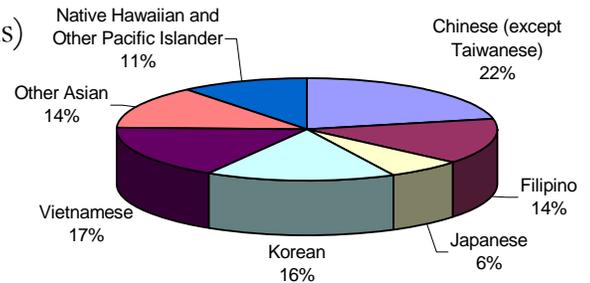


Oregon Tobacco Prevention and Education Program Asian and Pacific Islander Data Report – 2007

According to the 2005 U.S. Census of Oregon’s 3.6 million inhabitants, 3.7 percent (131,628 individuals) identify themselves as Asian or Pacific Islander. Sixty-one percent of all Asians and Pacific Islanders in Oregon live in Clackamas, Multnomah and Washington counties, the tri-County area that encompasses the Portland urban center.



Tobacco’s annual toll on Asians and Pacific Islanders in Oregon

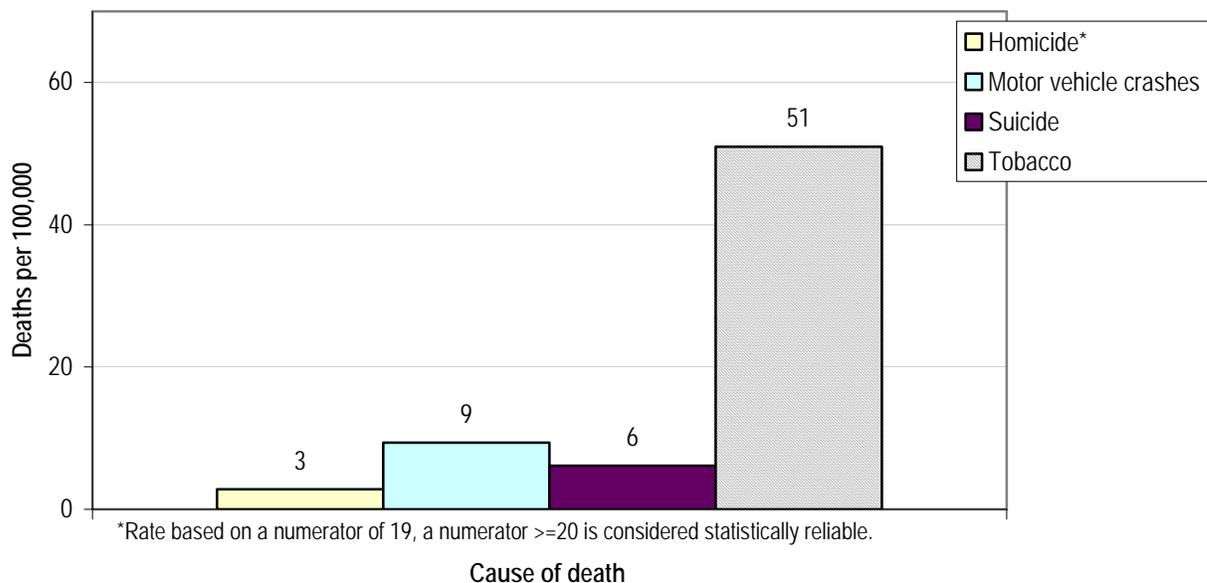
38 Asians and Pacific Islanders die from tobacco use.

742 Asians and Pacific Islanders suffer from a serious illness caused by tobacco use.

\$6 million is **spent** on medical care for Asians and Pacific Islanders for tobacco-related illnesses.

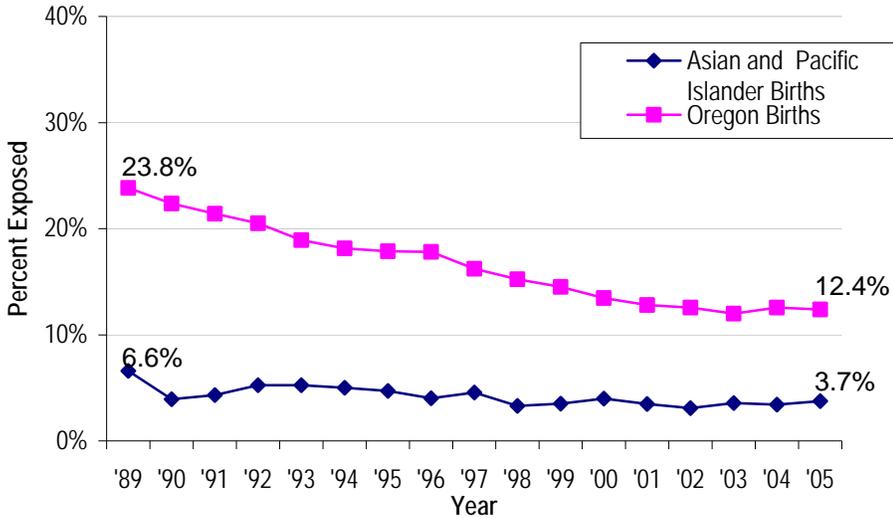
\$6 million in productivity is **lost** due to tobacco-related deaths.

Figure 1. Selected causes of death among Oregon Asians and Pacific Islanders, 2000-2004



Death among Oregon Asian or Pacific Islanders is 5 to 18 times more likely to be due to tobacco than due to homicide, motor vehicle accidents or suicide.

Figure 2. Infants born to women who smoked during pregnancy, 1989-2005

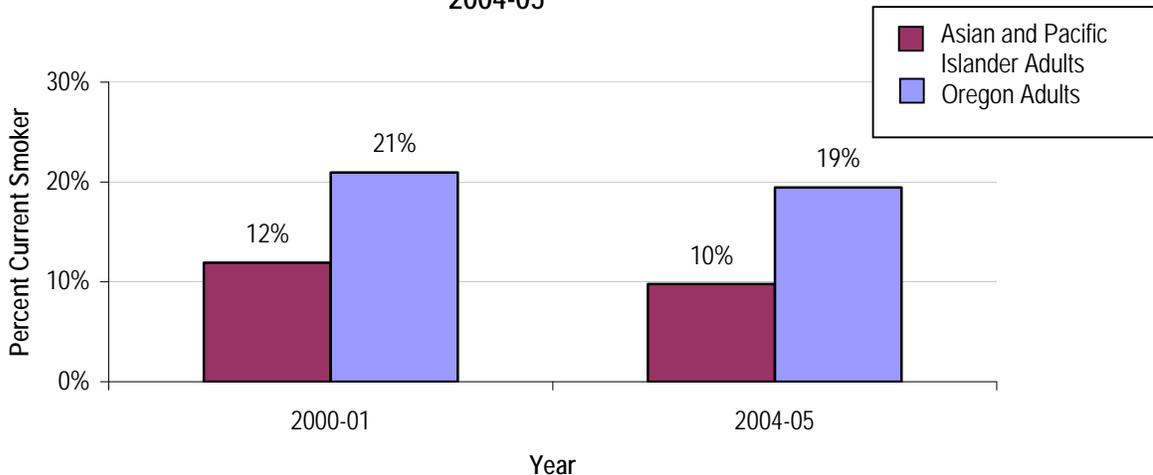


A lower percentage of the babies born to Asian and Pacific Islander mothers were exposed to their mother's cigarette smoking during the prenatal period in 2005 (3.7 percent) than in 1989 (6.6 percent).

The risk for perinatal mortality, both stillbirths and neonatal deaths, and the risk for sudden infant death syndrome (SIDS) are higher for the offspring of women who smoke during pregnancy - 2001 Surgeon General's Reportⁱ

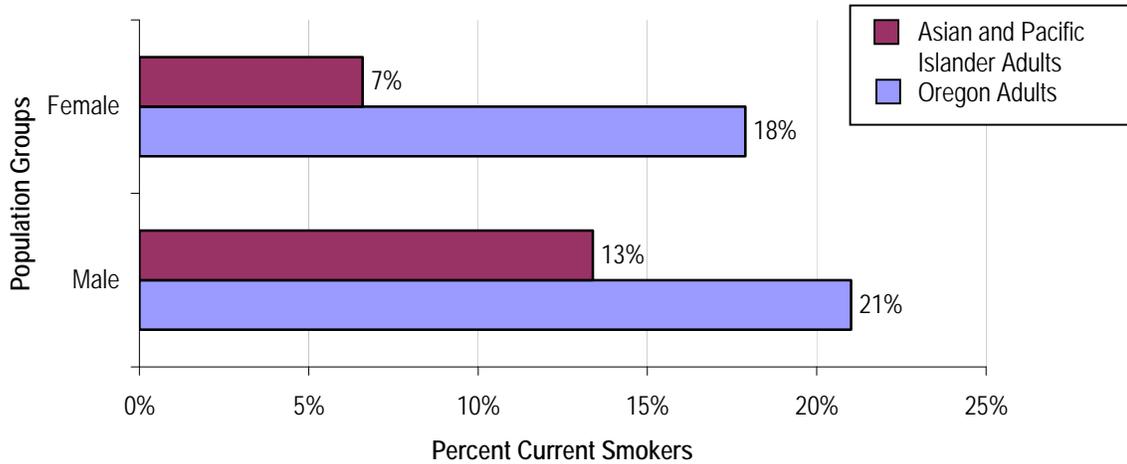
Adult smoking

Figure 3. Smoking prevalence among Oregon adults, 2000-01 and 2004-05



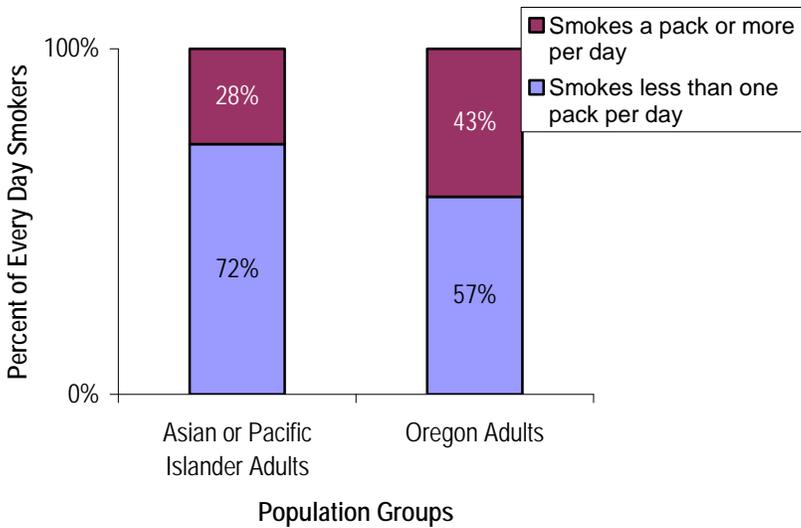
Asian and Pacific Islander adults, as a whole, have the lowest smoking prevalence among any ethnic or racial population nationally, as well as in Oregon. In addition, Oregon Asian and Pacific Islander adults have a lower prevalence (10 percent) than the national smoking prevalence among Asian and Pacific Islanders (13.3 percent).ⁱⁱ However, national studies have found specific sub-populations of Asian and Pacific Islanders bear a greater burden of tobacco use, primarily, Korean, Filipino, and Japanese descendents.ⁱⁱⁱ Current surveillance systems do not capture large enough sample sizes in Oregon for this type of analysis.

Figure 4. Smoking prevalence among Oregon adults by sex, 2004-2005



The overall lower prevalence of smoking among Asian and Pacific Islanders may also be related to the lower prevalence of smoking among women, seven percent, as compared with Asian and Pacific Islander men, 13 percent.

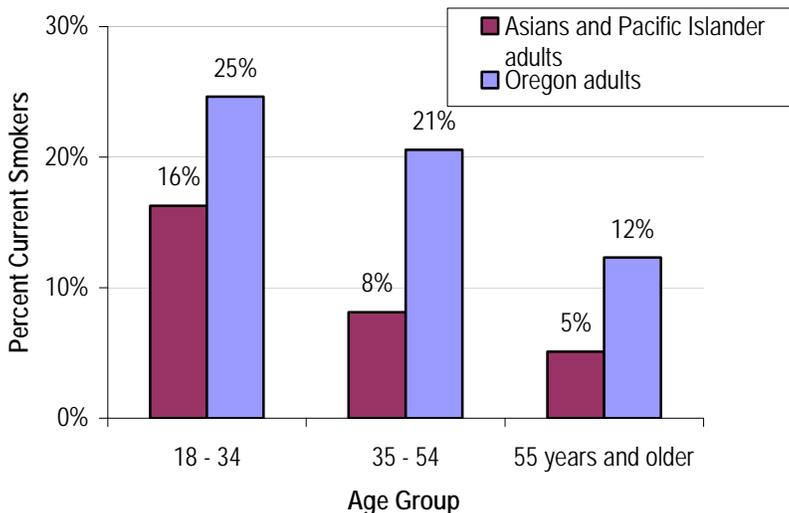
Figure 5. Cigarette consumption among every day smokers 2004-2005



In addition to an overall lower smoking prevalence than all Oregonians, 72 percent of Asian and Pacific Islander every day smokers consume less than a pack per day, as compared with 57 percent of all Oregon every day smokers (Figure 5).

Similar to the overall trend in Oregon, the prevalence of smoking among Asian and Pacific Islander adults decreases as age increases, with five percent of Asian Pacific Islanders 55 years and older smoking (Figure 6).

Figure 6. Adult smoking by age group, 2004-2005



0.8 percent of adult Asian and Pacific Islander smokers called the Oregon Quit Line in 2004 – 2005 as compared with 1.5 percent of all Oregon Smokers.

Adult exposure to secondhand smoke

According to the 2006 Surgeon General’s Report – *The Health Consequences of Involuntary Exposure to Tobacco Smoke* – “There is no risk-free level of exposure to secondhand smoke: even small amounts of secondhand smoke exposure can be harmful to people’s health.”^{iv}

Figure 7. Hours of secondhand smoke exposure from all sources during a typical week, 2004-2005

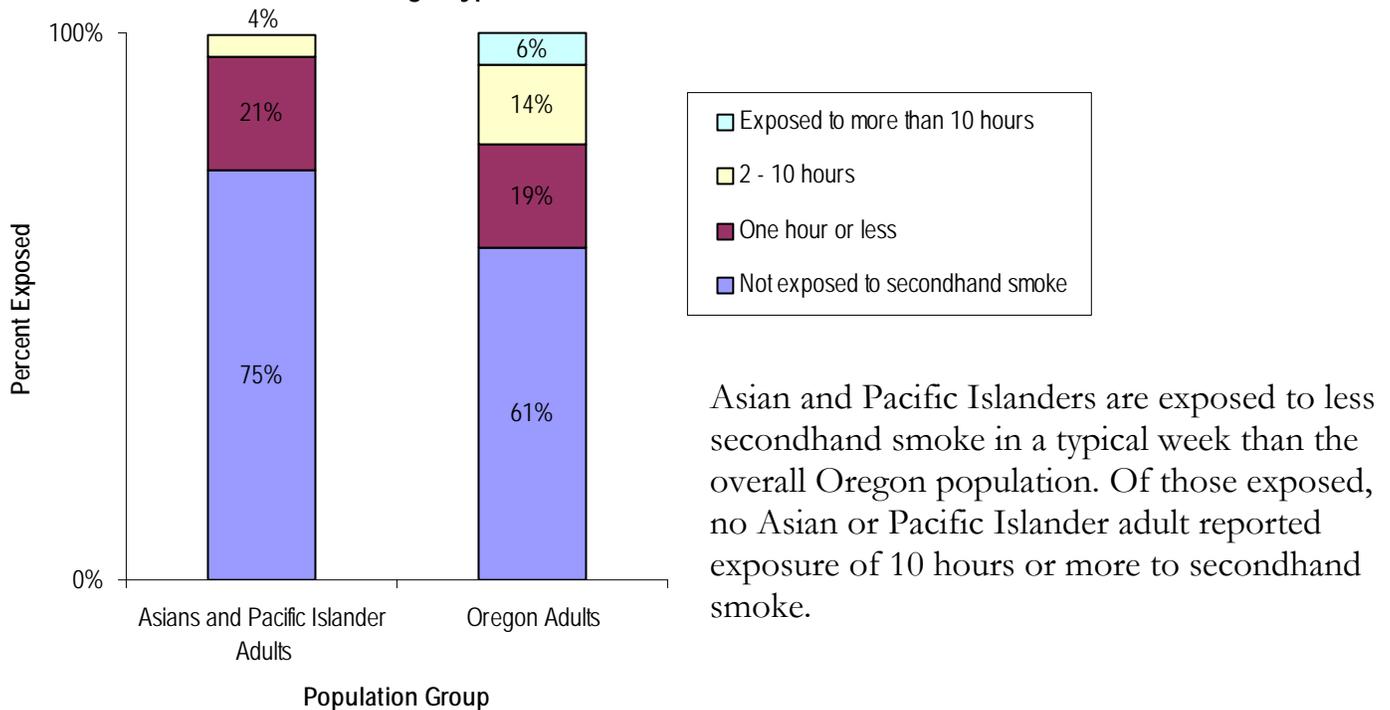
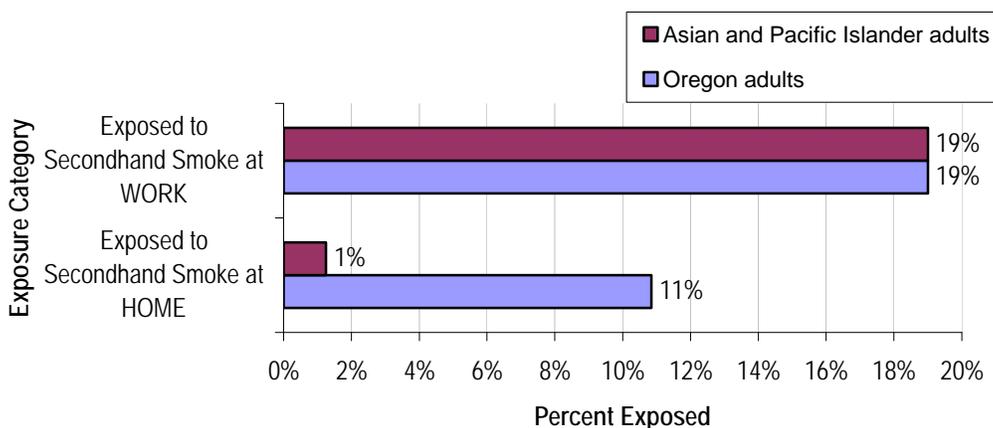


Figure 8. Secondhand smoke exposure (SHS) during the last 30 days by source of exposure, 2004-2005



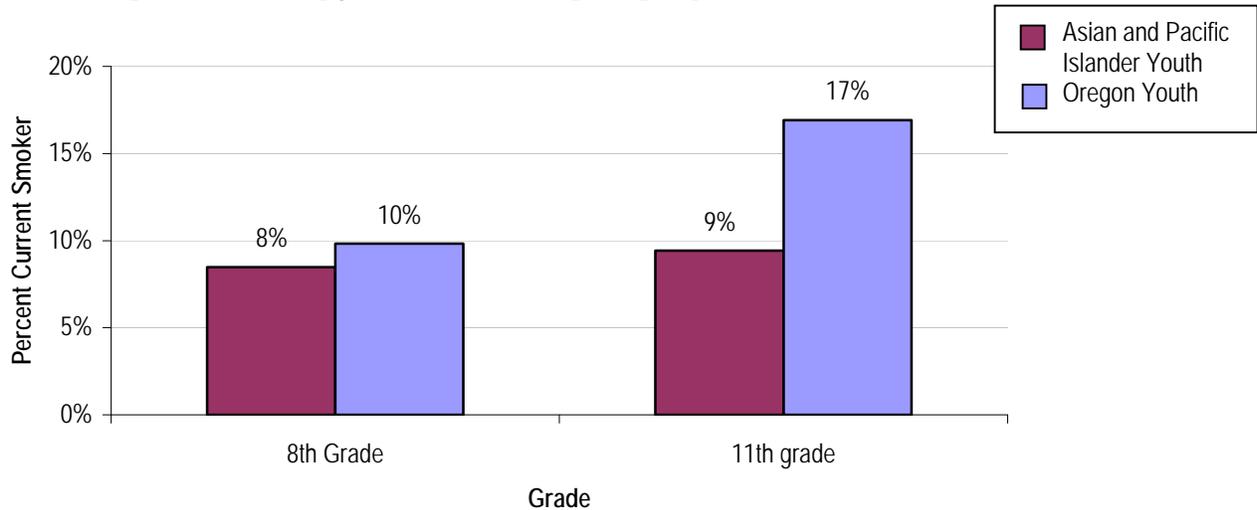
Nonsmokers exposed to secondhand smoke at home or work increase their risk of developing heart disease by 25 to 30 percent and lung cancer by 20 to 30 percent.^v

The level of exposure to secondhand smoke among Asian and Pacific Islanders appears to be the result of secondhand smoke at work, rather than at home.

Youth smoking

As with adults, smoking among Asian and Pacific Islander youth is lower than overall Oregon youth, with nine percent of 11th grade Asian and Pacific Islander youth smoking.

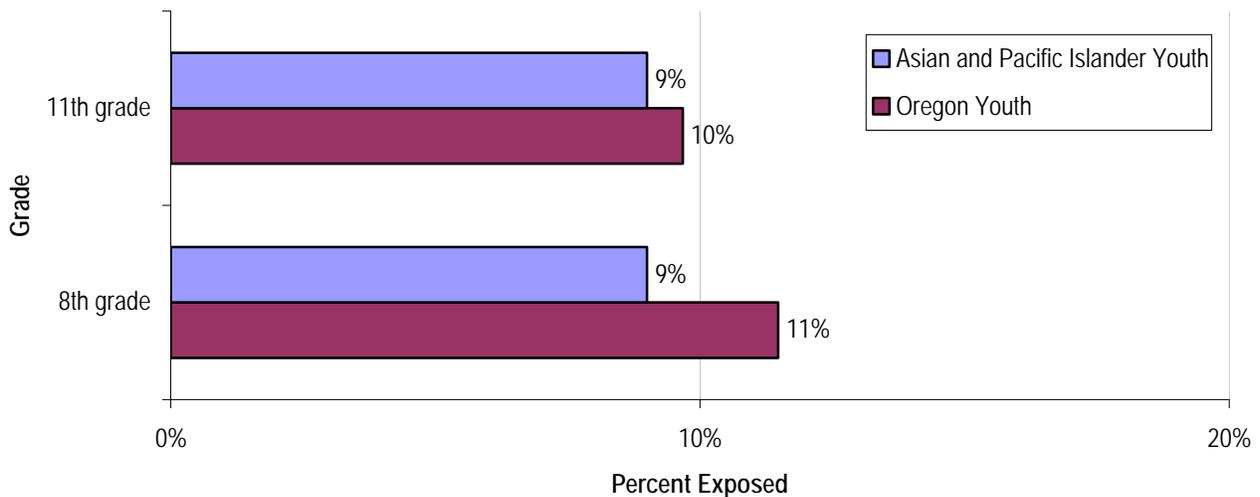
Figure 9. Smoking prevalence among Oregon youth, 2005-2006



Youth exposure to secondhand smoke

Exposure to secondhand smoke in the home has been correlated with increased smoking prevalence among youth. Recent findings from the Global Tobacco Youth Survey indicate youth who never smoked are 1.4 to 2.1 times more likely to be susceptible to initiate smoking if they were exposed to secondhand smoke in the home.^{vi}

Figure 11. Secondhand smoke exposure in the home among Oregon youth



Despite low secondhand smoke exposure in the home reported by Asian and Pacific Islander adults, nine percent of Oregon 8th and 11th grade Asian and Pacific Islanders report exposure to secondhand smoke in the home. This discrepancy may be due to different data collection methodologies and phrasing of the questions that assess SHS exposure in the home.*

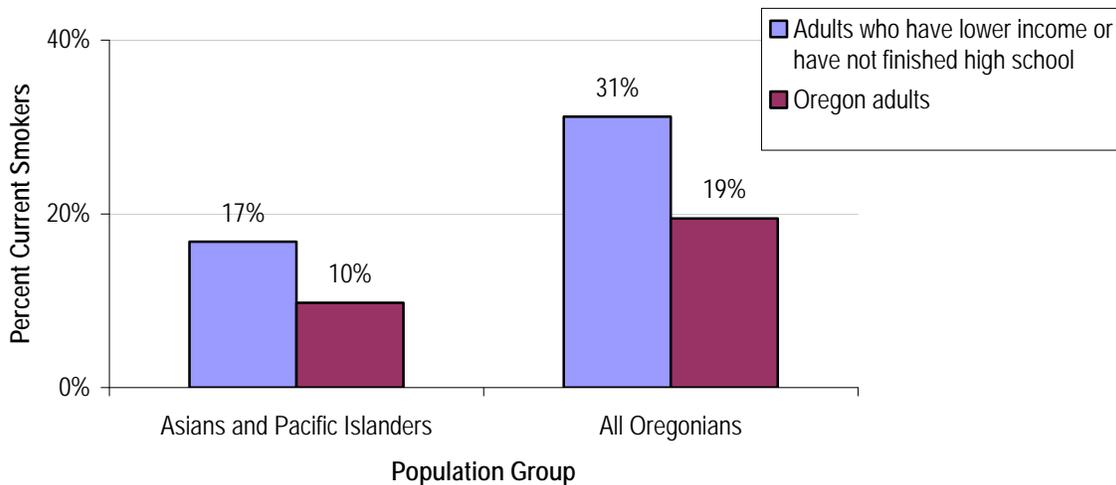
*Please see the methods section for a more thorough description of the discrepancies.

Smoking among Asian and Pacific Islander adults who have lower income or have not finished high school

Smoking prevalence varies by race/ethnicity as well as by societal factors. Both income and level of education completed have been associated with increased prevalence of smoking. Americans living below the federal poverty line are 40 percent more likely to smoke than those living at or above the federal poverty line.^{vii}

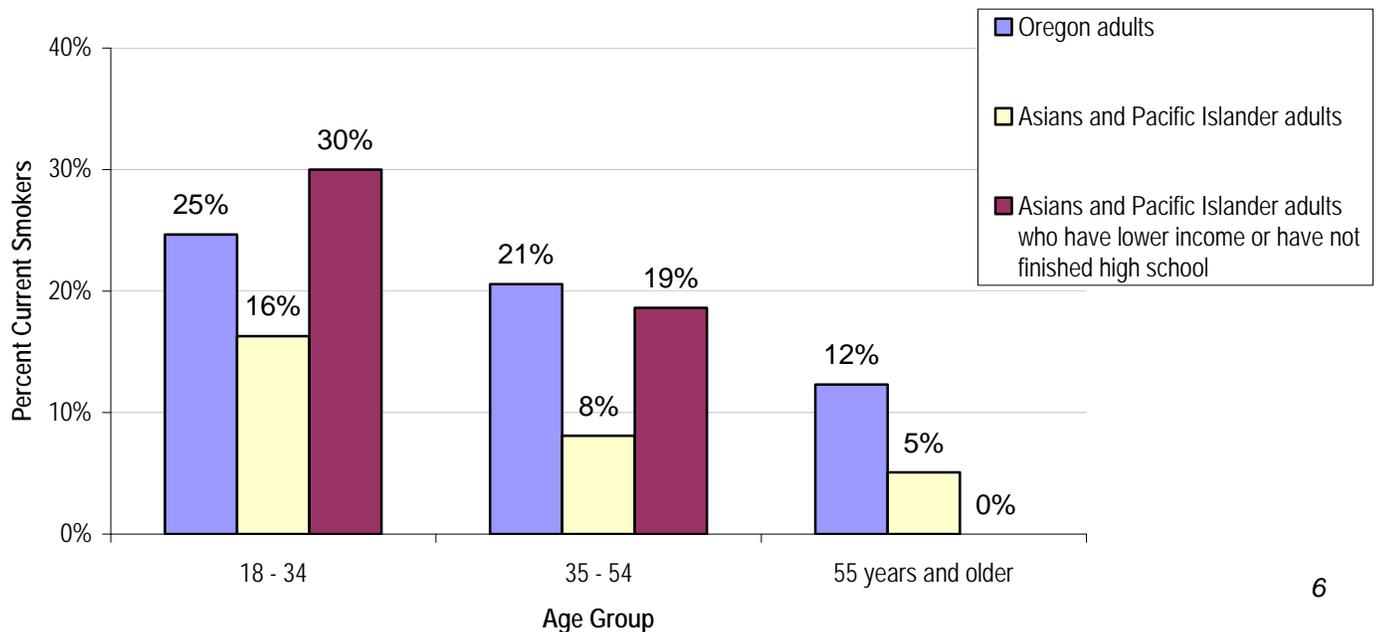
Fourteen percent of Asian and Pacific Islander adults in Oregon have incomes lower than the federal poverty line or have not finished high school as compared with 18 percent of the overall Oregon population. This group is twice as likely to smoke as Oregon Asian and Pacific Islanders who have finished high school and have higher incomes.

Figure 11. Smoking prevalence among Oregon adults, 2004-2005



Smoking among Oregon Asian and Pacific Islander adults declines as age increases, this pattern is similar to all Oregon adults and does not appear to be affected by income or level of education (Figure 12).

Figure 12. Adult smoking by age group, 2004-2005



Methods

Denominator sizes for the survey data depicted in figures

Figure Number	All Oregonians	Asians and Pacific Islanders	Asians and Pacific Islander adults who have lower income or have not finished high school	Oregon adults who have lower income or have not finished high school
5	4,173	65		
6	23,575	585		
7	6,521	311		
8 - WORK	9,004	309		
8 - HOME	6,719	327		
11	23,575	587	78	3,618
12	23,575	585	78	3,617

General

Asian and Pacific Islander populations comprise many distinct population groups, of which one or more may have a higher prevalence of smoking. However, due to sample size, we cannot further break down the population to identify specific risks and/or inherent differences between the sub-groups of the Asian and Pacific Islander population.

All survey data, unless otherwise specified, are age-adjusted and weighted. “Age adjustment is used to compare risks of two or more populations at one point in time or one population at two or more points in time.”^{viii} This method helps better depict what is happening in a population where age may be correlated with the outcome, in this case, tobacco use.

Weights were applied to survey data to account for Oregon’s population distribution by age and sex during the survey year. Weights are an artificial adjustment to ensure that survey data reflect the population being studied.

All significance testing was conducted at the 95 percent confidence level using an immediate form of a Student’s t-test in Stata 9.0.

Tobacco related deaths

Using Oregon Vital Statistics data, age-adjusted death rates for specific causes by race were calculated for 2000 – 2004 (numerator \geq 20). For Asian and Pacific Islander homicides, a numerator of 19 was used in the calculations. Data for this cause of death may not be reliable despite a large denominator.

Percent of live births to mothers that smoked

Using Oregon Vital Statistics data, proportions of live births in which the mother reported smoking during the prenatal period were calculated. Data are not age-adjusted or weighted. They are actual counts.

Adult smoking and secondhand smoke exposure

Adult estimates were calculated using the 2004-2005 Behavioral Risk Factor Surveillance System (BRFSS) oversample, except when looking at trends including the 2000-2001 BRFSS oversample. “The Behavioral Risk Factor Surveillance System (BRFSS) is the world’s largest, on-going telephone health survey system, tracking health conditions and risk behaviors in the United States yearly since 1984.”^{ix} All data are age-adjusted and weighted.

A current smoker is defined as someone who has smoked at least 100 cigarettes in his or her life and currently smokes.

Only Asian and Pacific Islander adults that own landline phones and speak English were included in this population-based survey.

Youth tobacco use and exposure to secondhand smoke

All estimates are calculated using the 2005-2006 Oregon Healthy Teens (OHT) survey. The Oregon Healthy Teens survey is a comprehensive, school-based, anonymous and voluntary survey. OHT monitors risk behaviors and other factors that influence the health and well-being of Oregon’s children and adolescents. Data are weighted by statewide youth population estimates, but are not age-adjusted because only 8th and 11th graders were surveyed, and the data can only reflect trends for these two groups.

**The incongruent data on secondhand smoke exposure in the home may relate to the differences in survey methodology between Oregon Healthy Teens (OHT) and the Behavioral Risk Factor Surveillance System (BRFSS). OHT encompasses 8th and 11th grade youth only, while BRFSS collects data from all adults, including those without children living in the home and older/younger adults who might not have 8th and 11th graders in the home. Acculturation, the adopting of the behaviors of a new environment, may play an important role in smoking prevalence among Asian and Pacific Islanders. English proficiency is associated with lower rates of smoking.ⁱⁱⁱ BRFSS, offered only in English, would capture a different cross section of the community than OHT, which captures youth where a language other than English may be spoken in the home.

Adults who have lower income or have not finished high school

Estimates were calculated using the 2004-2005 BRFSS race oversample, and were age-adjusted. The same weighting strategy used for adult estimates was applied to this analysis. Adults who have lower income or have not finished high school is defined as respondents living below 100 percent of the federal poverty line and/or possessing less than a high school education. The 100 percent federal poverty line variable was calculated using household size and income. Income on BRFSS is collected using categories rather than actual numbers. At the lower end of income, these categories increase by \$5000 increments. The category that matched the 100 percent federal poverty line for household size in the year the survey was conducted was used for the calculation.

Potential limitations

BRFSS is the main source of population-level data to assess tobacco use and exposure among adults in the state of Oregon. The survey is administered using random-digit-dialing of landline phones.

According to a national study, one in eight Asian and Pacific Islander households, like most of the U.S. population, have wireless only households, meaning no landline is present.^x Assuming the trend is similar in Oregon, the current BRFSS methodology might exclude certain Asian and Pacific Islander adults from the sample.

Nationally, wireless only households have a significantly higher prevalence of smoking (29.6 percent) as compared with landline only households (18.9 percent). Households without telephone service have the highest smoking prevalence (41.5 percent).⁹ These limitations may lead to underreporting of smoking prevalence, as multiple studies have confirmed the correlation between cell phone usage and smoking.^{xi,xii}

Additionally, institutionalized populations (e.g. individuals in hospitals, prisons, nursing homes, mental health facilities, etc.) are not included in BRFSS. These populations may have higher rates of smoking than the general population.

According to the 1998 Surgeon General's report, *Tobacco Use Among Minority Populations*, all Asian and Pacific Islander adults do not share the same risk. Sub-populations, related to county of origin, play an important role in assessing smoking prevalence among Asian and Pacific Islanders. Korean, Filipino and Japanese sub-populations bear the highest burden of tobacco use nationally.ⁱⁱⁱ However, BRFSS does not capture a large enough sample size to analyze the data at this level of detail in Oregon.

ⁱ U.S. Department of Health and Human Services. *Women and Smoking: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2001.

ⁱⁱ "Tobacco Use Among Asian Americans and Native Hawaiians/Pacific Islanders." American Lung Association 19 July 2007 www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=346357H

ⁱⁱⁱ U.S. Department of Health and Human Services. *Tobacco Use Among Racial and Ethnic Minority Groups: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1998.

^{iv} U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.

^v U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.

^{vi} "Exposure to Secondhand Smoke Among Students Aged 13 – 15 years – Worldwide, 2000-2007." *CDC Morbidity and Mortality Weekly Report*. vol. 56 . no. 20, May 25, 2007.

^{vii} Smoking Habits and Prevention Strategies in Low Socio-economic Status Populations. *National Network on Tobacco Prevention and Poverty*. 2004

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- viii National Center for Health Statistics Definitions Web Page. 22 May 2007
H www.cdc.gov.mill1.sjlibrary.org/nchs/datawh/nchsdefs/ageadjustment.htmH.
- ix "Turning Information into Health, Behavioral Risk Factor and Surveillance System." Center for Disease Control. 11 July 2007 H www.cdc.gov/brfss/index.htmH.
- x Blumeberg SJ, Luke JV. "Wireless Substitution: Early release of estimates based on data from the national Health Interview Survey, July – December 2006." National Center for Health Statistics. 14 May 2007 H www.cdc.gov/nchs/nhis.htmH.
- xi Blumeberg et al. "Telephone Coverage and Health Survey Estimates: Evaluating the Need for Concern About Wireless Substitution." *American Journal of Public Health*. vol. 96, no. 5, May 2006.
- xii Nelson et al. A Comparison of National Estimates from the National Health Interview Survey and the Behavioral Risk Factor Surveillance System. *American Journal of Public Health*. vol. 93, no. 8, August 2003.

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