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.

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

**Adult smoking**

Asian and Pacific Islander adults have the lowest smoking prevalence among any ethnic or racial population nationally, as well as in Oregon. 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). 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. Current surveillance systems do not capture large enough sample sizes in Oregon for this type of analysis.
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.

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.

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

Asian and Pacific Islanders are exposed to less secondhand smoke in a typical week than the overall Oregon population. Of those exposed, no Asian or Pacific Islander adult reported exposure of 10 hours or more to secondhand smoke.

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

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.

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.\textsuperscript{vi}

Despite low secondhand smoke exposure in the home among 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.\textsuperscript{*}

\textsuperscript{*Please see the methods section for a more thorough description of the discrepancies.}
Smoking among economically disadvantaged Asians and Pacific Islanders

Economic status is the single greatest predictor of tobacco use in the United States. Americans living below the federal poverty line are 40 percent more likely to smoke than those living at or above the federal poverty line.\textsuperscript{vii}

Fourteen percent of Asian and Pacific Islander adults living in Oregon are economically disadvantaged as compared with 18 percent of the overall population. Economic disadvantage is defined as living below 100 percent of the federal poverty line or not completing high school. Economically disadvantaged Oregon Asian and Pacific Islanders are almost twice as likely to smoke as Oregon Asian and Pacific Islanders who are not economically disadvantaged.

Figure 11. Smoking prevalence among Oregon adults, by economically disadvantaged status, 2004-2005

Like all Oregonians, smoking prevalence is higher among economically disadvantaged Asian and Pacific Islanders (17 percent).

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

Economically disadvantaged Asian Pacific Islander adults under the age of 55 bear the highest burden of smoking. Nonetheless, the overall Oregon trend of decreasing smoking prevalence with increasing age still applies.
Methods

Denominator sizes for the survey data depicted in figures

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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.” 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>=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.” 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 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.** 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.

**Economically disadvantaged**

Estimates were calculated using the 2004-2005 BRFSS race oversample, and were age-adjusted. The same weights used for adult estimates were applied to the economically disadvantaged analysis. Economic disadvantage is ascertained for each respondent based on living below 100 percent of the federal poverty line 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. 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). These limitations may lead to underreporting of smoking prevalence, as multiple studies have confirmed the correlation between cell phone usage and smoking.

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. However, BRFSS does not capture a large enough sample size to analyze the data at this level of detail in Oregon.

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National Center for Health Statistics Definitions Web Page. 22 May 2007  


