oregon's eighth-grade youth was 76 percent higher than that of the United States (30.1 percent versus 17.1 percent). Results from the 2006 Oregon Healthy Teens Survey show the increase continuing with 31.9 percent reporting drinking alcohol on one or more occasions in the past month.
- Females experienced the greatest increase. In 1999 the rate of past month alcohol use was 26.4 percent; in 2006 the rate increased to 33.9 percent.
- For eighth-grade males the rates went from 26.8 percent in 1999 to 29.9 percent in 2006.
- The rate of past month alcohol use by 11th-grade students went from 45.2 percent in 1999 to 47.4 percent in 2005. However, in 2006 OREGON HEALTHY TEENS SURVEY results declined with 43.9 percent reporting current alcohol use.
- In 2006, about one of every four 11th-grade youth and one of every eight eighth-grade youth in Oregon reported binge alcohol use, that is, having five or more drinks of alcohol within a couple hours.

- The most recent OHT results show an increase in eighth-grade binge drinking from 11.5 percent in 2005 to 13.3 percent in 2006; but a decline in 11th-grade binge alcohol use from 28.9 percent in 2005 to 24.9 percent in 2006.
- From 2004 through 2006, eighth-grade females reported higher rates of binge alcohol use. In 11th grade, males were more likely to binge drink.
- From 2001 to 2005, alcohol use declined for 18- to 20-year-olds. Current alcohol use went from 55.5 percent in 2001 to 34.2 percent in 2005; binge drinking declined from 27.0 percent in 2001 to 16.4 percent in 2005; heavy alcohol use went from 11.0 percent in 2001 to 4.8 percent in 2005.
- Oregon adults have higher rates of current alcohol use and heavy drinking than the nation for all age categories over 21 years.
- In 2005, Oregonians of all ages had higher rates of current alcohol use than the nation. About two-thirds of 21- to 54-year-olds drink alcohol on one or more occasions each month. Only adults 65 or older had past month alcohol use rates below 50 percent.
- Current alcohol use is consistently higher for males. In 2005, the rate of current alcohol use was 25 percent higher for males than females (65.0 percent versus 51.9 percent).
- From 1999 through 2005, alcohol use rates remained fairly steady for most age categories. The two exceptions are 21- to 29-year-olds and 55- to 64-year-olds.
- Current alcohol use rates for 21 to 29-year-olds declined 7.7 percent from 71.0 percent in 1999 to 65.5 percent in 2005.
- Over the same period, past month alcohol use rates increased 12.8 percent for 55- to 64-year-olds from 49.9 percent in 1999 to 56.3 percent in 2005.
- One in five adult males report binge drinking at least once each month. From 1999 through 2005, adult males were two to three times as likely as females to report drinking five or more drinks on one occasion in the past month. In 2005, the rate of binge alcohol use was 21.5 percent for males versus 6.7 percent for females.
- More than one of every 20 Oregon adults is a heavy drinker. Data on heavy alcohol use in Oregon shows that males and adults 21- to 29-years-old are more likely to be heavy users of alcohol.
- From 2001 through 2005, adult rates of heavy drinking have changed little overall. However, there have been distinct trends among specific age categories.

- The rate of heavy drinking among 21- to 29-year-olds decreased 38 percent from 12.6 percent in 2001 to 7.8 percent in 2005.
- Among 30- to 34-year-olds and 55- to 64-year-olds there was a steady increase in past month heavy alcohol use. The rate of heavy alcohol use increased 63 percent for 30- to 34-year-olds, from 3.7 percent in 2001 to 6.0 percent in 2005.
- Heavy alcohol use increased 43 percent for 55- to 64-year-olds, from 4.7 percent in 2001 to 6.7 percent in 2005.
- From 1999 through 2002, more than half of the women surveyed through Pregnancy Risk Assessment Monitoring System (PRAMS) reported drinking alcohol in the three months preceding their pregnancy. As the pregnancy progresses, alcohol use drops. In the last trimester of pregnancy, less than one in 10 women reported drinking alcohol. However, the rate of alcohol consumption reported in the last three months increased each year from 1999 through 2002.

What we learned about tobacco

Smoking is the leading cause of preventable death in Oregon as it is in the rest of the United States. For Oregon adults, cigarettes are the second most commonly used addictive substance; but youth were more likely to smoke marijuana than cigarettes. In general, males are more likely to use tobacco products and this results in higher tobacco-linked death rates for men.

There was a dramatic decline in per capita cigarette consumption over the past 10 years with females experiencing greater decreases in the rate of smoking than males. However, long-term declines in tobacco use have tapered off and recently there have been increases for specific age groups.

Tobacco

Consequences of tobacco use in Oregon

Each year in Oregon, tobacco claims more lives than motor vehicle crashes, suicide, AIDS and murders combined.

- Oregon's lung cancer death rate exceeded that of the United States every year from 1999 through 2003. In 2004, 80.3 percent of the deaths due to lung, bronchi and trachea cancer in Oregon were linked to tobacco use (1,666 of 2,075).
- Oregon's rate of death due to chronic lower respiratory disease and emphysema exceeded that of the United States every year from 1999 through 2003. In 2004, 78.4 percent of Oregon deaths due to chronic lower respiratory disease and emphysema were linked to tobacco use (1,388 of 1770).
- Oregon's rate of death due to cardiovascular disease is lower than that of the United States every year from 1999 through 2003. In 2004, 20.5 percent of the deaths due to cardiovascu-

lar disease in Oregon were linked to tobacco use (1,937 of 9,437).

- There were 6,576 deaths linked to tobacco use in Oregon in 2004.
- About 25 percent (1,666) were due to lung cancer, including cancer of the bronchi and trachea;
- Twenty-nine percent (1,937) were cardiovascular disease deaths; and
- Twenty-one percent (1,388) were due to chronic lower respiratory diseases.
- In 2004, males accounted for 57.3 percent of all tobacco-linked deaths (3,771 of 6,576).
- Tobacco consumption in Oregon
- From 1998 through 2004, Oregon's cigarette sales declined 34 percent from 82 packs to 54 packs sold per capita, indicating an overall decrease in smoking during the six-year period. Since 2004, sales have remained steady
- In the past 10 years there was a substantial decrease in the percentage of youth who smoked their first cigarette before 13 years. Males were more likely than females to smoke before 13.
- In 2006, the rate of current cigarette use dropped to an all-time low for 11th-grade students 15.4 percent. The rate of current cigarette use by eighth-graders decreased in 2006 to 8.7 percent, but remained above the 2004 rate of 8.1 percent.
- Current cigarette use by Oregonians 18 or older decreased from 22.4 percent in 1998 to 18.6 percent in 2005. This translates to 20 percent fewer adult smokers. The largest decreases have been for those 35 to 54 years old.
- In 2005, 13.4 percent of Oregonians 18 or older smoked cigarettes every day, less than the national rate of 15.3 percent. In Oregon, as in the United States, more males smoke every day than females. However, in 2005, females 35 to 44 years old were more likely to smoke daily than their male counterparts; and for adults 65 or older, males and females were equally likely to smoke every day.
- From 1998 to 2005, the percentage of females who smoke daily dropped from 16.4 percent to 12.6 percent. The percentage of males who smoke daily dropped from 17.4 percent to 14.2 percent.
- Despite the long-term decrease in the number of Oregon adults who smoke daily, from 2004 to 2005 the decreases were not seen across all age and gender categories. There was an increase for 18- to 24-year-olds, 55- to 64-year-old males and

females 65 or older. For the first time since 1998, the percentage of 18- to 24-year-old Oregonians who smoke every day has exceeded the rate of daily smoking in the United States.

- In 2006, the Oregon Healthy Teens Survey showed 5.6 percent of the 11th-graders used smokeless tobacco in the past month (10.2 percent of the males; 1.0 percent of the females). In the same year, 3.0 percent of the eighth-graders reported using smokeless tobacco in the past 30 days (4.6 percent of the males; 1.3 percent of the females).
- Based on 2005 Oregon Behavioral Risk Factor Survey results, 3.1 percent of adults 18 or older in Oregon were current smokeless tobacco users. Smokeless tobacco use was much higher among males (6.1 percent) than among females (0.1 percent).

What we learned about illicit drugs

Illicit drug use affects Oregon more than the nation. Oregon has higher rates of marijuana use, methamphetamine use and illicit use of prescription stimulants and pain relievers. The consequences of illicit drug use have been spreading from urban to more rural counties throughout the state. In addition, patterns of illicit drug use by Oregon youth differ from those of alcohol or cigarettes. When it comes to alcohol and cigarettes, youth 12 to 17 years old are less than half as likely as adults 26 or older to report use in the past month. However, Oregon youth are more likely to use, abuse or be dependent on illicit drugs than adults 26 or older. Rates of marijuana use by Oregon youth are more than double the rate of adults 26 or older. Estimates of drug abuse or dependence for youth were also twice the adult rate.

Based on Oregon Healthy Teens results, the drugs most frequently used by eighth- and 11th-graders were marijuana, inhalants, prescription drugs, cocaine and methamphetamine. Rates of illicit drug use by Oregon eighth-graders showed decreases in use for all substances in the past five years. Youth in eighth and 11th grades were more likely to smoke marijuana in the past month than cigarettes. Rates of illicit drug use by Oregon 11th graders showed steady downward trends in marijuana and methamphetamine use but little change in prescription drug use, use of inhalants and cocaine use.

Illicit drugs

Consequences of illicit drug use

DSM-IV criteria used to estimate Oregon rates of past year drug abuse or dependence show:

- One out of 20 youth ages 12 to 17 suffers from drug abuse or dependence (5.7 percent);

- Almost one out of 10 young adults 18 to 25 years (9.2 percent) abuses or is dependent on one or more illicit drugs; but
- The rate for adults 26 or older is less than one of every 50 (1.5 percent).

Based on Vital Statistics data, Oregon's drug-related mortality rate was at least twice the rate of the United States every year from 1999 to 2003. Males were more likely to die from drugs; in 2003 males had five times the rate of drug-related deaths as females.

The Medical Examiner's Annual Drug-Related Deaths Report provides additional information that reflects the impact of methamphetamine use as it spread throughout the state.

- From 1999 to 2001, a drop in heroin-related deaths resulted in a decrease in the overall rate of drug-related deaths reported by the Medical Examiner. Beginning in 2001, methamphetamine-related deaths drove the number of drug-related deaths back up. In 2005, for the first time, the number of methamphetamine-related deaths equaled that of heroin-related deaths, 86 each.
- In the past five years there's been a notable shift in where drug-related deaths are taking place. Historically deaths have occurred overwhelmingly in the tri-county area surrounding Portland, i.e., Multnomah, Washington and Clackamas counties. Comparison of 2002 deaths with those of 2005 shows drug-related deaths decreased in the Portland tri-county area even though the total number of deaths increased in the state.
- From 2002 to 2005 the total number of drug-related deaths occurring in the Portland tri-county area decreased from 123 to 109, but increased from 53 to 93 elsewhere.
- In 2002, 69.9 percent of all drug-related deaths in Oregon occurred in Multnomah, Clackamas or Washington counties. By 2005, that dropped to 55.6 percent.
- In 2002 about half of the methamphetamine-related deaths occurred in the Portland tri-county area. In 2005, the tri-counties had one quarter of the meth-related deaths and three quarters occurred outside of Multnomah, Clackamas and Washington counties.

Illicit drug consumption in Oregon

- Marijuana use by eighth- and 11th-graders was surpassed only by alcohol use. Despite an overall decline in marijuana use from 1999 to 2006, students were more likely to smoke marijuana than cigarettes.
- The highest rates of past month inhalant use were reported by eighth-graders. In 2006, the rate of inhalant use by Oregon eighth-graders was almost 50 percent higher than that of the nation, 6.1 percent versus 4.1 percent.
- Eighth-grade females reported the highest rate of inhalant use. In 2006, the rate of inhalant use by eighth-grade females was three times the rate of 11th-grade females and four times the rate of 11th-grade males. Past month inhalant use for eighth-grade females was 7.1 percent versus 5.1 percent for eighth-grade males.
- In 2006, one of every 20 11th graders, 5.7 percent, used prescription drugs to get high on at least one occasion in the past month versus 3.3 percent for eighth graders.
- The rate of methamphetamine use by Oregon students has steadily declined. By 2005 11th graders' lifetime methamphetamine use had fallen by more than a third. In 1999, 8.8 percent of the females and 7.1 percent of the males used meth. By 2005 that dropped to 5.5 percent for females and 4.3 percent for males.
- Similar decreases in lifetime meth use occurred among Oregon's eighth-grade students. In 2001, 4.3 percent of the females and 3.1 percent of the males used meth. By 2005 that dropped to 3.1 percent for females and 2.4 percent for males.
- Cocaine use by Oregon youth has changed little. In 2006, 1.5 percent of 11th graders and 1.3 percent of eighth graders reported using cocaine in the past month.
- Oregon's rate of marijuana use is higher than that of the nation. About one of every five adults 18 to 25 years (20.9 percent); and one of every eight adults 26 or older (6.11 percent) used marijuana in the past month. In 2005 the rate of marijuana use by adults 26 or older was 50 percent higher than that of the nation (4.07 percent).
- About one of every 10 adults 18 to 25 used illicit drugs other than marijuana (10.6 percent). This is 25 percent higher than the national rate (8.5 percent). Illicit drug use by Oregon adults 26 or older was the same as the nation, 2.4 percent.

Appendices

Appendix A. List of alcohol indicators

Construct	Age	Indicator	Description	Data source
Crime and criminal justice	All ages	Number of alcohol-related motor vehicle deaths per 100,000 population	Number of vehicle deaths per 100,000 in which at least one driver, pedestrian or cyclist had been drinking alcohol.	Fatality Analysis Reporting System
Crime and criminal justice	All ages	Percentage of motor vehicle fatalities involving a drunk driver	Percentage of all motor vehicle fatalities in which the driver was legally drunk.	Fatality Analysis Reporting System
Crime and criminal justice	All ages	Number of alcohol-related fatal motor vehicle crashes per 100,000 population	Number of fatal motor vehicle crashes in which at least one driver, pedestrian, or cyclist had been drinking alcohol (per 100,000).	Fatality Analysis Reporting System
Dependence or abuse	Age 12 or older	Alcohol dependence or abuse in past year	Alcohol dependence or abuse in past year.	National Survey on Drug Use and Health
Mortality	All ages	Homicide death rate	Number of deaths from homicide per 100,000 population.	National Survey on Drug Use and Health
Mortality	All ages	Suicide death rate	Number of deaths from suicide per 100,000 population.	National Survey on Drug Use and Health
Mortality	All ages	Chronic Alcoholic Liver Disease	Number of deaths due to chronic alcoholic liver disease per 100,000 persons	Oregon Center for Health Statistics

Construct	Age	Indicator	Description	Data source
Mortality	All ages	Rate of alcohol-induced deaths	Alcohol-induced deaths per 100,000 population (includes alcoholic mental/ behavioral disorders, degeneration of nervous system, polyneuropathy, alcoholic myopathy, cardiomyopathy, gastritis, liver disease, chronic pancreatitis, alcohol in the blood,	Oregon Center for Health Statistics
Mortality	Younger than age 65	Years of potential life lost before age 65 due to	Years of potential life lost, alcohol induced alcohol-induced death.	Oregon Center for Health Statistics
30-day use	Age 12 or older	30-day alcohol use	How long has it been since you last drank an alcoholic beverage? Please do not include times when you had a sip or two from a drink.	National Survey on Drug Use and Health
30-day use	Age 18 or older	Percentage of adults who had at least 1 drink in the past 30 days.	Adults who had at least one drink of alcohol within the past 30 days.	Oregon Behavioral Risk Factor Surveillance System
30-day use	8th grade — 11th grade	Percentage of youth who drank alcohol 1 or more times in the past 30 days.	On how many occasions (if any) have you had beer or wine (non-religious) or hard liquor to drink during the past 30 days?	Oregon Healthy Teens Survey

Construct	Age	Indicator	Description	Data source
Current binge drinking	Age 12 or older	Binge alcohol use in the past month	Percentage of persons who reported having 5 or more drinks on the same occasion (i.e. at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days	National Survey on Drug Use and Health
Current binge drinking	Age 18 or older	Percentage of adults who had 5 or more drinks of alcohol on one occasion during the past month.	Considering all types of alcoholic beverages, how many times during the past month did you have 5 or more drinks on an occasion?	Oregon Behavioral Risk Factor Surveillance System
Current binge drinking	8th grade — 11th grade	Percentage of youth who report binge drinking in the past 30 days	During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple hours?	Oregon Healthy Teens Survey
Age of initial use	8th grade — 11th grade	Percentage of youth who were younger than 13 years old when they drank alcohol for the first time.	How old were you when you had more than a sip or two of beer, wine, or hard liquor for the first time?	Oregon Healthy Teens Survey
Crime and criminal justice	Age 18 or older	Percentage of adults who have driven when they perhaps had too much to drink.	During the past 30 days, how many times have you driven when you've had perhaps too much to drink?	Oregon Behavioral Risk Factor Surveillance System
Crime and criminal justice	8th grade	Percentage of youth who rode with adult driver who was drinking.	Percent of youth who rode in a car driven by a parent or adult who had been drinking alcohol.	Oregon Healthy Teens Survey

Construct	Age	Indicator	Description	Data source
Crime and criminal justice	11th grade	Percentage of youth who drove when they 'perhaps had too much to drink.'	During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?	Oregon Healthy Teens Survey
Current heavy drinking	Age 12 or older	Heavy use of alcohol	Drinking 5 or more drinks on the same occasion on 5 or more days in the past 30 days.	National Survey on Drug Use and Health
Current heavy drinking	Age 18 or older	Heavy drinking by adults in the past month.	Adult men having more than two drinks per day; adult women having more than one drink per day in the past month.	Oregon Behavioral Risk Factor Surveillance System
Per capita consumption	All ages	Per capita consumption of beer	Total sales of beer (estimated in gallons of ethanol) per capita age 14 and older.	Alcohol Epidemiologic Data System
Per capita consumption	All ages	Per capita consumption of wine	Total sales of wine (estimated in gallons of ethanol) per capita age 14 and older.	Alcohol Epidemiologic Data System
Per capita consumption	All ages	Per capita consumption of spirits	Total sales of distilled spirits (estimated in gallons of ethanol) per capita age 14 and older.	Alcohol Epidemiologic Data System
Per capita consumption	All ages	Per capita consumption of alcohol	Total sales of alcohol (estimated in gallons of ethanol) per capita age 14 and older.	Alcohol Epidemiologic Data System

Construct	Age	Indicator	Description	Data source
Use during pregnancy	All ages	Alcohol use during the 3 months before pregnancy.	During the 3 months before you got pregnant, how many alcoholic drinks did you have in an average week?	
Use during pregnancy	All ages	Alcohol use during the last 3 months of pregnancy	During the last 3 months of your pregnancy, how many alcoholic drinks did you have in an average week?	Pregnancy Risk Assessment Survey

Appendix B. List of tobacco indicators

Construct	Age	Indicator description	Tool description	Data source
Mortality	All ages	Tobacco-related deaths.	Number of tobacco-related deaths per 100,000 persons.	Oregon Center for Health Statistics (OVS)
Mortality	All ages	Tobacco-linked cancer death rate.	Number of cancer deaths linked to tobacco use per 1,000 population.	Oregon Center for Health Statistics
Mortality	All ages	Tobacco-related chronic lower respiratory disease death rate.	Number of deaths from chronic lower respiratory disease linked to tobacco use per 100,000 population.	Oregon Center for Health Statistics
Mortality	All ages	Tobacco-linked cardiovascular disease death rate.	Number of deaths from cardiovascular disease linked to tobacco use per 1,000 population	Oregon Center for Health Statistics
Mortality	All ages	CLRD and emphysema deaths.	Number of deaths from chronic lower respiratory disease and emphysema per 100,000 population.	National Center for Health Statistics
Mortality	All ages	Cardiovascular disease death rate	Number of deaths from cardiovascular disease per 100,000 population	National Center for Health Statistics
Mortality	All ages	Lung cancer death rate	Number of deaths from lung cancer per 100,000 population	National Center for Health Statistics

Construct	Age	Indicator description	Tool description	Data source
30-day use	Age 12 or older	Any past month tobacco product use.	Any tobacco product use in the past month.	National Center for Health Statistics
30-day use	Age 12 or older	30-day cigarette use	During the past 30 days, on how many days did you smoke part or all of a cigarette?	
30-day use	Age 12 or older	30-day use of other tobacco products.	During the past 30 day, on how many days did you use other tobacco products?	National Center for Health Statistics
Per capita consumption	Age 18 and older	Annual per capita tobacco sales.	Number of packs of cigarettes taxed at the wholesale level per person age 18 and older.	Public Health Department's Per Capita Sales of Tobacco (PHD
30-day use	Age 18 and older	Current daily use of cigarettes.	Percentage of persons who report smoking cigarettes every day.	Oregon Behavioral Risk Factor Surveillance System
30-day use	Age 18 and older	Current smoking status.	Percentage of persons who indicate they now smoke cigarettes, everyday or some days.	Oregon Behavioral Risk Factor Surveillance System

Construct	Age	Indicator description	Tool description	Data source
30-day use	Age 18 or older	Current use of smokeless tobacco.*	Percentage of persons who report using smokeless tobacco products such as chewing tobacco and snuff.	Oregon Behavioral Risk Factor Surveillance System
30-day use	8th grade — 11th grade	Current daily use of cigarettes among youth.	Percentage of youth who report smoking cigarettes on 20 days or more within the past 30 days.	Oregon Healthy Teens Survey
30-day use	8th grade — 11th grade	Percentage of youth who smoked in the past 30 days.	During the past 30 days, on how many days did you smoke?	Oregon Healthy Teens Survey
30-day use	8th grade — 11th grade	Percentage of youth who used smokeless tobacco in the past 30 days.	During the past 30 days, on how many days did you use chewing tobacco, snuff or dip such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits or Copenhagen?	Oregon Healthy Teens Survey

Appendix C. List of illicit drug indicators

Construct	Age	Indicator description	Tool description	Data source
Dependence or abuse	Age 12 or older	Illicit drug dependence or abuse.	Percentage of persons aged 12 and older meeting DSM-IV criteria for drug abuse or dependence.	National Survey on Drug Use and Health
Mortality	All ages	Drug related deaths per 100,000 population.	Total number of deaths related to heroin, cocaine and/or methamphetamine per 100,000 population.	Oregon State Medical Examiner
Mortality	All ages	Cocaine-related deaths per 100,000 population.	Total number of deaths related to cocaine use per 100,000 population.	Oregon State Medical Examiner
Mortality	All ages	Heroin-related deaths per 100,000 population.	Total number of deaths related to heroin use per 100,000 population.	Oregon State Medical Examiner
Mortality	All ages	Methamphetamine-related deaths per 100,000 population.	Total number of deaths related to methamphetamine per 100,000 population.	Oregon State Medical Examiner
Mortality	All ages	Drug-related mortality.	Number of deaths from illicit drug use per 100,000 population.	National Vital Statistics
Age of initial use	11th grade	Percentage of persons who were younger than 13 when they tried marijuana.	How old were you when you first tried marijuana?	Oregon Healthy Teens Survey
Age of initial use	Age 12 or older	First time use of marijuana in the past year.	Percentage who used marijuana for the first time in the past year.	National Survey on Drug Use and Health

Construct	Age	Indicator description	Tool description	Data source
30-day use	8th grade	Percentage of youth using marijuana 1 or more times in the past 30 days.	During the past 30 days, how many times did you use marijuana?	Oregon Healthy Teens Survey
30-day use	8th and 11th grade	Percentage of youth who used illicit drugs in the past 30 days, including marijuana.	Summary variable: Illicit drug use in the past 30 days including marijuana, inhalants, prescription drugs, stimulants, cocaine, heroin, ecstasy and/or LSD.	Oregon Healthy Teens Survey
30-day use	Age 12 or older	Any illicit drug use in the past month.	Any illicit drug use in the past month including marijuana or hashish, cocaine, inhalants, hallucinogens, heroin and prescription drugs.	National Survey on Drug Use and Health
30-day use	Age 12 or older	Marijuana or hashish use in the past 30 days.	How long has it been since you last used marijuana or hashish?	National Survey on Drug Use and Health
30-day use	Age 12 or older	Illicit drug use other than marijuana in the past month.	Past 30-day use of cocaine, inhalants, hallucinogens, heroin, or prescription drugs.	National Survey on Drug Use and Health
30-day use	8th grade	Percentage of youth who used inhalants in the past 30 days.	During the past 30 days, how many times did you sniff glue, breathe the contents of aerosol spray cans, or inhale any paints or sprays to get high?	Oregon Healthy Teens Survey

Construct	Age	Indicator description	Tool description	Data source
30-day use	8th and 11th grade	Percentage of youth who used prescription drugs to get high in the past 30 days.	During the past 30 days, how many times did you use prescription drugs (without doctor's orders) to get high?	Oregon Healthy Teens Survey
30-day use	8th ____ 11th grade	Percentage of youth who used methamphetamines in the past 30 days.	On how many occasions (if any) have you used stimulants (amphetamines, meth, crystal, speed, crank) during the past 30 days?	Oregon Healthy Teens Survey
30-day use	8th ____ 11th grade	Percentage of youth who used cocaine in the past 30 days.	During the past 30 days, how many times did you use any form of cocaine, including powder, crack or freebase.	Oregon Healthy Teens Survey
30-day use	8th ____ 11th grade	Percentage of youth who used MDMA (Ecstasy) in the past 30 days..	During the past 30 days, how many times did you use ecstasy (also called MDMA)?	Oregon Healthy Teens Survey
30-day use	8th ____ 11th grade	Percentage of youth who used heroin in the past 30 days.	During the past 30 days, how many times did you use heroin or other opiates or narcotics?	Oregon Healthy Teens Survey
Past year use	Age 12 or older	Nonmedical use of pain relievers in the past year.	How long has it been since you last used any prescription pain reliever that was not prescribed for you, or that you took only for the experience or feeling it caused?	National Survey on Drug Use and Health
Past year use	Age 12 or older	Cocaine use in the past year.	How long has it been since you last used any form of cocaine?	National Survey on Drug Use and Health

Construct	Age	Indicator description	Tool description	Data source
Lifetime use	8th ____ 11th grade	Percentage of youth who used any form of cocaine sometime in their life.	During your life, how many times have you used any form of cocaine, including powder, crack or freebase?	Oregon Healthy Teens Survey
Lifetime use	8th ____ 11th grade	Percentage of youth who used heroin sometime in their life.	During your life, how many times have you used heroin (also called smack, junk or China White)?	Oregon Healthy Teens Survey
Lifetime use	8th ____ 11th grade	Percentage of youth who used steroids without a doctors prescription sometime in their life.	During your life, how many times have you taken steroid pills or shots without a doctors prescription?	Oregon Healthy Teens Survey
Lifetime use	8th ____ 11th grade	Percentage of youth who used methamphetamine sometime in their life.	During your life, how many times have you used methamphetamines (also called speed, crystal, crank or ice)?	Oregon Healthy Teens Survey Oregon Healthy Teens Survey
Lifetime use	8th and 11th grade	Percentage of youth who used a needle to inject any illegal drug in their life.	During your life, how many times have you used a needle to inject any illegal drugs into your body?	

Appendix D. Internet locations for data sources

Acronym	Data source name	Internet location
AEDS	Alcohol Epidemiologic Data System	http://pubs.niaa.nih.gov/publication/surveillance73/pcyr1970-2003.txt
FARS	Fatality Analysis Reporting System	http://www-fars.nhtsa.dot.gov/finalreport.cfm?title=Trends andstateid=41 andyear=2005 andtitle2=Alcohol
LEDS	Law Enforcement Data System	http://www.oregon.gov/OSP/CJIS/annual_reports.shtml
NSDUH	National Survey on Drug Use and Health	http://www.oas.samhsa.gov/nsduhLatest.htm
NVSS	National Center for Health Statistics	http://www.cdc.gov/nchs/
BRFSS	Oregon Behavioral Risk Factor Surveillance System	http://www.dhs.state.or.us/dhs/ph/chs/brfs/brfsdata.shtml
OREGON HEALTHY TEENS SURVEY	Oregon Healthy Teens Survey	http://www.dhs.state.or.us/dhs/ph/chs/youthsurvey/index.shtml
ME	Oregon State Medical Examiner	http://www.oregon.gov/OSP/SME/Drug_Related_Death_Statistics.shtml

Acronym	Data source name	Internet location
OVS	Oregon Center for Health Statistics	http://www.dhs.state.or.us/dhs/ph/chs/data/index.shtml
PRAMS	Pregnancy Risk Assessment Survey	http://www.oregon.gov/DHS/ph/pnh/prams/9899qlist.shtml
CPS	The Status of Children (Child Protective Services)	http://www.oregon.gov/DHS/abuse/publications/children/index.shtml
SSHL	University of California, San Diego	http://ssdc.ucsd.edu/tobacco/sales/

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Oregon Department of Human Services
Addiction and Mental Health Division
500 Summer Street NE
Salem, Oregon 97301

DHS