

Tobacco Consumption and Consequences in Oregon

Initial Report of Oregon's State Epidemiological Outcomes Workgroup

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To the reader,

This report is one of three epidemiological profiles on substance use in Oregon. The purpose of the epidemiological profiles is to summarize the nature, magnitude and distribution of alcohol, tobacco, and illicit drug use and related consequences in the State. Each profile is written as a stand-alone document. The appendices include tables that detail trend data for each indicator reviewed by the SEOW.

This report profiles the use tobacco products including the use of smokeless tobacco and the resulting health impacts.

The profile reports are the product of collaborative efforts of Oregon's State Epidemiological Outcomes Workgroup (SEOW). 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.

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. Other epidemiological profiles and reports include:

- Alcohol Consumption & Consequences in Oregon
- Illicit Drug Consumption & Consequences in Oregon
- Alcohol, Tobacco & Illicit Drug Consumption & Consequences, Executive Summary

The Executive Summary highlights the findings from all three profiles.

All reports can be accessed online at the location noted below.

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Introduction

In March 2006, the State of Oregon received funding from the Substance Abuse & 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 target 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 tobacco (Selective Prevention), or specific individuals who show signs of involvement with tobacco use (Indicated Prevention).

About the profile

The purpose of the epidemiological profile on tobacco is to summarize the nature, magnitude and distribution of tobacco use and related consequences in Oregon. The information presented in this section is one of a series of steps to promote the use of data in an ongoing process of assessment, planning, and monitoring at State and community levels. The profile uses statewide data that has been measured consistently for three or more years and is readily available and accessible to the public. This report summarizes state-level findings; future reports will examine demographic and geographic data further.

How the information is organized

In developing the epidemiological profile for tobacco, a selection of indicators about tobacco product use and its consequences was examined. These indicators are organized into a set of constructs that provide a picture of tobacco use and its impacts across the lifespan. See Table 1 below.

Information about the consequences of tobacco use is presented first, then patterns of tobacco use, and finally a summary of the findings.

State trend data for the tobacco indicators listed below can be found in Appendices B through E.

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Table 1. Tobacco Constructs and Indicators

Construct	Indicator(s)	Data source
Tobacco-related mortality	<ul style="list-style-type: none"> • Number of deaths from lung cancer per 100,000 population • Number of deaths from chronic lower respiratory disease and emphysema per 100,000 population • Number of deaths from cardiovascular disease per 100,000 population 	National Center for Health Statistics
	<ul style="list-style-type: none"> • Number of tobacco-related deaths per 100,000 persons • Number of lung cancer deaths linked to tobacco use per 100,000 population • Number of deaths from chronic lower respiratory disease linked to tobacco use per 100,000 population • Number of deaths from cardiovascular disease linked to tobacco use per 100,000 population 	Oregon Center for Health Statistics
Tobacco use during pregnancy	<ul style="list-style-type: none"> • Percent of pregnant women who smoked any time during pregnancy 	Oregon Center for Health Statistics
	<ul style="list-style-type: none"> • Percent of pregnant women reporting smoking during the last three months of pregnancy 	Pregnancy Risk Assessment Monitoring Survey
Per capita cigarette consumption	<ul style="list-style-type: none"> • Number of packs of cigarettes taxed at the wholesale level per person age 18 or over 	Department of Revenue Excise Tax

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Past month use of tobacco products	<ul style="list-style-type: none"> • Percent of persons 12 or older, who used any tobacco products in the past 30 days • Percent of persons 12 or older, who smoked part or all of a cigarette in the past 30 days 	National Survey on Drug Use and Health
	<ul style="list-style-type: none"> • Percent of persons 18 or older, who currently smoke cigarettes either every day or on some days • Percent of persons 18 or older, who currently smoke cigarettes every day • Percent of persons 18 or older who use smokeless tobacco products such as chewing tobacco and snuff 	Oregon Behavioral Risk Factor Surveillance System
Past month use of tobacco products by youth	<ul style="list-style-type: none"> • Percent of youth who smoked in the past 30 days • Percent of youth who used smokeless tobacco in the past 30 days 	Oregon Healthy Teens Survey
Age of initial use	<ul style="list-style-type: none"> • Percent of youth who were less than 13 years old when they smoked a cigarette for the first time 	

How the data was assessed

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;

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- 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 impact individuals and society than others.

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 are 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.

Over the past 10 years there has been a dramatic decline in per capita cigarette consumption. However, long-term declines in tobacco use have tapered off and recently there have been increases for specific age groups in the State.

Currently, Oregonians use tobacco products at the same rate as the rest of the United States. According to the National Survey on Drug Use and Health, about 30 percent of persons 12 or older use tobacco products each month in Oregon. Tobacco product use peaks at 18 to 25 years and then declines in adults 26 or older. Twelve to 17 year olds have the lowest rate of tobacco use.¹

Tobacco-related Consequences in Oregon

Tobacco use has negative impacts on people at all stages of life. Smoking harms nearly every organ of the body, causing many diseases and reducing the health of smokers in general. The list of diseases caused by smoking is extensive including many cancers, chronic lung diseases, coronary heart and cardiovascular diseases. According to the Centers for Disease Control, smoking and ongoing exposure to second hand smoke is associated with diminished health status that can result in increased absenteeism from work and increased use of medical care services.²

Children and adolescents who smoke are less physically fit and have more respiratory illnesses than their nonsmoking peers. Smoking by children and adolescents is related to impaired lung growth, chronic coughing, and wheezing. It hastens the onset of declines in lung function during late adolescence and early adulthood. In addition, tobacco use in adolescence

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is associated with many other health risk behaviors, including higher risk sexual behavior and use of alcohol and drugs.³

Research has shown that women's smoking during pregnancy increases the risk of pregnancy complications, premature delivery, low birth weight infants, stillbirth and sudden infant death syndrome (SIDS). Compared with unexposed infants, babies exposed to secondhand smoke after birth are at twice the risk for SIDS, and infants whose mother smoked before and after birth are at three to four times greater risk.⁴

Smokeless tobacco is a significant health risk and is not a safe substitute for smoking cigarettes. Smokeless tobacco causes oral health problems and the 28 cancer-causing agents found in smokeless tobacco increases the risk of developing cancer of the oral cavity. Smokeless tobacco use can lead to nicotine addiction and dependence. Adolescents who use smokeless tobacco are more likely to become cigarette smokers.⁵

About the consequence indicators

Tobacco-related consequences presented in this section center on a single construct, tobacco-related mortality. Mortality data from the National Center for Health Statistics and Oregon Center for Health Statistics were examined as a measure of the impact of tobacco on the health of Oregon residents.

- National mortality data provide useful comparisons for three key indicators with strong correlation to tobacco use: deaths from lung cancer, deaths from chronic lower respiratory disease and emphysema, and deaths from cardiovascular disease.
- Indicators derived from Volume 2 of the Oregon Vital Statistics Annual Report provide information on deaths linked to tobacco. Throughout this section, all mortality rates are reported as number of deaths per 100,000 persons and include: all tobacco-linked deaths, tobacco-linked lung cancer deaths, tobacco-linked chronic lower respiratory disease deaths, and tobacco-linked cardiovascular deaths.

Lung cancer deaths

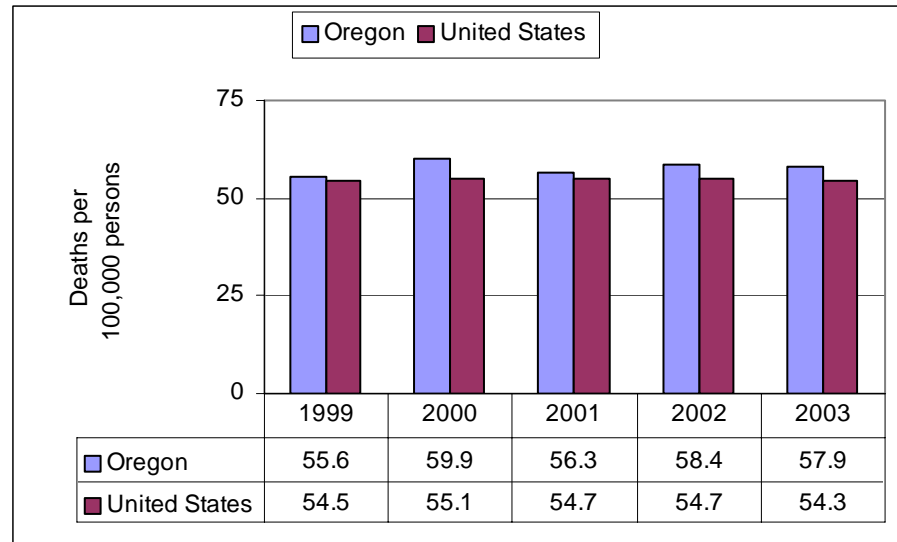
Lung cancer is the most common form of cancer mortality in the United States. Death from lung cancer follows a long latency period so it takes many years for population-level changes in cigarette use to be reflected in changes to lung cancer death rates.

- 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 lung cancer death rate exceeded that of the United States every year from 1999 through 2003. See Figure 1 below.

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Figure 1. Number of lung cancer deaths per 100,000 persons in Oregon and the United States – 1999 to 2003



Data Source: National Center for Health Statistics

Chronic lower respiratory disease and emphysema

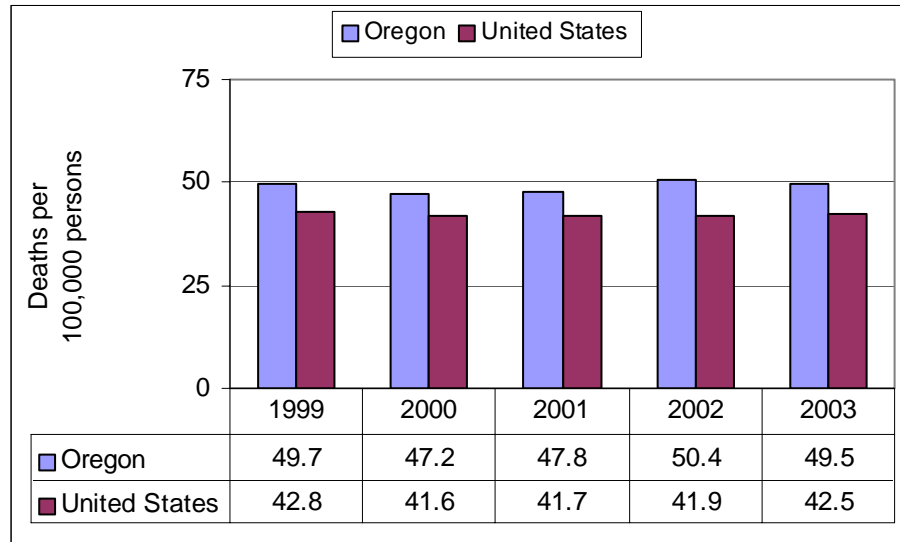
Cigarette smoking causes chronic lower respiratory disease and emphysema; and second hand smoke can trigger a host of respiratory ailments. Death from respiratory disease reflects long-term, chronic cigarette smoking. This indicator only looks at deaths, the magnitude of tobacco-linked respiratory illnesses is far greater.

- In 2004, 78.4 percent of the deaths due to chronic lower respiratory disease and emphysema in Oregon were linked to tobacco use (1,388 of 1,770).
- 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. See Figure 2 below.

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Figure 2. Number of deaths from chronic lower respiratory disease and emphysema per 100,000 persons in Oregon and the United States – 1999 to 2003



Data Source: National Center for Health Statistics

Cardiovascular disease

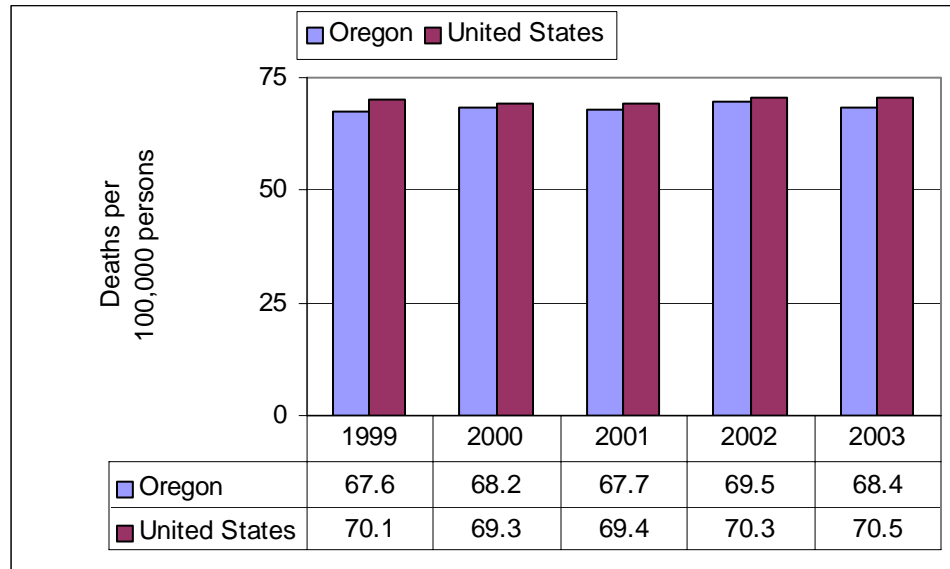
Cigarette smoking is considered the most preventable cause of cardiovascular disease. This indicator only looks at deaths, the magnitude of tobacco-linked cardiovascular disease illness is far greater.

- In 2004, 20.5 percent of the deaths due to cardiovascular disease in Oregon were linked to tobacco use (1,937 of 9,437).
- Oregon's rate of death due to cardiovascular disease is lower than that of the United States every year from 1999 through 2003. See Figure 3 below.

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Figure 3. Number of deaths from cardiovascular disease per 100,000 persons in Oregon and the United States – 1999 to 2003



Data Source: National Center for Health Statistics

Tobacco-linked deaths

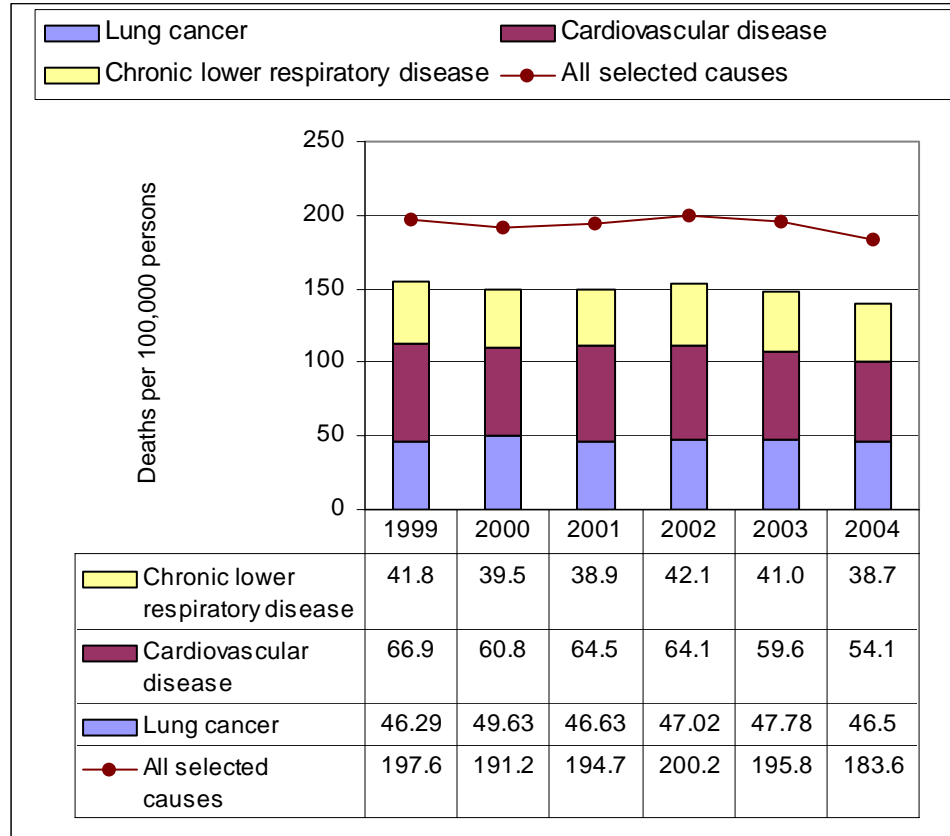
There were 6,576 deaths linked to tobacco use in Oregon in 2004. Death certificates include a check box that is used to identify deaths known to be associated with use of tobacco products. It is thought that this method results in underreporting of the actual number of tobacco-linked deaths. The tobacco-linked death rate fluctuates from year to year but there hasn't been a strong directional trend during the 5-year period beginning 1999. Figure 4 below shows the three groups of diseases that account for three quarters of all tobacco-linked deaths:

- 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.

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Figure 4. Number of deaths in Oregon that have been linked to tobacco, per 100,000 persons, by cause – 1999 to 2004



Data Source: Oregon Vital Statistics

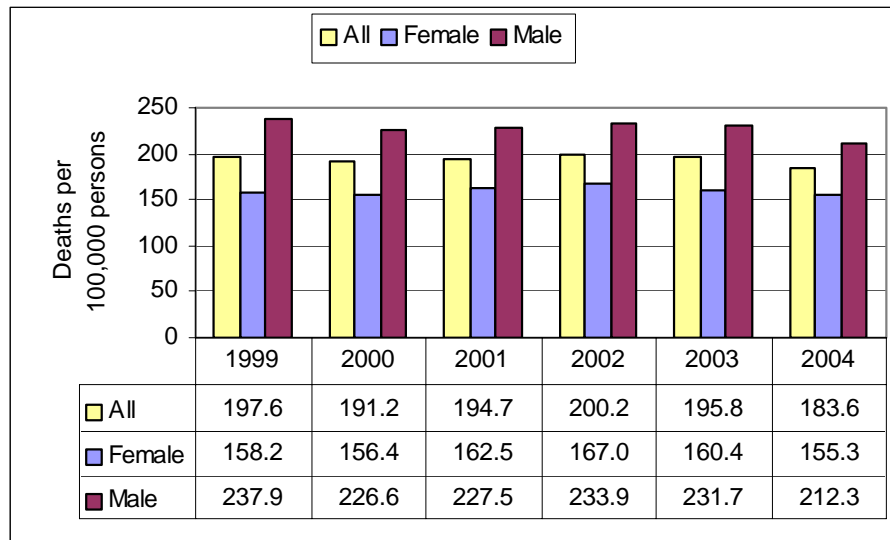
Gender

- In 2004, males accounted for 57.3 percent of all tobacco-linked deaths (3,771 of 6,576). Figure 5 below shows the gender disparities in tobacco-linked deaths that have been consistent since 1999.

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Figure 5. Tobacco-linked deaths in Oregon, by gender - 1999 to 2004



Data Source: Oregon Vital Statistics

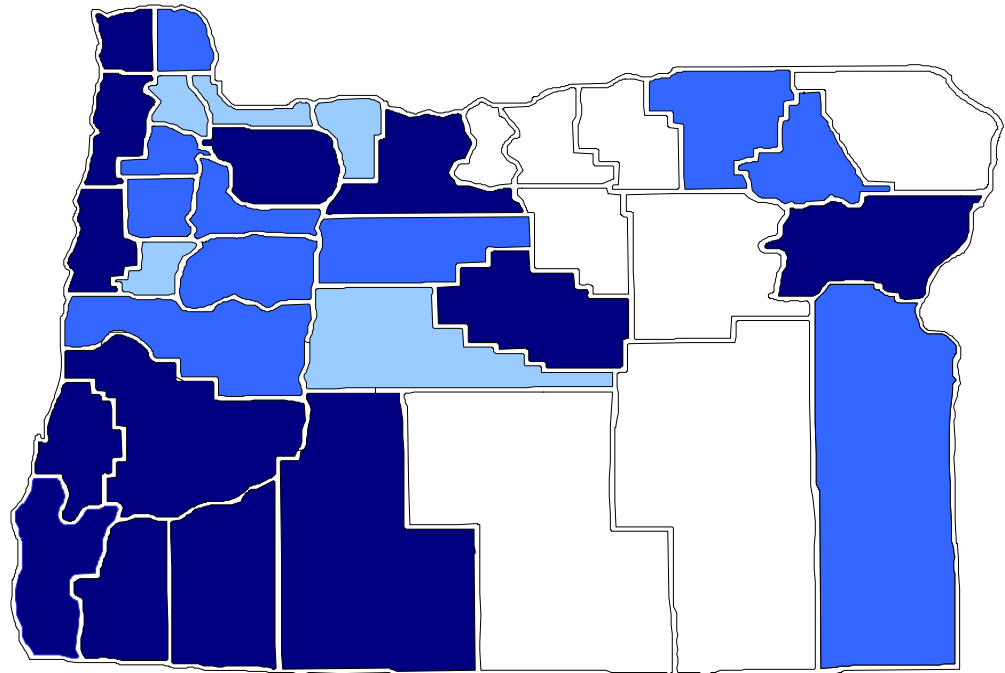
Three years of county-level mortality data were combined (2002 to 2004) to calculate an average tobacco-linked death rate per 100,000 persons. Confidence intervals were determined using the formulas from Appendix B of the Oregon Vital Statistics Annual Report.⁶ The map in Figure 6 depicts four categories of counties:

- Ten “average” counties with tobacco-linked death rates between 190 to 195 deaths per 100,000 persons.
- Five “better” counties that have tobacco-linked death rates that are less than 190 deaths per 100,000 persons.
- Thirteen “worse” counties that have tobacco-linked death rates more than 195 deaths per 100,000 persons.
- Eight counties that are not reported because the total number of tobacco-linked deaths for the 3-year period is less than 100.

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Figure 6. Map of tobacco-related deaths per 100,000 persons in Oregon



Number of Tobacco-linked Deaths per 100,000 persons, 2002 to 2004			
	Worse (>195/100,000)		Better (<190/100,000)
	Average (190 to 195/100,000)		Not reported, < 100 cases

*Results not reported for counties with populations less than 10,000 persons

Table 2 below provides the comparison data for tobacco-related deaths for all counties and the state. Although the rate of tobacco-linked deaths per 100,000 persons is presented for all counties in Table 2 below, the chance variation that can occur in counties with fewer than 100 deaths during the three years 2002 to 2004, make the results subject to large swings. Because of this, anyone preparing to make important decisions regarding these counties based on these rates should be wary.

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Table 2. Tobacco-linked deaths by county, based on combined 2002 to 2004 data

County	Total deaths	Rate/100,000	Lower limit	Upper limit
Baker	125	251	207	295
Benton	296	122	108	136
Clackamas	1642	334	318	351
Clatsop	244	224	196	252
Columbia	272	201	177	225
Coos	678	360	333	388
Crook	196	321	276	366
Curry	198	312	268	355
Deschutes	668	171	158	183
Douglas	983	322	302	342
Gilliam	17	298	173	477
Grant	71	307	239	387
Harney	63	280	215	358
Hood River	89	144	113	174
Jackson	1226	216	204	228
Jefferson	117	195	160	231
Josephine	837	357	333	381
Klamath	551	271	249	294
Lake	65	291	224	370
Lane	1973	199	190	207
Lincoln	455	339	308	370
Linn	700	222	206	238
Malheur	166	173	147	200
Marion	1693	191	182	200
Morrow	80	230	182	286
Multnomah	3643	179	173	185
Polk	340	177	158	196
Sherman	22	389	244	588
Tillamook	220	296	257	335
Umatilla	421	197	178	215
Union	132	178	148	209
Wallowa	58	270	205	350
Wasco	230	323	281	365
Washington	1523	108	102	113
Wheeler	18	387	229	610
Yamhill	510	193	176	209
Oregon	20525	193	190	195

Data Source: Oregon Vital Statistics Annual Reports 2002 to 2004

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Tobacco Consumption in Oregon

Multiple data sources were used to examine tobacco use in Oregon. The measures that are presented examine cigarette smoking by youth and adults, males, females, and females during pregnancy; as well as smokeless tobacco use.

- Department of Revenue Excise Tax information is used to assess the number of packs of cigarettes taxed at the wholesale level. This information provides an estimate of the number of packs of cigarettes sold annually and is used to gauge changes in per capita cigarette consumption for persons age 18 or over.
- The National Survey on Drug Use and Health is an annual survey sponsored by the Substance Abuse and Mental Health Services Administration. The survey conducts in home interviews with civilian, noninstitutionalized persons of the United States 12 years old or older. As a result, estimates based on these surveys tend to be more conservative than results from the other surveys listed below.
- Oregon's Behavioral Risk Factor Surveillance System collects information from adults 18 or older through phone interviews. This information is used to estimate the percent of adults who smoke daily or at least on some days. It also provides information about the use of smokeless tobacco products.
- The Oregon Healthy Teen Survey is a voluntary pencil and paper survey administered to 8th and 11th grade students in schools across the state. This survey provides the information about past month cigarette smoking and use of smokeless tobacco for youth. Results from 11th grade surveys also provide information about initial use of cigarettes before age 13.
- Oregon Vital Statistics' birth certificate records yield information about the percent of women who smoked any time during their pregnancy.
- The Pregnancy Risk Assessment Monitoring Survey provides information about the percent of women who smoked during the last three months of pregnancy.

Tobacco use in Oregon

Based on 2003 and 2004 National Survey on Drug Use and Health, 28.9 percent of the population 12 or older (about 863,000 persons) use tobacco each month in Oregon, about the same as the rest of the United States. This includes cigarettes, smokeless tobacco such as chewing tobacco or snuff, cigars, or pipe tobacco. The National Survey on Drug Use and

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Health defines cigarette use as smoking “part or all of a cigarette.” See Table 3 below.

- Youth have the lowest rate of use, 14.7 percent or about 44,000 youth;
- Young adults 18 to 25 year olds have the highest use rate, 44.7 percent or about 79,000 persons;
- The rate of tobacco use declines in adults 26 or older to an average of 27.9 percent or approximately 640,000 adults.

Table 3. Percent of persons 12 or older who used any tobacco product in the past month in Oregon and the United States – 2003-2004

	12 or older	12 to 17	18 to 25	26 or older
United States	29.5	14.4	44.7	28.9
Oregon (95% Confidence Interval)	28.9 (26.3-31.7)	14.7 (12.4-17.4)	45.6 (41.9-49.3)	27.9 (24.7-31.3)

Data Source: National Survey on Drug Use and Health

Results for past month cigarette smoking show 24.4 percent of Oregonians 12 or older (about 730,000 persons) smoked part or all of a cigarette in the past month on one or more occasions. See Table 4 below. This includes:

- 11.6 percent of the 12 to 17 years olds (about 35,000 youth);
- 39.3 percent of the 18 to 25 year olds (about 154,000 young adults);
- and
- 23.6 percent of those 26 or older (about 541,000 adults).

Table 4. Percent of persons 12 or older who smoked all or part of a cigarette in the past month in Oregon and the United States – 2003-2004

	12 or older	12 to 17	18 to 25	26 or older
United States	25.2	12.0	39.9	24.4
Oregon (95% Confidence Interval)	24.4 (21.9-27.2)	11.6 (9.7-13.9)	39.3 (35.7-43.0)	23.6 (20.5-27.0)

Data Source: National Survey on Drug Use and Health

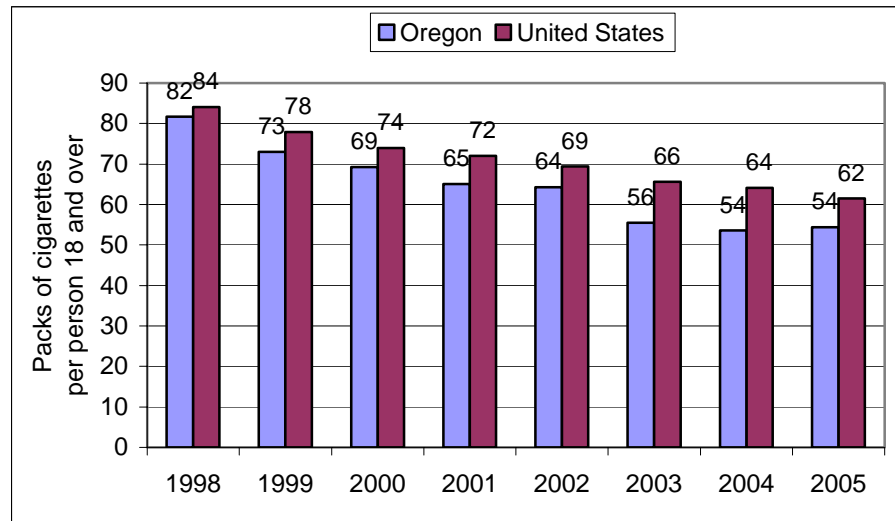
Per capita cigarette sales

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. However, from 2004 to 2005, sales have remained steady.

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Figure 7. Annual numbers of packs of cigarettes taxed at the wholesale level per person aged 18 and over, Oregon and the United States – 1998 to 2005



Data Sources: Oregon Department of Revenue and Oregon Census

Adult cigarette use

The Oregon Behavioral Risk Factor Survey contains a series of questions regarding the use of tobacco products. This section will review data on three topics:

- Current cigarette use:
- Daily cigarette use; and
- Use of smokeless tobacco.

Current cigarette use

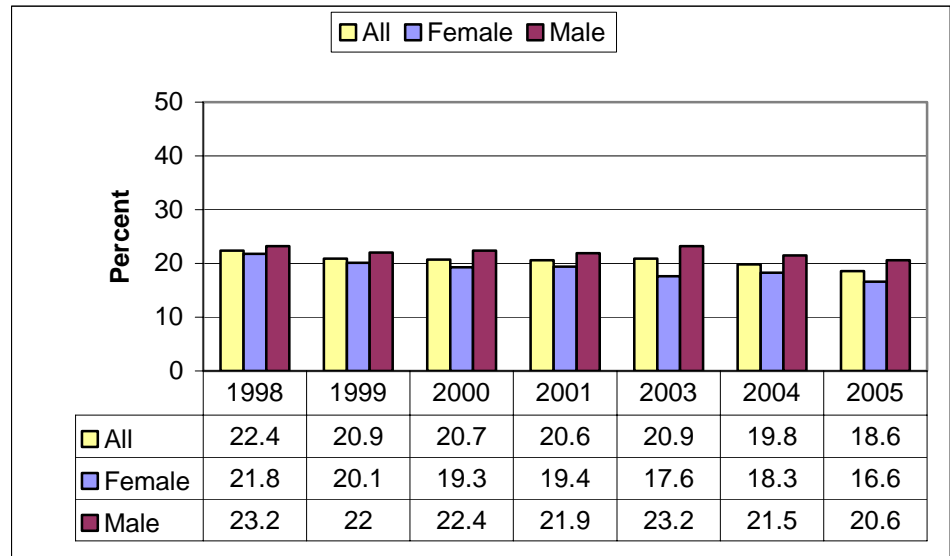
The Oregon Behavioral Risk Factor Surveillance System defines current cigarette use as individuals who have smoked a total of 100 cigarettes in their lifetime and reported smoking every day or some days in the past month.

- Current cigarette use by Oregonians 18 or older has decreased from 22.4 percent in 1998 to 18.6 percent in 2005. This translates to twenty percent fewer adult smokers from 1998 to 2005. See Figure 8 below.

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Figure 8. Percent of Oregonians who smoke some days or every day, by gender – 1998 to 2005



Data Source: Oregon Behavioral Risk Factor Surveillance System

Gender

There are more males who are current smokers than females in Oregon. From 1998 to 2005, females experienced greater decreases in the rate of current smokers, which widened the gap even more between the genders.

- In 1998, males were 6.4 percent more likely to be current smokers than females (23.2% versus 21.8%). In 2005, males were 24.1 percent more likely to be current smokers than females (20.6% versus 16.6%).

Table 5. Changes in the percent of Oregonians who smoke some days or every day, by gender – 1998 to 2005

Gender	1998	2005	Net decrease	Percent decrease
All	22.4%	18.6%	-3.8	-20.6%
Female	21.8%	16.6%	-5.2	-28.5%
Male	23.2%	20.6%	-2.6	-11.2%

Data Source: Oregon Behavioral Risk Factor Surveillance System

Age

- From 1998 through 2005, 18 to 24 year olds had the highest rate of current smoking and those 65 or older had the lowest.

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- Since 1998, all age groups have experienced a decline in the number of people who smoke every day or some days. The largest decreases have been for those 35 to 54 years old. See Table 6 below.

Table 6. Changes in the percent of current smokers in Oregon, by age – 1998 to 2005

Age	1998	2005	Net decrease	Percent decrease
18 or older	22.4%	18.6%	-3.8	-17.0%
18 to 24 years	30.6%	26.6%	-4.0	-13.1%
25 to 34 years	27.3%	22.7%	-4.6	-16.8%
35 to 44 years	25.7%	20.4%	-5.3	-20.6%
45 to 54 years	23.3%	18.6%	-4.7	-20.2%
55 to 64 years	17.9%	16.3%	-1.6	-8.9%
65 or older	11.8%	8.1%	-3.7	-32.2%

Data Source: Oregon Behavioral Risk Factor Surveillance System

- From 2004 to 2005, the overall decrease in the number of Oregon adults that are current smokers continued. However, decreases were not seen across all age and gender categories. Males 18 to 24 years old, and females 65 or older had increases in the number who smoked in the past 30 days. See Table 7 below.

Table 7. Past year increases in the percent of Oregonians who are current smokers, by age and gender – 2004 to 2005

Gender	Age	2004	2005	Net increase	Percent increase
Male	18 to 24	24.3%	31.0%	+6.7	+27.6%
Female	65 or older	6.0%	8.2%	+2.2	+36.7%

Data Source: Oregon Behavioral Risk Factor Surveillance System

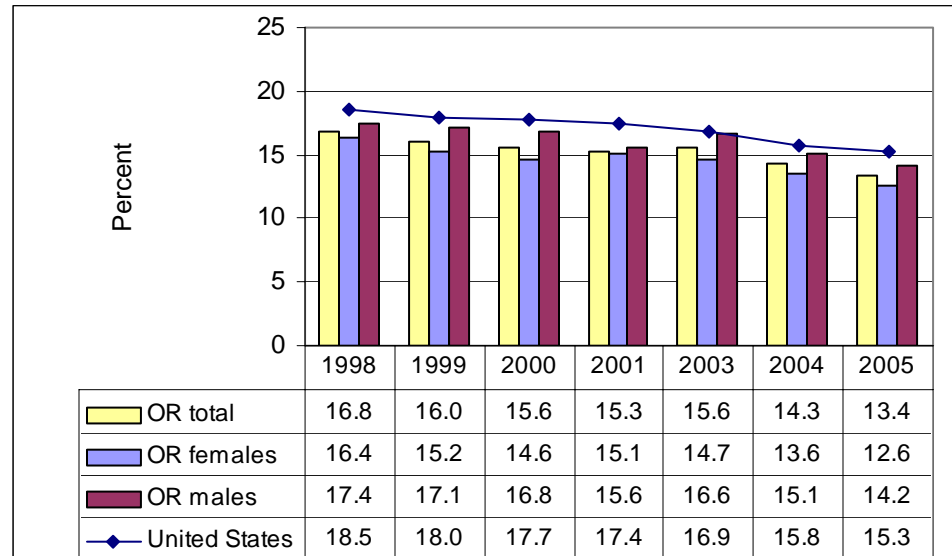
Daily cigarette smoking

In 2005, 13.4 percent of Oregonians 18 or older smoked cigarettes every day; less than the national rate of 15.3 percent. In general Oregon males are more likely to smoke every day than females. Despite this fact, Oregon males are less likely to smoke daily than persons 18 or older in the United States. See Figure 9 below.

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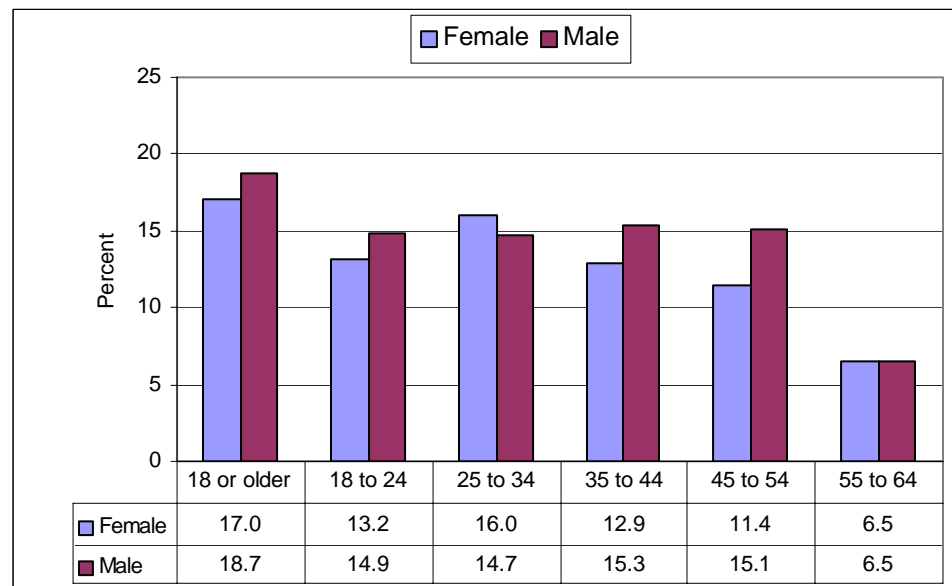
Figure 9. Percent of persons 18 or older in Oregon and the United States who smoke cigarettes every day, by gender – 1998 to 2005



Data Source: Behavioral Risk Factor Surveillance System

- In 2005, females 25 to 34 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. See Figure 10 below.

Figure 10. Percent of Oregonians 18 or older who smoke daily, by age and gender – 2005



Data Source: Behavioral Risk Factor Surveillance System

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- From 1998 to 2005, both males and females had decreases in the percent that smoke every day. The percent of females who smoke daily dropped from 16.4 percent in 1998 to 12.6 percent in 2005. The percent of males who smoke daily dropped from 17.4 percent in 1998 to 14.2 percent in 2005.
- These decreases translate to 23.2 percent fewer females who smoke daily; and 18.4 percent fewer males who smoke cigarettes daily comparing 1998 rates to those of 2005. See Table 8 below.

Table 8. Changes in the percent of Oregonians who smoke daily, by gender – 1998 to 2005

Gender	1998	2005	Net decrease	Percent decrease
All	16.8%	13.4%	-3.4	-20.2%
Female	16.4%	12.6%	-3.8	-23.2%
Male	17.4%	14.2%	-3.2	-18.4%

Data Source: Behavioral Risk Factor Surveillance System

Age

In 1998 and 2005, 18 to 24 years olds had the highest rate of daily smoking and those 65 or older had the lowest.

Since 1998, all age groups have experienced a decline in the number that smoke daily. The largest decrease was for those 65 or older; the smallest decrease was for 25 to 34 year olds. See Table 9 below.

Table 9. Changes in the percent of Oregonians who smoke daily, by age – 1998 to 2005

Age	1998	2005	Net decrease	Percent decrease
18 or older	16.8%	13.4%	-3.4	-20.2%
18 to 24 years	21.7%	17.9%	-3.8	-17.5%
25 to 34 years	17.7%	16.0%	-1.7	-9.6%
35 to 44 years	19.7%	15.4%	-2.3	-11.7%
45 to 54 years	17.8%	14.1%	-3.7	-20.8%
55 to 64 years	14.9%	13.3%	-1.6	-10.7%
65 or older	9.6%	6.5%	-3.1	-32.3%

Data Source: Behavioral Risk Factor Surveillance System

- Since 1998, the percent of persons 18 or older that smoke cigarettes every day has declined (1998=16.8%; 2005=13.4%). This translates to twenty percent fewer adults who smoke daily in 2005.

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- Despite the long-term decrease in the number of Oregon adults that smoke daily, from 2004 to 2005, there was an increase for 18 to 24 year olds, 55 to 64 year old males, and females 65 or older. See Table 10 below.

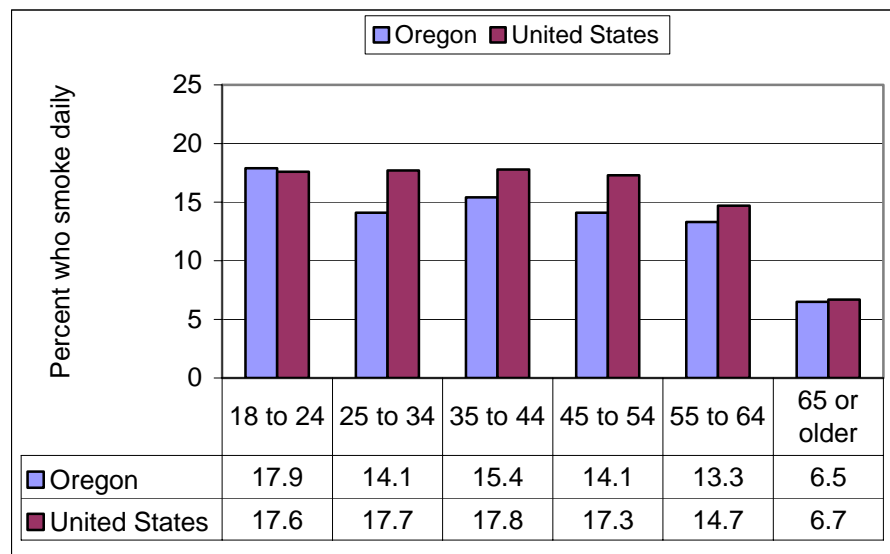
Table 10. Past year increases in the percent of Oregonians who smoke daily, by age and gender – 2004 to 2005

Gender	Age	2004	2005	Net increase	Percent increase
Female	18 to 24	13.0%	17.0%	+4.0	+30.8%
Male	18 to 24	14.1%	18.7%	+4.6	+30.5%
Male	55 to 64	13.3%	15.1%	+1.7	+13.5%
Female	65 or older	6.0%	6.5%	+0.5	+8.3%

Data Source: Behavioral Risk Factor Surveillance System

- For the first time since 1998, the percent of 18 to 24 year old Oregonians who smoke every day has exceeded the rate of daily smoking in the United States. See Figure 11 below.

Figure 11. Current daily cigarette smoking in Oregon and the United States, by age – 2005



Data Source: Behavioral Risk Factor Surveillance System

Smoking during pregnancy

Oregon Center for Health Statistics collects information about tobacco use any time during pregnancy through Oregon Birth Certificate information gathered shortly after the mother gives birth. In 2004 in Oregon women

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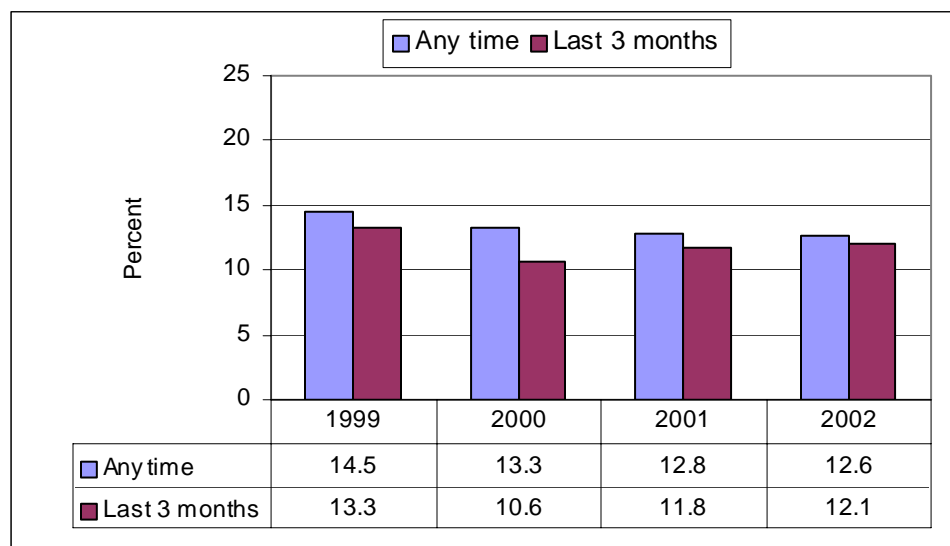
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who smoked had a low birthweight rate of 92.6 per 1,000 live births compared to 55.2 per 1,000 among women who did not smoke.

The Pregnancy Risk Assessment Monitoring Survey (PRAMS) is a pencil and paper survey mailed to a sample of women who have given birth each year. Information about smoking during the last three months of pregnancy is used for this report.

- In 2005, birth certificate records showed one out of eight mothers (12.4%) reported smoking at some time during pregnancy. This is 14 percent fewer women smoking during pregnancy than in 1999.
- From 1999 through 2002 the rate of smoking during the last three months of pregnancy ranged from 10.6 to 13.3 percent based on PRAMS results. See Figure 12 below.

Figure 12. Percent of pregnant women who smoked cigarettes any time or during the last 3 months of pregnancy in Oregon, 1999-2005



Data Sources: Oregon Vital Statistics - Birth Certificates, Pregnancy Risk Assessment Monitoring System

Cigarette Use by Youth

The Oregon Healthy Teens Survey contains a series of questions regarding the use of tobacco products. Oregon Healthy Teens Survey results provide information about middle school and high school cigarette use. This section presents data on:

- Current cigarette use, that is, smoking on one or more occasions in the past month; and
- Age of initial use.

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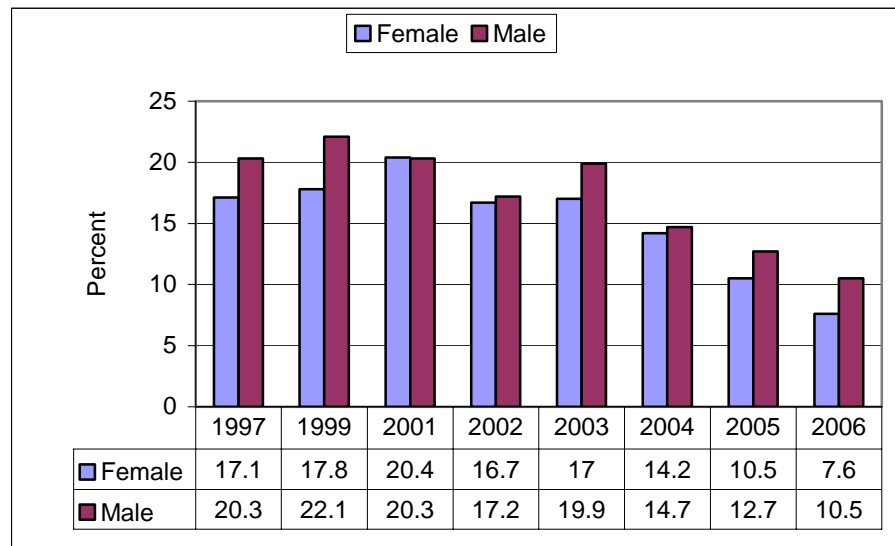
Middle school students are surveyed in the 8th grade. This report compares Oregon's 8th grade results to national results from the Monitoring the Future Survey, 8th grade data. High school students are surveyed in the 11th grade and state results are compared to 11th grade national Youth Risk Behavior Surveillance System results.

Age of initial use

Looking at the percent of 11th graders who were less than 13 years old when they smoked their first cigarette assesses age of initial use. In the past ten years, there has been a substantial decrease in the percent of 11th grade youth who were less than 13 when they smoked their first cigarette.

- Males are 38 percent more likely than females to first smoke before 13 (10.5% versus 7.6%).
- Early initial use of cigarettes by male youth was cut in half, from a high of 22.1 percent in 1999 to 10.5 percent in 2006.
- The rate fell even more for females. It went from 20.4 percent in 2001 to 7.6 percent in 2006, a 64 percent decline. See Figure 13 below.

Figure 13. Percent of 11th grade Oregon youth who were less than 13 when they smoked their first cigarette, by gender – 1997 to 2006



Data Source: Oregon Healthy Teens Survey

Current cigarette use

As was seen in the adult population, there have been long term declines in cigarette use by Oregon youth, but there haven't been consistent declines among students in the past three years.

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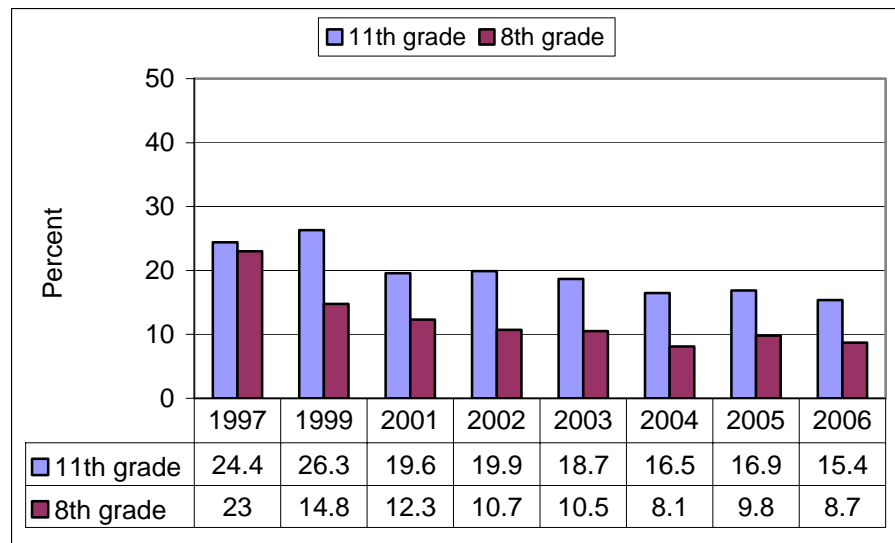
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Age

More high school youth smoke cigarettes than middle schoolers. In 2006, 8.7 percent of 8th graders smoked in the past month and 15.9 percent of 11th graders.

- Between 2004 and 2005 there was an increase in smoking for 8th and 11th grade youth.
- In 2006, the rate of current cigarette use dropped to an all-time low for 11th grade students. However, even though the rate of current cigarette use by 8th graders decreased in 2006, it was still above the 2004 rate. See Figure 14 below.

Figure 14. Past month cigarette smoking by Oregon youth, by grade – 1997 to 2006



Data Source: Oregon Healthy Teens Survey

- Since 1997, both grades have experienced a decline in the number that smokes each month. The largest decrease was 62.0 percent for 8th graders, but 11th graders showed a 32.3 percent decline in past month smoking in the 10-year period from 1997 to 2006. See Table 11 below.

Table 11. Changes in past month cigarette use by Oregon youth, by grade – 1997 to 2006

Age	1997	2006	Net decrease	Percent decrease
8 th grade	23.0%	8.7%	-14.3	-62.0%
11 th grade	23.5%	15.9%	-7.6	-32.3%

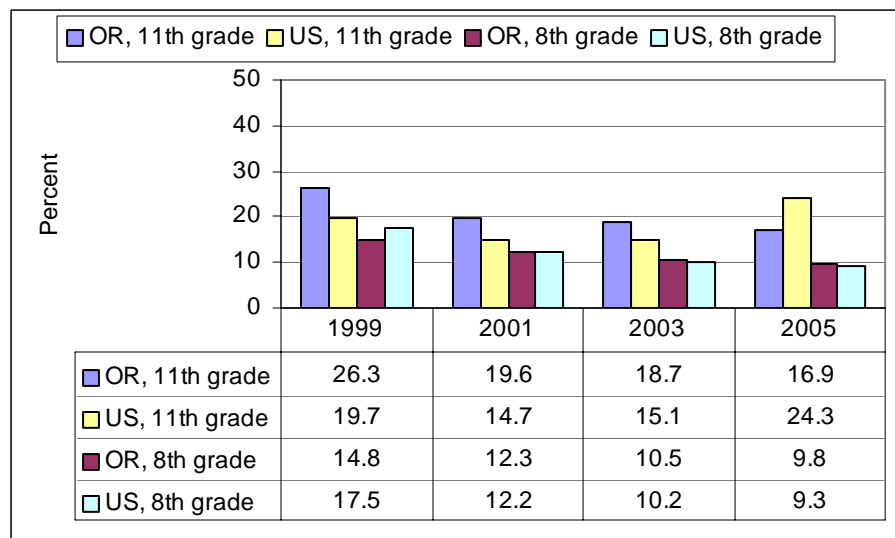
Data Source: Oregon Healthy Teens Survey

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- From 1999 through 2003 Oregon 11th grade youth had higher rates of past month cigarette use than the national rate. In 2005, the national Youth Risk Behavior Survey results had an increase in past month smoking that was not seen in Oregon's results. Thus, for the first time since 1999, Oregon's 11th grade students reported a lower rate of past month smoking than the national average. See Figure 15 below.
- In contrast, when Oregon's 8th grade students are compared to national Monitoring the Future Survey results, the rate of past month smoking by Oregon's 8th graders is about the same as the national average every year except 1999. See Figure 15 below.

Figure 15. Past month cigarette smoking in Oregon and the United States, by grade – 1999 to 2005



Data Source: Oregon Healthy Teens Survey, Monitoring the Future Survey, Youth Risk Behavior Surveillance System

Gender

- From 1997 to 2006 there was an overall decline in the percent of male and female students reporting past month smoking by 8th and 11th graders. Eighth grade males had the largest decrease and 11th grade males had the smallest decrease in past month smoking. See Table 12.

Table 12. Changes in past month cigarette use by Oregon youth, by grade and gender – 1997 to 2006

Grade	Gender	1997	2006	Net decrease	Percent decrease
8th	Female	26.1%	9.9%	-16.2	-62.0%
8th	Male	20.0%	7.5%	-12.5	-62.5%
11th	Female	25.4%	14.9%	-10.5	-41.3%

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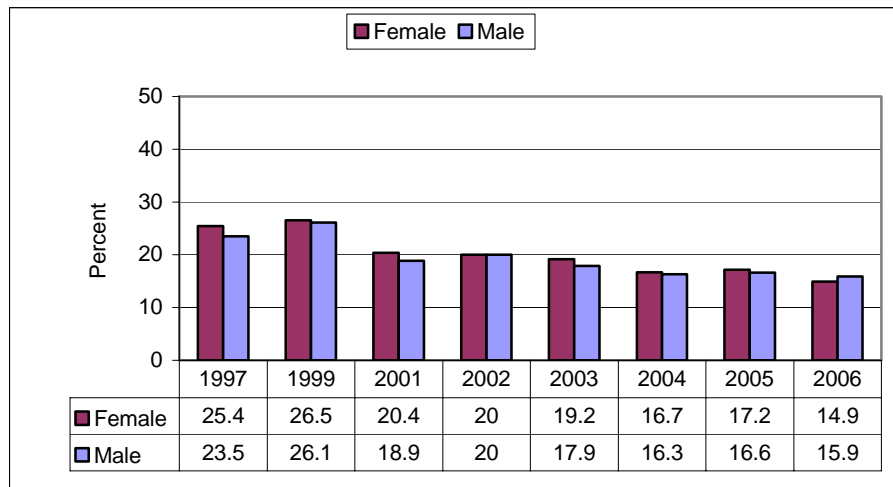
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11th	Male	23.5%	15.9%	-7.6	-32.3%
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Data Source: Oregon Healthy Teens Survey

- Eleventh grade males and females have about the same rate of past month cigarette use; one year females will have higher rates and another year it will be males. See Figure 16 below.

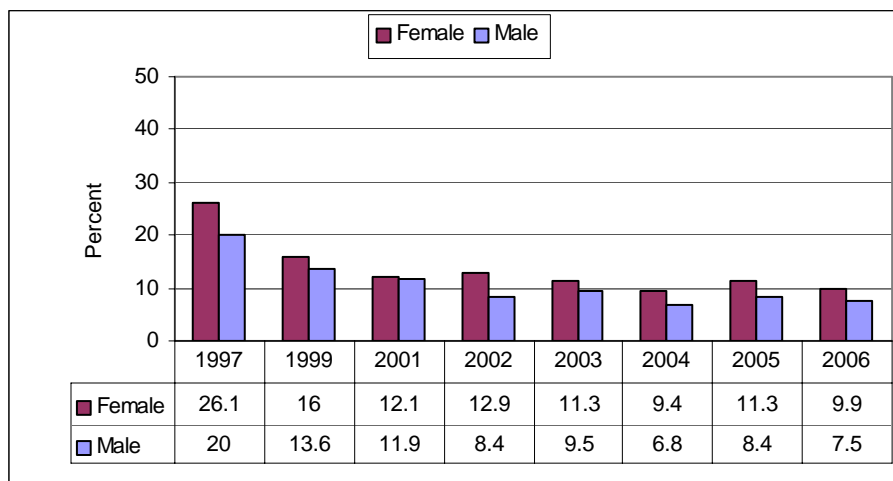
Figure 16. Percent of 11th grade Oregon youth who smoked cigarettes in the past month, by gender – 1997 to 2006



Data Source: Oregon Healthy Teens Survey

- In 8th grade, females are consistently more likely to smoke in the past month than males. See Figure 17 below.

Figure 17. Percent of 8th grade Oregon youth who smoked cigarettes in the past month, by gender – 1997 to 2006



Data Source: Oregon Healthy Teens Survey

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Smokeless tobacco

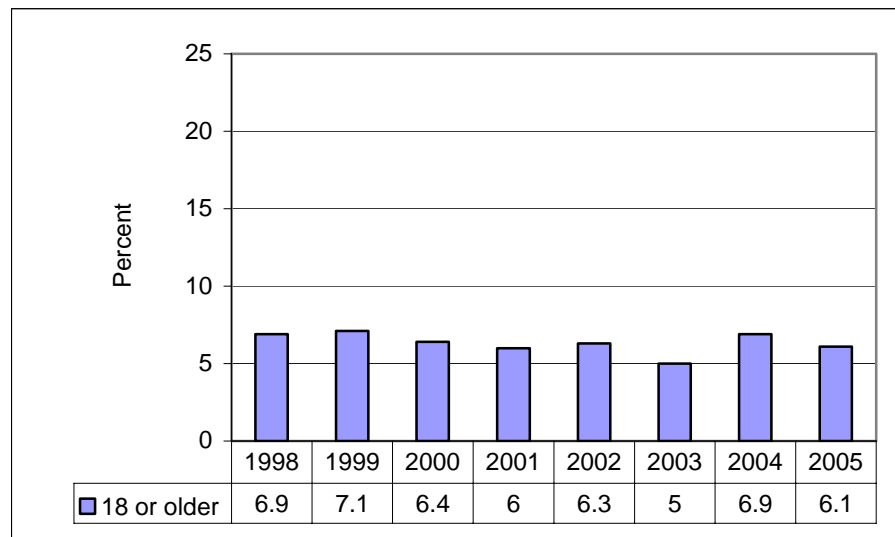
This section presents data on the use of smokeless tobacco from two sources:

- The Oregon Behavioral Risk Factor Survey asks adults 18 and over about past month use of smokeless tobacco; and
- The Oregon Healthy Teens Survey asks 8th and 11th grade students, how many days they used chewing tobacco, snuff, or dip during the past 30 days.

Gender

- Based on 2005 Oregon Behavioral Risk Factor Survey results, 3.1 percent of adults 18 or older in Oregon are current smokeless tobacco users. Smokeless tobacco use is much higher among males (6.1%) than among females (0.1%).
- The rate of adult smokeless tobacco use has not experienced the same declines as cigarette use. See Figure 18 below.

Figure 18. Percent of males 18 or older who used smokeless tobacco in the past 30 days in Oregon - 1998 to 2005



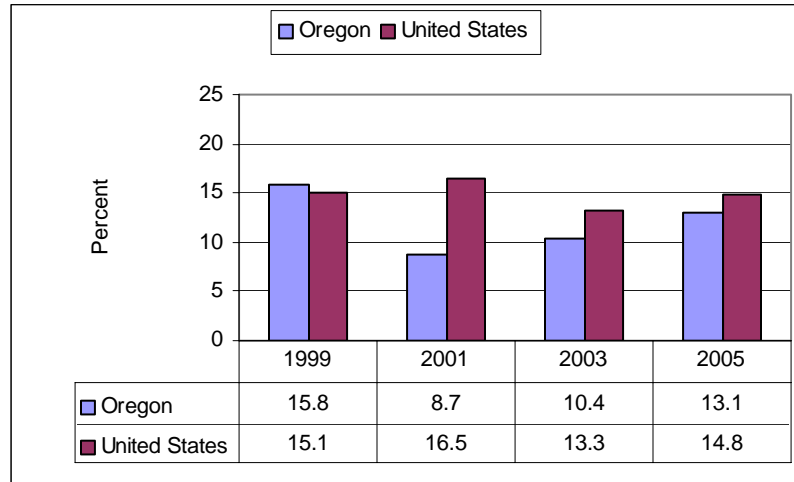
Data Source: Oregon Behavioral Risk Factor Survey

- Youth exhibit the same use patterns as their adult counterparts. 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 8th graders reported using smokeless tobacco in the past 30 days (4.6 percent of the males; 1.3 percent of the females). See Figures 19 and 20 below.

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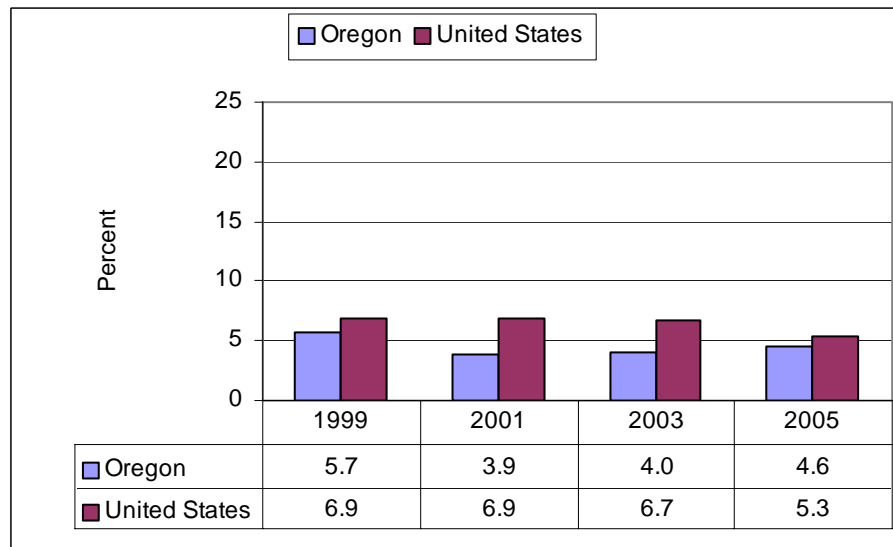
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Figure 19. Percent of 11th grade males who used smokeless tobacco in the past 30 days in Oregon and the United States – 1999-2005



Data Source: Oregon Healthy Teens Survey, Youth Risk Behavior Surveillance System

Figure 20. Percent of 8th grade males who used smokeless tobacco in the past 30 days in Oregon and the United States – 1999-2005



Data Source: Oregon Healthy Teens Survey, Monitoring the Future

Summary of Findings

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

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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 in the State.

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 the deaths due to chronic lower respiratory disease and emphysema in Oregon 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 cardiovascular 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 2004.⁷
 - 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.

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- In the past ten years there was a substantial decrease in the percent of youth who smoked their first cigarette before 13 years. Males are more likely than females to smoke before 13.
- The rate of current cigarette use dropped to an all-time low for 11th grade students in 2006, 15.4 percent. The rate of current cigarette use by 8th graders decreased in 2006 to 8.7 percent, but remained above the 2004 rate of 8.1 percent.
- For the first time since 1998, the percent of 18 to 24 year old Oregonians who smoke every day has exceeded the rate of daily smoking in the United States.
- Current cigarette use by Oregonians 18 or older decreased from 22.4 percent in 1998 to 18.6 percent in 2005. This translates to twenty 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 percent of females who smoke daily dropped from 16.4 percent to 12.6 percent. The percent 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 that 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.
- In 2006, the Oregon Healthy Teens Survey showed 5.6 percent of the 11th graders used smokeless tobacco in the past month (10.2% of the males; 1.0% of the females). In the same year, 3.0 percent of the 8th graders reported using smokeless tobacco in the past 30 days (4.6% of the males; 1.3% 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%) than among females (0.1%).

¹ Substance Abuse and Mental Health Services Administration. *Results from the National Survey on Drug Use and Health: State Estimates of Substance Use*. Office of Applied Studies, Rockville, MD. Accessed online, January 2007
<<http://www.oas.samhsa.gov/2k4/State/appB.htm>>

² *ibid*

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³ U.S. Department of Health and Human Services. *Youth and Tobacco Use: Current Estimates*. Atlanta, GA: Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006. Accessed online, February 2007

<http://www.cdc.gov/tobacco/research_data/youth/Youth_Factsheet.htm>

⁴ U.S. Department of Health and Human Services. *Impact on Unborn Babies, Infants, Children, and Adolescents*. Atlanta, GA: Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004. Accessed online, February 2007

<http://www.cdc.gov/tobacco/sgr/sgr_2004/Factsheets/1.htm>

⁵ U.S. Department of Health and Human Services. *Smokeless Tobacco*. Atlanta, GA: Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006. Accessed online, February 2007 <<http://www.cdc.gov/tobacco/factsheets/smokelesstobacco.htm>>

⁶ Oregon Department of Human Services. *Oregon Vital Statistics Annual Report 2004, Volume 2*. Office of Disease Prevention and Epidemiology Center for Health Statistics, 2006.

⁷ Oregon Department of Human Services. *Taking Action for a Tobacco-Free Oregon, Oregon Statewide Tobacco Control Plan, 2005-2010*. Portland, OR: DHS, Office of Disease Prevention and Epidemiology, 2005. Accessed online, January 2007

<<http://www.oregon.gov/DHS/ph/tobacco/docs/stateplan05-10.pdf>>