

Oregon Public Health Division  
**State Health Profile**  
September 2012





# Acknowledgements

This report would not have been possible without the efforts of Oregon Public Health Division program staff, the stakeholder advisory group, and members of the public who provided comment and input.

## Oregon Public Health Division

### Office of the State Public Health Director

- Program Design and Evaluation Services

### Center for Public Health Practice

- Center for Health Statistics
- HIV/STD/TB Program
- Acute and Communicable Disease Prevention Program
- Immunization Program

### Center for Prevention and Health Promotion

- Health Promotion and Chronic Disease Prevention
- Injury Prevention and Epidemiology
- Maternal and Child Health Section
- Adolescent, Genetics and Reproductive Health Section

### Center for Health Protection

- Research and Education Services

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## For more information

The Oregon State Health Profile presents information on selected health indicators that provides a snapshot of the health status of Oregonians. More detailed information on specific indicators, as well as public health data and reports, is available on the Public Health Division website at:

*<http://public.health.oregon.gov/DataStatistics/Pages/index.aspx>*

*<http://public.health.oregon.gov/ProviderPartnerResources/PublicHealthAccreditation/Pages/HealthStatusIndicators.aspx>*

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# Executive Summary

The vision of the Oregon Health Authority’s Public Health Division is “Lifelong health for all people in Oregon,” while its mission is “Promoting health and preventing the leading causes of death, disease and injury in Oregon.” In order to achieve these aims, we must understand the primary health outcomes, factors, behaviors, environment, and policies that affect the health of Oregonians.

The Oregon State Health Profile presents information on selected health indicators, offering a snapshot of the health status of Oregonians. Together these indicators provide benchmarks by which to measure progress towards achieving health for all our residents. Below are some highlights.

## Demographic trends

Oregon has an aging and increasingly diverse population. In 2010, approximately 15% of the population was aged  $\geq 65$  years; in 2020, this is projected to increase to 20% of the population. Whereas in 1990, Oregon’s population was 90% white, non-Hispanic, in 2010 fewer than 80% of Oregonians were white, non-Hispanic. In 2010, 11.7% of Oregonians were Hispanic; 3.7% were Asian; 1.8% were black or African American; 1.4% were American Indian; and 3.8% were multiracial.

## Socioeconomic status

Poverty and under-education contribute to poor health. In 2010, almost 16% of Oregonians of all ages, and 22% of Oregon children lived in poverty. And, 17.5% of Oregonians, and 29% of households with children, experienced food insecurity, compared to 14.5% in the United States overall and 20.2% for households with children. In 2010, one in three Oregon children who started as high school students four years earlier did not graduate with their class.

## Causes of death

In Oregon during 2010, the five leading causes of death were: cancer, heart disease, lung disease, stroke, and unintentional injuries. Of note, Oregon’s death rates were higher than those of the overall U.S. for suicide (36% higher), liver disease (28%), diabetes (21%), stroke (13%), and chronic lower respiratory disease (10%). Injuries were the leading cause of premature death before age 75 years — while injuries accounted for 7.7% of all deaths among Oregonians during 2009, they accounted for 25.3% of total years of potential life lost before age 75.

## Injury deaths

The numbers of Oregonians killed in motor vehicle crashes have declined substantially during the past decade, but the numbers dying from opioid drug overdoses have been steadily increasing. Oregon’s rate of suicide has remained substantially higher than the U.S. rate for the last 30 years.

## Quality of life

Overall, Oregonians report that their own health status is high: from 2000 through 2010, 82%–86% of Oregon adults reported good to excellent health.

## Chronic diseases

As Oregon's population ages, we expect to see that more people will be living with chronic diseases, such as heart disease, cancer, diabetes and stroke. While Oregon's rates of heart attack hospitalizations and lung cancer diagnoses have declined, the proportion of the population diagnosed with diabetes has increased — in 2009, 7.8% of adults reported having been diagnosed with diabetes, up from 4% in 1995.

## Communicable diseases

Chlamydia infection is the most common reportable disease in Oregon and a major cause of infertility. In 2010, reported chlamydia incidence in Oregon was 375 cases/100,000 residents, and highest among young adults (particularly women) aged 20-24 years.

In 2011, 328 cases of pertussis were reported in Oregon (8.5 cases per 100,000 population); a steady increase since 2006. The greatest numbers of cases were reported in children <5 years of age; pertussis is of particular concern in the youngest infants, who have the highest risk of complications and death (at least four in Oregon since 2003).

## Health behaviors

Tobacco use remains the leading preventable cause of death, and is associated with approximately 7,000 deaths each year. Almost 20% of Oregon adults report that they are current smokers. In addition, alcohol continues to contribute to deaths from injuries. Almost 15% of adults and 25% of Oregon teens report binge drinking during the past 30 days.

Overweight and obesity in Oregon have increased since 1990. During 2010, 60% of Oregonians were either overweight or obese. Overweight and obesity result from too many calories consumed and not enough used through activity and exercise. Consumption of fruits and vegetables serves as a marker for healthy diets. During 2009, only about one in four Oregon adults reported consuming  $\geq 5$  servings of fruits and vegetables per day, a proportion that has remained unchanged since 1996. Sadly, an even smaller proportion of children consume healthy amounts of fruits and vegetables: only one in five Oregon eighth-graders consumed  $\geq 5$  fruits and vegetables per day in 2009, a 24% decline since 2001. Meanwhile the proportion of adult Oregonians who are active has not changed over time: in 2009, 56.5% of Oregon adults reported meeting the CDC physical activity recommendations, 43.5% did not.

## Maternal and child health

Oregon's infant mortality has been lower than U.S. infant mortality for more than 20 years, and continues to decline. During 2010, 4.9 infants died per 1,000 live births among Oregon residents, having declined from 5.6 in 2000. Oregon has the highest rate among U.S. states of mothers who breastfeed: in 2008, 75% of Oregon mothers breastfed at eight weeks

postpartum, compared to 35% of all U.S. mothers. Conversely, Oregon recently ranked 46th lowest among U.S. states in proportions of children who receive developmental screening: in 2007, 13.5% of Oregon children aged 10 months to 5 years received appropriate screening in the past 12 months, compared to 19.5% in the U.S. as a whole.

Tooth decay in children can cause oral pain and infection, later diminishing school attendance and success, nutrition, and general health. The oral health of young Oregonians worsened from 2002 to 2007: in first–third graders, untreated tooth decay increased from 24% to 36%, and rampant decay increased from 16% to 20%. Oregon ranks 48th among U.S. states for fluoridated public water systems; only 22.6% of Oregonians get their drinking water from a fluoridated water system, compared to 73.9% in the U.S. as a whole.

The state’s teen pregnancy rate has consistently been lower than the national rate. In 2008 (the most recent national data available), Oregon’s pregnancy rate for teens aged 15-17 years was 25.7 per 1,000 compared to the national rate of 36.8 per 1,000.

## Environmental health

Pesticide exposure is reportable by law in Oregon. From 2002-2007, 614 events were determined to be responsible for 689 “likely” cases. (An event can expose more than one person.) Of these, the majority (69.7%) were reported as occurring at a “private residence.” According to the Pesticide Use Reporting System, in 2008, more than 19.5 million pounds of pesticides were applied in Oregon; 77% of the pesticides used were for agriculture, followed by forestry (4.2%), and rights-of-way (3.5%).

Overall, outdoor air quality in Oregon is excellent; only a few locations regularly experience days in which pollution levels exceed National Ambient Air Quality Standards for fine particulate matter. Three counties with the highest levels — Lane, Klamath and Jackson — reduced annual average concentrations of fine particulate matter from 2002 to 2010 by 37%–49% by replacing inefficient wood burning stoves and limiting outdoor burning during winter months.

## Health care access

During 2011, 14.6% of Oregonians reported that they did not have health insurance, compared to 15.6% of the U.S. population. By age, Oregonians aged 19–64 years were most likely to be uninsured (21.0%), followed by children and youth aged ≤18 years (5.6%), and adults ≥65 years (0.9%).

During 2010, 76% of Oregon adults reported having a personal physician or health care provider (79% of females, 73% of males), a number which has been stable for the past 10 years. Having a personal physician or health care provider increased with age, from 53% of adults aged 18–24 years to 91% aged ≥65 years.

## Health disparities

Specific populations in Oregon experience significant health inequities. For example, compared to whites, African Americans and American Indians in Oregon die younger, and experience significantly more asthma, diabetes and hypertension than non-Hispanic whites. African Americans and Hispanics have significantly higher rates of new HIV infections, and teen pregnancy and birth rates than non-Hispanic whites. Relative to others, people of low socioeconomic status have more chronic disease, and are more likely to smoke and to be obese. Relative to heterosexuals, lesbian, gay and bisexual Oregonians are more likely to smoke, have asthma, diabetes, arthritis or cardiovascular disease, and to experience intimate partner violence. People with a history of incarceration are at higher risk than the general population for many communicable and chronic diseases, which follow them from the community into correctional institutions and back to the community.

## Conclusion

Improving the health of all Oregonians is not a task for the public health or health care systems alone; rather, it will require health-focused agencies and groups to work with social service, transportation, planning, education, economic development agencies, private business leaders, not-for-profit organizations, academic institutions, policymakers, tribal officials, and the public to address our challenges. Health is everybody's business.

# Introduction

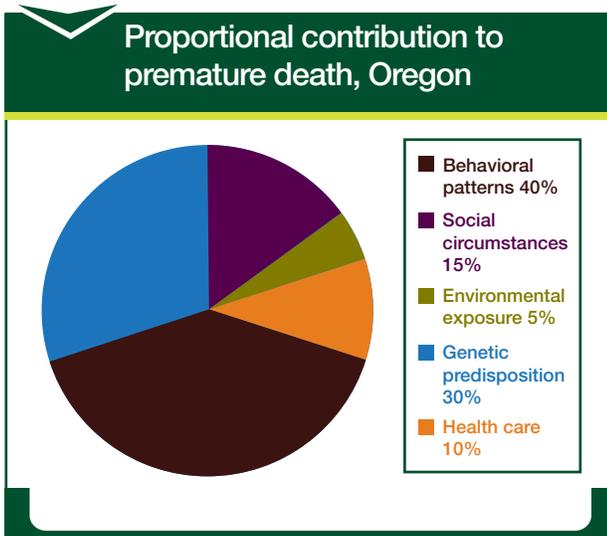
Oregonians pride ourselves on our beautiful natural environment, with high mountains, rugged coastline, and clean air and water. Oregon has the ninth largest geographic area among U.S. states. Its 3.8 million residents make it the 29th most populous state. About two-thirds of the state’s population lives west of the Cascade Mountains in the Willamette Valley — the rest of the state is rural. Traditionally, Oregon has been a state of farmers, loggers, ranchers, and fishermen. While Oregonians are proud of their heritage, some aspects of our geography, demography, and economy present challenges to achievement of the optimum health of the population, whether they be long distances to health care appointments, the aging of the population, or the economic downturn, which has increased food insecurity for many of our children.

The vision of the Oregon Health Authority’s Public Health Division is, “Lifelong health for all people in Oregon.” The Public Health Division’s mission is, “Promoting health and preventing the leading causes of death, disease and injury in Oregon.” In order to achieve this vision and mission, it is important to understand the health outcomes, factors, behaviors, environment, and policies that most strongly affect the health of our citizens.

The Oregon State Health Profile presents information on selected health indicators. These indicators serve as benchmarks by which to measure progress towards achieving health for all Oregonians. Together, these indicators provide a snapshot of the health status of Oregon’s population.

# Framework

Health is defined by The World Health Organization as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. Many factors contribute to overall health. Broadly, these factors can be grouped into: behavioral patterns, genetic predisposition, social circumstances, access to health care, and environmental exposure.<sup>+</sup>



America’s Health Rankings (conducted by the United Health Foundation),\* and The County Health Rankings (conducted by the University of Wisconsin and funded by the Robert Wood Johnson Foundation)† are based on population health frameworks that emphasize the many factors which contribute to overall health.

In developing Oregon’s State Health Profile, we grouped health status indicators within a modified version of these conceptual frameworks. In addition, we view health status through a health equity lens, and present information on specific populations,

including: racial and ethnic populations; economically disadvantaged and uninsured populations; lesbian, gay, bisexual or transgendered populations; and incarcerated populations.

The indicators included in this report and in the State Health Profile on the Public Health Division website are not intended as a comprehensive list of all metrics pertaining to the health status of Oregonians. Rather, they comprise selected key indicators that in their totality provide a “snapshot” of Oregon’s health.

<sup>+</sup> McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. *Health Affairs (Millwood)* 2002; 21: 78-93.

\* <http://www.americashealthrankings.org/SiteFiles/Statesummary/OR.pdf>

† <http://www.countyhealthrankings.org/about-project/background>

# Oregon's Health Profile Framework

## Context

Demographic trends  
Socioeconomic status

## Health status

Mortality  
    Leading causes of death  
    Premature death  
    Injury deaths  
Quality of life  
Chronic diseases  
Communicable diseases

## Health behaviors

Tobacco use  
Obesity: Diet, physical activity  
Alcohol abuse

## Maternal and child health

Prenatal care/ Infant mortality  
Infant breastfeeding/ Developmental screening  
Oral health: Tooth decay/ Water fluoridation  
Teen pregnancy

## Environmental health

Pesticide exposure  
Air quality

## Health care access

Uninsured  
Primary care provider  
Receipt of preventive services

## Policy environment

Tobacco, nutrition, physical activity

## Process for Identifying Indicators

To identify core indicators for inclusion in Oregon's State Health Profile, the Oregon Public Health Division convened a committee of key stakeholders representing state public health and health care, local public health, tribal agencies, academia, and not-for-profit organizations. Stakeholders met in person and reviewed possible frameworks for the indicators, as well as a draft list.

### Criteria for selection of indicators included:

1. Importance: impact on the public's health;
2. Easily understandable;
3. Validity: population-based, recognized data source, time trends available when relevant; consistent with national measures;
4. Feasibility: readily available; does not require extensive additional resources;
5. Actionable: indicator can spur action by public health or stakeholders.

Input from stakeholders (both during the in-person meetings, and through a survey) was incorporated in selection and revision of the list of indicators. Initially the list of proposed indicators was posted on the Oregon Public Health Division website and stakeholder comment solicited by email. Then, as drafts of indicator data were available, these were posted to the website for additional public comment as were the discussion and presentation of health equity issues for some specific populations (communities of color, those of low socioeconomic status, sexual minorities, and those incarcerated).

The most current available data were used to compile indicator summaries, tables and figures. Analyses by age and sex and 10-year time trends are presented where possible and relevant.

## Demographic Trends and Socioeconomic Status

Among the important demographic trends relevant to Oregon's overall population health status are: aging of the population; increasing racial and ethnic diversity; the number of Oregonians living in poverty; and the educational status of Oregonians.

In 2011, Oregon's population was 3.8 million people. Over the next decade, this number is expected to increase by 10% to 4.2 million. Much of this increase ( $\geq 60\%$ ) is expected to occur among people aged  $\geq 65$  years from 15% in 2010 to 20% of Oregon's population in 2020\*. Life expectancy at birth for Oregon men increased from 68.4 years in 1970, to 79.6 years in 2010, and for women, from 76.2 years in 1970 to 82.2 years in 2010.

While it is aging, Oregon's population is also becoming more diverse. The proportion of Oregon's population that was white, non-Hispanic declined from 90% in 1990 to  $< 80\%$  during 2010.

Race and Ethnicity of Oregonians, 2010		
Race/ethnicity	Total population	% of population
Native Hawaiian and Pacific Islander	13,404	0.3%
American Indian and Alaska Native	53,203	1.4%
Black	69,206	1.8%
Two or more races	144,759	3.8%
Asian	141,263	3.7%
Hispanic/Latino	450,062	11.7%
White, non-Latino	3,005,848	78.5%

Source: U.S. Census Bureau, 2010

Poverty is associated with poor health. In Oregon, a significant percentage of the population lives at or below poverty. In 2010, 15.8% of Oregonians of all ages lived in poverty. The proportion of children in Oregon living in poverty was even higher: 21.6%. These figures are similar to those for the U.S. overall.

Educational level is an important determinant of income and is itself a strong determinant of health. The four-year high school cohort graduation rate represents the percentage of students entering high school who graduate with a regular diploma within four years. In 2010–2011 the cohort graduation rate in Oregon was 67.2%; for boys it was 62.8% compared to 71.9% for girls. This means that a third of Oregon's teens do not graduate from high school with their incoming class. With regard to post-secondary education, in 2010, 28.8% of Oregon adults aged  $\geq 25$  years had a post-secondary degree; slightly more men (29.2%) than women (28.3%) had a post-secondary degree.

\*Campbell, Paul R., 1996, "Population Projections for States, by Age, Sex, Race and Hispanic Origin: 1995 to 2025," Report PPL-47, U.S. Bureau of the Census, Population Division.

Food insecurity influences health status in several ways. Level of access to adequate and nutritious food is related to overweight and obesity, hypertension, high cholesterol, and diabetes. In addition, food insecurity affects child development and readiness to learn. Oregon has one of the highest levels of food insecurity in the United States: in 2010, 17.5% of Oregonians overall and 29% of households with children were food insecure. This compares to 14.5% in the U.S. overall and 20.2% for households with children.

# STATE HEALTH INDICATORS



# HEALTH STATUS

## Mortality

### Leading causes of death

Knowledge of the leading causes of death and their trends over time helps decision makers identify strategies that are likely to contribute to the greatest reductions in early mortality. In Oregon during 2010, the five leading causes of death were: cancer, heart disease, lung disease, stroke, and unintentional injuries (see following table). Of note, Oregon's mortality rates were higher than those of the United States for suicide (higher by 36%), liver disease (by 28%), diabetes (by 21%), stroke (by 13%), and chronic lower respiratory disease (by 10%). In contrast, Oregon's mortality rates were lower than the U.S. for heart disease (by 21%) and for pneumonia and influenza (by 26%).

Mortality also varies by sex and age. With the exception of Alzheimer's disease, age-adjusted death rates for Oregonians are higher for men than women, with the greatest disparities seen in deaths from suicide (higher by 213%), liver disease (by 95%), unintentional injury (by 87%), heart disease (by 61%), and cancer (by 38%).

Most deaths occur in people  $\geq 75$  years of age. This means that leading causes of death in people of all ages are dominated by the causes of death in people aged  $\geq 75$  years. Within age groups, leading causes of death vary. Prenatal conditions lead among infants; unintentional injuries predominate among people aged 1–44 years; cancer is the leading case for people aged 45–84 years; and heart disease leads for people  $\geq 85$  years of age. To examine trends over time, death rates are age-adjusted. Age-adjusted death rates for heart disease and stroke have been decreasing, while death rates for cancer and lung disease have remained relatively stable. Age-adjusted death rates for injuries have been increasing.

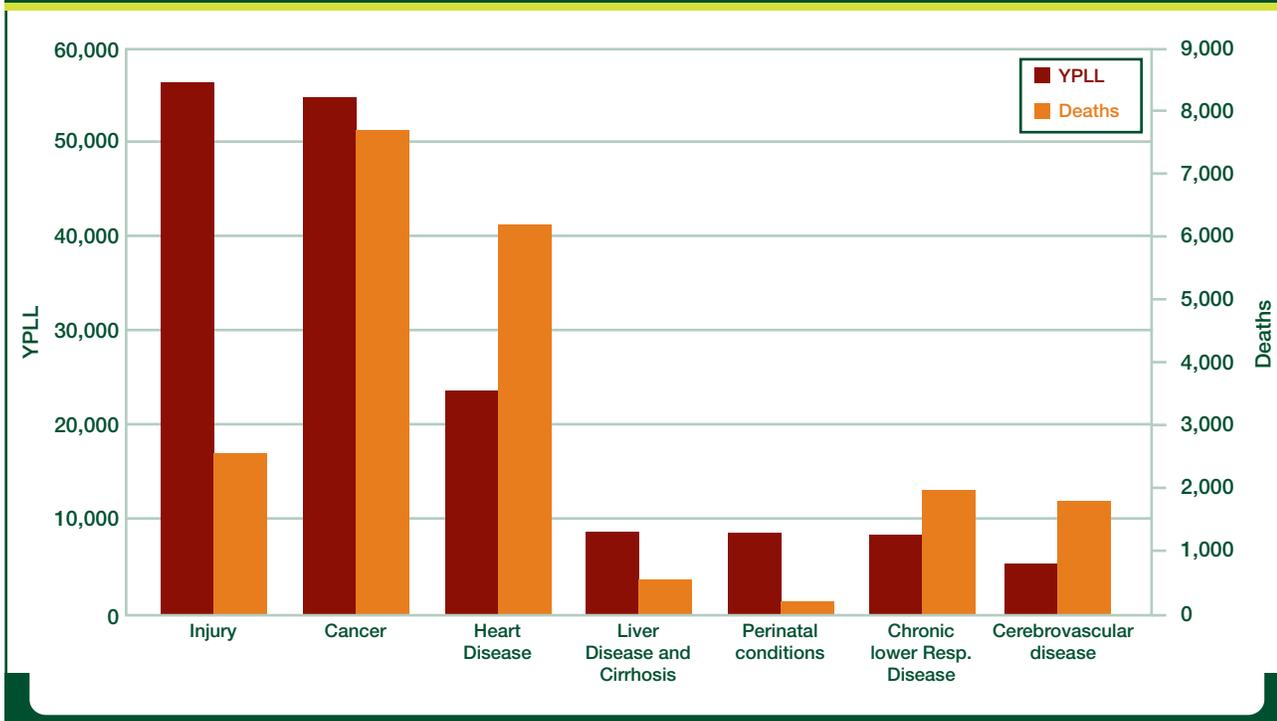
## Leading causes of death, U.S. and Oregon residents, 2009\*

Cause of Death in Rank Order	US	Oregon			
	Total	Total		Men	Women
	Rate <sup>1</sup>	Rate <sup>1</sup>	No.	Rate <sup>1</sup>	Rate <sup>1</sup>
<b>Total</b>	741.1	739.7	31,547	860.4	637.8
Malignant Neoplasms	173.2	176.8	7,470	210.3	152.4
Heart Disease	180.1	143.0	6,226	180.8	112.2
Chronic Lower Respiratory Disease	42.3	46.4	1,935	51.0	43.6
Cerebrovascular Disease	38.9	44.0	1,900	46.1	42.1
Unintentional Injuries	37.3	38.8	1,577	50.6	27.0
Alzheimer's Disease	23.5	27.7	1,212	23.5	30.1
Diabetes Mellitus	20.9	25.3	1,069	29.7	21.4
Suicide	11.8	16.1	640	24.8	7.9
Influenza & Pneumonia	16.2	12.0	509	13.8	10.5
Liver Disease & Cirrhosis	9.2	11.8	504	15.8	8.1

\*2009 is the most recent year for which final US data are available. US data from CDC WONDER; Oregon data from Oregon death certificate data.

<sup>1</sup>Age-adjusted rates per 100,000 population.

## Leading causes of death and years of potential life lost (YPLL) before age 75, Oregon residents, 2010



Data Source: Oregon death certificate data

## Premature death: Societal cost – years of potential life lost

Because leading causes of death vary by age, mortality rates by underlying cause alone do not reflect the full societal impact of premature death. Estimating years of potential life lost (YPLL) is a way of quantifying the cost of early death by measuring the number of years between age at death and a specific standard age. For instance, if the standard is set at 75 years, a death at age 21 results in 54 years of potential life lost.

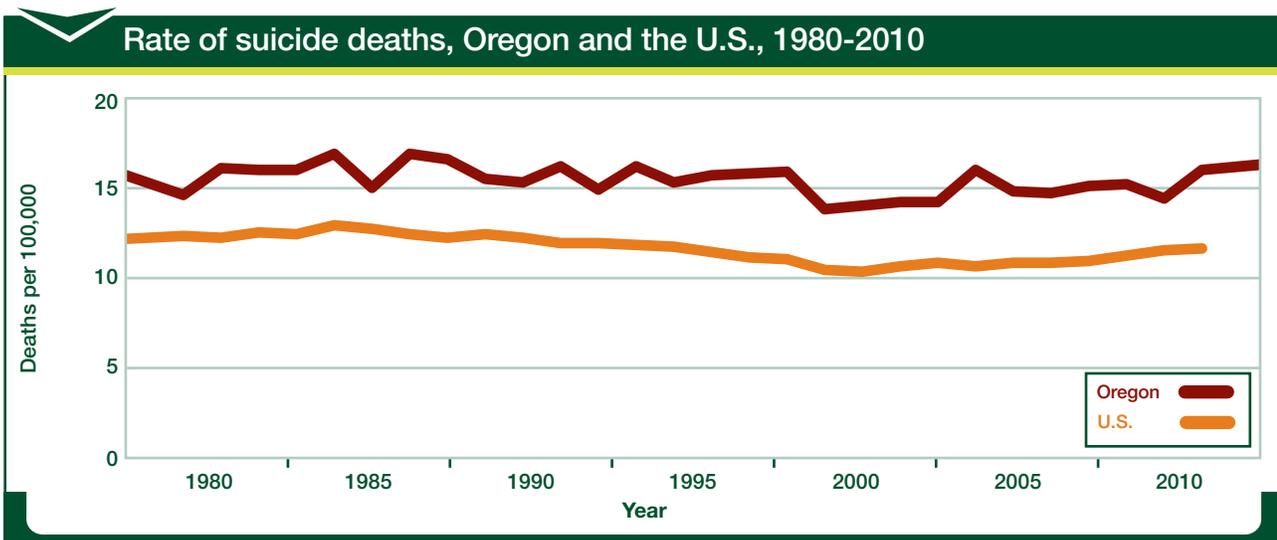
During 2010, 224,366 years of potential life were lost before age 75 years among Oregon residents. The average potential years of life lost were 63% higher for deaths among males relative to females (138,960 vs. 85,406). The figure above compares causes of death by YPLL before age 75 years with the number of deaths. Injury ranks third among causes of death, but first among causes of YPLL. While injuries accounted for 7.7% of all Oregon resident deaths in 2009, they accounted for 25.3% of total YPLL.

## Injury deaths

Deaths due to injury are the leading cause of premature death and years of potential life lost in Oregon.

## Suicide

Suicide is among the leading causes of death in Oregon, and one of the leading contributors to premature mortality (YPLL). In 2010, Oregon experienced 674 suicide deaths (16.3 per 100,000 residents). Rates in Oregon have consistently been higher than the U.S. for the past 30 years. Suicide is one of the five leading causes of death for Oregonians aged 35–54 years, and rates are higher among men than women.



SOURCE: OREGON DEATH CERTIFICATE DATA

## Intimate partner homicides

Intimate partner violence (IPV) is a serious public health problem that impacts individuals, families and communities across Oregon. Approximately one in five homicides in Oregon resulted from IPV during 2010. The number of intimate partner-related homicides in Oregon appeared to decline from 2005 to 2008, but increased in 2009 and 2010.

Many more women than men are killed by intimate partners: among all female homicide victims aged  $\geq 15$  years during 2010, 46% were killed by intimate partners. Approximately two-thirds of victims killed by an intimate partner were living with the perpetrator when the incident occurred.



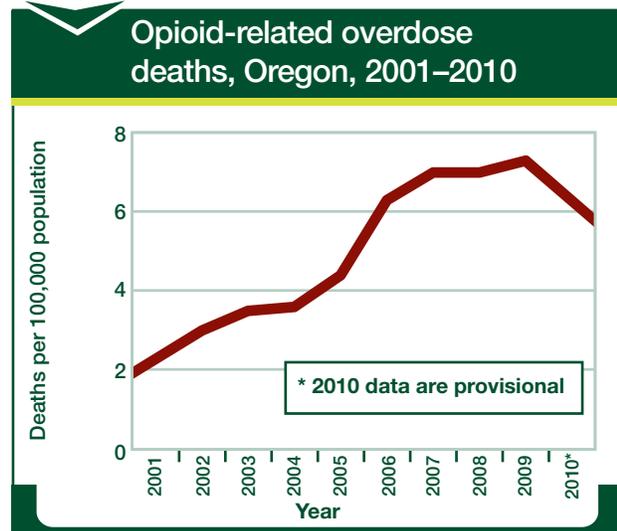
SOURCE: OREGON VIOLENT DEATH REPORTING SYSTEM

## Opioid-related overdose

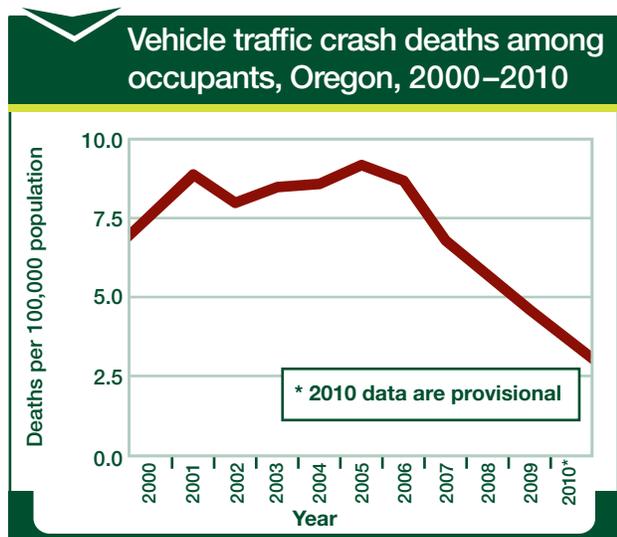
Unintentional opioid-related overdose is one of the leading causes of injury mortality in Oregon, and has increased three- to four-fold during the past decade (from 69 total deaths during 2001 to 225 during 2010). Efforts targeted at patients who use opioids as well as clinicians who prescribe them are needed to address this emerging public health problem.

## Motor vehicle occupant fatalities

Motor vehicle crashes contribute substantially to unintentional injury-related deaths, one of the five leading causes of death among Oregonians. Deaths among vehicle occupants in motor vehicle traffic crashes decreased from 244 in 2000 (7.1 per 100,000) to 123 (3.2 per 100,000) in 2010. Many factors have contributed to the decline including decrease in the average vehicle miles driven, improved public education and awareness efforts, engineered cars and roadways with a focus on safety, injury policy, and law enforcement.



SOURCE: OREGON DEATH CERTIFICATE DATA



SOURCE: OREGON DEATH CERTIFICATE DATA

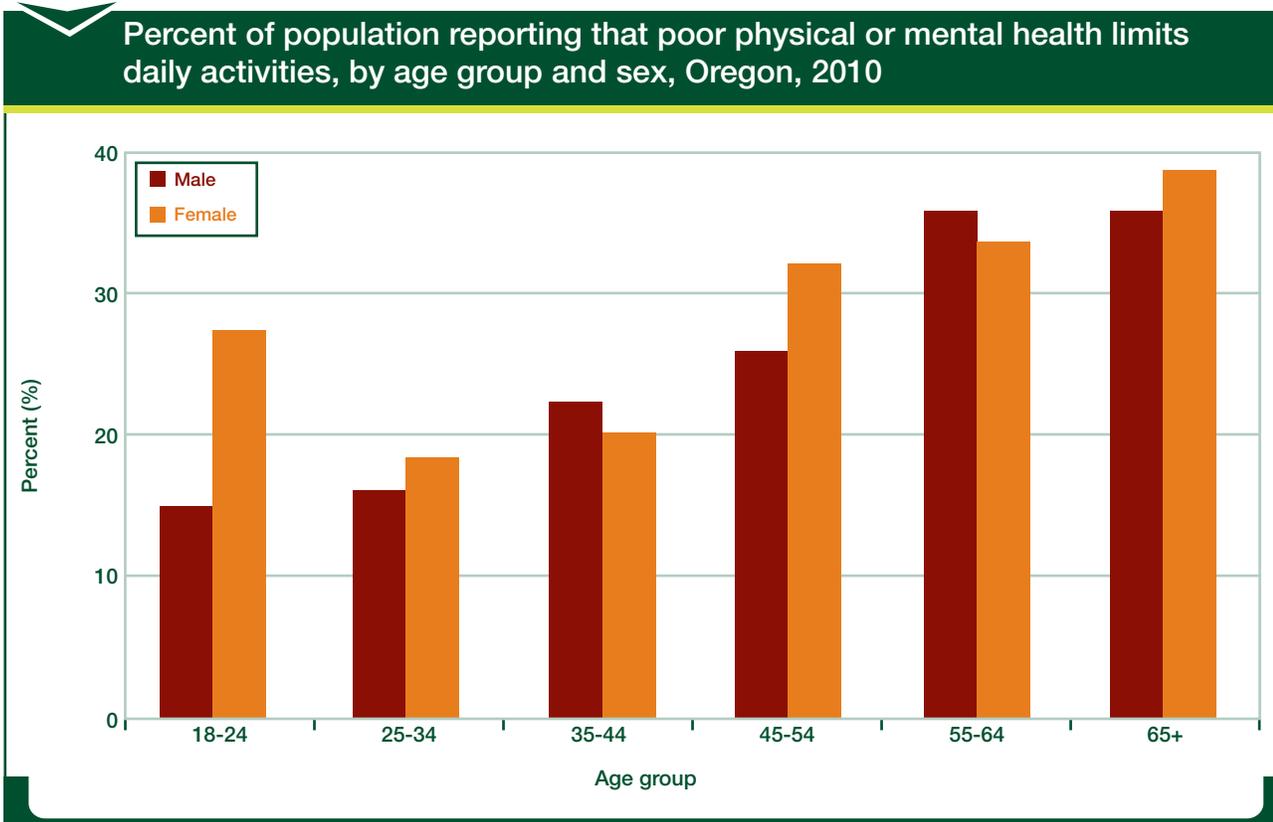
# Quality of life

## Report of good to excellent health

From 2000 through 2010, 82%–86% of Oregon adults reported good to excellent health.

## Physical or mental health issues limiting activities

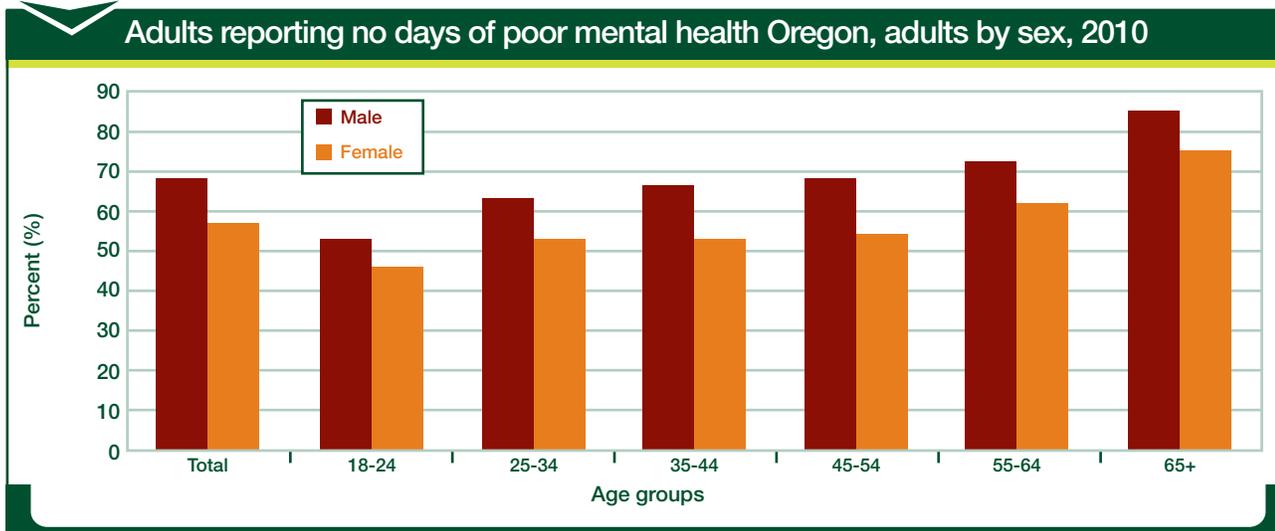
In 2010, 27.4% of Oregonians reported that physical or mental health issues limited their daily activities during the past 30 days, with a slightly higher proportion of women reporting limitations than men (29.2 vs. 25.6).



SOURCE: BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

## Emotional health

Adults reporting no days of poor mental health increased with increasing age from 49% in those aged 18-24 years to 80% in those aged  $\geq 65$  years. Self-reported mental health status is worse among females relative to males in all age groups.



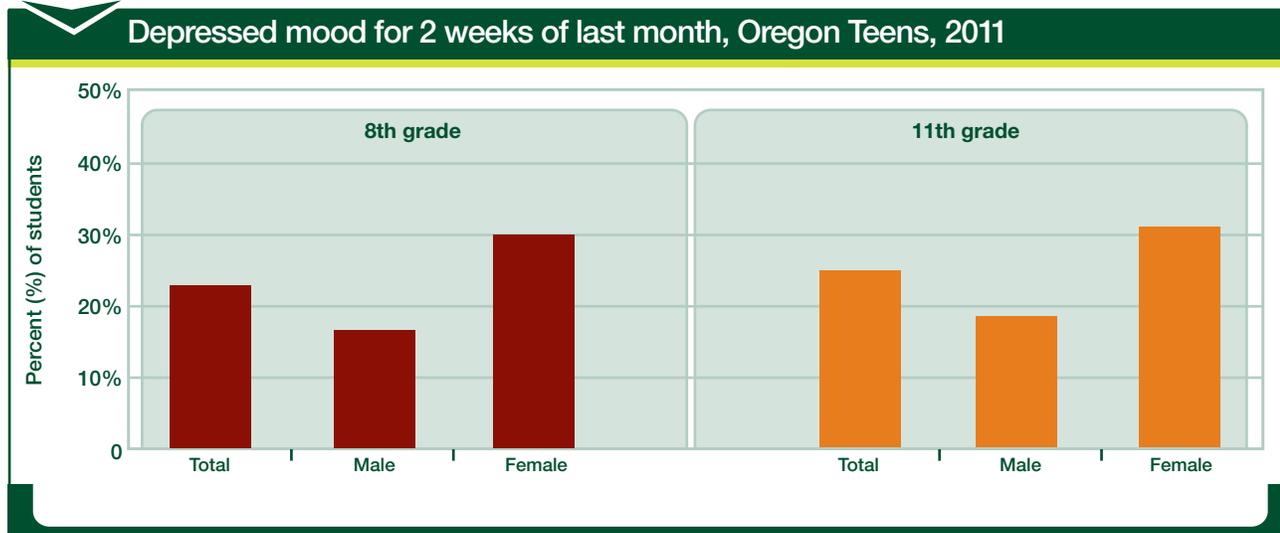
SOURCE: BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

## Maternal depression

In 2009, 37% of women reported symptoms of depression during and/or after pregnancy, a figure which has held relatively constant since 2004. Maternal depression may impact the mother, her partner, mother-baby interactions, and the long-term cognitive and emotional development of the baby (Source: Oregon Pregnancy Risk Assessment Monitoring System).

## Teen psychological distress

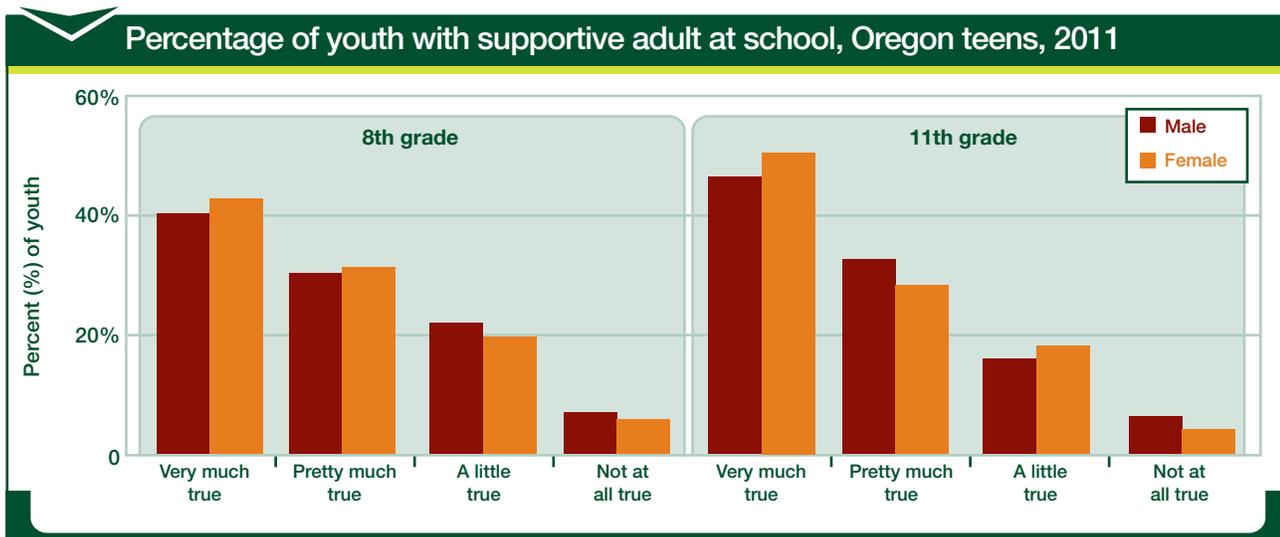
Psychological distress during the past month is a risk factor for suicidal thoughts and behaviors, and diminishes a young person’s overall wellness, development, and school achievement. Nearly one in four youths reports a depressed mood for two weeks out of the past month. Report of depressed mood is more prevalent among girls relative to boys.



SOURCE: OREGON HEALTHY TEENSSURVEY, 2011

## Teens with supportive adult at school

Presence of a supportive adult at school indicates school connectedness, which is associated with higher academic achievement, high school graduation, other healthy behaviors, and positive youth development and teen resilience. Overall, approximately 72% of eighth-graders and 78% of 11th-graders reported the presence of a supportive adult at school (“very much true” or “pretty much true”).



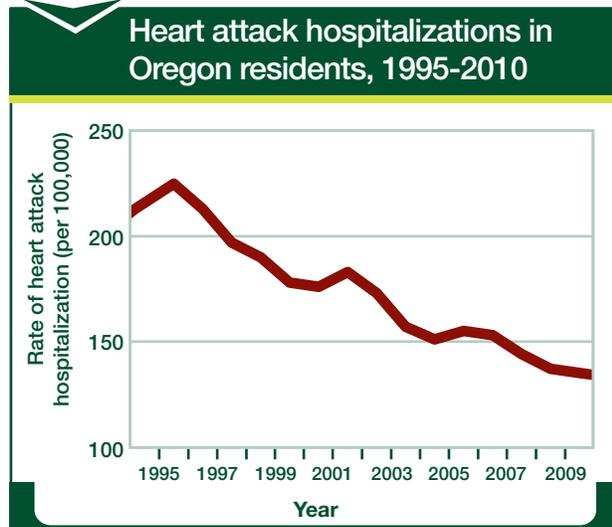
SOURCE: OREGON HEALTHY TEENS SURVEY, 2011

# Chronic diseases

As Oregon's population ages, we expect more people to be living with chronic diseases. In the recent past, Oregon's rates of heart attack hospitalizations and lung cancer diagnoses have declined while the percentage of people having been diagnosed with diabetes has been steadily increasing.

## Heart attack hospitalizations

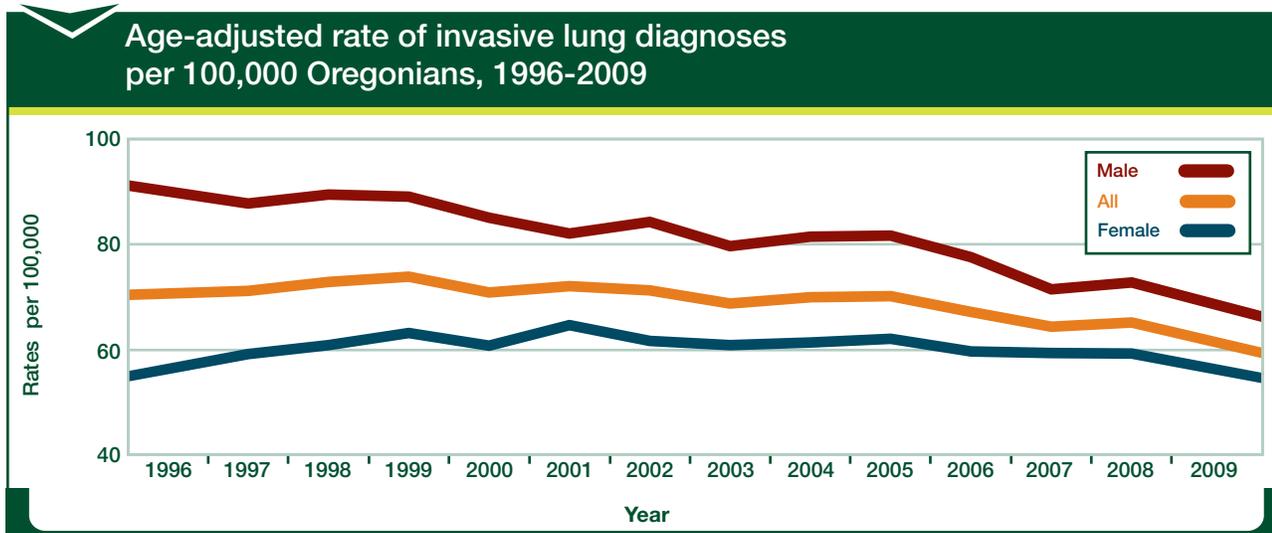
During 2010, there were 3,667 hospitalizations for heart attack in Oregon in persons aged 18-74 years. The rate of heart attack hospitalizations has been gradually decreasing during the past 15 years, likely due to a combination of improved cardiac care, as well as a decrease in tobacco use.



SOURCE: OREGON HOSPITAL DISCHARGE INDEX

## Lung cancer diagnoses

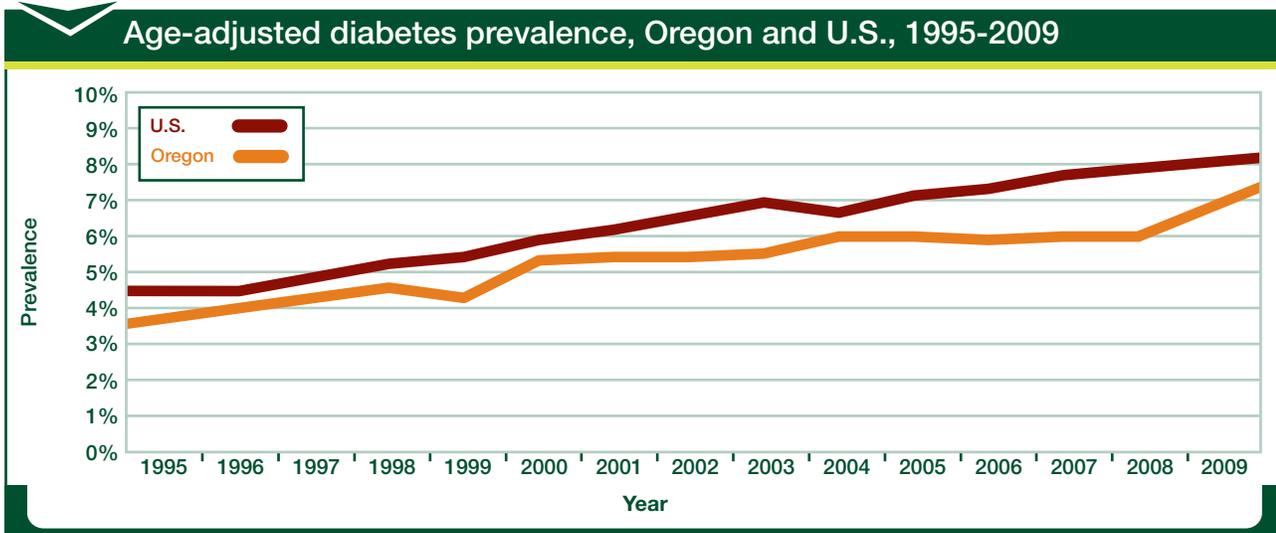
Lung cancer is the third most commonly reported cancer (after breast and prostate cancers) and the number one leading cause of cancer deaths in Oregon; of these, 80% are related to smoking. Lung cancer diagnosis rates among men have dropped markedly during the past decade, due to decreases in tobacco use. Rates among women remain slightly lower than rates among men but have remained relatively flat. Rates among men and women can be expected to decline if smoking rates fall further.



SOURCE: OREGON STATE CANCER REGISTRY

## Diabetes prevalence

Diabetes causes cardiovascular disease and other health complications, including kidney disease, blindness, and limb amputation. During 2009, the prevalence of diabetes in Oregon adults was 7.8%, a 95% increase from 1995 (4.0%). These increases are driven by concurrent increases in the prevalence of obesity.

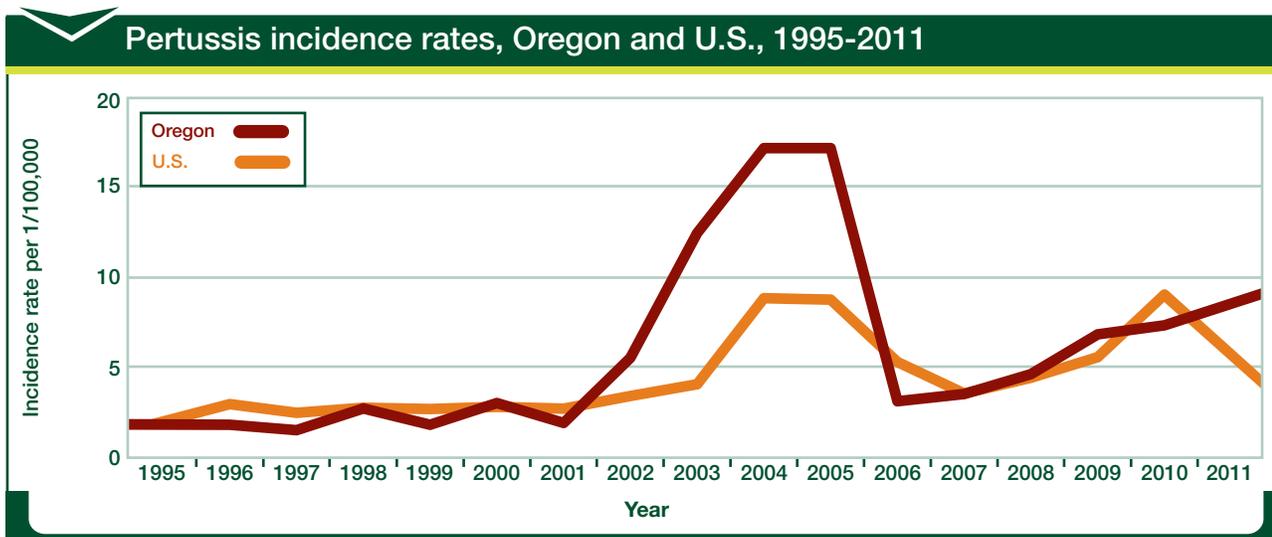


SOURCE: OREGON AND U.S. BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEMS

# Communicable diseases

## Pertussis (whooping cough)

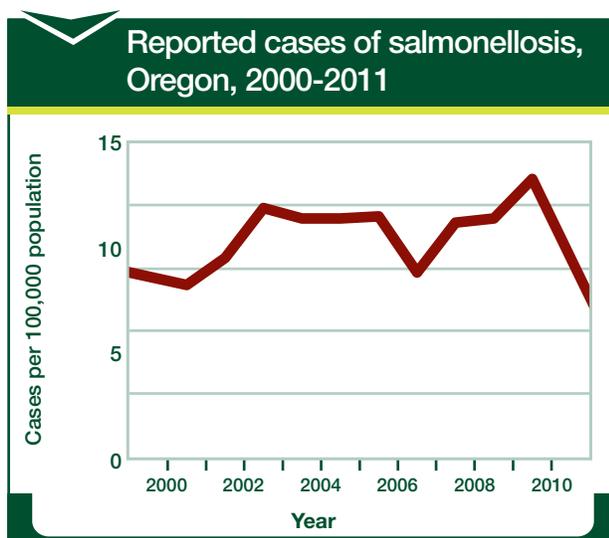
In 2011, 328 cases of pertussis were reported in Oregon (8.5 cases per 100,000 population). The highest rates were observed in children aged  $\leq 5$  years. Pertussis stubbornly remains a concern in Oregon and has been increasing since 2006. Pertussis is of particular concern in infants, who have the highest risk of pertussis-related complications and death (at least four in Oregon since 2003). Rates of pertussis are much higher among under- or unvaccinated children relative to fully vaccinated children. Increasing rates of childhood vaccination is the most obvious approach to reducing illness.



SOURCE: OREGON REPORTABLE DISEASES DATABASE

## Salmonellosis

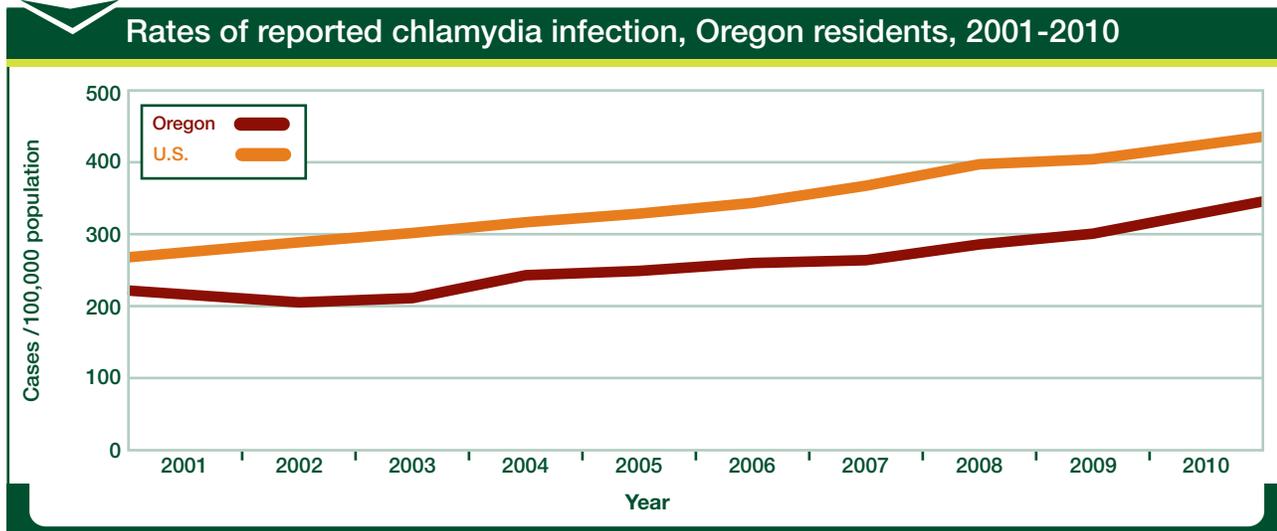
Salmonella infection occurs most frequently among infants and young children. Despite significant effort to reduce salmonella contamination in beef and poultry, and steps to protect newly identified sources of infection such as sprouts, peanut butter, almonds, and jalapeños, we have seen no apparent decrease in the incidence of salmonellosis in the past decade. Consistent public health surveillance and identification of other risk factors are needed to control this infection.



SOURCE: OREGON REPORTABLE DISEASES DATABASE

## Chlamydia infection

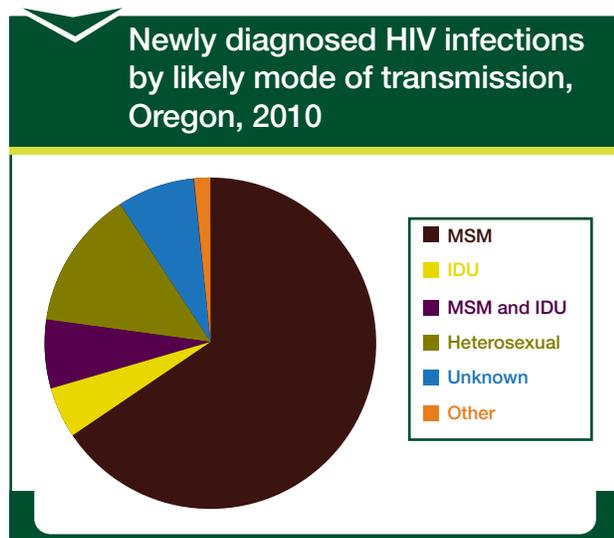
Chlamydia is the most common reportable disease in Oregon and a major cause of infertility. During 2010, the reported chlamydia incidence in Oregon was 375 cases/100,000 residents. Incidence is highest among young adults 20-24 years old. Reported chlamydia incidence in Oregon increased steadily during the past decade but remains below the U.S. rate. Reported chlamydia cases reflect the effectiveness of screening and treatment, efforts to promote sexual health and safe sexual practices.



SOURCE: OREGON REPORTABLE DISEASES DATABASE

## HIV infection

HIV is a potentially fatal, bloodborne and sexually transmitted disease. It disproportionately affects sexual, racial and ethnic minority groups. Oregon rates are approximately half U.S. rates, and have declined slightly during the past couple of years. New HIV cases continue to be diagnosed predominantly among men who have sex with men (MSM); only 10% of new diagnoses occurred in women during 2010. Efforts to address transmission need to continue to focus on MSM as well as those persons who inject drugs (IDU).



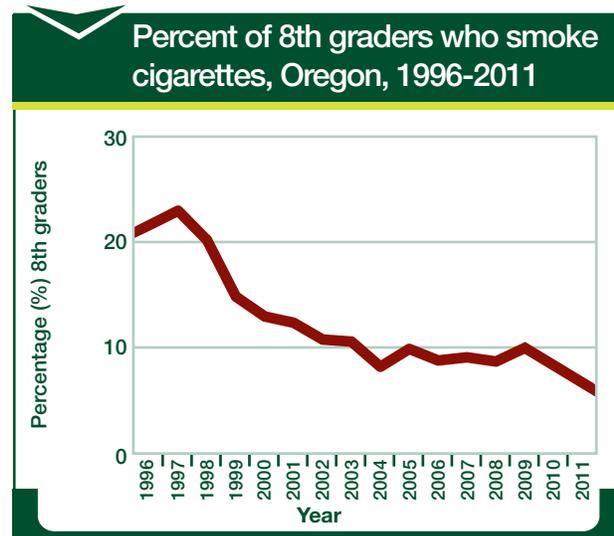
SOURCE: OREGON REPORTABLE DISEASES DATABASE

# Health behaviors

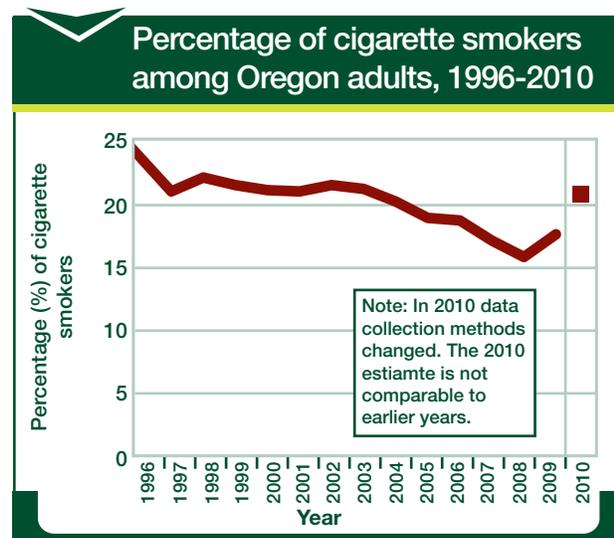
## Tobacco use

Smoking is the most common root cause of avoidable death and disease in Oregon. It kills more than 7,000 Oregonians annually, and costs the state \$2.4 billion in health care costs and lost productivity due to premature death. From 1997, when Oregon's Tobacco Prevention and Education Program was implemented, to 2008, cigarette smoking declined among Oregon adults.

Similarly, percentage of Oregon 8th graders who smoke cigarettes declined from 1996 - 2011.

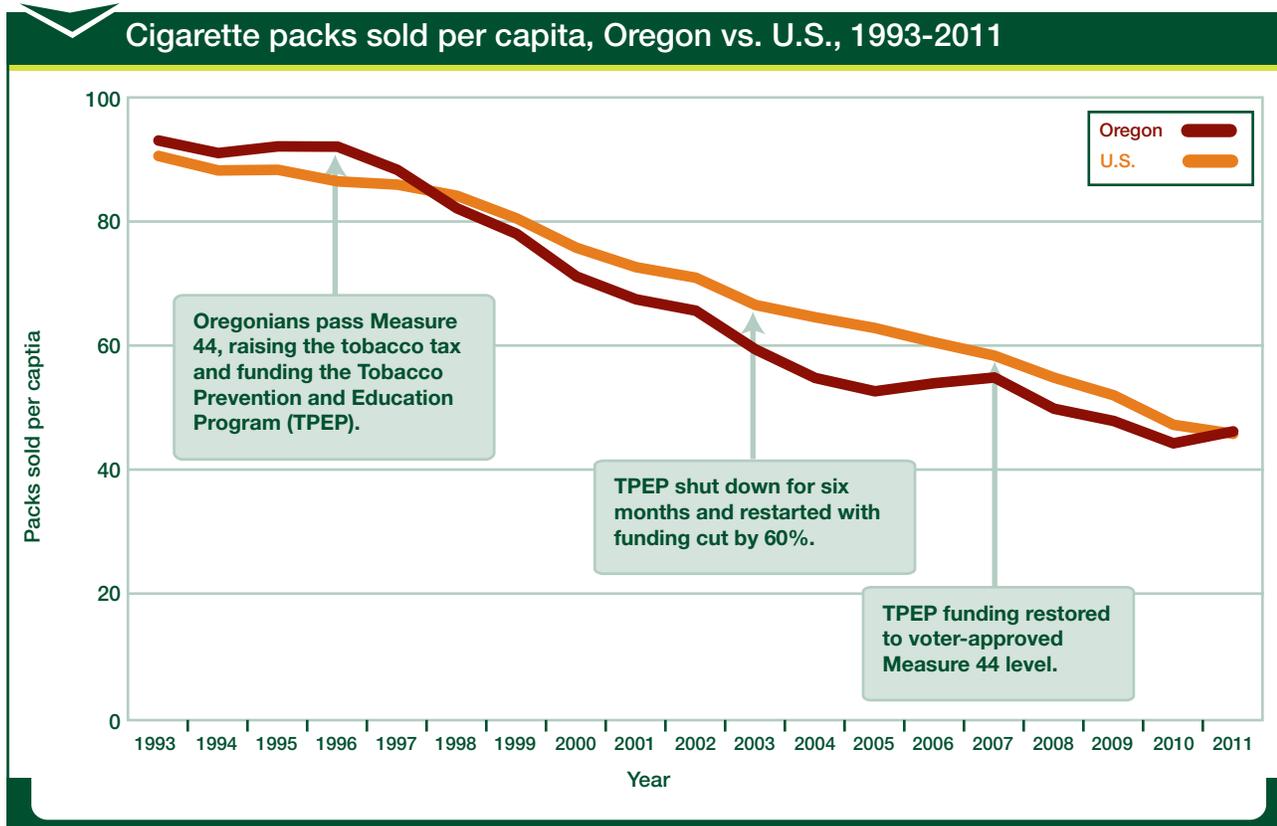


SOURCE: OREGON HEALTHY TEENS SURVEY



SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

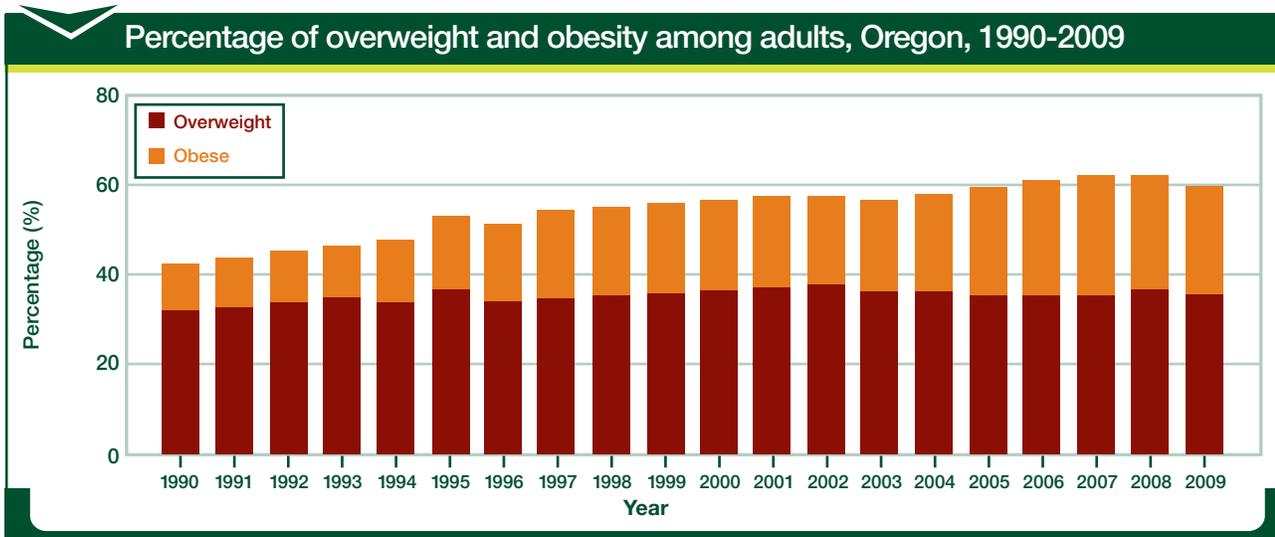
Tobacco consumption, as measured by cigarette packs sold in the state (determined by tax collections) is another marker for tobacco use; cigarette packs sold has declined in Oregon during the past 15 years.



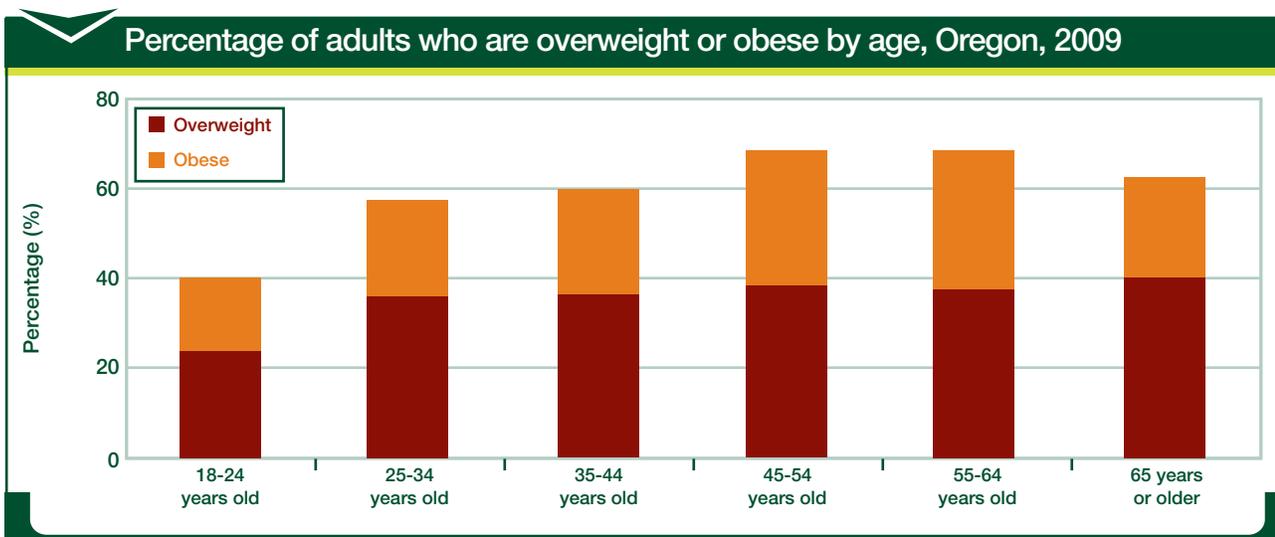
RESEARCH TRIANGLE INSTITUTE (1993-1998); ORZECOWSKI AND WALKER (1999-2009) POPULATION – U.S. CENSUS BUREAU

# Obesity

Overweight and obesity comprise the second leading cause of preventable death in Oregon, causing an estimated 1,500 premature deaths each year. Obesity is a major risk factor for high blood pressure, high cholesterol, diabetes, heart disease, and cancer. Obese persons have annual medical costs that are \$1,429 higher than non-obese persons. In 2009, 36.1% of Oregon adults were overweight, and 24.1% were obese. The percentage of adults who were obese doubled from 11% in 1990 to >24% in 2009.

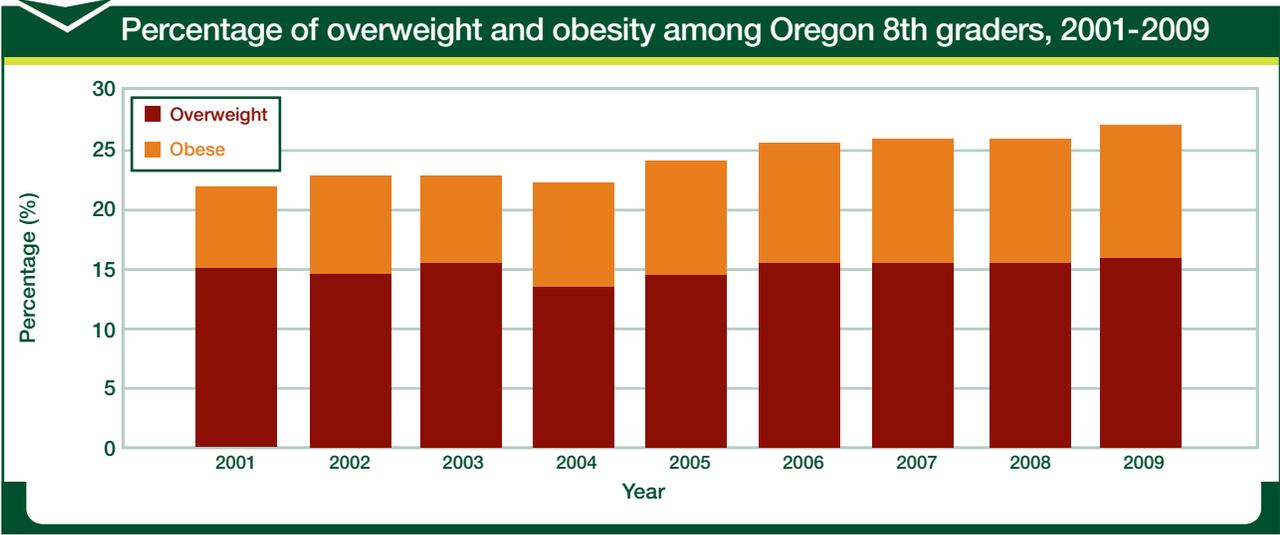


SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM



SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Among Oregon eighth-graders, overweight has remained relatively stable during the past 10 years at around 15%, while obesity has steadily increased from 7.3% to 11.2%.

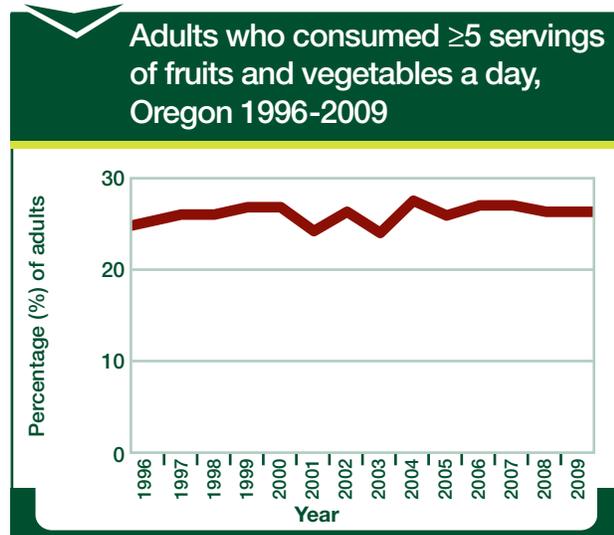


SOURCE: OREGON HEALTHY TEENS SURVEY

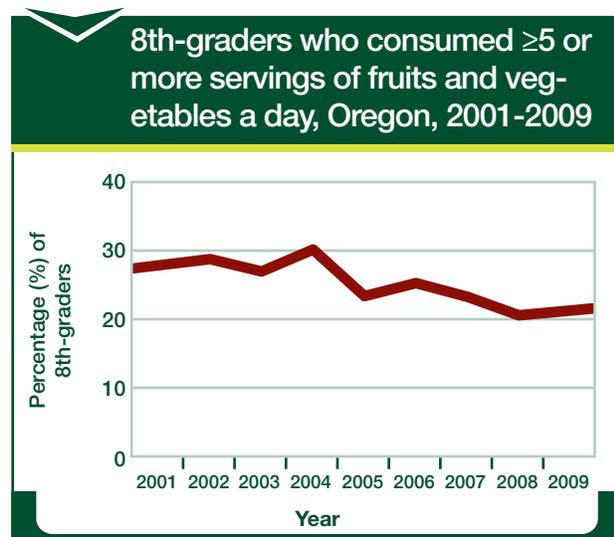
# Diet

## Fruit and vegetable consumption

Overweight and obesity result from calorie consumption that exceeds the number of calories expended. Since measuring calories consumed is difficult and costly to do accurately, eating  $\geq 5$  servings of fruits and vegetables a day, and drinking sugar-sweetened beverages are used as markers of healthy and unhealthy diets respectively. During 2009, about one in four Oregon adults consumed  $\geq 5$  servings of fruits and vegetables per day, a proportion that has remained relatively unchanged since 1996. Women were more likely than men, and people who were not overweight or obese were more likely than people who were obese, to consume  $\geq 5$  servings of fruits and vegetables per day. Oregon eighth-graders (one in five) were less likely than adults to consume five or more servings a day of fruits and vegetables. Consumption of fruits and vegetables by eighth-graders does not vary by weight and has declined by 24% from 2001 to 2009.



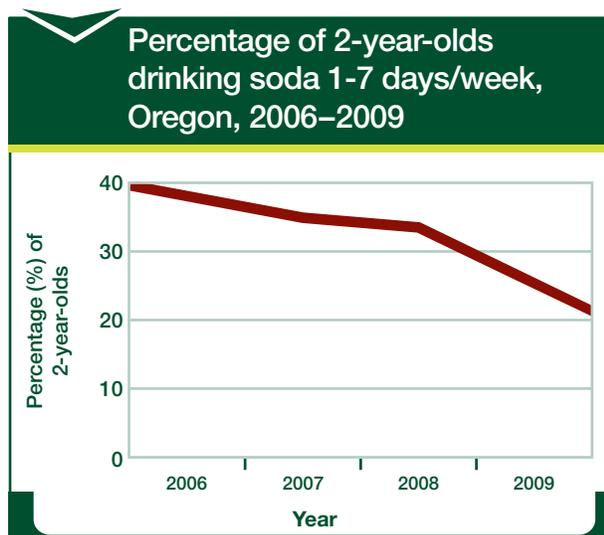
SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SURVEY



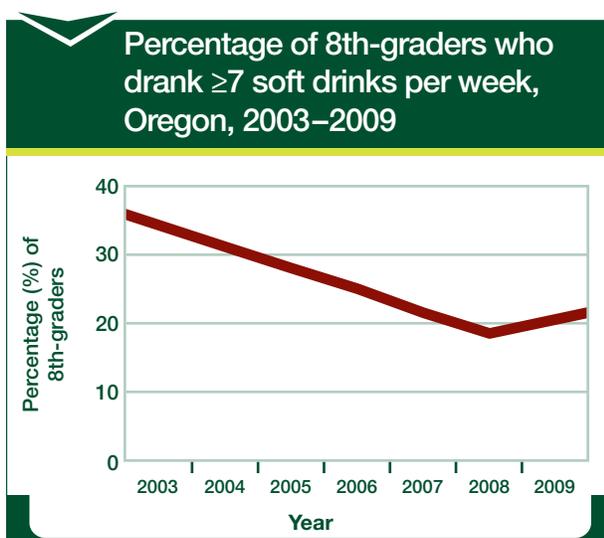
SOURCE: OREGON HEALTHY TEENS SURVEY

## Sugar-sweetened beverage consumption

Sugar-sweetened beverages are the largest source of added sugar in the American diet. Sugar-sweetened beverage consumption is associated with overweight and obesity in adults and children. Overall, during 2009, 20.6% of Oregon eighth-graders (25.1% of boys and 16.4% of girls) reported drinking  $\geq 7$  more soft drinks per week.



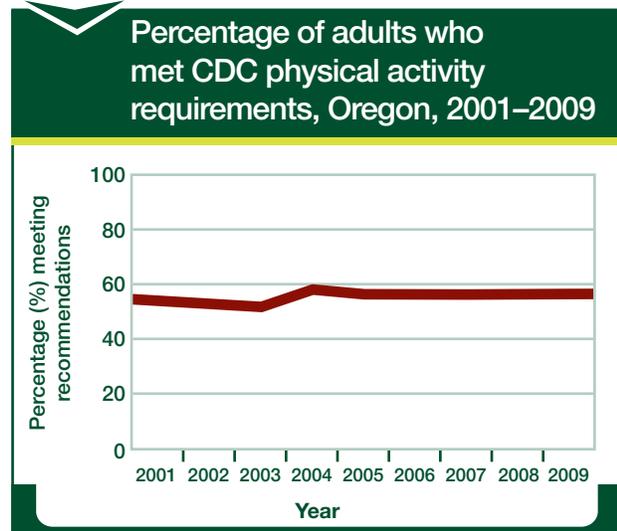
SOURCE: OREGON PRAMS-2



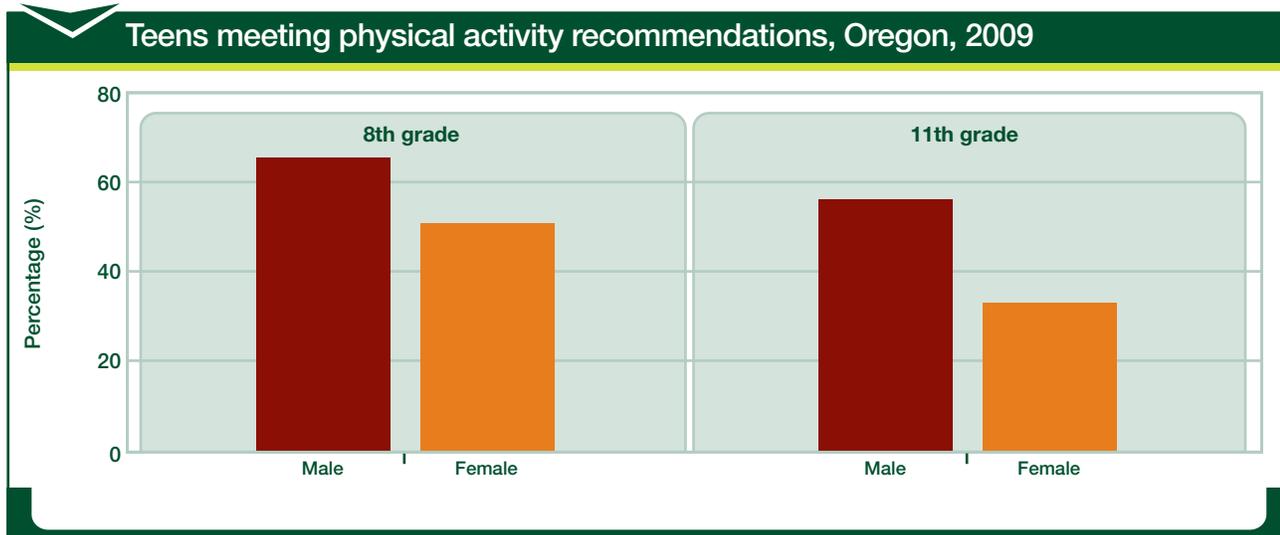
SOURCE: OREGON HEALTHY TEENS SURVEY

## Physical activity

In addition to weight control, regular physical activity improves strength and endurance, helps ensure healthy bones and muscles, reduces anxiety and stress, increases self-esteem, and improves blood pressure and cholesterol levels. Physical activity is measured by meeting the CDC recommendations as follows: for adults, being moderately active for  $\geq 30$  minutes on  $\geq 5$  days per week, or vigorously active  $\geq 20$  minutes on  $\geq 3$  days per week; and for teens, being physically active for  $\geq 60$  minutes per day on most days of the week. In 2009, 56.5% of Oregon adults (59.8% of men, and 53.4% of women) reported meeting the CDC physical activity recommendations, a number that has not changed over time.



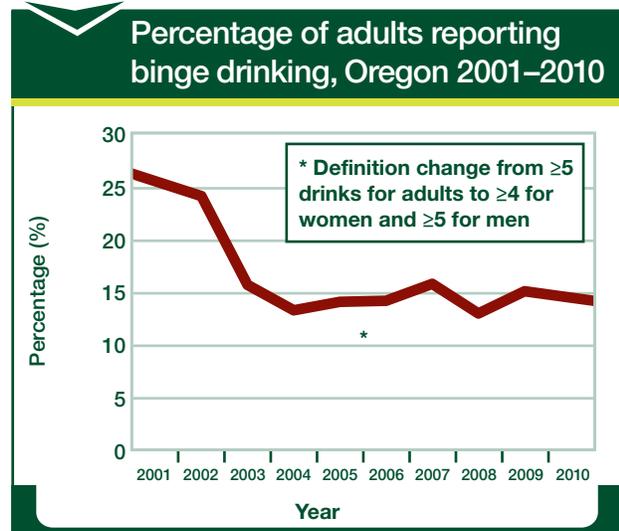
SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM



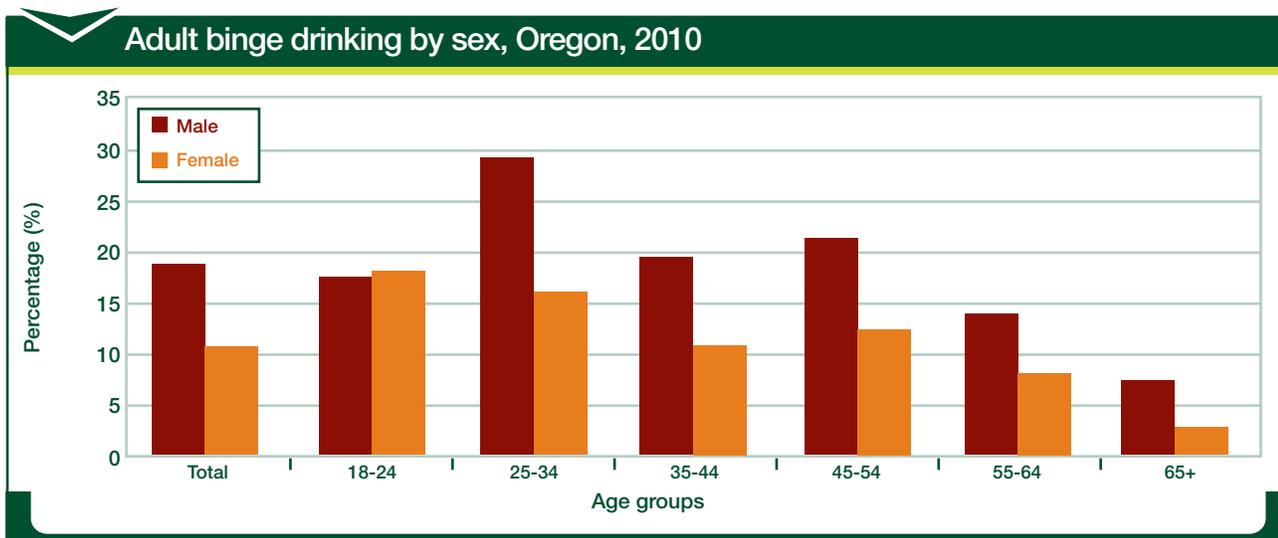
SOURCE: OREGON HEALTHY TEENS SURVEY

## Alcohol abuse

Binge drinking is a significant risk factor for injury, violence, and chronic substance abuse. During 2010, 14.4% of adults reported binge drinking on at least one occasion during the past 30 days. Self-reported binge drinking declined from 2001 to 2004 but has not changed appreciably since. Males, in general, report binge drinking more frequently than women. Male binge drinking peaks (29.5%) in the 25–34 year age group; female binge drinking peaks (18.1%) in the 18–24 year age group.

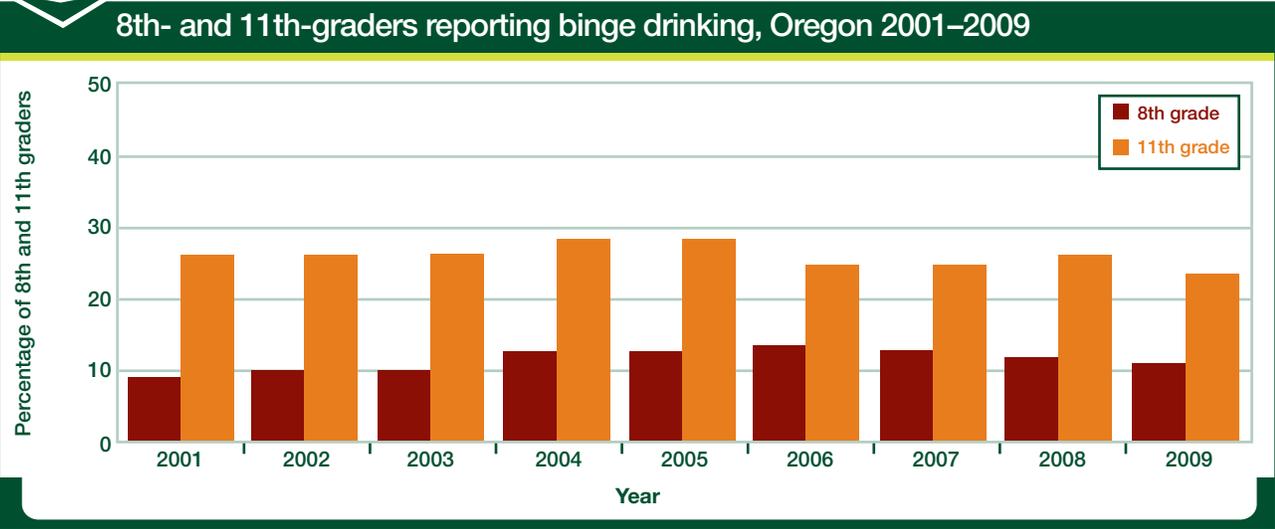


SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM



SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Among youth in 2009, 10.7% of Oregon eighth-graders and 23.4% of Oregon 11th-graders reported binge drinking in the past 30 days. Levels of binge drinking were similar among boys and girls.



SOURCE: OREGON HEALTHY TEENS SURVEY

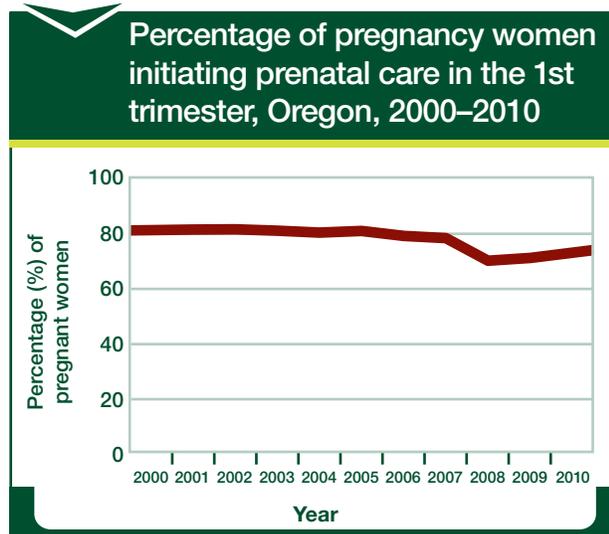
# Maternal and child health

## Prenatal care

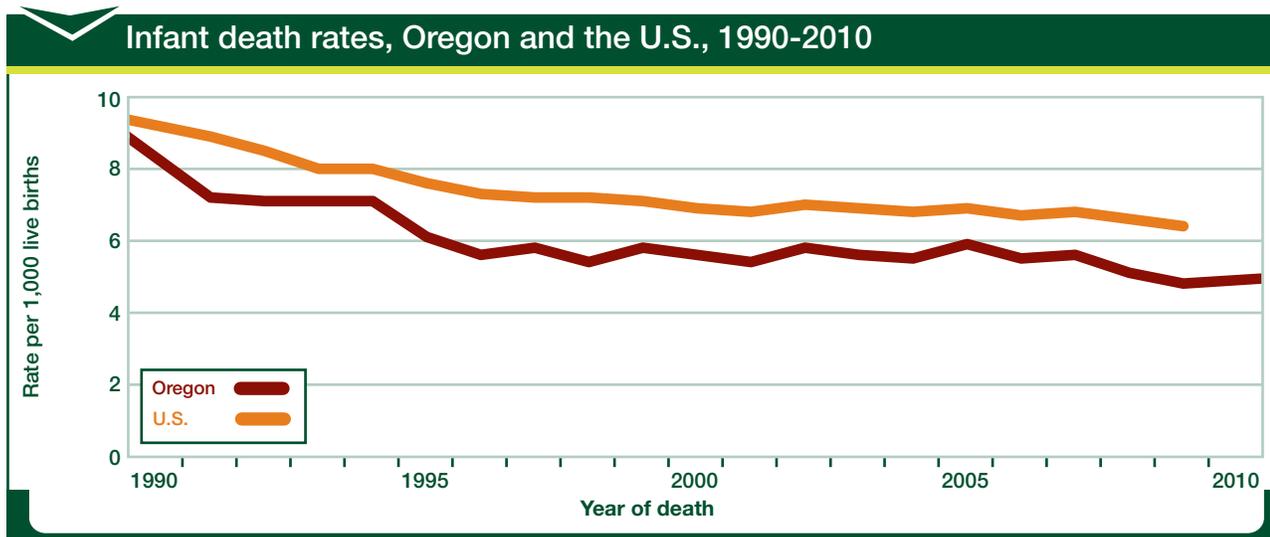
In 2010, 73.1% of pregnant women initiated prenatal care during the first trimester. Since 2005, the number of pregnant women in Oregon who reported initiating prenatal care during their first trimester of pregnancy decreased from 81.1% (2000–2005) to 74.4% (2006–2010).

## Infant mortality

Infant mortality is an important indicator related to access and quality of health care for pregnant women and newborns. During 2010, 4.9 infants died per 1,000 live births among Oregon residents, down from 2000 when 5.6 infants died per 1,000 live births. Oregon's infant and neonatal death rates have been lower than the U.S. for more than 20 years.



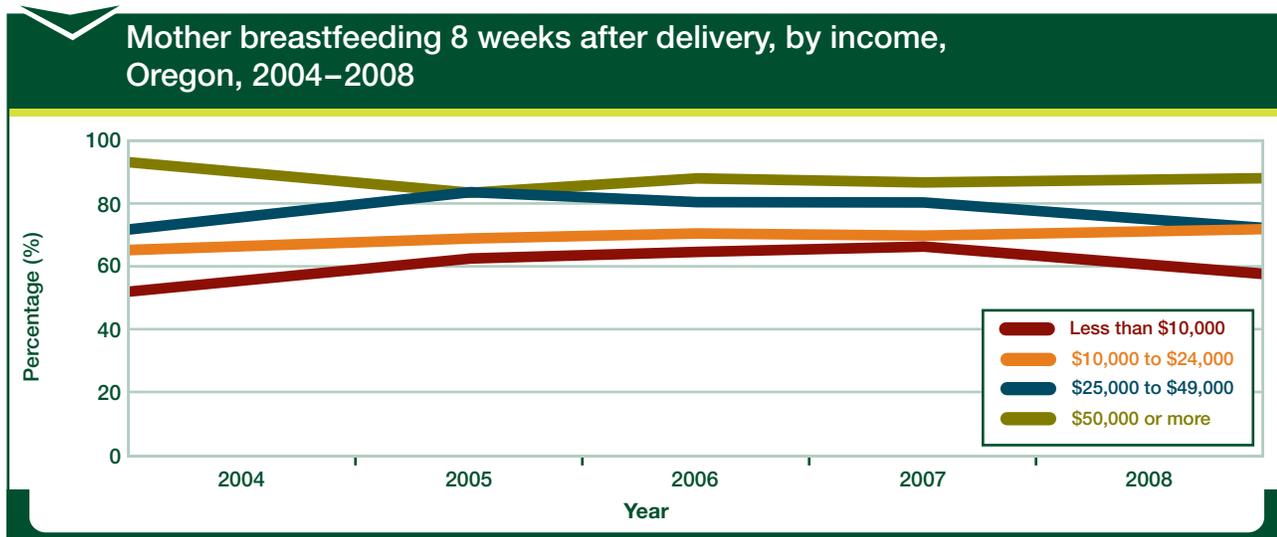
SOURCE: OREGON BIRTH CERTIFICATE DATA



SOURCE: OREGON DEATH CERTIFICATE DATA

## Infant breastfeeding

Breastfeeding provides nutritional and medical benefits to infant and mother, and is considered a marker of optimal care in the first year of life. Oregon has the highest rate of breastfeeding in mothers in the U.S.: 84.2% at 4 weeks postpartum (compared to U.S. 64.3%), and 75.0% at 8 weeks postpartum (compared to U.S. 35%) (2008 data). Lower rates of breastfeeding are associated with mothers aged <25 years and low-income status. However, breastfeeding rates in young mothers have steadily increased in Oregon since 2004.



SOURCE: PRAMS

## Childhood developmental screening

Early childhood development is a marker for future social, physical and cognitive development; screening for childhood development is a marker for access to age-appropriate preventive health care services. In 2007, 13.5% of Oregon children aged 10 months to 5 years received developmental screening in the past 12 months; Oregon ranked the 46th lowest of U.S. states.

Completed developmental screening	
	Percent (%)
Oregon	13.5
Nationwide	19.5

Source: National Survey of Children's Health

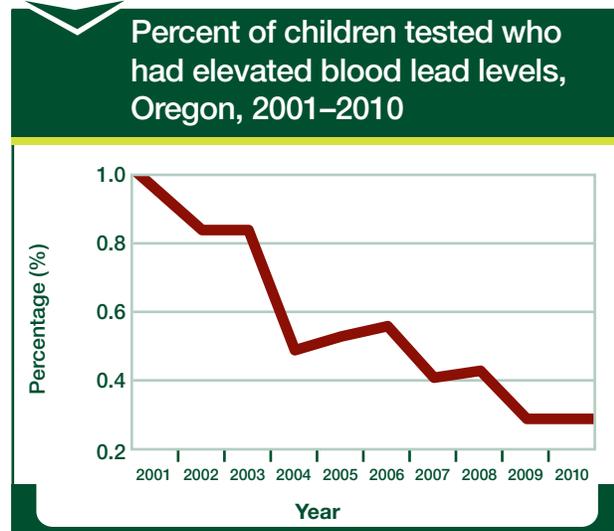
## Elevated childhood lead levels

Lead is toxic to people of all ages, but young children are the most at risk. Lead poisoning has neurological effects that are most damaging when the brain is developing rapidly in early childhood. In 2010, 0.3% of Oregon children tested had elevated blood lead levels.

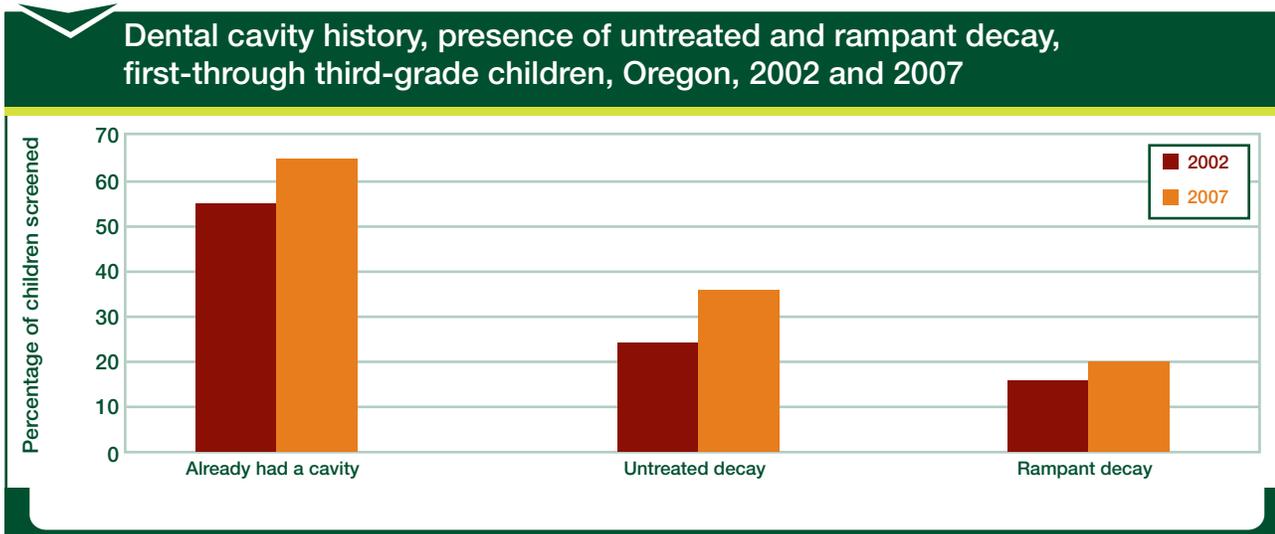
## Oral health

### Tooth decay

Tooth decay in children causes oral pain and infection that can lead to diminished school attendance and success, nutrition, and general health. The oral health of young Oregonians has worsened since 2002 when the prevalence of cavities in first- through third-graders increased from 57% to 64%. In these children, untreated tooth decay increased from 24% to 36%, and rampant decay increased from 16% to 20%.



SOURCE: OREGON LEAD POISONING PREVENTION PROGRAM



SOURCE: OREGON SMILE SURVEY, 2002 AND 2007

## Water fluoridation

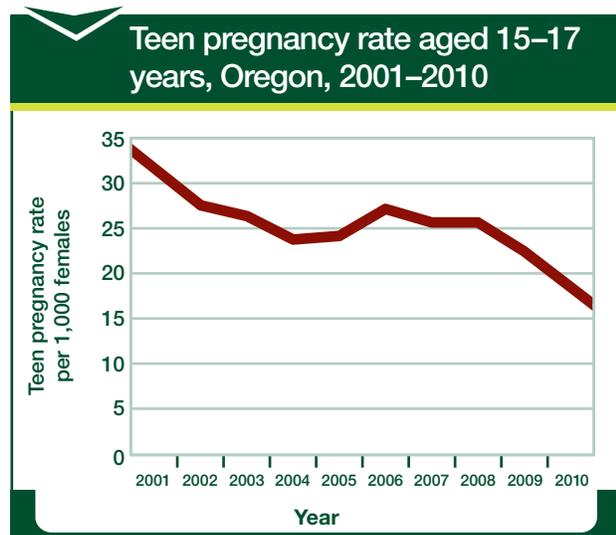
Fluoridation of water is an important intervention to ensure optimal dental health in the community, particularly of children. Despite evidence that water fluoridation is safe and prevents tooth decay, Oregon ranks 48th among U.S. states by proportion of public water systems that are fluoridated. This diminishes the dental health of all Oregonians.

Fluoridation in U.S. and Oregon	
	Percent (%)
Percentage of U.S. population on public water systems receiving fluoridated water	73.9
Percentage of Oregon population on public water systems receiving fluoridated water	22.6
Oregon fluoridation compared to other states	48th

Sources: CDC Water Fluoridation Reporting System as of December 31, 2010, and the U.S. Census Bureau estimates from 2010.

## Teen pregnancy rates

Teen pregnancies and births are linked to poverty, income disparity, high school dropout, and overall child and family well-being. Teen pregnancy rates have declined over the last 10 years.



SOURCE: OREGON BIRTH CERTIFICATE DATA, INDUCED TERMINATION OF PREGNANCY DATABASE

# Environmental health

## Pesticide exposure

Pesticides include herbicides, insecticides and various other chemicals used for pest control. During 2008, more than 19.5 million pounds of pesticide active ingredients were applied in Oregon; 77% was applied to agricultural crops, 4.2% to forests, and 3.5% to rights-of-way. The largest amounts were applied in the Mid-Columbia, Willamette, and Southern Coastal regions.

Pounds of pesticides applied by region, Oregon, 2008\*

Water Basin	Reported Pounds of Active Ingredient Applied	Percent (%)
Middle Columbia	7,482,839	38
Willamette	4,515,486	23
Southern Oregon Coastal	3,098,503	16
Middle Snake-Boise	1,537,464	8
Klamath	898,157	5
Lower Columbia	735,262	4

Source: Pesticide Use Reporting System

\*Includes commercial pesticide applications and applications to public lands. Does not include pesticides applied for non-commercial purposes to private lands.

Pesticide exposure is reportable by law in Oregon. From 2002–2007, 614 events were determined to be responsible for the 689 exposures (an event can expose more than one person). Of these, 428 (69.7%) were reported as having occurred at a “private residence.”

## Air quality

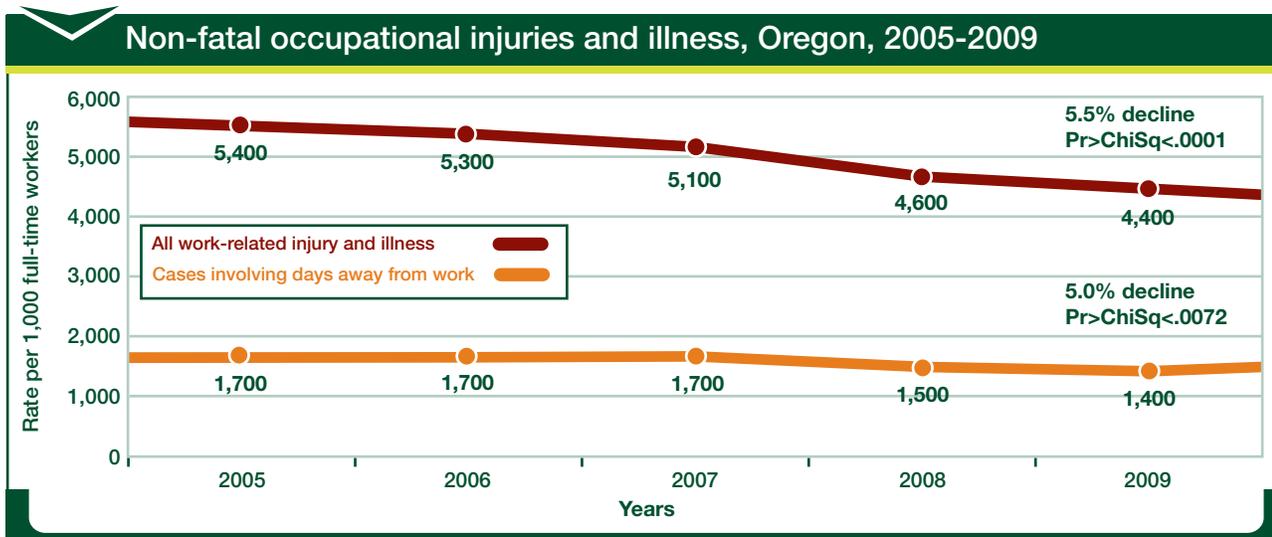
Overall, outdoor air quality in Oregon is excellent; only a few counties, including Lane, Klamath and Jackson, regularly experience days in which fine particulate matter (PM2.5) pollution or ozone levels exceed National Ambient Air Quality Standards. By implementing interventions, such as replacing inefficient wood burning stoves and limiting outdoor burning during winter months, Lane, Klamath and Jackson counties reduced the annual average concentrations of PM2.5 by 37% to 49% from 2002 to 2010.

# Occupational health and safety

During 2010, nearly 1.8 million Oregonians were employed. Approximately 50,000 workers had nonfatal work-related injuries or illnesses, more than half of which required job transfers, work restrictions or time away from work.

## Non-fatal injuries and illnesses

Rates of occupational injury and illness in Oregon decreased by 5.5% per year from 2005. Men accounted for 66% of cases and women 34%. The industries with the highest rates of days away from work include transportation and warehousing; utilities; construction; wholesale trade; and agriculture, forestry, and fishing.



SOURCES: BUREAU OF LABOR STATISTICS, ANNUAL SURVEY OF OCCUPATIONAL INJURIES AND ILLNESSES

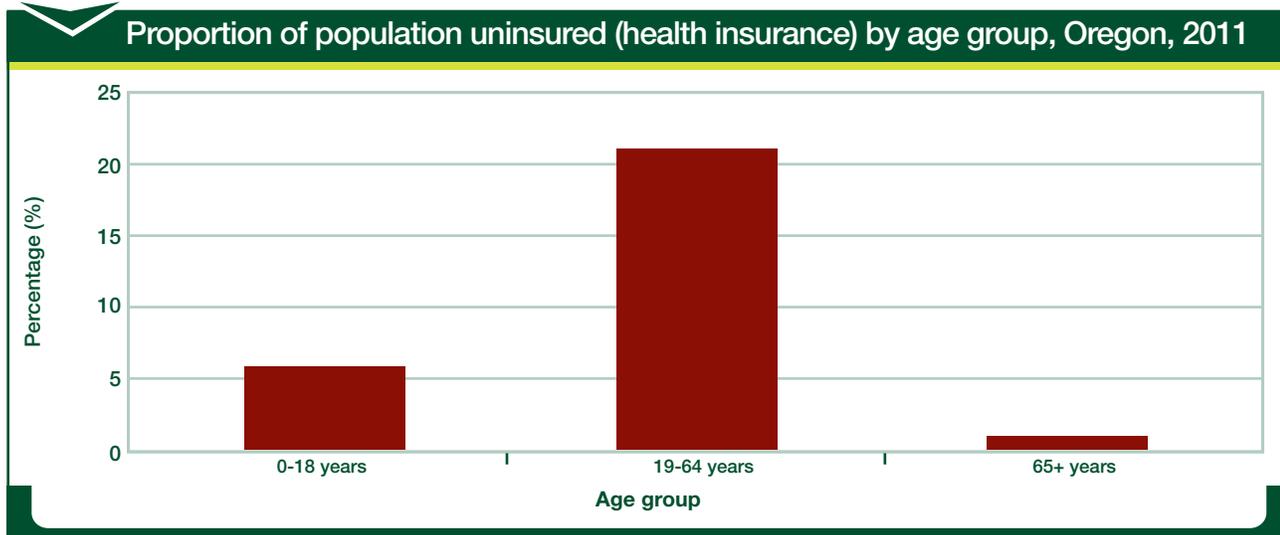
## Fatal work-related injuries

In 2010, 47 Oregon workers suffered fatal occupational injuries. This is well below the annual average of 68 work-related fatalities in Oregon during 2005-2009. The industries with the highest percentage of fatalities were agriculture, forestry, fishing, and hunting (24%); construction (15%); and transportation and warehousing (16%).

# Health care access

## Lacking health insurance

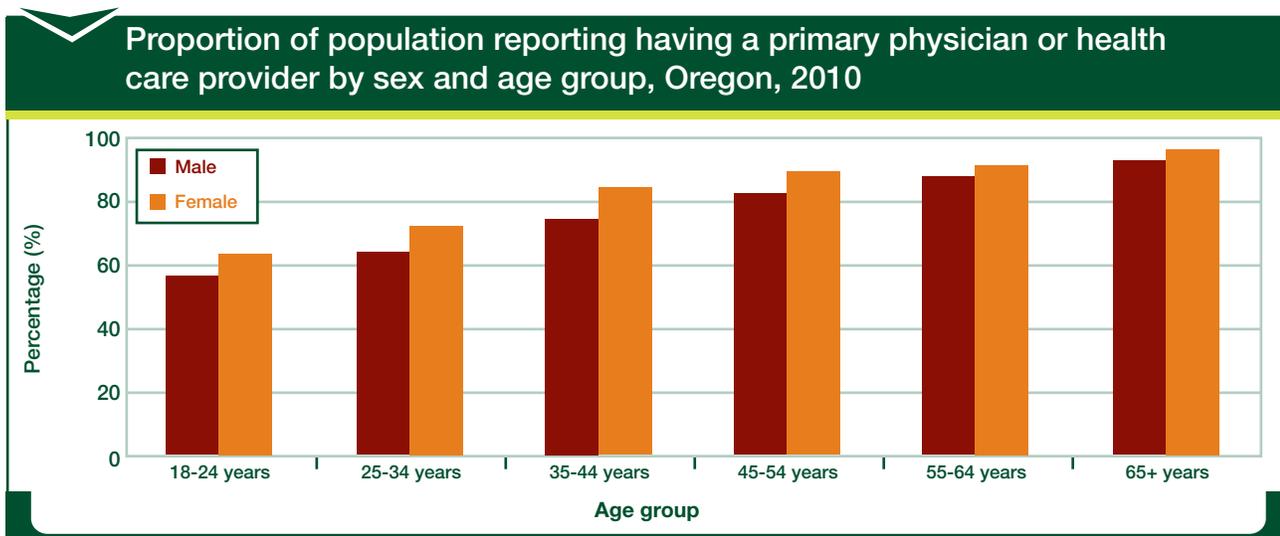
During 2011, 14.6% of Oregonians reported not currently having health insurance, compared to 15.6% of the U.S. population (American Community Survey 2010). By age group, adult Oregonians aged 19–64 years have the highest uninsured rate (21%), followed by children and youth aged  $\leq 18$  years (5.6%), and adults  $\geq 65$  years (0.9%).



SOURCE: OREGON HEALTH POLICY RESEARCH, OREGON HEALTH INSURANCE SURVEY, 2011

## Primary care provider

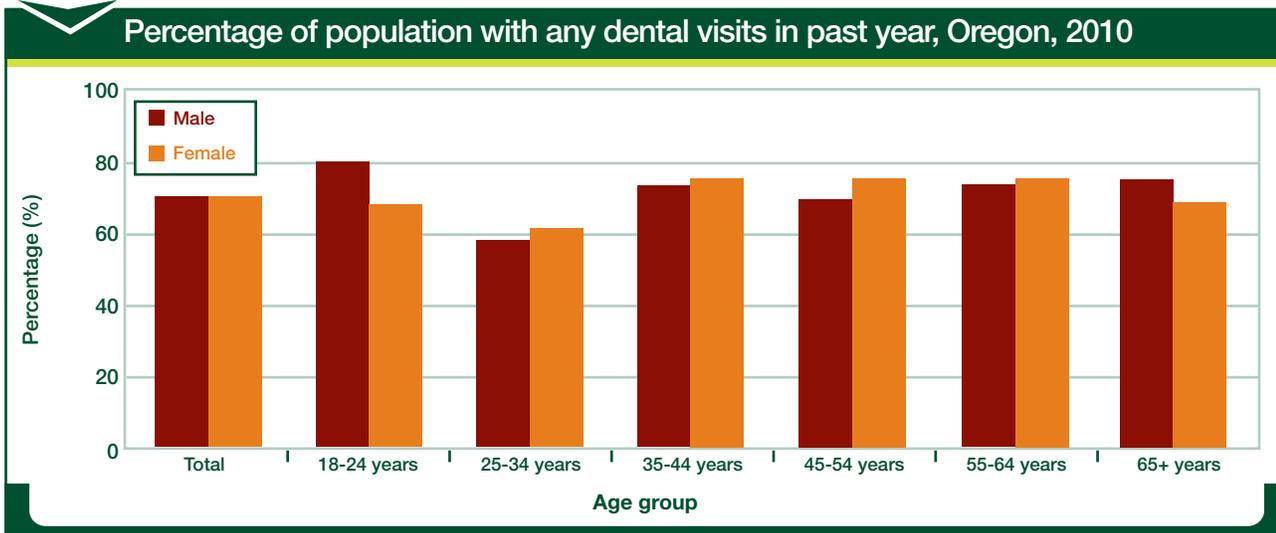
During 2010, 76% of Oregon adults reported having a personal physician or health care provider (79% of females, 73% of males), a number which has been stable for the past 10 years. Having a personal physician or health care provider increased with age, from 53% of adults aged 18–24 years to 91% aged  $\geq 65$  years.



SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

## Dental visits: Adults

Overall, 68% of males and 71% of females had a dental visit in the past year, a trend that has remained stable since 2002.

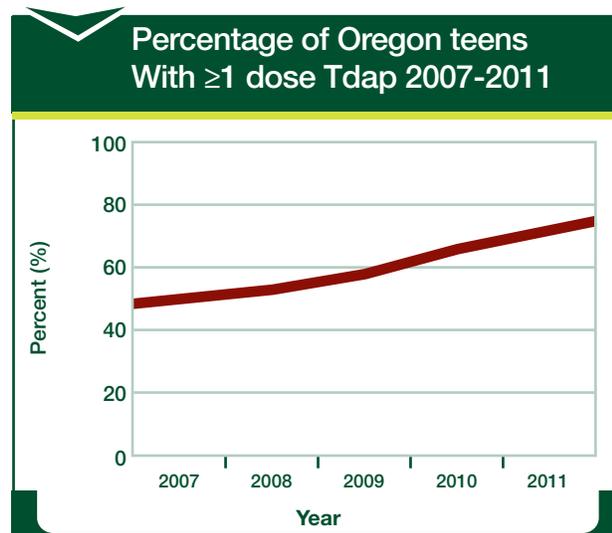


SOURCE: OREGON BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM, 2010

## Receipt of preventive services

### Adolescent Tdap vaccine (tetanus, diphtheria, acellular pertussis)

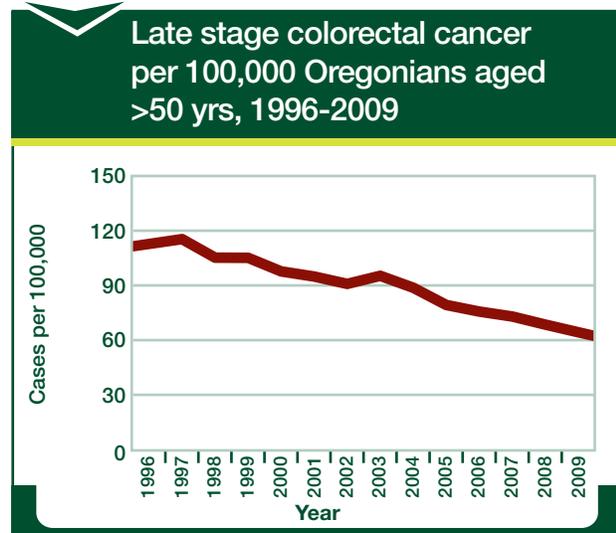
Among the vaccine preventable diseases, pertussis (“whooping cough”) has the highest incidence in Oregon. While vaccination rates are high among children, immunity wanes over time, leaving adolescents and adults susceptible; they, in turn, can transmit the infection to infants too young to be vaccinated, but at highest risk of severe disease and complications. A single dose of Tdap is recommended for everyone age  $\geq 11$  years. In 2011, 72% of teens had received at least one dose of Tdap.



SOURCE: ALERT IMMUNIZATION REGISTRY

## Colorectal cancer screening

Colorectal cancer is the second leading cause of cancer deaths among Oregonians. Colorectal cancer is preventable if precancerous polyps are detected and removed. In 2010, 59% of adults age 50-75 years had received the recommended screening (57% of men and 61% of women). Earlier screening has led to a steady decline in late stage colorectal cancer diagnosis.



SOURCE: OREGON CANCER REGISTRY

# Policy environment

## Tobacco policies

### Public agencies

The Oregon Indoor Clean Air Act requires employers to prohibit smoking in indoor worksites and within 10 feet of entrances, windows, and air intakes. Employers may adopt stronger policies to prohibit smoking and other forms of tobacco use on their entire premises. By designating their entire premises as tobacco-free, public agencies help reduce tobacco-related health care costs and serve as a model for other employers in creating healthy worksites. In 2012,

- State agencies: two of 95 (2%) state agencies have a tobacco-free worksite policy, including the Department of Human Services and the Oregon Health Authority. All facilities within these two agencies are tobacco-free.
- Counties: three of 36 (8%) counties have a tobacco-free worksite policy covering all county agencies.
- Tribes: none of Oregon's nine tribes has a tobacco-free worksite policy.

### Higher educational Institutions

Tobacco-free campus policy protects students, employees and visitors from secondhand smoke exposure and helps people quit. Most of the students served by colleges and universities are young adults in the 18-26 year age range, the population at greatest risk for tobacco use and subject to vigorous tobacco industry marketing efforts. In 2012,

- Community colleges: 5 of 17 (29 %) have 100% tobacco-free or smokefree campus policies
- Public universities: 2 of 7 (29 %) have 100% tobacco-free or smokefree campus policies

### Multi-unit housing

Multi-unit housing is one of the last indoor environments where people may be exposed to secondhand smoke. Public housing authorities serve populations that bear a disproportionate burden of tobacco use and tobacco-related chronic diseases, including people with low incomes; racial and ethnic minorities; people with disabilities; and people with chronic health conditions, such as asthma.

In 2012, 20 of 22 (91 %) of public housing authorities have a smokefree housing policy.

### Tobacco prevention funding

Tobacco costs Oregon more than \$2.4 billion in direct medical expenditures and indirect costs due to premature death each year. Smoking-related disease costs Oregon Medicaid \$287 million annually. For Oregon to achieve success with health system transformation and achieve better health and better health care at lower cost, Oregon must reduce tobacco use and exposure.

Currently, Oregon spends \$1.95 per capita annually on tobacco prevention, compared to the \$11.60 per capita recommended by the Centers for Disease Control and Prevention's Best Practices for Comprehensive Tobacco Control Programs (2007).

## Nutrition and physical activity policies

### State agency nutrition policies

Collaborative statewide and community-based obesity prevention programs that include standards for nutrition can make it easy for children and adults to access healthy foods where they live, work, play and learn. Increasing access to healthful foods and beverages, and restricting access to unhealthful foods and beverages in state agencies will not only increase access to healthful foods for public employees, but also visitors, customers and clients.

In 2012, no Oregon state agencies have a healthy nutrition policy in place.

### Schools meeting physical education standards

In 2007 the Oregon Legislature passed physical education standards for public schools. The law specifies that by 2017, all elementary and middle schools will be required to ensure that K-5 students receive 150 minutes per week of physical education and that students in grades 6-8 receive 225 minutes per week.

- In the 2008-2009 school year, 144 schools in 196 districts offered all students at the school the required amount of physical education instruction.
- For the 2009-2010 school year, 79 schools in 195 districts (one district was dissolved) offered all students the required amount of physical education instruction, which represents a 54% decline in the number of schools meeting the requirements for PE minutes.

### Obesity prevention funding

Oregon spends about \$1.6 billion (\$339 million paid by Medicaid) in medical expenses for obesity-related chronic diseases, such as diabetes and heart disease, each year. To achieve success with health system transformation (improved population health, health care quality and lower costs), Oregon must reduce and prevent obesity. Preventing obesity and obesity-related diseases requires comprehensive programmatic and policy interventions that create supportive environments for healthy eating and active living.

In 2012, there is no funding for statewide obesity prevention.

# Health Equity: Specific Populations

## Background

Health equity is an Oregon Health Authority (OHA) core value. Health equity is achieved when all people have reached the highest possible level of health. To reach health equity, not only must all individuals be valued equally, but strategies to improve health for Oregonians overall must be tailored to meet the unique needs of different population groups.

## Social determinants of health

Health is determined by access to quality health care and social determinants of health — the economic and social conditions in which people live that determine their health.

Most major diseases are determined by a network of interacting social, economic, and physical forces that may increase or decrease the risk for disease.

Individuals who live in high opportunity neighborhoods have better health outcomes because they have better access to living-wage jobs, high quality education, vibrant built environments that promote physical activity and access to healthy food, and social networks. In these communities it is easier for individuals to make healthy choices. The following sections do not present all available data on specific populations. Instead, indicators were selected for inclusion based on previously conducted analyses and comparability with the State Health Indicators.

## Racial and ethnic populations

The need to eliminate racial and ethnic health disparities is imperative given the rapid increase in diversity in Oregon during the last 20 years. Oregon is expected to gain 197,000 people through international migration between 1995 and 2025. The Latino population has almost doubled in the past 10 years alone — from 275,000 in 2000 to more than 400,000 in 2010 — and is now the largest minority population in the state. The Asian American population continues to grow, now numbering more than 130,000 in Oregon.

Race/ethnicity of Oregonians, 2010

Race/ethnicity	Total population	Percent (%) of population
Native Hawaiian and Pacific Islander	13,404	0.3
American Indian and Alaska Native	53,203	1.4
Black	69,206	1.8
Two or more races	144,759	3.8
Asian	141,263	3.7
Hispanic/Latino	450,062	11.7
White, non-Latino	3,005,848	78.5

Source: U.S. Census Bureau, 2010

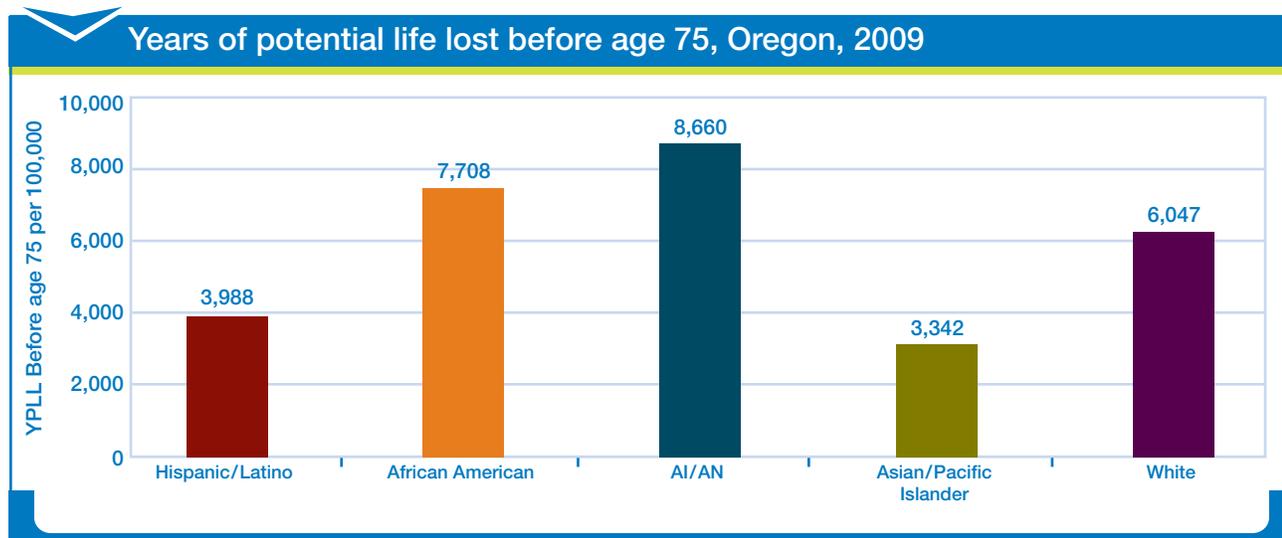
## Limitations

Racial and ethnic categories reflect social constructs and are not based on biology, anthropology, or genetics. The categories are intended for collecting data on the race and ethnicity of broad population groups, but their utility to inform health disparities are subject to significant limitations. Specifically, the grouping of diverse communities into broad racial and ethnic categories may obscure important health disparities. For example, the racial category of “Black or African American” does not distinguish between an African American with roots in the U.S. dating back hundreds of years and a recent refugee from Africa. Similarly, the racial category of “White” includes individuals from culturally diverse ethnic communities such as Eastern European and Middle Eastern. Data on racial and ethnic health disparities, or lack thereof, should be interpreted with caution due to these inherent limitations.

## Selected indicators

### *Disparities in mortality*

Estimating years of potential life lost (YPLL) is a way of quantifying the burden of early death by measuring the number of years between age at death and a specific standard age. For instance, if the standard is set at 75 years, a death at age 21 results in 54 years of potential life lost. The African American and American Indian/Alaska Native communities in Oregon are disproportionately burdened by premature death compared to non-Latino whites, while YPLL for the Latino and Asian/Pacific Islander communities are lower than for non-Latino whites.



SOURCE: OREGON VITAL STATISTICS AND NATIONAL CENTER FOR HEALTH STATISTICS  
 DATA NOTE: AGE-ADJUSTED TO U.S. STANDARD POPULATION 2000

### Disparities in chronic conditions

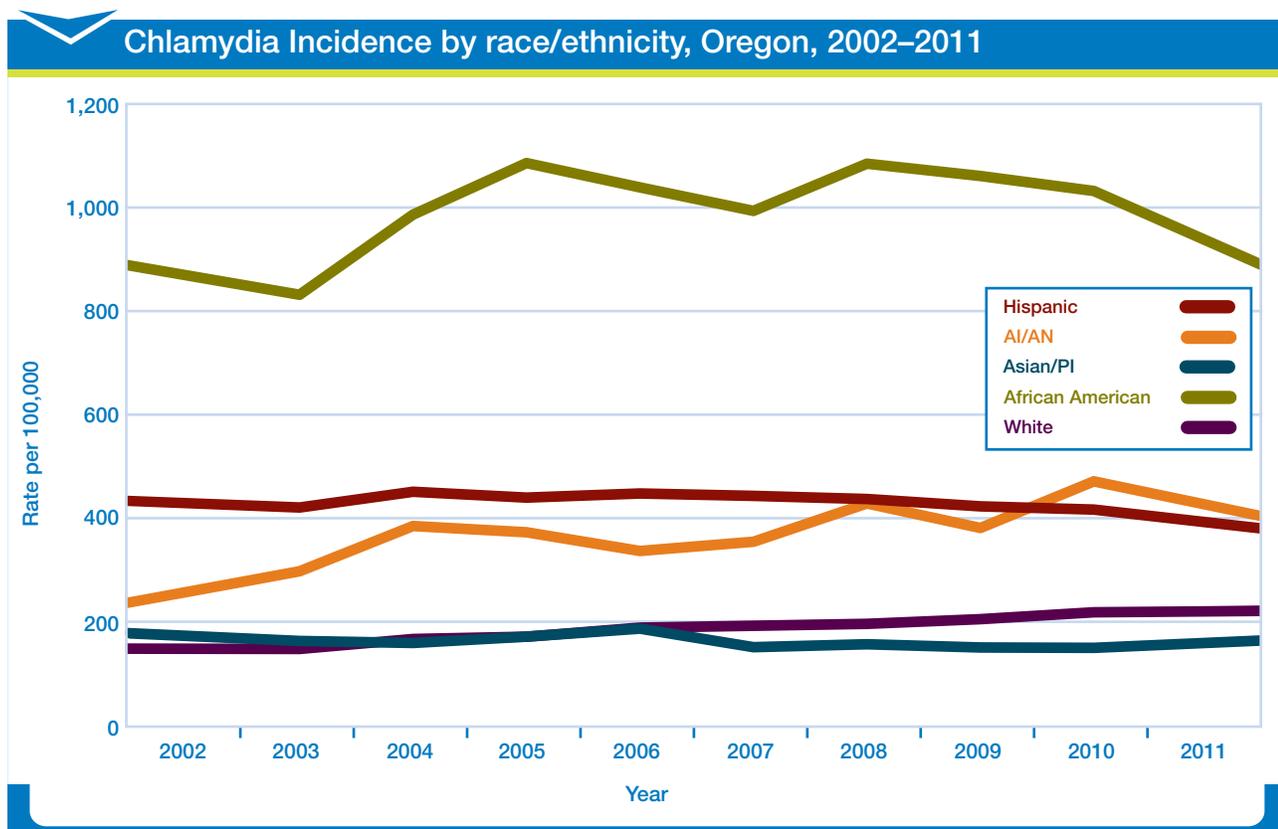
Prevalence of chronic conditions also varies by race and ethnicity in Oregon. The table below shows that African Americans have the highest prevalence of asthma, diabetes, and hypertension. Compared to non-Latino whites, American Indians/Alaska Natives have a higher prevalence of asthma and diabetes, and Latinos have a higher prevalence of diabetes.

Prevalence of select chronic conditions among adult Oregonians by race/ethnicity					
	Non-Latino				Latino
	African American	American Indian / Alaska Native	Asian / Pacific Islander	White	
Asthma	16.5%	15.3%	6.4%	10.1%	4.9%
Diabetes	13.4%	12.2%	7.2%	6.2%	9.6%
Hypertension	41.4%	29.5%	18.9%	25.3%	19.2%

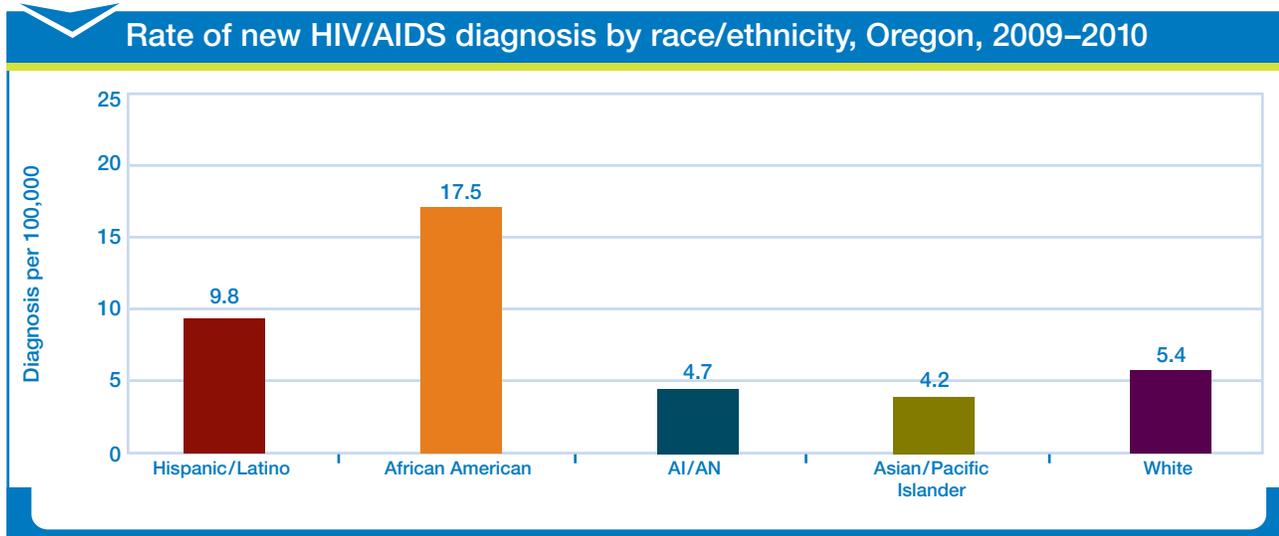
Source: Oregon Behavioral Risk Factor Surveillance System, Race Oversample, 2004-2005  
 Data Note: All estimates age adjusted to the U.S. standard population, 2000.

### Disparities in communicable diseases

Sexually transmitted infections (STIs) can contribute to premature delivery and low birth weight babies, as well as infertility. Among both males and females, African Americans and Latinos have much higher chlamydia disease rates than non-Latino whites.



Disparities in HIV occurrence by race and ethnicity demonstrate that certain communities of color are more likely to become infected with HIV and to bear the burden of lifelong disease. Compared to non-Latino whites, the rates of new HIV/AIDS diagnoses are higher among Latinos and African Americans.



SOURCE: HIV/STD/TB PROGRAM AND NATIONAL CENTER FOR HEALTH STATISTICS

### Disparities in health behaviors

The root causes of chronic diseases include smoking, lack of physical activity, obesity, and chronic stress. Among adults, African Americans and American Indians/Alaska Natives are more likely to smoke than other populations. Among youth, African American (15%) and American Indian/Alaska Native (17%) eighth-graders also have a higher smoking prevalence than whites (10 percent) (Source: Oregon Healthy Teens Survey, 2005-2006). The prevalence of adult obesity is very high among Latinos, African Americans, and American Indians/Alaska Natives, while the prevalence of obesity among Asian/Pacific Islanders is relatively low.

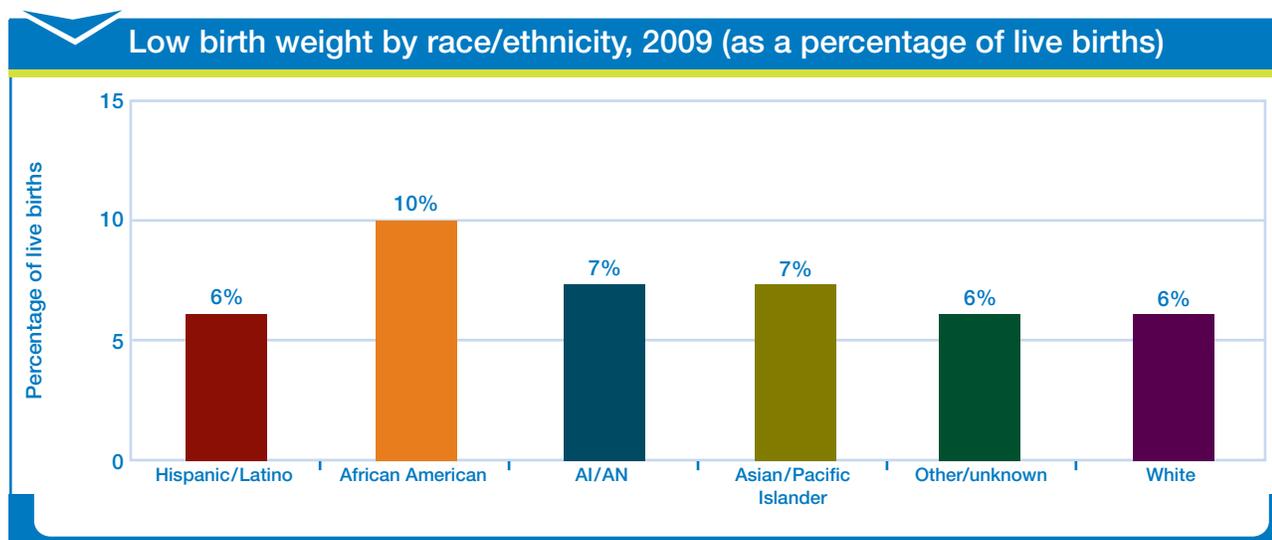
	Percent (%) of smoking	Percent (%) of obesity
American Indians/Alaska Natives	38	30
African Americans	30	29
Latinos	14	31
Asian	10	15
Non-Latino Whites	20	24

Source: Behavioral Risk Factor Surveillance System, 2004-2005  
 Data Note: All estimates age adjusted to the U.S. standard population, 2000.

### Disparities in maternal and child health

Early health and risk assessment, obstetric care and education improve health outcomes for both the mother and infant. Relative to non-Latino whites (74%), Latinos (62%), African Americans (63%), and American Indians/Alaska Natives (60%) were less likely to have begun prenatal care in the first trimester (Source: Oregon Vital Statistics and National Center for Health Statistics, 2009).

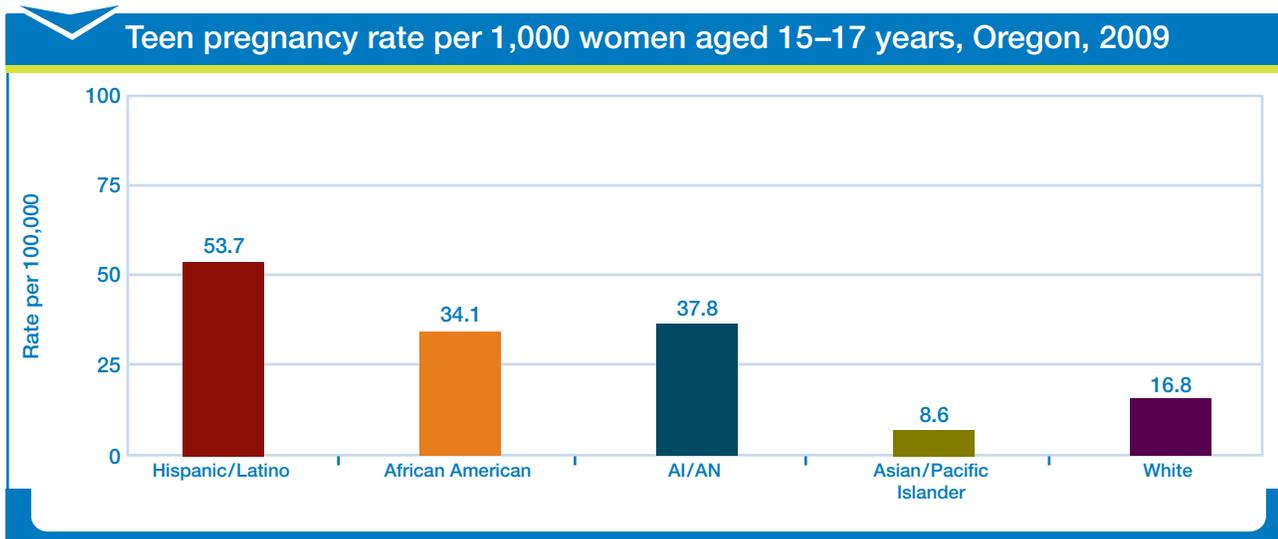
African American women also are more likely than women of other races and ethnicities to have low birth weight infants. Compared to infants of normal weight, low birth weight infants are at increased risk for impaired development and infant death.



SOURCE: OREGON VITAL STATISTICS AND NATIONAL CENTER FOR HEALTH STATISTICS

The receipt of recommended vaccinations in early childhood is a proxy for measuring the quality of well-child care. Overall, proportions of children aged 2 years with complete immunization coverage are high. In comparison to non-Latino whites (73%), the vaccination rate is slightly higher among Latinos (80%) and Asian Americans (76%), while the rate among Pacific Islanders (61%) is lower (Source: Oregon ALERT Immunization Information System, 2010).

Racial and ethnic disparities also exist in the rates of teen pregnancy. In Oregon, Latinos, African Americans, and American Indians/Alaska Natives have significantly higher teen pregnancy rates than do non-Latino whites while the rate for Asian/Pacific Islanders is lower.



SOURCE: OREGON VITAL STATISTICS AND NATIONAL CENTER FOR HEALTH STATISTICS

*Disparities related to health care access*

Relative to non-Latino whites, health insurance coverage is lower among several of Oregon’s racial and ethnic populations, and these differences vary by age. Among children and young adults age 18 years and younger, American Indians/Alaska Natives (25%) and Latinos (17%) are more likely to be uninsured than non-Latino whites and African Americans. Among working age adults (age 19–64 years), American Indians/Alaska Natives, Latinos and African Americans are more likely to be uninsured than non-Latino whites.

Percent uninsured by race, ethnicity and age, Oregon, 2010					
	Non-Latino				Latino
	African American	American Indian / Alaska Native*	Asian / Pacific Islander	White	
Percentage of Uninsured Ages 0 – 18	5%	25%	8%	7%	17%
Percentage of Uninsured Ages 19 - 64	28%	31%	20%	20%	47%

Source: American Community Survey, 2010

\* Survey respondents with Indian Health Services (IHS) and no other source of health insurance are classified as uninsured. IHS is not considered health insurance by the American Community Survey because it does not have a defined benefit plan.

The following table presents a graphic summary of the disparities discussed above, which facilitates the identification of patterns of disparities for communities of color in Oregon. For all indicators, disparities are identified by how the community of color is doing in comparison to non-Latino whites.

 <b>Disparity</b>	These measures suggest disparities between at least one community of color and non-Latino whites. Further analysis of both possible reasons for these disparities and remedial interventions are needed. Disparities could be influenced by many factors, such as co-morbidities, poverty, education, social exclusion, and lack of social support, so we caution the reader to not view these disparities as the result of a single cause.
 <b>No Disparity</b>	The comparison of communities of color to non-Latino whites shows little or no difference between the groups with regard to the given indicator.
 <b>Doing Better</b>	The community of color has better outcomes than non-Latino whites.

Indicator	Hispanic/Latino	African American	AI/AN	Asian	Pacific Islander
First Trimester Prenatal Care	Disparity	Disparity	Disparity	No Disparity	No Disparity
Low Birth Weight Births	No Disparity	Disparity	No Disparity	No Disparity	No Disparity
Immunizations for 2 Year Olds*	Doing Better	No Disparity	No Disparity	Doing Better	Disparity
Cigarette Smoking Among Adults	Doing Better	Disparity	Disparity	Doing Better	Doing Better
Cigarette Smoking Among Youth*	No Disparity	Disparity	Disparity	No Disparity	No Disparity
Obesity Among Adults	Disparity	Disparity	Disparity	Doing Better	Doing Better
Asthma Among Adults	Doing Better	No Disparity	Disparity	Doing Better	Doing Better
Diabetes Among Adults	Disparity	Disparity	Disparity	No Disparity	No Disparity
Hypertension Among Adults	Doing Better	Disparity	No Disparity	No Disparity	No Disparity
New Chlamydia Cases	Disparity	Disparity	No Disparity	No Disparity	No Disparity
New HIV/AIDS Diagnosis	Disparity	Disparity	No Disparity	No Disparity	No Disparity
Teen Pregnancy Rate	Disparity	Disparity	Disparity	Doing Better	Doing Better
Years of Potential Life Lost <75	Doing Better	Disparity	Disparity	No Disparity	No Disparity
Percentage of Uninsured Ages 0-18	Disparity	Disparity	Disparity	No Disparity	No Disparity
Percentage of Uninsured Ages 19-64	Disparity	No Disparity	Disparity	No Disparity	No Disparity

\*Hispanics/Latinos included in all race categories for this indicator

\*\* For more information: OHA Office of Equity and Inclusion State of Equity Report and website <http://www.oregon.gov/oha/oei/pages/soe/index.aspx>.

# Economically disadvantaged and uninsured populations

Socioeconomic status (SES) is well-recognized as an important determinant of health: those with lower SES suffer disproportionately from many health disparities. SES is often defined by income, education, or both. The table below summarizes the percentage of Oregon residents meeting selected indicators of low socioeconomic status.

Low socioeconomic status, Oregon, 2010		
	Percent (%)	Percent (%)
Did not graduate high school in 4 years	33%	
No post-secondary degree	71%	
<b>Poverty</b>		
Overall	15.8%	(US: 15.3%)
Households with kids	21.6%	(US: 21.6%)
<b>Food Insecurity</b>		
Overall	17.5%	(US: 14.5%)
Households with kids	29%	(US: 20.0%)

Source: Oregon Behavioral Risk Factor Surveillance System, 2010

## Selected indicators

### *Disparities in chronic conditions*

Economically disadvantaged Oregonians are less likely to report good or excellent health status than those who are not economically disadvantaged (69% vs. 90%). Prevalences of many chronic conditions are higher among the economically disadvantaged than among those who are not economically disadvantaged. For example, 15% of economically disadvantaged adults in Oregon report having diabetes, compared to 6% of non-disadvantaged adults.

Prevalence of selected chronic conditions among adults by economic status, Oregon, 2009		
Chronic conditions	Economically disadvantaged*	Non-economically disadvantaged
Asthma	18%	9%
History of heart attack	9%	3%
History of stroke	7%	2%
Diabetes	15%	6%
High blood pressure	29%	24%

\* Respondents were considered economically disadvantaged if they: 1) had a household income  $\leq$  100% of Federal Poverty Level, or 2) had not completed high school.

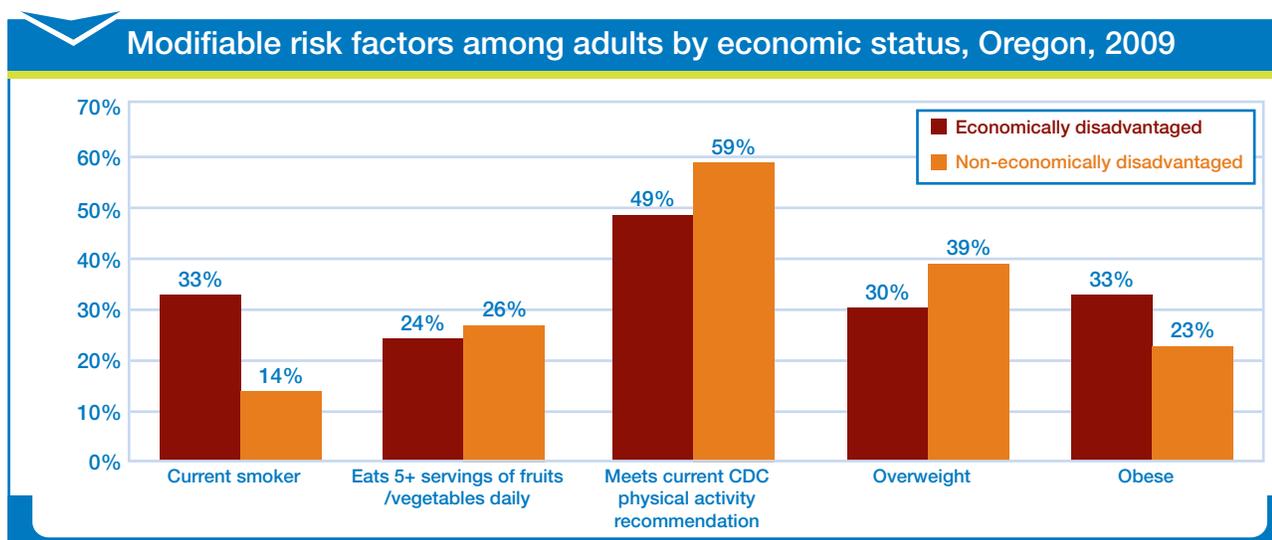
Source: Oregon Behavioral Risk Factor Surveillance System, 2009  
Age adjusted to the 2000 U.S. standard population.

### *Disparities in health behaviors*

Smoking, lack of physical activity, low intake of fruits and vegetables, and obesity all increase the risk of chronic disease morbidity and mortality.

Smoking prevalence among Oregon adults overall has decreased during the past two decades, but smoking prevalence remains higher among economically disadvantaged people. During 2009, 34% of economically disadvantaged people reported smoking compared to 14% of people who were not economically disadvantaged.

Similarly, overweight and obesity (body mass index  $\geq 30$ ) is more common among adults who are economically disadvantaged relative to those who are not economically disadvantaged. Economically disadvantaged adults are also less likely to meet Centers for Disease Control and Prevention physical activity recommendations for good health.



SOURCE: OREGON BRFSS, 2009. AGE ADJUSTED TO THE 2000 U.S. STANDARD POPULATION.

### *Disparities in maternal and child health*

Mothers without any post-secondary education are less likely to receive first-trimester obstetric care than those with higher levels of education (62% vs. 80%) (Source: Oregon Vital Statistics, 2010).

In addition, prenatal tobacco use is much higher among mothers who did not graduate from high school (19%) or who have a high school diploma/GED (18%) than among those with some college (9%) or more education (2%) (Source: Oregon Birth Certificate data).

### *Disparities related to health care access*

Oregonians who are economically disadvantaged are more likely to be uninsured. Approximately seven out of 10 uninsured adults in Oregon have incomes at or below 200% of the Federal Poverty Level.

Percent uninsured by age and Federal Poverty Level (FPL), Oregon, 2011		
	200% FPL and under	Over 200% FPL
Ages 0 – 18 years	65%	35%
Ages 19 years and over	72%	28%

Source: Oregon Health Insurance Survey, 2011

In 2011, 21% of adults (age 19-64) and under 6% of youths (age 0-18) were uninsured in Oregon (Source: Oregon Health Insurance Survey 2011). Additionally, Oregonians 0-64 years old who were uninsured for a year were much less likely to report their health as excellent or very good (44%) than those with individual or group (private) insurance (78% and 72%, respectively). In addition, the uninsured were less likely to report a usual source of care, were less likely to get a routine checkup in the last year, were more likely to have delayed routine medical and dental care due to cost, and were more likely not to have filled a prescription due to cost (Source: Oregon Health Insurance Survey 2011).

## Lesbian, gay, bisexual or transgendered populations

People who identify as lesbian, gay, bisexual or transgendered (LGBT) experience unique and complex health disparities, compounded by a lack of data and research on LGBT people. The National Institutes of Health (NIH) released a report on the health of LGBT people in 2011, calling for additional research and data collection on federally funded health surveys, and the Agency for Healthcare Research and Quality (AHRQ) included LGBT people as a priority population in their 2011 National Healthcare Disparities Report (NHDR).

In Oregon, an estimated 3% of adults identify as lesbian, gay, or bisexual (LGB) while 7% of 11th-grade youth identify as lesbian, gay, bisexual, or are not sure of their sexual identity. No population-based data exist for gender minorities in Oregon, so we cannot calculate disparities for people identifying as transgender.

## LGB population estimates

Population estimates	Adults 18-69 years old		Youth 11th grade	
	Men	Women	Boys	Girls
Heterosexual / straight	97.5%	96.4%	94.9%	91.8%
Gay / lesbian	1.7%	1.6%	1.3%	0.7%
Bisexual	0.8%	2.0%	2.0%	4.9%
Questioning / Not sure*	N/A	N/A	1.9%	2.5%

\* Only youth given “not sure” response option

Source: Adult data from Behavioral Risk Factor Surveillance System 2005–2009; Youth data from OHT 2006–2009

Data suggest that key demographic differences exist between LGB adults and their heterosexual counterparts in Oregon. LGB adults are more likely to be college graduates (43% vs. 34%) than heterosexual adults, yet more LGB adults have an annual household income less than \$20,000 (17% vs. 12%), live in poverty (13% vs. 10%), and experience household food insecurity (18% vs. 12%) than heterosexual adults. Below, we discuss how some selected health indicators vary by sexual identity in Oregon.

### Selected indicators

#### *Disparities in mental health*

Sexual minorities in Oregon are significantly more likely to experience mental health issues than their heterosexual peers. Nearly twice as many LGB adults report frequent mental distress (14 or more days of poor mental health in the last 30 days) as heterosexual adults (17% vs. 9%). Similarly, more than twice as many lesbian, gay, bisexual, or questioning (LGBQ) youth report feeling “sad or hopeless for 2 or more weeks” in the past 12 months as their heterosexual peers (42% vs. 18%). One in five LGBQ youth report a suicide attempt in the last 12 months, compared with one in 25 heterosexual youth (20% vs. 4%).

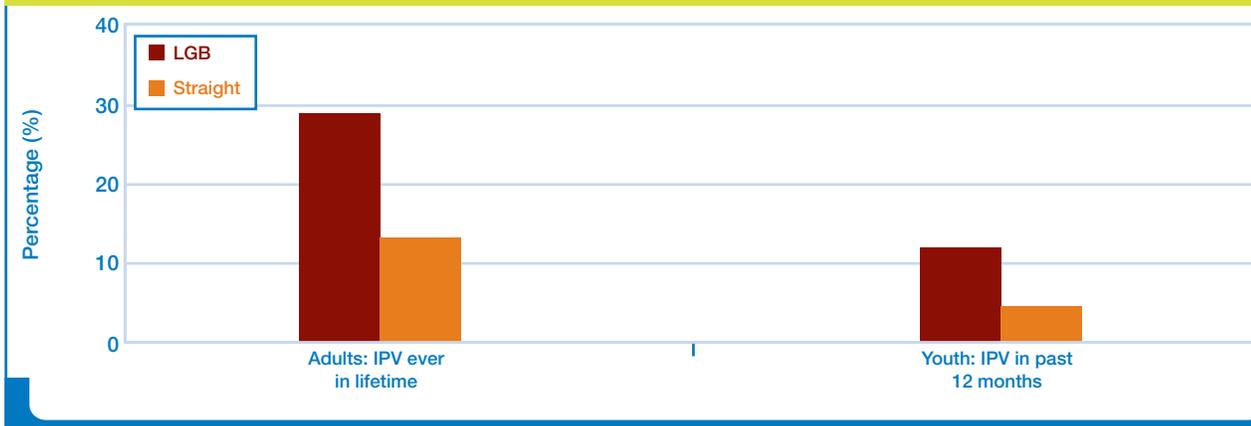
#### *Disparities in chronic conditions*

Significantly more LGB adults live with arthritis, asthma, diabetes or cardiovascular disease than heterosexual adults (41% vs. 33%); in particular, nearly twice as many LGB adults report being diagnosed with asthma as heterosexual adults (17% vs. 9%).

#### *Disparities related to injury prevention and violence*

Both LGB adults and youth appear to experience higher rates of intimate partner violence (IPV), with twice as many LGB adults than heterosexual adults reporting ever being hit, slapped, pushed, kicked, or physically hurt by an intimate partner in their lifetimes (29% vs. 14%), and more than twice as many LGBQ youth than heterosexual youth report being hit, slapped, pushed, kicked, or physically hurt by an intimate partner in the last 12 months (12% vs. 5%). (See figure on next page)

## Intimate partner hit, slapped, pushed, kicked or physically hurt by sexual identity, Oregon, 2005–2009

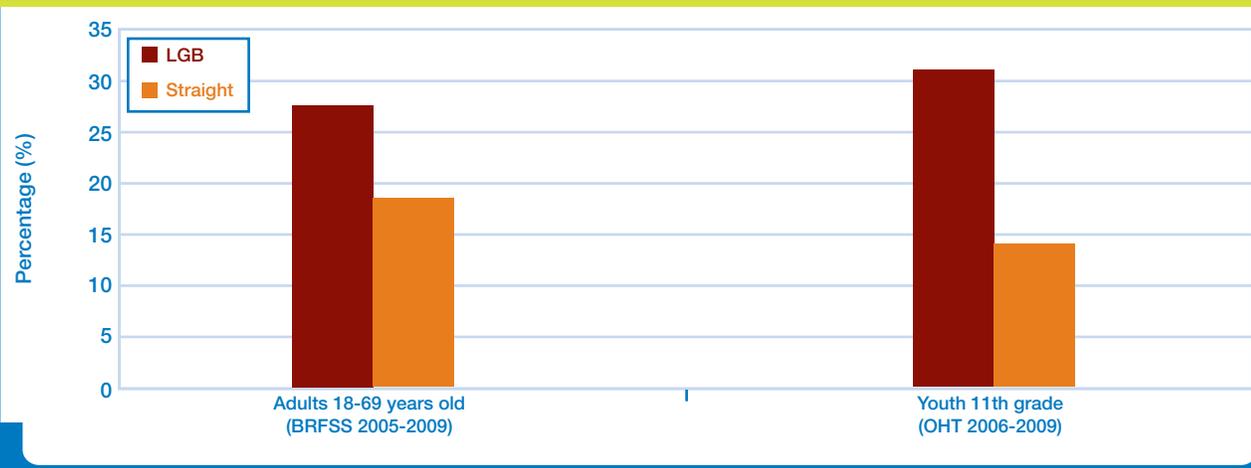


SOURCES: ADULTS 18-69 YEARS OLD: BEHAVIORAL RISK FACTOR SURVEILLANCE SURVEY, 2005–2009; YOUTH GRADE 11: OREGON HEALTHY TEENS SURVEY, 2006–2009

### *Disparities in health behaviors*

Although there has been a decrease in the smoking prevalence among Oregon adults and youth overall, the smoking prevalence among those identifying as lesbian, gay, or bisexual has remained high. Data suggest that smoking prevalence among sexual minorities is much higher than among Oregonians overall (28% vs. 19% for adults and 31% vs. 14% for youth).

## Current smoker by sexual identity, Oregon, 2005-2009



SOURCES: ADULTS 18-69 YEARS OLD: BRFSS 2005–2009; YOUTH GRADE 11: OHT 2006–2009

Additional factors increase the risk of chronic disease morbidity and mortality in LGB populations. LGB adults are less likely to eat five or more servings of fruits and vegetables a day. LGBQ youth are less likely to meet the CDC recommendations for physical activity, and more likely to experience obesity. Finally, lesbian and bisexual adult women are more likely to experience obesity than straight women (32% vs. 25%), while gay and bisexual men are less likely to experience obesity than straight men (16% vs. 25%).

### *Disparities related to health care access*

Sexual minority adults and youth appear to experience significant barriers in accessing needed health care. LGB adults are less likely than heterosexual adults to have medical insurance or coverage (77% vs. 82%), are more likely to report barriers to accessing health care due to cost in the last 12 months (23% vs. 15%), and are less likely to have a usual health care provider (70% vs. 77%).

## Incarcerated populations

People who have been incarcerated face higher risks for many chronic and communicable diseases that accompany them from the community into correctional institutions and back to the community. In 2010, an estimated 3.5% of Oregon's population was processed into a county jail facility; currently, more than 14,000 persons are incarcerated within one of Oregon's 13 state prisons. Since 1980, the number of state prison inmates has quadrupled, along with their complex health care needs.

In Oregon, an incarcerated person is younger, more likely to be male, a person of color, and less educated relative to the general population. In addition, the rate of incarceration of women is increasing. People living in poverty are more likely to be imprisoned than people with more financial resources, adding to the challenge of achieving health equity for incarcerated people.

Demographics of incarcerated adults vs. non-incarcerated adults, Oregon

Characteristic	Incarcerated adults*	Non-incarcerated adults**
18-45 years old	72%	47%
Male	92%	49%
African American	9%	2%
Hispanic / Latino	14%	12%
Less than HS / GED	43%	15%

Sources: \* Oregon Department of Corrections, July, 2012

\*\* U.S. Census, 2010

### Selected indicators

#### *Disparities in mortality*

The risk of death for convicts is elevated during the first year after release from prison: suicide and drug overdose are two common causes<sup>†</sup>. Other causes of excess mortality among male ex-prisoners include homicide, accidents, HIV, cardiovascular disease, liver disease, and liver cancer<sup>†</sup>.

<sup>†</sup> Binswanger IA, Stern MF, Deyo RA, Heagerty PA, et al. Release from prison—a high risk of death for former inmates. *N Engl J Med.* 2007; 356: 157–65.

<sup>†</sup> Rosen DL, Schoenbach VJ, Wohl DA. All-cause and cause-specific mortality among men released from state prison, 1980-2005. *Am J of Public Health.* 2008; 98: 2278–84.

### *Disparities in substance abuse and mental health*

The prevalence of substance abuse and mental health issues among incarcerated populations exceeds that of the general adult population. According to the Oregon Department of Corrections, almost three-quarters of prisoners have abused substances, and half have mental health diagnoses.

Mental conditions in incarcerated adults on intake, Oregon, 2012	
Mental condition	Incarcerated adults
Substance abuse, any	73%
Dependence/addiction	59%
Axis I or II diagnosis or developmental disability (DD)	49%
Moderate to severe treatment need	33%
Severe mental health problem	17%
Developmental disability	2%

Source: Oregon Department of Corrections, July 2012

### *Disparities in chronic conditions*

Management of chronic diseases, such as diabetes, hypertension and asthma, can be difficult among incarcerated populations. However, probably because they are a more youthful population, the prevalence of many chronic conditions is lower among incarcerated adults relative to non-incarcerated adults.

Chronic conditions in incarcerated vs. non-incarcerated adults, Oregon		
Health condition	Incarcerated adults*	Non-incarcerated adults**
Diabetes mellitus	6%	8%
Hypertension	17%	27%
Asthma	7%	10%

Sources: \*Oregon Department of Corrections (ODOC), July 2012

\*\* Oregon Behavioral Risk Factor Surveillance System, 2009

### *Disparities in communicable diseases*

Communicable diseases such as HIV, hepatitis C and tuberculosis are more common among incarcerated than non-incarcerated populations. All prisoners are screened for tuberculosis on intake and annually for the duration of their incarcerations.

Communicable diseases in incarcerated vs. non-incarcerated adults, Oregon		
Health condition	Incarcerated adults <sup>i</sup>	Non-incarcerated adults
Hepatitis C	23,300 per 100,000 <sup>ii</sup>	82 per 100,000 <sup>iii</sup>
HIV	435 per 100,000	6 per 100,000
Chlamydia	2.5% <sup>iv</sup>	2.2% <sup>v</sup>
Tuberculosis	11.8 per 100,000	2.3 per 100,000

Sources:

<sup>i</sup> Oregon Department of Corrections (ODOC), July 2012

<sup>ii</sup> Seroprevalence population study by ODOC, 2005: 23.3%.

<sup>iii</sup> Adult cases of laboratory-confirmed chronic hepatitis C, Oregon Enhanced Viral Hepatitis Surveillance Site, 2010. Note that methods for measuring seroprevalence in a population versus lab-confirmed chronic cases are different; thus rates cannot be directly compared.

<sup>iv</sup> ODOC, 2011: All women prisoners are screened at intake: 13 of 529 tested positive.

<sup>v</sup> National Health and Nutrition Estimation Survey, United States, 2007–2008, females aged 14–39 years.

### *Disparities in family health*

More than two-thirds of Oregon's female inmates and more than half of male inmates are parents. This means an estimated 20,000 children in Oregon have a parent in prison. Incarceration of a household member is a major adverse childhood experience, which can have adverse health effects across a child's lifespan. The Oregon Public Health Division and Oregon Department of Corrections collaborate with various community groups, such as the Children's Justice Alliance, to improve the lives of children with incarcerated parents.

## Discussion/conclusion

Oregonians have much to be proud of regarding the health of our state's population, but we also confront significant challenges.

Information presented in the State Health Profile covers many diverse health topics, and is presented by specific population groups and over time, when relevant and feasible. Some important gaps in available population health data become evident upon review of this overview. Much of the risk factor information is obtained from telephone-based surveys. People who lack telephones, are unable to communicate verbally, or are institutionalized, are not captured. We lack robust, high-quality data on children of elementary school age, and birth anomalies. Several useful data sources will soon be available, including a statewide all-payor, all-claims database that will include data on outpatient clinical care, which may help to fill some of the data gaps.

This State Health Profile represents an important step in developing a comprehensive understanding of the health of Oregonians. Many reports on specific diseases and risk behaviors exist, but this is the first compilation of such a comprehensive set of indicators in a single report. The State Health Profile lays groundwork for improvement efforts, to be addressed in the Public Health Division's Strategic Plan, and State Health Improvement Plan.

Improving the overall health of all Oregonians is not a task for the public health or health care systems alone; rather, it will require health agencies to work with social service, transportation, planning, education, economic development agencies, private business leaders, not-for-profit organizations, academic institutions, policymakers, tribal officials, and the public to address our challenges. Health is everybody's business.

## Data Sources

**CDC Wonder:** Database that provides data collected by the National Center for Health Statistics (NCHS) for statistical reporting and analysis of deaths from specific diseases.

**Department of Corrections:** Data on the incarcerated population in Oregon are available from the Oregon Department of Corrections, Research and Evaluation Unit. The Research and Evaluation Unit provides information about offender populations, program performance, and policy impact. (*Available at: [http://www.oregon.gov/DOC/RESRCH/docs/inmate\\_profile.pdf](http://www.oregon.gov/DOC/RESRCH/docs/inmate_profile.pdf)*)

**Reportable disease data:** All Oregon physicians, other health care providers, and laboratories are required by law to report certain diseases and conditions to local health departments. Reportable diseases are primarily of infectious etiology, but also include cancer, lead poisoning and pesticide exposures.

**Oregon Hospital Discharge Index:** The hospital inpatient discharge dataset, available from the Oregon Health Authority Office for Health Policy and Research includes patient demographics, admission and discharge information, characteristics of the treatment provided, and nature of each discharge from Oregon hospitals.

**Oregon State Cancer Registry:** The Oregon State Cancer Registry (OSCaR) is a population-based reporting system that collects and analyzes information about cancer cases occurring in Oregon. Reportable cases include all cancers except specific forms of common, curable skin cancer and in situ cervical cancers.

**National Violent Death Reporting System, Oregon:** The NVDRS in Oregon collects data from several data sources: Oregon Medical Examiner's reports, Oregon Crime Lab reports, Oregon Law Enforcement Data System Uniform Crime reports, the Homicide Incident Tracking System, local law enforcement reports, death certificates, and Child Fatality Review reports. This program collects information from many data sources and compiles incident-based cases for all violent deaths in Oregon in order to generate public health information on violent deaths and to develop violence prevention strategies.

**ALERT Immunization Registry:** ALERT is a statewide immunization information system, developed to achieve complete and timely immunization of all children ages 0-18 years. ALERT collects data from public and private health care providers who administer the immunizations.

**Birth certificate data:** Oregon State law requires birth certificates to be completed for all live births. These birth records are the primary data sources for health information shown on these pages. The Oregon Health Authority Public Health Division Center for Health Statistics registers only births that occur in Oregon. However, information on births occurring out-of-state to Oregon residents is also reported through an interstate exchange agreement. Data may be tabulated by residence (where the person lived) or by occurrence (where the event occurred).

**Death data:** Death certificate data are used to examine trends in mortality and causes of death. Variables in this database include cause of death; decedent's identifying information; date and place of death; occupation of the decedent; whether the death was related to tobacco use; education of decedent; marital status of decedent; and county, place and date of injury (if applicable).

**Teen pregnancy data:** Pregnancy estimates are based on the estimated number of teen births and induced terminations among Oregon teens; they do not include the number of fetal deaths or miscarriages (spontaneous abortions) that occur. The estimation of teen births is considered to be relatively complete and includes births to resident teens even when they occur out-of-state. The estimation of teen abortions is based on all reported abortions to teenage residents of Oregon; however, because states often do not report abortions obtained within their borders to the state of residence as occurs with vital events such as birth and death, an unknown number of Oregon teens obtain abortion services out-of-state. As a consequence, estimates of teen abortions and teen pregnancies should be considered minimal in nature.

**American Community Survey (ACS)/Census:** An ongoing survey conducted by the U.S. Census Bureau that provides data every year. Information from the survey generates data that help determine how more than \$400 billion in federal and state funds are distributed each year. The ACS occurs in one-, three-, and five-year intervals, as opposed to the decennial census.

**Oregon Behavioral Risk Factor Surveillance System (BRFSS) survey:** A random digit-dialed telephone survey that has been conducted continuously among non-institutionalized Oregon adults since 1988. The objective of the BRFSS is to collect uniform, state-specific data on preventive health practices and risk behaviors that are linked to chronic diseases, injuries, and preventable infectious diseases in the adult population. Factors assessed by the BRFSS include tobacco use, physical activity, dietary practices, safety-belt use, and use of cancer screening services, among others.

**Oregon Healthy Teens Survey (OHT):** OHT is Oregon's effort to monitor the health and well-being of adolescents. An anonymous and voluntary research-based survey, OHT is conducted among eighth- and 11th-graders statewide. The OHT survey incorporates two youth surveys that preceded it, the Youth Risk Behavior Survey (YRBS) and the Student Drug Use Survey. The questionnaire assessed behavioral risks among Oregon high school students (grades nine through 12) in the areas of vehicle safety, weapon carrying and violence, tobacco and alcohol use, other drug use, sexual activity and pregnancy, HIV knowledge and attitudes, eating behaviors, nutrition, physical activity, and access to health care, including use of school-based health centers.

**Oregon Health Insurance Survey (OHIS):** The Oregon Health Authority (OHA) conducted a statewide survey of health insurance coverage in 2011. Randomly chosen households were mailed letters asking for their participation, and households completed the survey over the phone, online, or via a written questionnaire;  $\geq 10,000$  Oregon households

completed the survey. Information collected included: health insurance status, health care access and cost, and demographic information, including education, income and employment.

**Oregon SMILE Survey:** This survey is the second in a series of assessments and presents the findings of oral screenings of first-, second- and third-graders attending Oregon public schools in 2006-2007. The first survey was conducted in 2002. Using national criteria recommended by the Centers for Disease Control and Prevention and the Association of State and Territorial Dental Directors, specially trained dental hygienists performed a brief, simple visual screening of each child's mouth. In addition, parents were invited to complete a questionnaire that included questions about the child's age, race/ethnicity, participation in the Federal Free or Reduced Lunch (FRL) Program, language spoken at home, gender, medical insurance, dental insurance, and time since last dental visit.

**Pregnancy Risk Assessment Monitoring System (PRAMS):** A population-based surveillance system that collects data on maternal attitudes and experiences prior to, during, and immediately after pregnancy for a sample of Oregon women. The sample data are analyzed in a way that allows findings to be applied to all Oregon women who have recently had a baby. PRAMS-2 is conducted when the child reaches 2 years old.



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