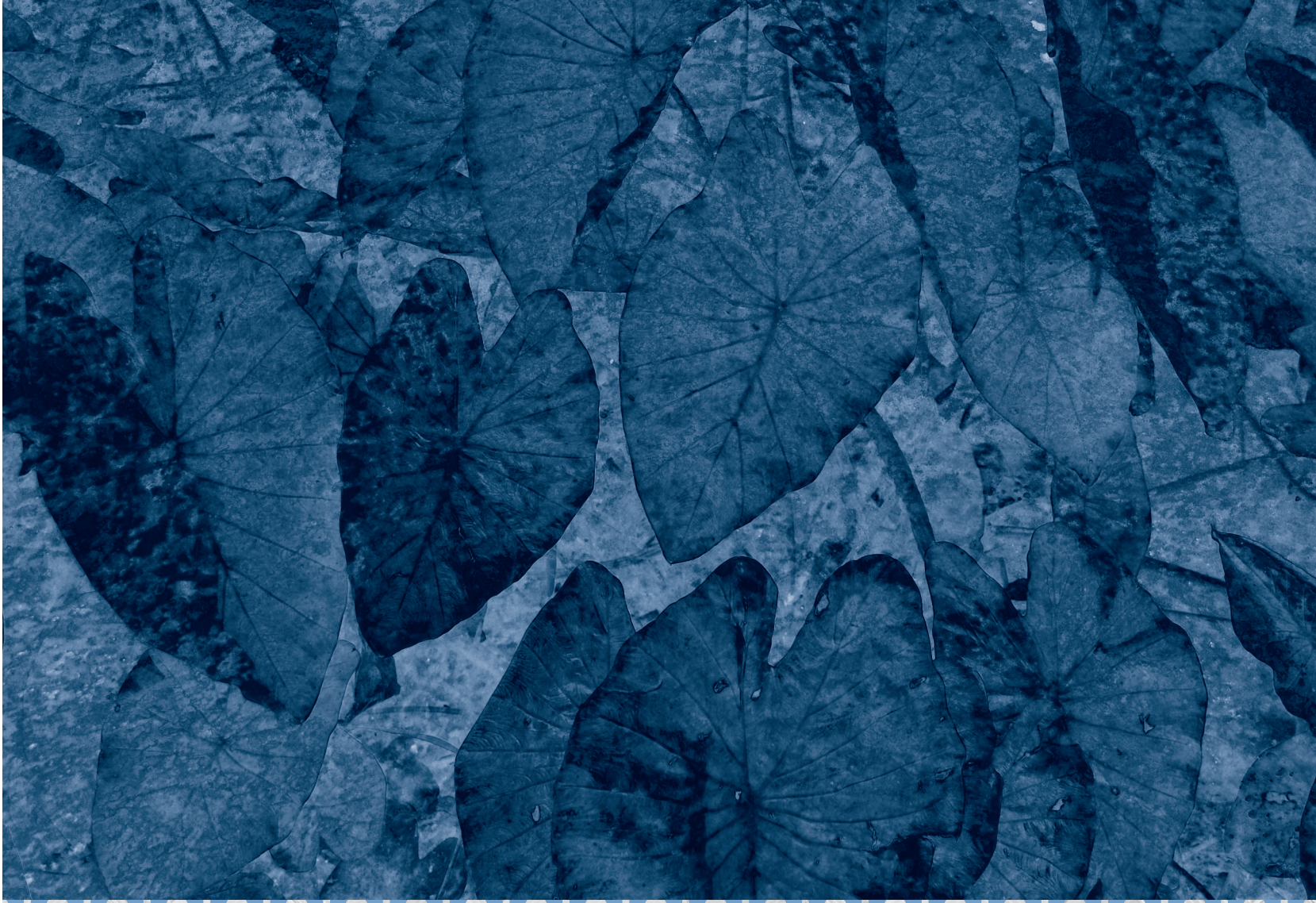


SMOKING AND TOBACCO USE IN HAWAIʻI

Facts, Figures and Trends

JULY 2010

Hawaiʻi State Department of Health
Tobacco Prevention and Education Program
Chronic Disease Management and Control Branch
1250 Punchbowl Street, Room 217 Honolulu, HI 96813

TABLE OF CONTENTS

A Message from the Director of Health

Aloha kakou,

Smoking and tobacco use remain the leading cause of *preventable* morbidity and mortality in Hawaii and the nation. Each day in this country, 4,000 youth smoke their first cigarette, 2,000 will become regular smokers, and one-third of those smokers will die from a tobacco-related illness. In Hawaii, tobacco use results in the death of over 1,000 residents annually and costs $656 million in health care costs and lost productivity and accounts for $117 million of all Medicaid expenditures.

The Hawaii State Department of Health is pleased to present SMOKING AND TOBACCO USE IN HAWAII: Facts, Figures, and Trends, an overview of data compiled from national and state surveillance sources and local surveys into a comprehensive document. This report is a valuable resource to decision makers, programs, agencies, organizations and anyone who may be interested in gaining a better perspective on the issue, identifying and defining objectives and priority populations, and establishing target goals.

It is our hope that this information will help us continue to make meaningful strides to reduce the burden of tobacco in Hawaii.

Kuikahi kakou I ka puuwai

Let us all work together from the heart,

Chiyome Leimaala Fukino, M.D.
Director
Hawaii State Department of Health

Acknowledgements

Thanks to Danette Wong Tomiyasu, Chronic Disease Management and Control Branch Chief, and Julian Lipsher, Lila Johnson, Pedro Haro-Arvizu, Kathy Koga and Anwar Quadri of the Tobacco Prevention and Control Program for reviewing and providing feedback on this report, along with Dan Galanis and Eric Tash of the Injury Prevention Program.

Thanks to Don Hayes, MD and Emily Roberson of the Family Health Services Division, for providing recent data on smoking and pregnancy from the Pregnancy Risk Assessment and Monitoring System (PRAMS). Thanks to Chelsi Urabe, MPH Epidemiology student from the University of Hawaii at Manoa, Department of Public Health Sciences, for assisting with updating some of the recent trends from web-based statistics. And finally, thanks to Earl Bradbury, CDC Prevention Specialist Fellow, who updated the trend and policy graphs.

Suggested Citation:
Pobutsky A., and T. Lowery St. John (2010). *Smoking and Tobacco Use in Hawaii: Facts, Figures and Trends*. Hawaii State Department of Health (DOH), Honolulu, HI.

Executive Summary

This document provides an update on the most recent available data on tobacco use for a comprehensive look at tobacco use in Hawaii. Data was included from a variety of sources including telephone based surveys among adults, school-based surveys, and surveys among pregnant women. Since 1991, the Tobacco Prevention and Education Program at the Hawaii Department of Health has built and sustained a comprehensive program to reduce tobacco use in the state by preventing initiation, promoting quitting, eliminating exposure to secondhand smoke, and addressing disparities related to tobacco use.

Adult Tobacco Use

Fewer than 1 in 7 adults in Hawaii report current smoking in 2008 (15.4%); however, there are notable disparities. In the past 40 years, tobacco use has become concentrated among low income groups and the disadvantaged (Healton and Nelson, 2004; Barbeau, Krieger and Soobader, 2004; Siapush et al. 2006). Reported smoking rates are highest among those who have low annual household incomes (less than $15,000 per year) at 28.9% , among those with low education (less than a high school diploma) at 25.6%, and or those who are unemployed (28%). By Ethnicity, Filipino males have the highest smoking rate in Hawaii (25.3%), followed by Native Hawaiian women (23%), with the lowest rates among Japanese women (8.8%).

Current cigarette smokers are comprised of two groups—those who smoke everyday and those who smoke some days. There has been little change in the proportion who smoke everyday (12–14%) or some days (3–4%) since 2003. Few people in Hawaii (< 4%) use other forms of tobacco, including chewing tobacco, pipes, and cigars. Almost 90% of smokers report planning to quit at some point, with 29% reporting planning to quit within the next 30 days. When people who smoke report trying to quit, some of them report using medications (17%), and a few, counseling (3%).

Youth Tobacco Use

Cigarette smoking among public school youth has declined dramatically since 2000. In 2007, only 10% of high school students and 4% of middle school students smoked cigarettes on at least one day in the past month compared to 25% and 13% in 2000. Less than 40% of high school students have ever tried cigarettes (38.3%), and only about one in ten (9.7%) currently smoke cigarettes. Use of other forms of tobacco is less than 4%. Among those who smoke, 72% of high school and 70% of middle school students prefer to smoke menthol cigarettes. Illegal sales of tobacco to youth have declined steadily since 1996, when the Department of Health began conducting statewide tobacco compliance checks. However, repeat offenses among retailers and youth reports of low compliance suggest additional measures might be needed.

Low Socio-Economic Status

People with low household income and/or education, the unemployed, the unmarried and young people report the highest smoking rates. This pattern is consistent within each ethnic group and by gender. That is, among Native Hawaiians, the highest smoking rates are among low income Native Hawaiians and Native Hawaiians with low educational attainment. Similarly, for Filipinos, the highest smoking rates are among those with lower household income and low educational attainment. This pattern is the same for every

ethnic group. Among men, smoking is highest among those with low household income and those with low educational attainment. A similar pattern holds for women. However, small sample sizes preclude obtaining detailed information on the smoking behavior or readiness to quit smoking at this time among low-socioeconomic groups. A more in-depth examination of smoking and socio-economic status is planned in the near future.

Native Hawaiians

Native Hawaiians consistently have a higher smoking rate of any ethnic group in Hawaii and are the only ethnic group in which women (23%) smoke more than the men (20%). Among Native Hawaiians, those with lower socio-economic status (low income and/or low education) reported more current smoking. Among Native Hawaiians with the lowest household incomes (less than $15,000 per year), 52% report current smoking, along with 33.4% of those with less than a high school education and 27.8% with a high school education. Native Hawaiians also report preference for menthol cigarettes, specifically Kools. Over 90% of Native Hawaiian smokers report planning to quit smoking, with 30% planning to quit in the next 30 days. Most Native Hawaiian smokers (87%) are aware of assistance available to help them quit, but they are less likely than others in the general population to use pharmacotherapy. Slightly less than two-thirds of Native Hawaiian smokers sought medical care in the past year. When Native Hawaiians sought medical care in the past year, they were more likely to report having their smoking status assessed (76.5% vs. 63.3% for all smokers), and this was a statistically significant difference. However, Native Hawaiians were less likely to be advised to quit than the population of smokers as a whole (61.6% vs. 72.7%), but this was not a statistically significant difference.

Filipino Men

Among Filipinos, those with low socio-economic status (low income and/or low education) reported more current smoking than any other ethnic group, except Native Hawaiians. Although Filipino men have one of the highest smoking rates in the state, the surveys did not provide a large enough sample to get detailed information on their smoking behavior or readiness to quit smoking. A more in-depth assessment of Filipino (and other Asian) male smoking patterns is planned in the near future.

Pregnancy

Women who are pregnant or plan to become pregnant, are especially vulnerable to cigarette smoke because of the risk to themselves and the fetus. The frequency of smoking dramatically decreases among women who become pregnant, from 21% before pregnancy to 8% in the 3rd trimester. These decreases are only somewhat sustained after delivery, when the smoking prevalence increases to 13%. Native Hawaiian women and residents of the Hawaii County are more likely to smoke before, during and after pregnancy and at a higher rate than members of other ethnic groups or residents of other counties.

Secondhand Smoke (SHS)

More than 9 in 10 adults and 8 in 10 adult smokers believe SHS is harmful. Most people know that SHS is a cause of respiratory problems in children, lung cancer and heart disease, but fewer realize that it may

also put children at risk for sudden infant death syndrome (SIDS). From 2001 to 2006, the proportion of households reporting at least one adult smoker has decreased slightly (from 32% to 29%) and the proportion of people living in homes where smoking is not allowed increased (from 76% to 86%). The percentage of adults who do not allow smoking in their family cars has also increased to from 78% to 88%.

Laws and Policies

Since 1997, the Hawaii State cigarette excise tax has increased from $0.60 per pack to $2.00 (effective July 1, 2006). The average cost per pack has increased from $2.60 in 1997 to almost $7.00 by 2009. This should generate over $105 million in tax revenue for fiscal year 2008-2009 (National Council on State Legislatures, 2009). In 2009, the Hawaii Legislature enacted an increase of 20 cents per pack to the cigarette excise tax, $2.20 as of October 1, 2009, and an increase in the tax on other tobacco products from 40% to 85% in 2009, 95% in 2010 and 105% in 2011.

On November 16, 2006, Hawaii became the 14th state to enact comprehensive protection against secondhand smoke for all its citizens. The law prohibits smoking in enclosed and partially enclosed public spaces (such as restaurants, bars, clubs, airports and theaters). Smoking is not allowed in places of employment or within 20 feet of doorways to public buildings.

As of December 1, 2006, all retailers in Hawaii that sell tobacco products are required to have a tobacco retail permit from the Department of Taxation. This will allow better monitoring of tobacco sales.

Section 1: Adult Tobacco Use

Adults (residents 18 years and older) consume the majority of tobacco in Hawaii. Understanding who reports using tobacco and how they are using it is important for identifying health disparities and reducing consumption.

Data on adult tobacco use are collected primarily through two telephone surveys. The Behavioral Risk Factor Surveillance System (BRFSS) is an annual telephone survey of civilian, non-institutionalized adults (>18 years) in the United States which has been conducted in all the states and territories since 1988. The BRFSS assesses risk factors for diseases and conditions related to the ten leading causes of death in the U.S. population. The Adult Tobacco Survey (ATS) was conducted in 2001 and 2006. While conducted less often than the BRFSS, the ATS provides a more in-depth look specifically at tobacco use knowledge, attitudes and behaviors that can be useful in program evaluation. Centers for Disease Control and Prevention (CDC) Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC) database provides information on tobacco-related deaths. More information on the data sources can be found in the Appendix.

The Health Impact of Tobacco: Mortality and Morbidity

Cigarette smoking is a major cause of cancer, cardiovascular and respiratory disease mortality. In Hawaii, roughly 237 of every 100,000 deaths are estimated to be attributable to smoking, while nationally 248 deaths per 100,000 are estimated to be attributable to smoking (CDC-SAMMEC, 2009). This is more pronounced among men (380 deaths per 100,000) than women (133 deaths per 100,000) in both Hawaii and the U.S. Compared to the U.S., Hawaii has higher smoking attributable mortality among men and lower among women (the U.S. had a smoking attributable mortality of 355 per 100,000 deaths among men and 171 per 100,000 among women in the U.S.). Table 1 shows another indicator of tobacco mortality, the average annual deaths estimated to be attributable to tobacco.

Table 1. Annual Average Deaths from Tobacco Related Diseases, CDC-SAMMEC, 2000–2004

	Hawaii			United States		
Cause of Death	Men	Women	Total	Men	Women	Total
Trachea, lung, and bronchus cancer	253	119	372	78,680	46,842	125,522
Other cancers	96	27	123	25,792	9,534	35,327
Cardiovascular diseases	308	134	442	79,139	49,358	128,494
Respiratory diseases	308	134	226	53,795	49,358	103,338
Total	**803**	**360**	**1,163**	**237,406**	**155,277**	**392,681**

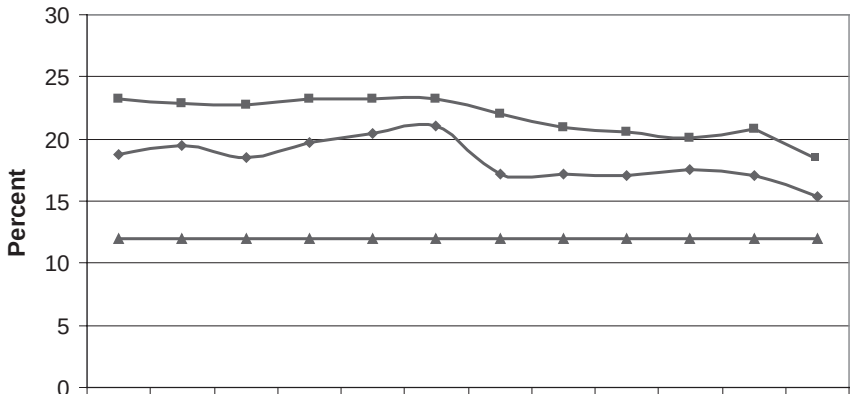
However, death is only part of the toll of tobacco, for each person who dies from a smoking-related disease, it is estimated that 20 more are living with smoking-attributable illnesses such as asthma and, or chronic obstructive pulmonary disease or cardiovascular diseases (CDC, 2000; 2009). Annual medical and lost productivity costs for smoking in Hawaii are estimated at over $550 million.

Adult Smoking Prevalence

The next section will examine smoking prevalence from 1997 to 2008 among Hawaii residents aged 18 years and older.

Data from the BRFSS show that adult smoking prevalence in Hawaii is lower than the national average; however, it is still well above the *Healthy People 2010* goal of 12%. After a slight increase in smoking prevalence from 1999 to 2002, reported current smoking dropped to about 17% in 2003 and has remained close to this level (Figure 1). In 2008, current smoking dropped to 15.4%, yet this is not significantly different from the 2007 estimate. Nationally, Hawaii ranked 6th among states for the lowest smoking prevalence in 2006 and 2007, and now stands at the 8th lowest in 2008 (See America's Health Rankings, 2009).

Figure 1. Adult Smoking Prevalence, Hawaii and the U.S., BRFSS 1997–2008

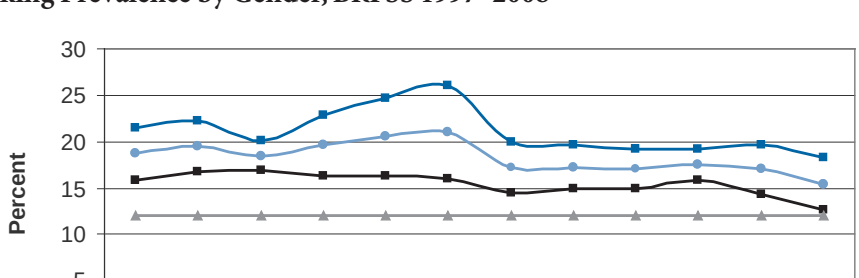


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Hawaii	18.7	19.5	18.5	19.7	20.5	21	17.2	17.2	17	17.5	17	15.4
United States	23.2	22.9	22.8	23.2	23.2	23.2	22	20.9	20.6	20.1	20.8	18.4
HP2010 Goal	12	12	12	12	12	12	12	12	12	12	12	12

Adult Smoking Prevalence by Gender

Overall, men in Hawaii are consistently more likely to smoke cigarettes than women (Figure 2). Tobacco use among men increased steadily from 20.1% in 1999 to 26.1% in 2002. After a sharp decrease in 2003, the male smoking prevalence has leveled out at about 1 in 5 men smoking everyday or some days. Meanwhile, smoking among women hovered around 16% from 1997 to 2002, decreased in 2003 only to increase back to 15.9% in 2006, but is now down to 12.7%.

Figure 2. Adult Smoking Prevalence by Gender, BRFSS 1997–2008

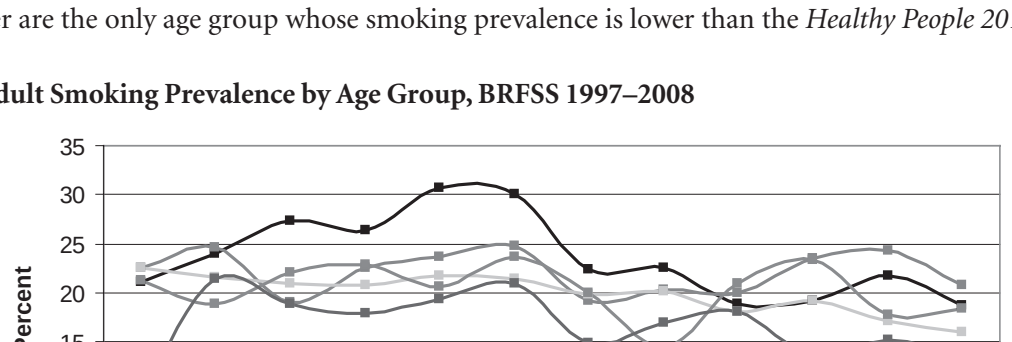


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Hawaii	18.7	19.5	18.5	19.7	20.5	21	17.2	17.2	17	17.5	17	15.4
Males	21.5	22.2	20.1	22.9	24.7	26.1	20	19.6	19.2	19.2	19.7	18.2
Females	15.8	16.7	16.9	16.3	16.3	16	14.5	14.9	14.9	15.9	14.3	12.7
HP2010 Goal	12	12	12	12	12	12	12	12	12	12	12	12

Adult Smoking Prevalence by Age Group

Considerable variation is revealed when smoking is examined by age group (Figure 3). The smoking prevalence for most age groups held relatively steady over the past 10 years with the exceptions of youngest adults (ages 18–24) and those between ages 45 and 54 years old. From 1997–2002, smoking among 18 to 24 year olds increased dramatically from 21.1% to 30.0% then dropped to 18.7% by 2008. Smoking among 45–54 year olds decreased to 14.4% in 2004 but increased back to 18.3% by 2008. In 2008, people between the ages of 18 and 54 years old were over three times more likely to smoke than those aged 65 and older. Adults aged 65 and older are the only age group whose smoking prevalence is lower than the *Healthy People 2010* goal.

Figure 3. Adult Smoking Prevalence by Age Group, BRFSS 1997–2008

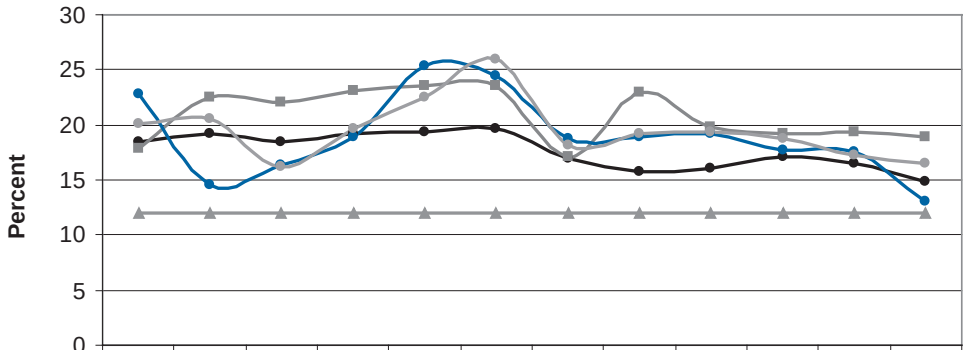


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
18-24	21.1	24	27.4	26.3	30.7	30	22.3	22.5	18.9	19.1	21.7	18.7
25-34	22.6	24.6	19	22.6	23.7	24.8	19.2	20.3	19.9	23.5	24.3	20.8
35-44	22.6	21.5	21	20.8	21.8	21.4	19.8	20.1	18.1	19.2	17.1	16
45-54	21.2	18.8	22	22.8	20.6	23.7	20	14.4	21	23.4	17.7	18.3
55-64	9.7	21.4	18.8	17.9	19.4	21	14.9	16.9	18.1	13.5	15.2	13.4
65+ yrs	10.3	7.1	5.4	8.7	9.7	7.3	8.2	9.3	7.2	6.7	8.3	6.5
HP2010	12	12	12	12	12	12	12	12	12	12	12	12

Adult Smoking Prevalence by County

Kauai and Maui Counties experienced an increase in smoking prevalence between 1999 and 2002, but have since declined to levels more similar to Honolulu County (Figure 4). Smoking prevalence in Hawaii County has been consistently higher than Honolulu County since 1998 and frequently higher than Kauai and Maui; however, in recent years, prevalence has decreased to approximate the levels of the other counties. From 2004 to 2006, smoking prevalence in Honolulu County had increased from 15.8% to 17.1%, although is currently down to 14.8% in 2008.

Figure 4. Adult Smoking Prevalence by County, BRFSS 1997–2008



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Honolulu	18.4	19.2	18.4	19.2	19.4	19.7	17	15.8	16.1	17.1	16.5	14.8
Hawaii	17.8	22.5	22	23.1	23.6	23.5	17.1	23	19.8	19.2	19.4	18.9
Kauai	22.8	14.6	16.4	18.9	25.3	24.4	18.7	18.9	19.2	17.7	17.5	13.1
Maui	20.1	20.5	16.2	19.7	22.5	25.9	18.2	19.2	19.3	18.7	17.2	16.5
HP2010	12	12	12	12	12	12	12	12	12	12	12	12

The BRFSS also allows us to examine smoking rates more closely on the community level. Geographic Information Systems (GIS) was used to identify areas with higher smoking rates using the 2008 BRFSS. Please note the total 2008 BRFSS sample size was 6,423. Some communities have small sample sizes. Different colors do not indicate statistical significance.

Kauai County

In 2008, the adult smoking prevalence for Kauai County was 13.1%. By community, smoking prevalence was 13% in both Hanalei/Kapa'a and Lihue-Waimea.

Honolulu County

The adult smoking prevalence for Honolulu County was 14.8%. By community, smoking prevalence varied greatly ranging from 5.3% in Kailua/Waimanalo to 29.6% in Nanakuli/Waianae

Maui County

In Maui County the overall adult smoking prevalence for 2008 was 16.5%. By community, smoking prevalence ranged from a low of 17.1% in Lahaina/Wailuku to a high of 19.9% on the island of Molokai.

Hawaii County

On the Big Island, the 2008 adult smoking prevalence was 18.9%. By community, prevalence ranged from a low of 17.5% in North Hawaii to 20.3% in the Puna/Ka'u region.

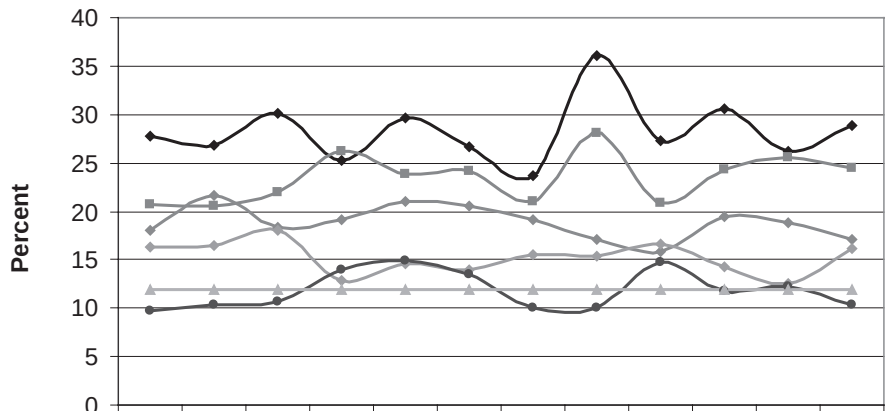
*For more information on the community groupings, please see the Hawaii Department of Health website *http://www.hawaii.gov/health/statistics/brfss/others/subarea.html*

Section 2: Health Disparities in Adult Tobacco Use

Adult Smoking Prevalence by Income

The pattern of high smoking rates among those with the lowest annual household incomes (less than $25,000 per year) has persisted for more than 10 years (Figure 6). This follows the national pattern, whereby people of low income and low socio-economic status are more likely to smoke.

Figure 5. Adult Smoking Prevalence by Income, BRFSS 1997–2008

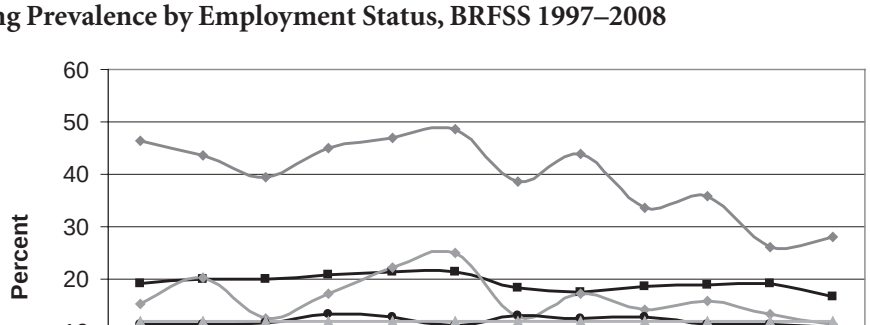


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
less than $15,000	27.8	26.9	30.1	25.2	29.6	26.6	23.7	36.1	27.3	30.6	26.2	28.9
$15,000-24,999	20.7	20.6	22	26.2	23.9	24.2	21	28.1	20.9	24.3	25.6	24.5
$25,000-49,000	18	21.7	18.3	19.1	21	20.5	19.2	17.1	15.8	19.5	18.9	17.1
$50,000-74,999	16.3	16.4	18	12.9	14.6	13.9	15.5	15.3	16.7	14.3	12.6	16.1
more than $75,000	9.8	10.4	10.7	14	14.9	13.5	10.1	10.1	14.7	11.7	12.2	10.4
HP2010	12	12	12	12	12	12	12	12	12	12	12	12

Adult Smoking Prevalence by Employment Status

Smoking prevalence also varies considerably by employment status (Figure 8). Over the past 10 years, the unemployed have consistently had the highest smoking prevalence with annual estimates ranging from 46.3% in 1997 to 48.6% in 2002. While there is a consistent downward trend in rates to a low of 26% in 2007 and 28% in 2008, smoking among the unemployed is consistently the highest smoking prevalence rate statewide. By contrast, smoking is consistently the least prevalent among those who are retired or cannot work. Retirees are three to four times less likely to smoke than adults who are unemployed.

Figure 6. Adult Smoking Prevalence by Employment Status, BRFSS 1997–2008

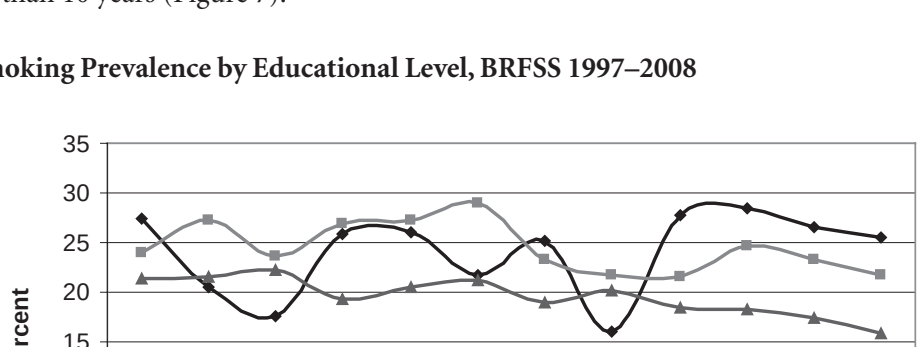


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Employed	19.1	20.1	20	20.7	21.3	21.5	18.2	17.6	18.5	18.9	19.1	16.8
Unemployed	46.3	43.7	39.4	44.9	47	48.6	38.7	43.9	33.7	35.9	26	28
Student/ Homemaker	15.4	20.2	12.4	17.2	22.3	25.1	12.8	17.3	14.1	15.9	13.4	11.4
Retired/ Can't work	11.5	11.4	11.6	13.2	12.9	11.1	13.1	12.6	12.7	11.3	11.4	10.7
HP2010	12	12	12	12	12	12	12	12	12	12	12	12

Adult Smoking Prevalence by Education

The pattern of high smoking rates among those with the lowest educational levels (high school or less) has persisted for more than 10 years (Figure 7).

Figure 7. Adult Smoking Prevalence by Educational Level, BRFSS 1997–2008

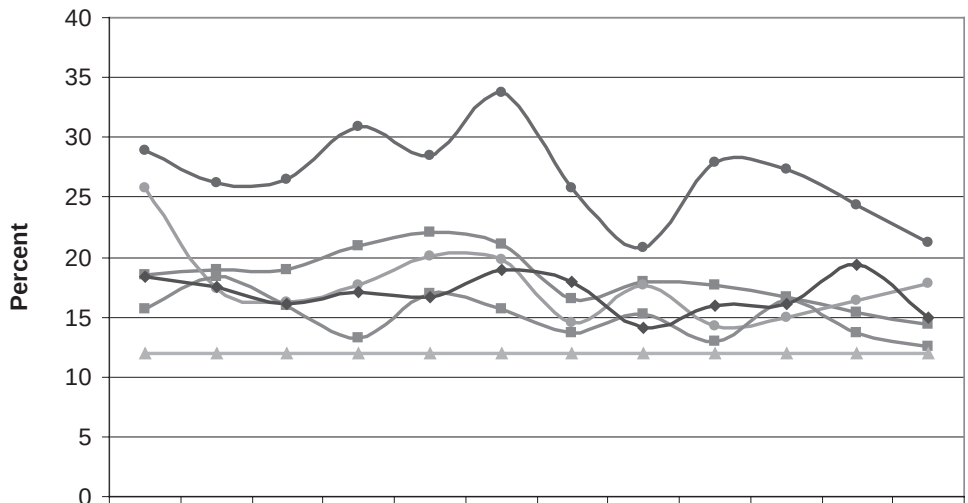


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Less than HS	27.4	20.5	17.6	25.8	26.1	21.8	25.1	16	27.7	28.4	26.6	25.6
HS Grad	24	27.2	23.7	26.9	27.2	28.9	23.2	21.8	21.5	24.7	23.2	21.7
Some College	21.4	21.5	22.2	19.3	20.6	21.2	18.9	20.2	18.4	18.2	17.4	15.9
College	8.2	9.2	10.3	10.8	11.8	11.6	9.4	9.8	10.5	9.2	9.1	8.8
HP2010	12	12	12	12	12	12	12	12	12	12	12	12

Adult Smoking Prevalence by Ethnicity

Native Hawaiians and part-Hawaiians are more likely to smoke than any other ethnic group in Hawaii. This has held true for the past 10 years (Figure 8). In 2008, the ethnic groups with the highest smoking prevalence were Native Hawaiians (21.2%), and the "Others" ethnic group (15.0%). Among the general adult population about one in seven adults smoke cigarettes, yet among Native Hawaiians over one in five smoke cigarettes. This can be partly attributed to the fact that unlike some other ethnic groups, Native Hawaiian women are as likely to smoke as their male counterparts. Since 2005, reported smoking prevalence has been declining among Hawaiians and Whites, but increasing among Filipinos and "Others".

Figure 8. Adult Smoking Prevalence by Ethnicity, BRFSS 1997–2008



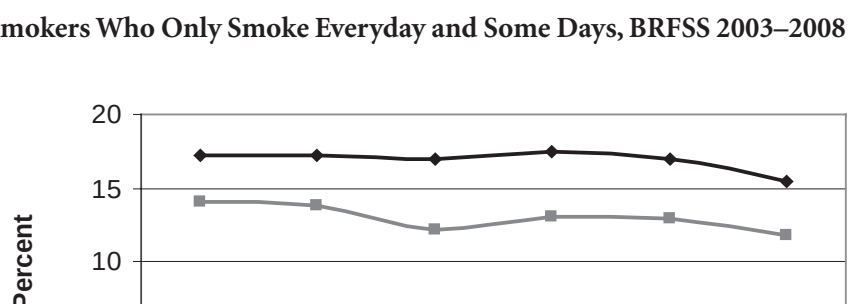
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Hawaiian	28.9	26.2	26.5	30.9	28.4	33.8	25.8	20.8	27.9	27.4	24.3	21.2
White	18.5	19	18.9	20.9	22	21	16.5	18	17.7	16.7	15.4	14.4
Filipino	25.8	17.3	16.2	17.6	20.1	19.8	14.5	17.6	14.2	15	16.4	17.8
Japanese	15.6	18.4	16	13.2	16.9	15.6	13.6	15.2	12.9	16.3	13.6	12.5
Others	18.3	17.5	16.1	17.1	16.6	19	18	14.1	16	16.1	19.4	15
HP2010	12	12	12	12	12	12	12	12	12	12	12	12

Section 3. Cigarette Consumption Patterns

In many states, it is possible to estimate the per capita cigarette consumption by dividing cigarette taxes collected by the adult population of the state. However in Hawaii, given the large numbers of tourists and the high proportion of those who are smokers, along with the number of residents who are smokers and have access to military exchanges and commissaries (which are not subject to state taxes), it is not possible to estimate per capita cigarette consumption. Instead, two proxy measures of consumption can be used. The first is the proportion of all current smokers who do not smoke cigarettes everyday (BRFSS), and the second is the reported average daily cigarette consumption among smokers (ATS).

From 2001 to 2008 the percentage of the adults who smoked cigarettes (current smokers) decreased from 21.0% to 15.4%. Current cigarette smokers are comprised of two groups: those who smoke everyday and those who smoke some days. The proportion of those who report smoking everyday has decreased slightly since 2003 (from 14% to 11.8%) while those who report only smoking on some days has increased slightly from 3.2% to 3.7% (Figure 9). These are not statistically significant differences.

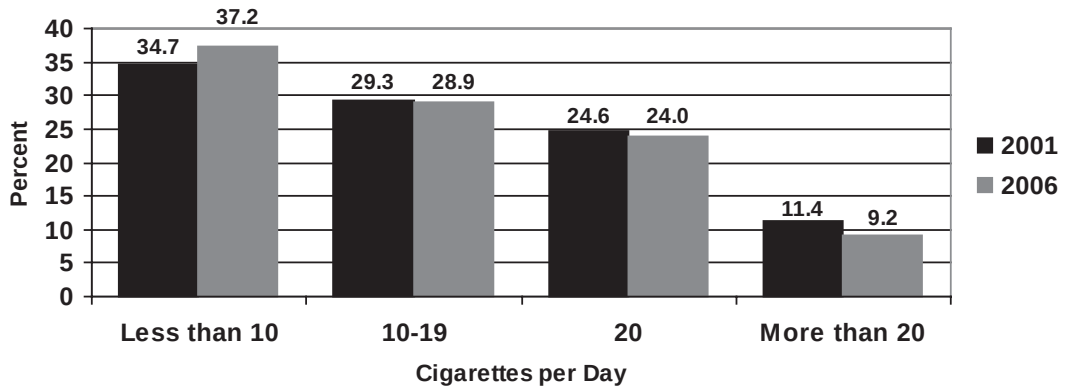
Figure 9. Proportion of Smokers Who Only Smoke Everyday and Some Days, BRFSS 2003–2008



	2003	2004	2005	2006	2007	2008
Total current smokers	17.2	17.2	17	17.5	17	15.4
Everyday smokers	14	13.8	12.1	13	12.9	11.8
Some days smokers	3.2	3.4	4.9	4.6	4.1	3.7

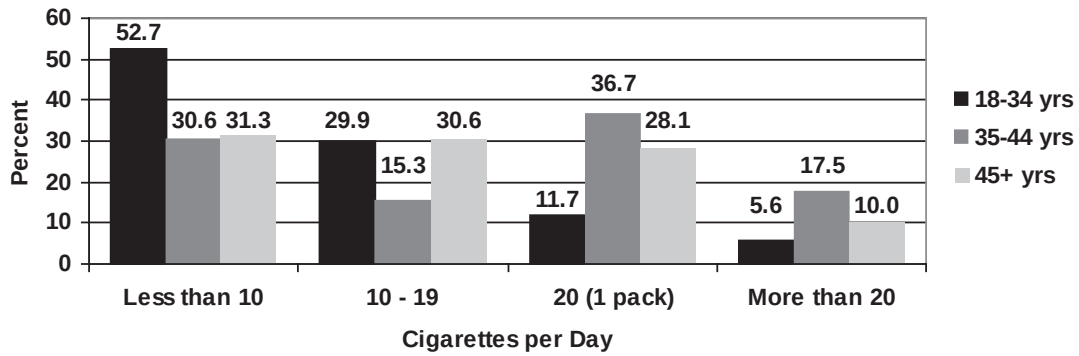
The Hawaii Adult Tobacco Survey provides more detail on consumption by providing the data necessary to calculate the average number of cigarettes smoked each day by smokers (both every day and some day smokers). In 2001, 64% of smokers reported smoking less than a pack of cigarettes per day, 24.6% smoking a pack and 11.4% smoking more than a pack per day (Figure 10). By 2006, the proportion who reported smoking less than a pack a day increased slightly to 66.1% and the proportion who reported smoking over a pack a day dropped slightly to 9.2%. However, despite these shifts, the average number of cigarettes smoked per day increased slightly from 13.5 in 2001 to 15.5 cigarettes per day in 2006.

Figure 10. Average Daily Cigarette Consumption by Adults, ATS 2001 and 2006



When cigarette consumption is examined by age, it is evident that younger adult smokers are more likely to report smoking fewer cigarettes each day than older smokers (Figure 11). Over 80% of smokers aged 18–34 years reported smoking less than a pack of cigarettes each day. Meanwhile, 54% of smokers aged 35–44 years and 38% of those aged 45 and older reported smoking at least one pack of cigarettes per day.

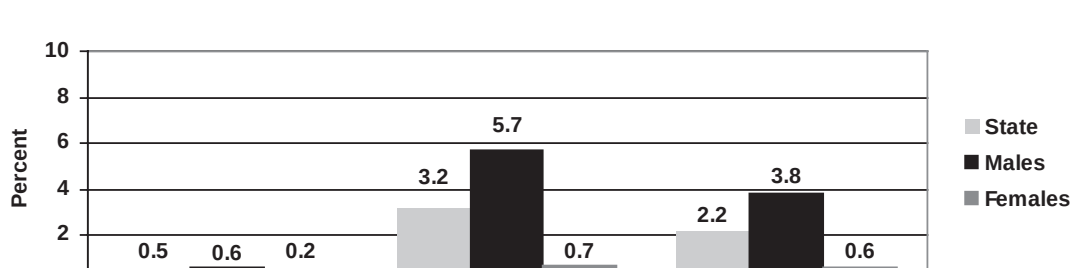
Figure 11. Average Daily Cigarette Consumption by Age Group, ATS 2006



Other Tobacco Use

Few people in Hawaii report using other forms of tobacco than cigarettes (e.g. smokeless tobacco, chewing tobacco, snuff, pipes, or cigars) and reported use decreased from 2001 to 2006. In 2006, 3.2% of adults reported smoking cigars everyday or on some days, 2.2% used smokeless tobacco, and 0.5% smoked tobacco in pipes (Figure 13). Men were more likely than women to smoke cigars (5.7% of men compared to 0.7% of women) and use smokeless tobacco (3.8% and 0.6%, respectively). Additionally, cigarette smokers are more likely to report using other forms of tobacco than non-smokers: 1.7% of cigarette smokers also smoked pipes, 7.0% used chewing tobacco or snuff and 8.5% smoked cigars.

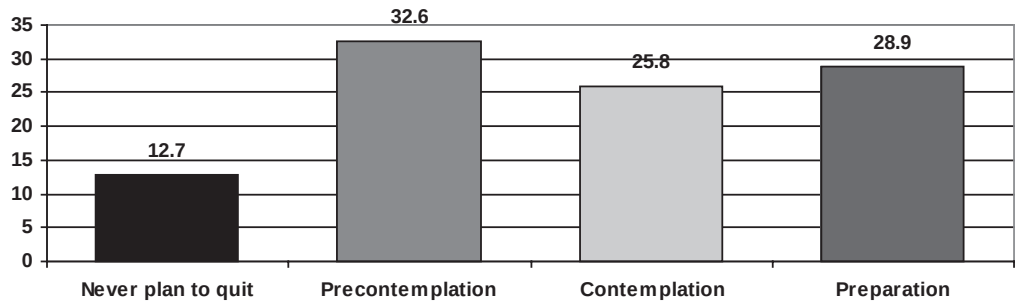
Figure 12. Adult Prevalence of Pipe, Cigar, and Smokeless Tobacco Use by Gender, ATS 2006



Section 4. Smoking Cessation and the Stages of Change Model

While some smokers seem to quit 'cold turkey' on their own, the mental preparation for quitting smoking has been framed as a series of steps which have been described as the Transtheoretical (Stages of Change) Model (Prochaska, DiClemente and Norcross, 1992). Most smokers report planning to quit smoking at some point—just 1 in 10 smokers say they never plan to quit. Approximately one-third (32.6%) plan to quit at some point, but not during the next six months, the 'pre-contemplation' stage (Figure 14). A quarter of smokers (25.8%) plan to quit smoking sometime between one and six months from now (the 'contemplation stage'), and almost 3 in 10 smokers (28.9%) are planning to quit smoking within the next 30 days (the 'preparation stage'). Most smokers are optimistic about their chances of success when they decide to give up smoking altogether, as 70.6% believe that are very or somewhat likely to succeed.

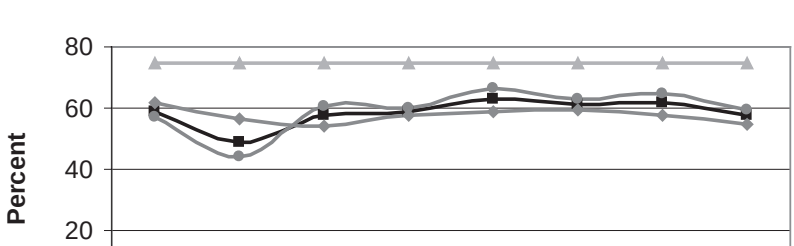
Figure 13. Stage of Change for Quitting Among Current Smokers, ATS 2006



Quit Attempts

Even after a smoker has decided to quit, it often takes several tries before they quit for good and current research suggests an average of about 8 attempts. One of the *Healthy People 2010* objectives for smoking cessation is for 75% of smokers each year to give up smoking for one day or longer in an attempt to quit smoking. In Hawaii, quit attempts among smokers ranged from 49.0% in 2002 to 63.2% in 2005 but decreased to 57.5% in 2008. (Figure 14). These are not statistically significant differences.

Figure 14. Quit Attempts among Smokers in the Past Year, BRFSS 2001–2008

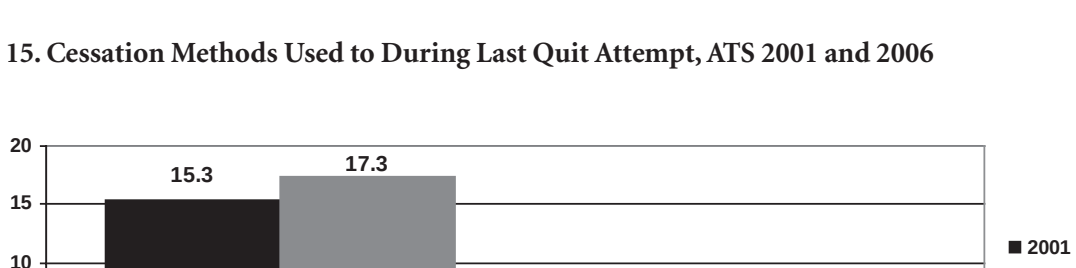


	2001	2002	2003	2004	2005	2006	2007	2008
Hawaii	58.8	49	57.8	59	63.2	61.2	61.8	57.5
Males	57	44.3	60.6	60.2	66.6	62.7	64.8	59.6
Females	61.5	56.7	54	57.5	59	59.5	57.8	54.6
HP2010 Goal	75	75	75	75	75	75	75	75

Cessation Methods Used

Current smokers who reported trying to quit within the last year and former smokers who quit smoking within the past five years were asked about the cessation methods they used during their last quit attempt. In 2006, 17.3% of former smokers used medication (nicotine patch, or gum or other medication) when they quit and 3.2% used classes or counseling (Figure 15). While there appears to be a modest increase in medication use from 2001 to 2006, use of classes and counseling remains the same.

Figure 15. Cessation Methods Used to During Last Quit Attempt, ATS 2001 and 2006



Summary of Adult Tobacco Use

Less than 1 in 7 adults in Hawaii smoke cigarettes in 2008; however, there are notable and persistent disparities in cigarette smoking. Among those who are unemployed, low income (less than $15,000 per year), or have less than a high school diploma, more than 25% of adults smoke. Filipino males have the highest smoking rate in Hawaii (25.3%), followed by Native Hawaiian women (23%), with the lowest rates among Japanese women (8.8%).

The overall prevalence of cigarette smoking has been decreasing over the past few years, as has the proportion of smokers who smoke every day. Few people in Hawaii (< 4%) use other forms of tobacco, including chewing tobacco, pipes, and cigars. Almost 90% of cigarette smokers plan to quit smoking. Of those, 29% plan to quit within the next 30 days. Approximately 60% of smokers have tried to quit smoking at least once each year. Few current and former smokers used supportive therapies such as medication (17%) or counseling (3%) during their last quit attempt.

Section 5. Youth Tobacco Use

Data on youth tobacco use is collected through two public school-based self-administered surveys: the Hawaii Youth Tobacco Survey (YTS) and the Hawaii Youth Risk Behavior Survey (YRBS). Both surveys are conducted every two years, in odd numbered years. The YTS collects in-depth information on tobacco use, secondhand smoke exposure and knowledge, attitudes, beliefs and behaviors about tobacco. The YRBS collects basic information on a variety of behaviors including cigarette use and demographics.

Youth Cigarette Smoking

Reported cigarette smoking among youth decreased dramatically from 2000 to 2007. In 2000, almost two-thirds (63.3%) of high school students reported they had tried smoking, yet by 2007, fewer than half (38.3%) had ever tried a cigarette, even one or two puffs (Figure 16). Similarly, while almost one-quarter of high school students were current smokers in 2000, by 2007 only about one-tenth had smoked a cigarette in the past 30 days. These trends were mirrored among middle school students where the percentage who ever tried smoking decreased from 38.4% in 2000 to 14.7% in 2007 and the percentage who currently smoked decreased from 12.9% in 2000 to 4.2% in 2007 (Figure 17).

Figure 16. Percent of Middle and High School Students who have Ever Tried Smoking, YTS 2000, 2003, 2005 & 2007

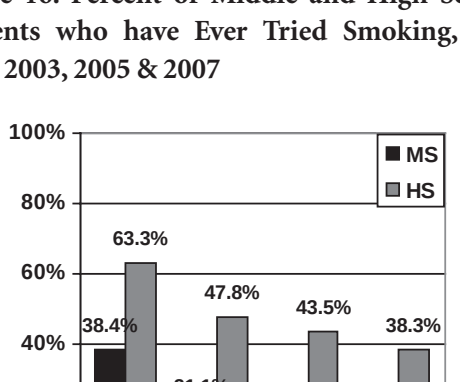
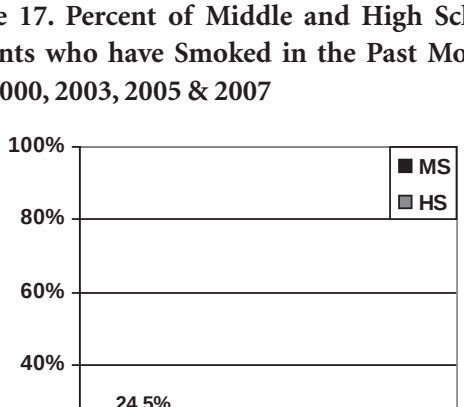


Figure 17. Percent of Middle and High School Students who have Smoked in the Past Month, YTS 2000, 2003, 2005 & 2007

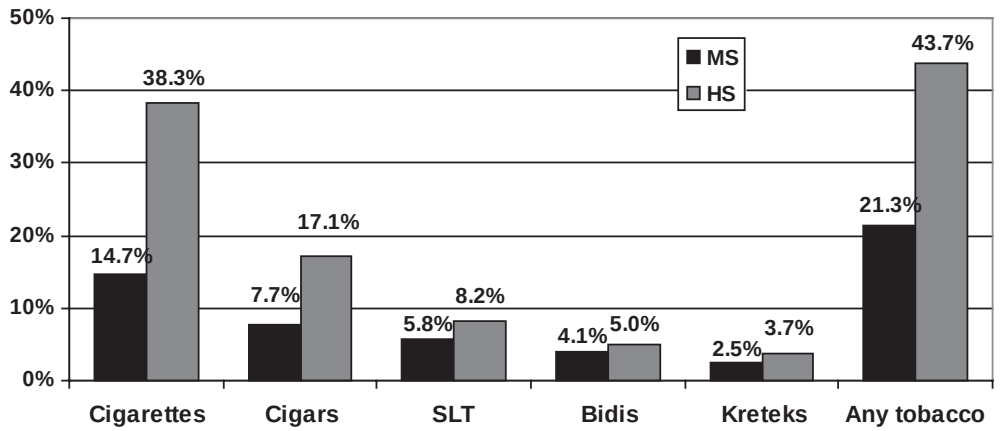


Other Youth Tobacco Use

While cigarettes remain the most widely used form of tobacco among Hawaii youth, 8% of middle school and 17% high school students have reported trying smoking cigars, and about 6% or 8% respectively have tried smokeless tobacco (SLT) such as chewing tobacco, snuff or dip (Figure 18). Few students have tried bidis (hand-rolled, flavored cigarettes from India) or *kreteks* (clove cigarettes), which are illegal in the City and County of Honolulu. All told, almost half of all high school students and 21% of middle school students have tried at least one form of tobacco. While many students have experimented with other forms of tobacco, current use other tobacco is very low. Among high school students, 5.7% currently smoke cigars

and less than 4% smoke pipes or bidis or use smokeless tobacco. Among middle school students less than 3% use any of the above forms of tobacco.

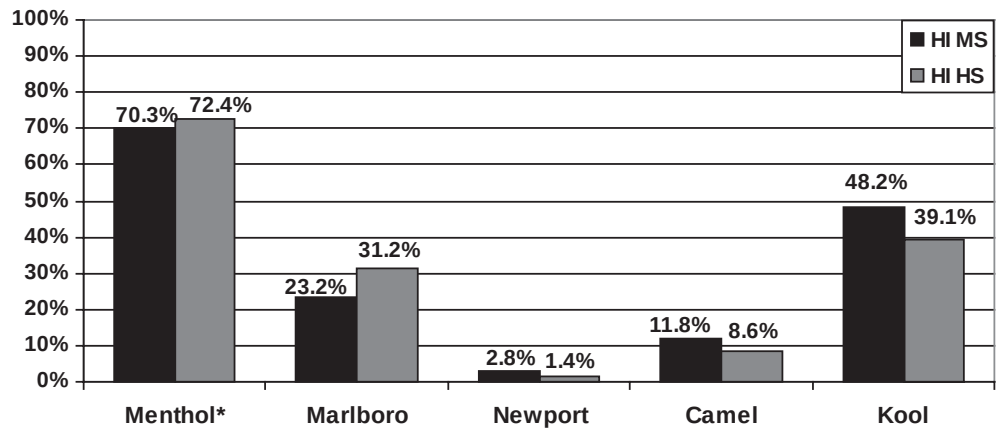
Figure 18. Ever Used Tobacco Products by Middle and High School Students, YTS 2007



Cigarette Preferences

Hawaii youth smokers reported a strong preference for menthol cigarettes. Over seven in ten Hawaii youth who smoke cigarettes report that they usually smoke menthol cigarettes. Nationally, 81% of high school smokers smoke Marlboro, Newport or Camel cigarettes, the three most heavily advertised brands compared to only 28.1% of high school smokers in Hawaii. Kool cigarettes are the preferred brand in Hawaii with 66% of middle school and 63% high school smokers stating that they usually smoke Kool cigarettes. Figure 19 displays the types of cigarettes youth report they usually smoke.

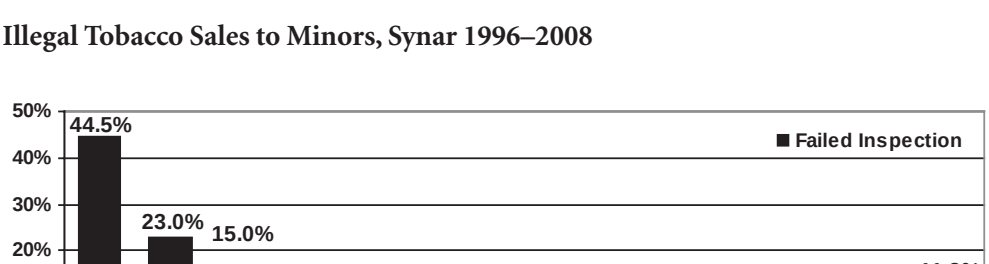
Figure 19. Proportion Reporting Usually Smoking Menthol and Cigarette Brand Preferences among Middle and School Smokers in Hawaii, YTS 2007



Illegal Tobacco Sales to Youth

In Hawaii, it is illegal to sell tobacco to youth under age 18. To help reduce tobacco sales to minors, the State Department of Health (DOH) instituted a program of merchant education and undercover police compliance checks in 1996 as prescribed by the Synar Amendment. The Synar Amendment (Public Health Service Act 42 U.S.C. 300x-26) requires states to have laws in place prohibiting the sale and distribution of tobacco products to persons under 18 and to enforce those laws effectively. Implementation of the Synar Amendment nationally is overseen by the Center for Substance Abuse Prevention within the Substance Abuse and Mental Health Services Administration of the Department of Health and Human Services. In Hawaii, the Department of Health's Alcohol and Drug Abuse Division contracts with the Cancer Research Center of Hawaii to conduct compliance checks. Each year, a series of compliance checks is conducted in accordance with a nationally standardized methodology to assess the rate of illegal sales to minors. Since 1996, the rate of illegal sales in Hawaii has fallen from 44.5% to under 6% from 2005–2007, but jumped to 11.2% in 2008. Although this increase appears to be appreciable, given the small number of stores surveyed (n=200), the actual increase in stores surveyed illegally selling tobacco to a minor increased from 12 to 22 outlets in 2008.

Figure 20. Illegal Tobacco Sales to Minors, Synar 1996–2008



While the steady decrease in failed compliance inspections is encouraging, two troubling aspects remain. On-going surveys of youth reveal that only 37.8% of high school smokers report being asked to show ID when buying cigarettes in the past month and only 30.8% report being refused sale in the past month (2005 YTS). Additionally, a recent DOH study of police citations from 2001–2006 issued for sale of tobacco to minors showed that 36% of the retail outlets involved accounted for 58% of the citations issued (Lowery St. John, Hirokawa and Roy, 2007).

Summary of Youth Tobacco Use

Cigarette smoking among youth (aged less than 18 years) has declined dramatically. Less than half of public high school students have ever tried cigarettes and only about one-eighth currently smoke cigarettes. Less than 10% of high school students and less than 5% of middle school students have smoked cigarettes on at least one day in the past month. Use of other forms of tobacco is very low, less than 4%. Most of Hawaii's middle and high school students who smoke prefer to smoke menthol cigarettes (70% and 72%, respectively) and their brand of preference is Kool cigarettes. Illegal sales of tobacco to youth have declined steadily since 1996, when the Department of Health began conducting statewide tobacco compliance checks, but repeat offenses among retailers and youth reports of low compliance suggest additional protections may be needed.

Section 6. Data on Specific Populations

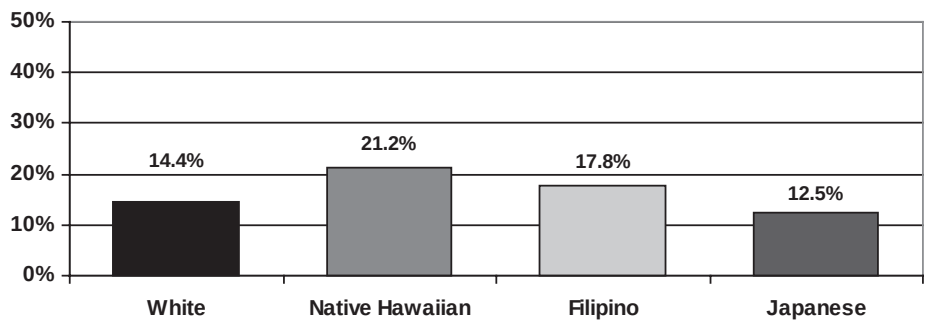
This section will examine three specific population groups for which data are available: Native Hawaiians, smoking among women during pregnancy and LGBTQ (lesbian, gay, bi-sexual, transgender or questioning).

In Hawaii, people with lower incomes and, or lower education are much more likely to report current smoking than people with higher incomes or education, and this pattern holds within each ethnic group. That is, among Filipinos those with the lowest household incomes (less than $15,000 per year), are also the most likely to report smoking (41.6%), as are Filipinos with less than high school educational attainment (27.7%). This pattern is repeated for all ethnic groups. Reported smoking in the state is highest among people who report being unemployed. Filipino men and Native Hawaiian women also have higher smoking rates. Recent research indicates that Native Hawaiian cigarette smokers are more susceptible to lung cancer than Caucasians or Japanese (Haiman, Stram, Wilkins et al, 2006). Although Filipino men and those with low socio-economic status have some of the highest smoking rates in the state, sample sizes are too low to get detailed information on their smoking patterns or readiness to quit smoking at this time. Reports examining Filipino and other Asian male smoking patterns, as well as socio-economic disparities are planned in the near future. Pregnant women are also a special high-risk population since they subject both themselves and their offspring to health problems when they smoke. There have been anecdotal accounts and evidence from other states and localities of higher smoking prevalence within the lesbian, gay, bi-sexual, transgender and questioning (LGBTQ) community; but, until recently, there has been no systematic data collection for this community in Hawaii.

Native Hawaiians

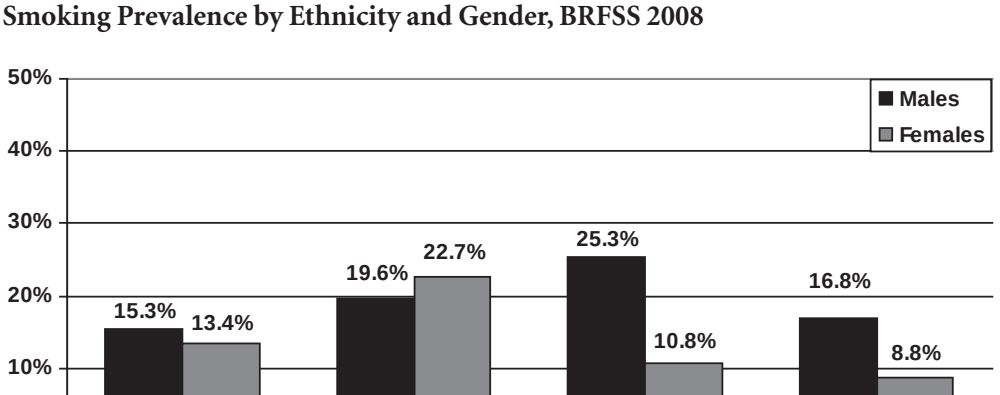
There are some important differences in attitudes about smoking and cigarette use among the Native Hawaiian population shown by data from the Behavioral Risk Factor Survey (BRFSS) and the Adult Tobacco Survey (ATS). As illustrated in Figure 5, Native Hawaiians have consistently higher prevalence of cigarette smoking compared other ethnic groups in Hawaii. According to the 2008 BRFSS, the prevalence of smoking among Native Hawaiian adults is 21.2%, followed by Filipinos (17.8%), Caucasian (14.4%), and Japanese (12.5%) (Figure 21). These are statistically significant differences between Native Hawaiians, Filipinos and Others compared to Japanese and Whites.

Figure 21. Smoking Prevalence by Ethnicity, BRFSS 2008



As illustrated in Figure 21, the prevalence of cigarette smoking among men is consistently higher than the prevalence among women. This does not hold true across all ethnic groups, particularly among Native Hawaiians. In 2008, 22.7% of Native Hawaiian women smoked compared to 13.4% of Caucasians, 10.8% Filipinas and only 8.8% of Japanese. By comparison, 19.6% of Native Hawaiian men smoked compared to 25.3% of Filipinos, 16.8% of Japanese and 15.3% of Caucasians (Figure 22).

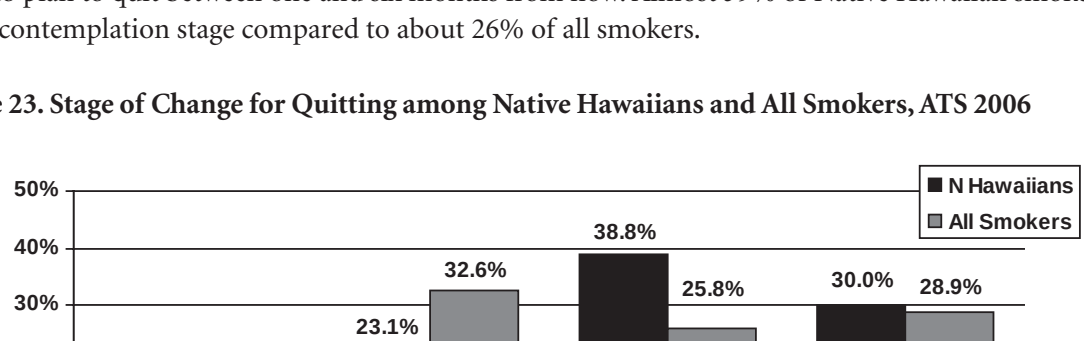
Figure 22. Smoking Prevalence by Ethnicity and Gender, BRFSS 2008



Native Hawaiian smokers are significantly more likely to smoke menthol cigarettes than Caucasian smokers (78.1% and 41.7%, respectively) and are less likely to smoke light or ultra light cigarettes. The most popular brand among Native Hawaiians is Kool, with 42.3% of Native Hawaiians smoking this brand, followed by 20.3% smoking Marlboro. Few Native Hawaiians smoke the popular mainland brand Camel.

When Native Hawaiians were asked a series of questions to determine their current plans for quitting smoking their answers differed from smokers as a whole (Figure. 23). Native Hawaiian smokers were more likely to plan to quit smoking at some point (91.9% compared to 87.3% of all smokers). Native Hawaiian smokers were about equally likely as all smokers to plan to quit within the next 30 days (preparation), but were more likely to plan to quit between one and six months from now. Almost 39% of Native Hawaiian smokers were in the contemplation stage compared to about 26% of all smokers.

Figure 23. Stage of Change for Quitting among Native Hawaiians and All Smokers, ATS 2006



Over three-quarters of Native Hawaiians (76.8%) felt they would be likely to succeed when they decided to quit smoking compared to only 70.6% of all smokers. Native Hawaiian smokers were more likely than members of other ethnic groups to have tried to quit smoking in the past 12 months (65.2% of Native Hawaiian smokers compared to 64.6% among Filipinos, 59.1% among Caucasians, and 49.6% among Japanese).

Figure 24. Assistance Used for Last Quit Attempt among Native Hawaiian and All Smokers, ATS 2006

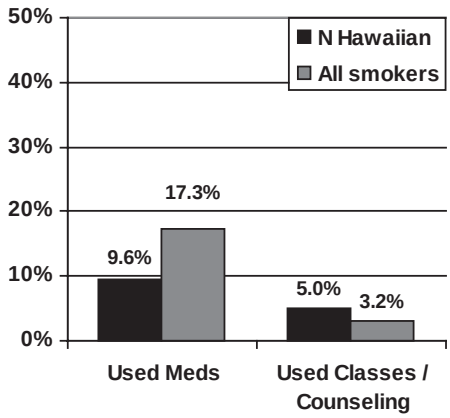
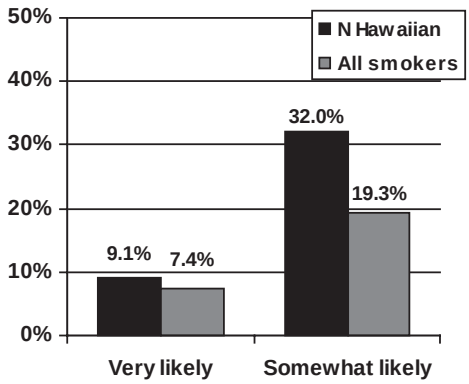


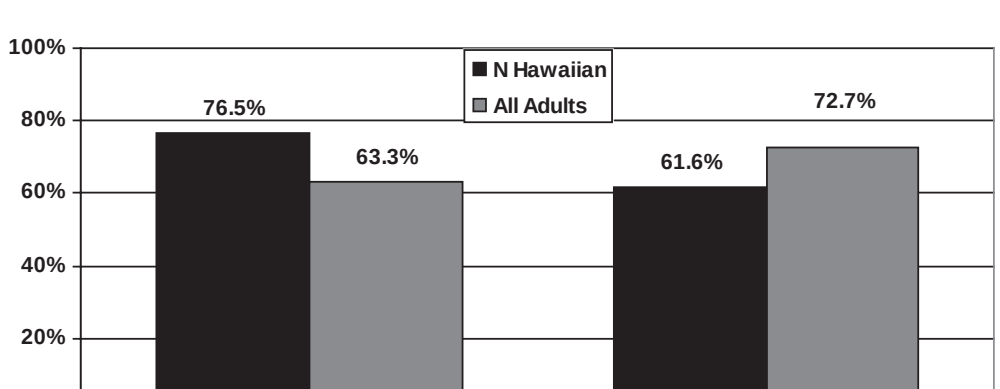
Figure 25. Likelihood of Using a Quitline among Native Hawaiian and All Smokers, ATS 2006



When they try to quit smoking (Figure 25), Native Hawaiians were almost twice as likely as all smokers to use classes or counseling to help them quit during their last attempt (5.0% and 3.2%, respectively); however, they are almost half as likely to use medications to help them quit (9.6% and 17.3%, respectively) (Figure 24). Finally, 86.7% of Native Hawaiians are aware of assistance available to quit smoking, and they are more likely than smokers as a whole to consider calling a telephone counseling service or quitline to help them stop smoking (41.1% and 26.7%, respectively) (Figure 26).

Three-quarters (75.1%) of Native Hawaiian adults surveyed have been to a doctor, nurse or other health professional for care within the past 12 months. Native Hawaiians were less likely to have received medical care than the general adult population (79.5%). When they sought care, Native Hawaiians were more likely than members of other ethnicities to have their smoking status assessed (76.5% of Native Hawaiians compared to 63.3% statewide). However, Native Hawaiian smokers were less likely than smokers statewide to be advised to quit by their health care professional (61.6% and 72.7%, respectively) (Figure 26).

Figure 26. Smoking Status Assessment and Advice to Quit by Healthcare Professional, ATS 2006



Native Hawaiian Summary

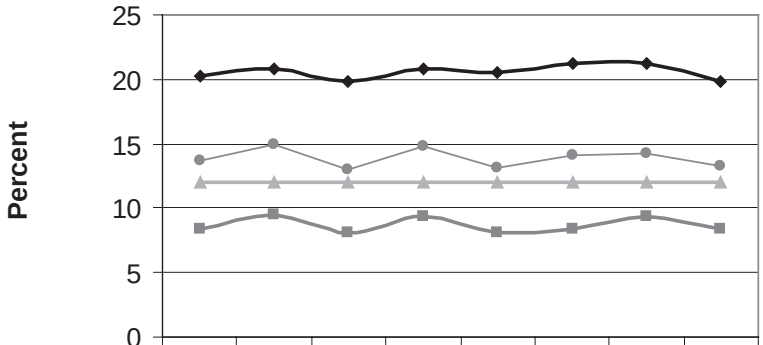
Native Hawaiians have the highest smoking prevalence of any ethnic group in Hawaii and, along with the Caucasians, they are the only groups in which men and women are equally likely to smoke. Native Hawaiians prefer to smoke menthol cigarettes, specifically Kools. Over 90% of Native Hawaiian smokers plan to quit smoking with 30% planning to quit in the next 30 days. Most Native Hawaiian smokers (87%) are aware of assistance to help them quit, but they are less likely to use pharmacotherapy than the population as a whole. Slightly less than two-thirds of Native Hawaiian smokers sought medical care in the past year. When they did seek medical care, they were more likely to have their smoking status assessed, but less likely to be advised to quit than the population of smokers as a whole.

Smoking and Pregnancy

Cigarette smoke not only harms pregnant women, it can also do great damage to the developing fetus. Smoking is most important known preventable risk factor for low birth weight and small size for gestational age, the leading contributors to fetal and neonatal deaths. The Pregnancy Risk Assessment Monitoring System (PRAMS) is a statewide surveillance system which uses a stratified random sample of postpartum women to assess risk factors and behaviors associated with pregnancy. More information on this data source can be found in the Appendix and on the website of the Hawaii Department of Health (**www.hhdw.org**).

In the PRAMS survey, women are asked about their smoking status three months before becoming pregnant, during the last trimester and at the time of the survey (three to six months postpartum). From 2000 to 2007, smoking in this group remained relatively stable (Figure 27). Prior to becoming pregnant, about one in five U.S. women smoked cigarettes. This is consistent with the smoking prevalence among all women of childbearing age. The proportion of women who smoked decreased to less than one in ten women by the third trimester. After pregnancy, the proportion of women who smoked increased to about 1 in 7 women, but did not revert to pre-pregnancy smoking levels.

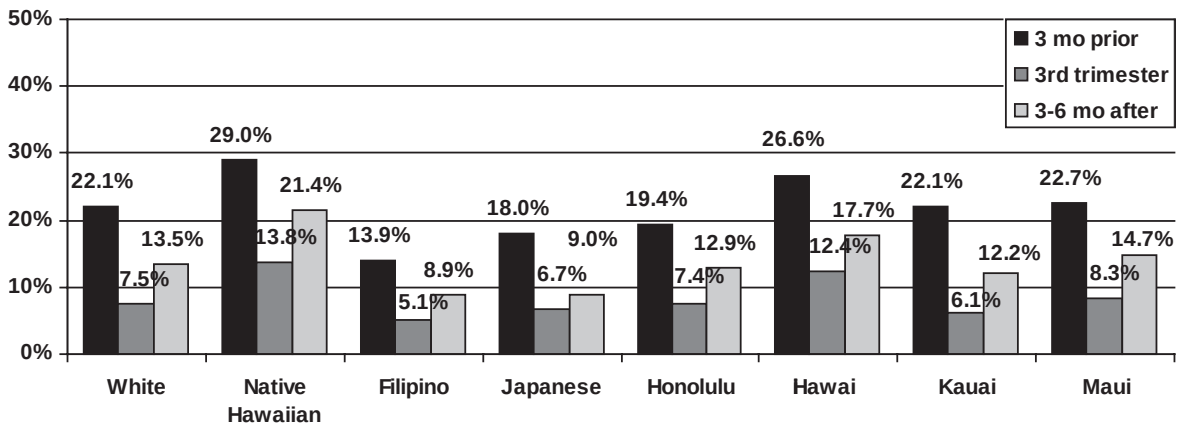
Figure 27. Cigarette Smoking Prevalence among Women Before, During and After Pregnancy, PRAMS 2000–2007



	2000	2001	2002	2003	2004	2005	2006	2007
Before pregnancy	20.2	20.8	19.8	20.8	20.6	21.2	21.2	19.8
During 3rd trimester	8.4	9.5	8.1	9.3	8.1	8.4	9.4	8.4
After pregnancy	13.7	15	13	14.8	13.1	14.1	14.3	13.3
HP2010 Goal	12	12	12	12	12	12	12	12

Despite these relatively stable statewide smoking trends before, during and after pregnancy, there is substantial variation among subgroups. Examination of the 2007 PRAMS data *(the most recent data available)* by ethnicity and county of residence reveals that Native Hawaiians and residents of Hawaii County are more likely to smoke prior to becoming pregnant, during the third trimester of pregnancy and three to six months postpartum (Figure 28). Prior to becoming pregnant, 29% of Native Hawaiian women and 27% of Hawaii County women smoked cigarettes, compared to about 20% of women statewide. Smoking among other ethnic and geographic groups decreased to around one-third of the pre-pregnancy prevalence, while prevalence among Native Hawaiians and Hawaii County residents only decreased to about half. Despite the variations, all groups met or exceeded the *Healthy People 2010* goal of 30% of smokers will stop smoking during pregnancy (*HP 2010* Goal 27-6). Unfortunately, the low smoking prevalence achieved during the third trimester is not sustained postpartum. Three to six months after delivery, smoking prevalence among these women increased to 13% statewide, 21% among Native Hawaiians and 18% among Hawaii County women.

Figure 28. Cigarette Smoking Prevalence 3 Months Before Pregnancy, During the 3rd Trimester, and 3–6 Months Postpartum by Ethnicity and County, PRAMS 2007



Smoking and Pregnancy Summary

Prior to becoming pregnant, women in Hawai'i smoke at a similar rate to other women in their age group. However, during pregnancy smoking dramatically decreases from 20% to 8%. These decreases are not sustained after delivery when the smoking prevalence increases to about 13–14%. Native Hawaiian women and residents of the Big Island are more likely to smoke before, during and after pregnancy at a higher rate than other ethnic groups.

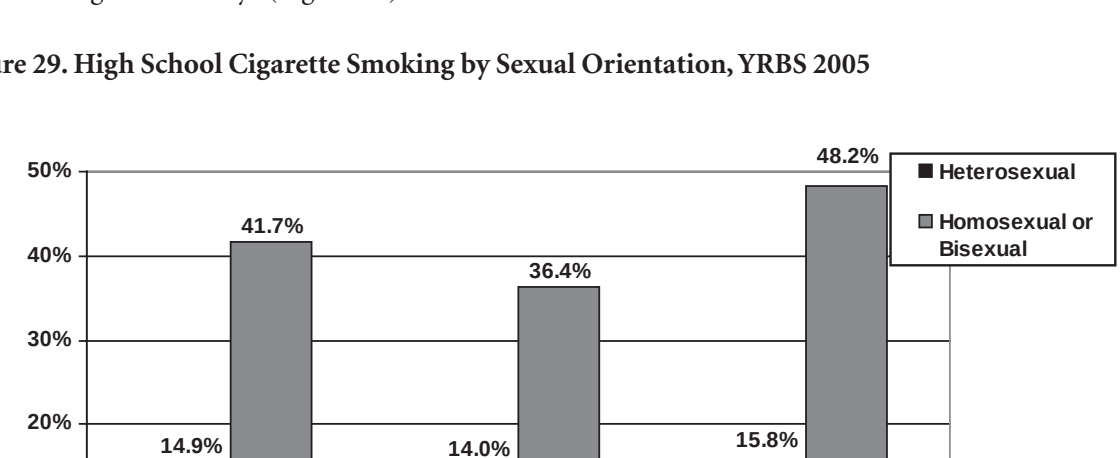
Homosexuals and Bisexuals

Studies have shown that smoking rates are higher among homosexuals, bisexuals and transgender populations that among heterosexuals. To better assess the needs of this population in Hawaii, TPEP worked within the Department of Health to add a sexual orientation question to the high school Youth Risk Behavior Survey in 2005 and ATS in 2006. Here are the tobacco-related findings of the YRBS and ATS.

Youth

Students were asked who they were sexually attracted to: males, females, males and females, or neither. Among those who felt sexual attraction towards a particular group, 92.0% were attracted to the opposite sex, 3.7% were attracted to the same sex and 4.3% were attracted to both sexes. For sample size issues, these groups were combined into the dichotomous variable of heterosexual (92.0%) and other than heterosexual (8.0%) and current smoking was examined. Homosexual and bisexual students were significantly more likely to have smoked cigarettes in the past 30 days than their heterosexual counterparts with homosexual and bisexual students being over 2.5 times more likely to smoke. This difference is more pronounced among high school girls than boys (Figure 29).

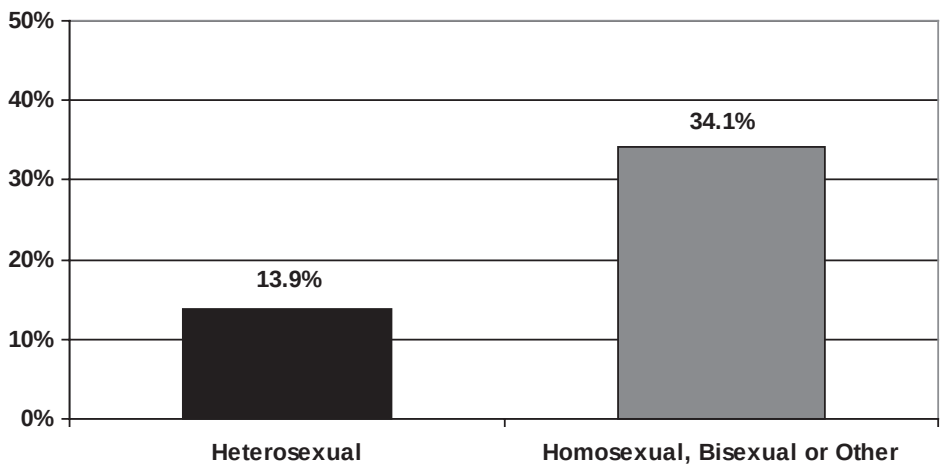
Figure 29. High School Cigarette Smoking by Sexual Orientation, YRBS 2005



Adults

Adult Tobacco Survey participants were also asked about sexual orientation. Participants were able to identify themselves as heterosexual (94%), homosexual (2%), bisexual (1%), something else (0.5%) or not sure (2%). For analytical power, these groups were combined into the dichotomous variable of heterosexual (96.3%) and 'other than heterosexual' (homosexual, bisexual or other) (3.7%) and current smoking was examined. Non-heterosexual adults were significantly more likely to smoke cigarettes than their heterosexual counterparts, 34.1% and 13.1% respectively (Figure 30).

Figure 30. Adult cigarette smoking prevalence by sexual orientation, ATS 2006



Sexual Orientation Summary

Smoking prevalence is higher among persons who are sexually attracted to members of the same sex or members of both sexes. In high school, students who are homosexual or bisexual smoke at 2.7 time the rate of their heterosexual counterparts (41.7% and 14.9%, respectively). This difference is even more pronounced among girls whose smoking prevalence is 15.8% among heterosexuals and 48.2% among homosexuals and bisexuals. Smoking among non-heterosexual adults is 2.5 times higher than their heterosexual counterparts (34.1% and 13.9%, respectively).

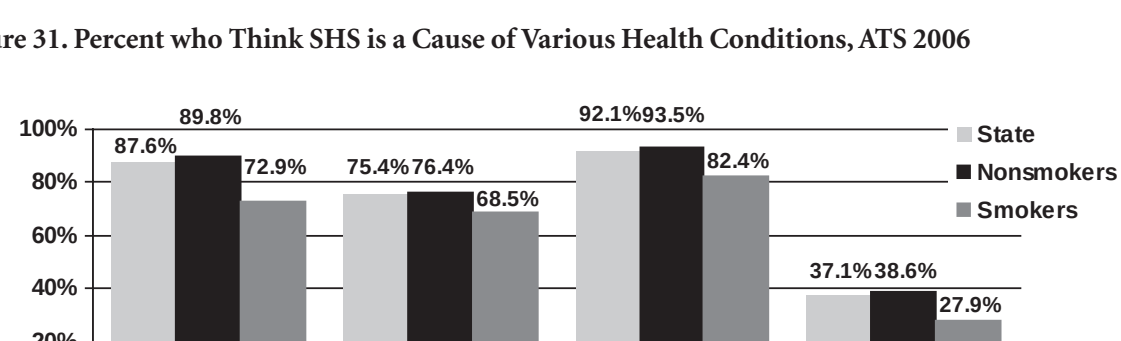
Section 7. Secondhand Smoke (SHS)

Secondhand smoke (SHS) is defined as the combination of smoke emitted from the burning tip of a lit cigarette and, or from the side stream, and, or exhalation of a smoker. Exposure to secondhand smoke is especially dangerous to vulnerable populations (including infants and young children, and those with respiratory conditions or cardiac conditions) and in enclosed spaces, including homes, cars, and workplaces. Data on secondhand smoke are collected primarily via the Adult Tobacco Survey conducted in 2001 and 2006. More information on the data sources can be found in the Appendix.

Knowledge, Attitudes and Behaviors about SHS

In Hawaii, 93.5% of all adults, and 82.8% of smokers believe that SHS is very or somewhat harmful to one's health in 2006. In fact, nine in ten adults thought SHS is a cause of respiratory problems in children and lung cancer. Fewer (75.4%) know SHS is a cause of heart disease in adults and less than 40% know SHS is a cause of sudden infant death syndrome (SIDS). Smokers are less likely than non-smokers to be able to correctly identify health conditions associated with SHS exposure (Figure 31).

Figure 31. Percent who Think SHS is a Cause of Various Health Conditions, ATS 2006



Home SHS Exposure

For nonsmokers who live with smokers, the home can be a major source of secondhand smoke exposure. Children, especially young children, are particularly vulnerable to SHS at home because of their lack of mobility and because they spend most of their time at home prior to going to school. In 2006, there was at least one reported adult smoker in 28.5% of Hawaii households—down slightly from 32.1% in 2001 (Figure 32). Since many households in the state have at least one smoker, rules about smoking in the home are important for protecting nonsmokers. The percentage of households that do not allow smoking has increased from 76.0% in 2001 to 85.7% in 2006 (Figure 33). Furthermore, in 87.1% of homes with children, smoking is not allowed anywhere inside in the home.

Figure 32. Percent of Households with a Smoker in the Home, ATS 2001 and 2006

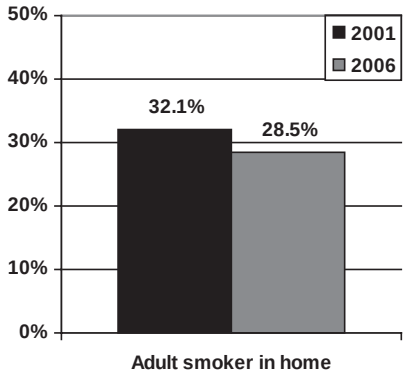
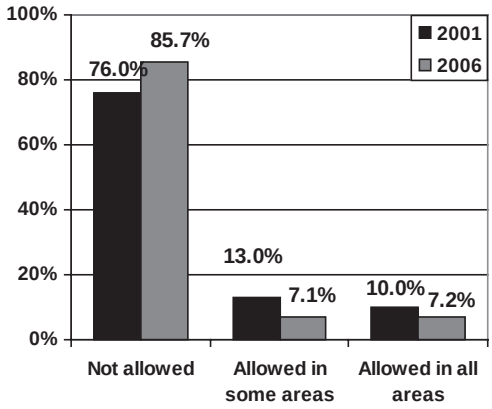


Figure 33. Rules about Smoking in the Home, ATS 2001 and 2006



As a result of household policies, smoking reportedly occurred inside only 13.5% of homes during the past week; however, in 9.8% of homes occupants were exposed to SHS daily (Figure 34). Smoking in cars can lead to a more concentrated exposure to SHS due to the small, enclosed environment. SHS exposure in cars in the past week has dropped from 18% in 2001 to 12.5% in 2006. As with homes, the percentage of people with smoke-free policies for their car(s) at all times or when children are present has also increased from 78% in 2001 to 88.4% in 2006 (Figure 35).

Figure 34. SHS Exposure at Home in Past 7 days, ATS 2006

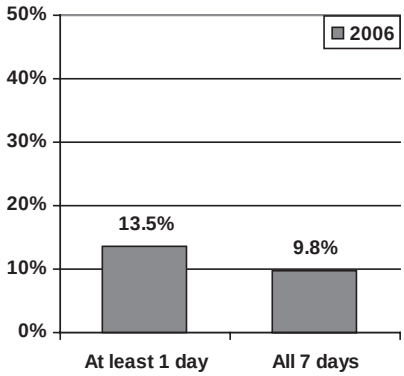
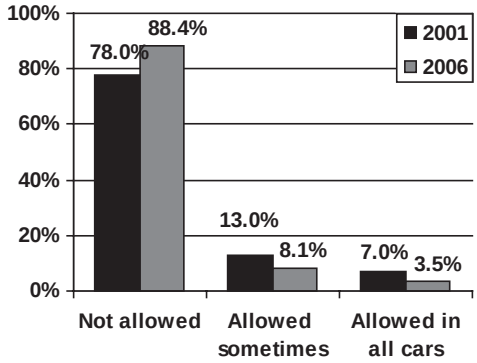


Figure 35. Rules about Smoking in Cars with Children, ATS 2001 and 2006



Summary of SHS

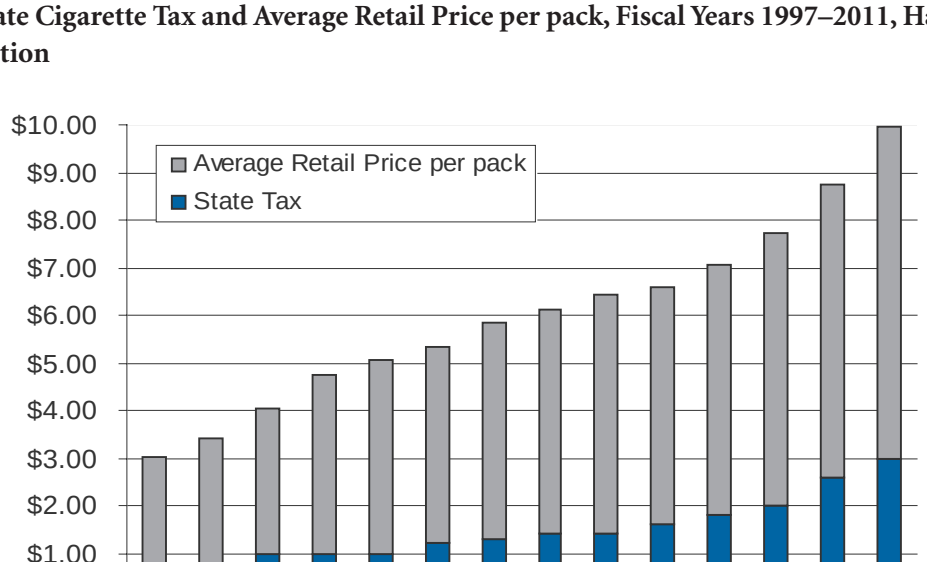
More than none in ten adults and eight in ten smokers believe SHS is harmful. Most people know that SHS is a cause of respiratory problems in children, lung cancer and heart disease, but fewer realize that it can cause sudden infant death syndrome or SIDS. Smokers were uniformly less aware than non-smokers of the health conditions associated with SHS. **While the proportion of households with at least one adult smoker has declined slightly (32% in 2001 compared to 29% in 2006), the proportion of people living in homes where smoking is not allowed has increased to 86% in 2006 from 76% in 2001. The percentage of adults who do not allow smoking in their family cars has also increased to 88% from 78%.**

Section 8. Laws and Policies

Cigarette Tax Revenues

Revenues from cigarette excise taxes represent an important source of state general funds, as well as an effective deterrent against smoking. The excise tax rate increased from $0.60 in 1997 to $1.40 in 2004. On July 1, 2006, the state excise tax was increased to $1.60 per pack raising Hawaii to the 9th highest excise tax rate in the country. This tax increase may be partly responsible for the first net decrease in cigarette packs sold in the past six years. Fluctuations in tourism and the effect of the tax stamp make interpreting tax revenue and the number of packs taxed difficult. On September 30, 2007, the state cigarette tax increased to $1.80 per pack. This tax is scheduled to increase incrementally until 2011 when the state cigarette excise tax will reach $2.60 per pack. Figure 36 below depicts the cigarette tax revenue compared to average price per pack from 1997–2011.

Figure 36. State Cigarette Tax and Average Retail Price per pack, Fiscal Years 1997–2011, Hawaii Department of Taxation



Smoke-Free Hawaii Law (Act 295)

On November 16, 2006, Hawaii celebrated becoming the 14th state to go smoke-free and enact a comprehensive law, known as Act 295, which protects workers throughout the state from exposure to secondhand smoke. Act 295 replaces the pre-existing county ordinances on secondhand smoke with a consistent level of basic protection for all Hawaii's citizen. Act 295 states: Smoking is not allowed in enclosed and partially enclosed public spaces such as bars, restaurants, clubs, airports, theaters, government facilities and stadiums. Smoking is not allowed in enclosed or partially enclosed places of employment. Smoking is not allowed within 20 feet of doorways, windows, and ventilation intakes of the above areas.

Tobacco Retailer Licensing

Licensure of tobacco retailers is an effective method for reducing illegal sales to minors. Currently, if a store is caught selling to a minor, the clerk is fined, but there are no repercussions to the business. This provides little motivation for stores to invest in training and monitoring of staff who sell cigarettes. The names of the stores that sold to a minor appeared in a newspaper ad, published monthly, which called attention to these stores lack of corporate citizenship. As of December 1, 2006, all tobacco retailers in Hawaii are required to have a tobacco retail permit from the Department of Taxation. The possibility of having a license suspended or revoked for repeated violations provides much greater motivation for compliance with the law. Licensure also provides a complete list of tobacco retail outlets and a possible funding source for retailer education and enforcement.

Laws and Policies Summary

In recent years, Hawaii has been proactive in passing legislation to reduce the burden of tobacco in our state. The increases in the cigarette excise tax from $1.00 per pack in 2000 to $2.00 in 2009 coincide with the precipitous decreases in smoking among the price sensitive youth population. Smoking among high school students declined from 24.5% in 2000 to less than 10% in 2007. Furthermore, recently enacted licensing for tobacco retailers has the potential to further reduce illegal tobacco sales to minors. Finally, Act 295 replaces the patchwork of county smoke-free workplace ordinances and provides a single, uniform law for all the islands.

Appendix: Data Sources

Survey	Sample size	Date collected	Area Collected	Methodology	95% CI
Behavioral Risk Factor Surveillance Survey (BRFSS)	2,000 pre-2001 & 2004 6,000+ for 2001 on	Ongoing throughout the year	Statewide, weighted to population	Random Digit Dial, see www.cdc.gov/brfss for full details	Overall ±2.2 pre 2001, ±1.5% current
Adult Tobacco Survey (ATS)	1,821 in 2001 3,950 in 2006	November 2001 Winter 2006	Statewide, weighted by County	Adult telephone survey, 2001 quota, 2006 stratified sample	± 2.3% in 2001 ± 2.0% in 2006
Youth Risk Behavior Survey (YRBS)	Approx. 1,800	Biannually weighted data 2005	Statewide, 6th–8th middle school 9–12 high school	School-based self administered survey with sampling	±2.1%
Healthy Hawaii Initiative Evaluation Survey (HHI)	4,706 4,555	Spring 2002 Fall 2002	Statewide, weighted by county and gender	Quota sampling, telephone administered, adults	+2% w/ 99% CI state
Youth Tobacco Survey (YTS)	1,045 middle school 1,511 high school	2000	17 middle schools 24 high schools All w/ peer education	School-based self administered survey, weighted	NR
Mall intercept survey (MIS)	202 500 500 500	October 2000 January 2002 June 2003 August 2004 August 2005	Oahu malls 2004 Neighbor Island malls added	Every 3rd teen, 11–17 years old	NR ±4.4% ±4.4%
Pregnancy Risk Assessment Monitoring System (PRAMS)	2,518 – 2000 data	Ongoing throughout the year	Statewide	Stratified random survey over-sampling at risk women, weighted	Less than 2%
SYNAR inspection reports	200	Annually	Retailers statewide	Stratified random sampling	±2.8%

Other Data Sources

Vital Statistics: *Death Certificate Statistical File.* Includes all deaths occurring in Hawaii and deaths occurring out-of-state-to Hawaii residents. Includes cause of death, place of death, demographics.

Department of Taxation: Cigarette Tax Receipts: Monthly tally of cigarette tax total. May be divided by tax rate to determine cigarette packs sold.

References

Adult Tobacco Survey Report (2006). Available from the Hawaii Tobacco Prevention and Control Program.

America's Health Rankings, Available at: http://www.americashealthrankings.org/2008/states/hi.html; and http://mstobaccodata.org/pubs/state_rankings.pdf. Accessed 5/11/2009.

Austin SB, N Ziyadeh, LB Fisher, JA Kahn, G Colditz and L Frazier (2004). Sexual orientation and tobacco use in a cohort study of US Adolescent girls and boys. *Archives of Pediatric and Adolescent Medicine*, 2004; 158:317–322.

Barbeau EM, N Krieger and M-J Soobacher. (2004). Working class matters: Socio-economic disadvantage, race/ethnicity, gender and smoking in the NHID 2000. *American Journal of Public Health*, 94 (2); 269–278.

Centers for Disease Control and Prevention (CDC). Cigarette smoking-attributable morbidity United States, 2000. MMWR, 2003/52:842–844. Smoking Attributable Mortality, Morbidity, and Economic Costs (SAMMEC). See also MMWR, 2009/58(02); 29–33.

Centers for Disease Control and Prevention (CDC). Youth Tobacco Surveillance—United States 2001–2002. In: Surveillance Summaries, May 19, 2006 *MMWR*, 55(No. SS-3).

Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data, 1998-2007. Available at: http://www.cdc.gov/brfss/. Accessed 5/11/2009.

Lowery St. John T, Hirokawa R, and Roy ML (2007). *Tobacco Sales to Minors in Hawai'i: Analysis of compliance with HRS 709-0908*. (unpublished). Available from the Hawaii Tobacco Prevention and Control Program.

Haiman CA, et al. (2006). Ethnic and racial differences in smoking-related risk of lung cancer. *New England Journal of Medicine*. Jan 26; 354(4):333–42.

Hawaii Behavioral Risk Factor Surveillance System, annually. Available at: http://hawaii.gov/health/statistics/brfss/index.html. Accessed 5/1//2009.

Healton C and K Nelson (2004). Reversal of misfortune: Viewing tobacco as a social justice issue. *American Journal of Public Health*, 94 (2); 186–191.

National Council on State Legislatures (2009). State Cigarette Excise Taxes, 2009. Available at: http://www.ncsl.org/programs/health/cigarette.htm. Accessed 5/11/2009.

Orzechowski and Walker, 2006. *The Tax Burden on Tobacco-Historical Compilation*. Volume 41. Arlington, Virginia: Orzechowski and Walker Consulting.

Orzechowski and Walker, 2008. *The Tax Burden on Tobacco-Historical Compilation*. Volume 43. Arlington, Virginia: Orzechowski and Walker Consulting.

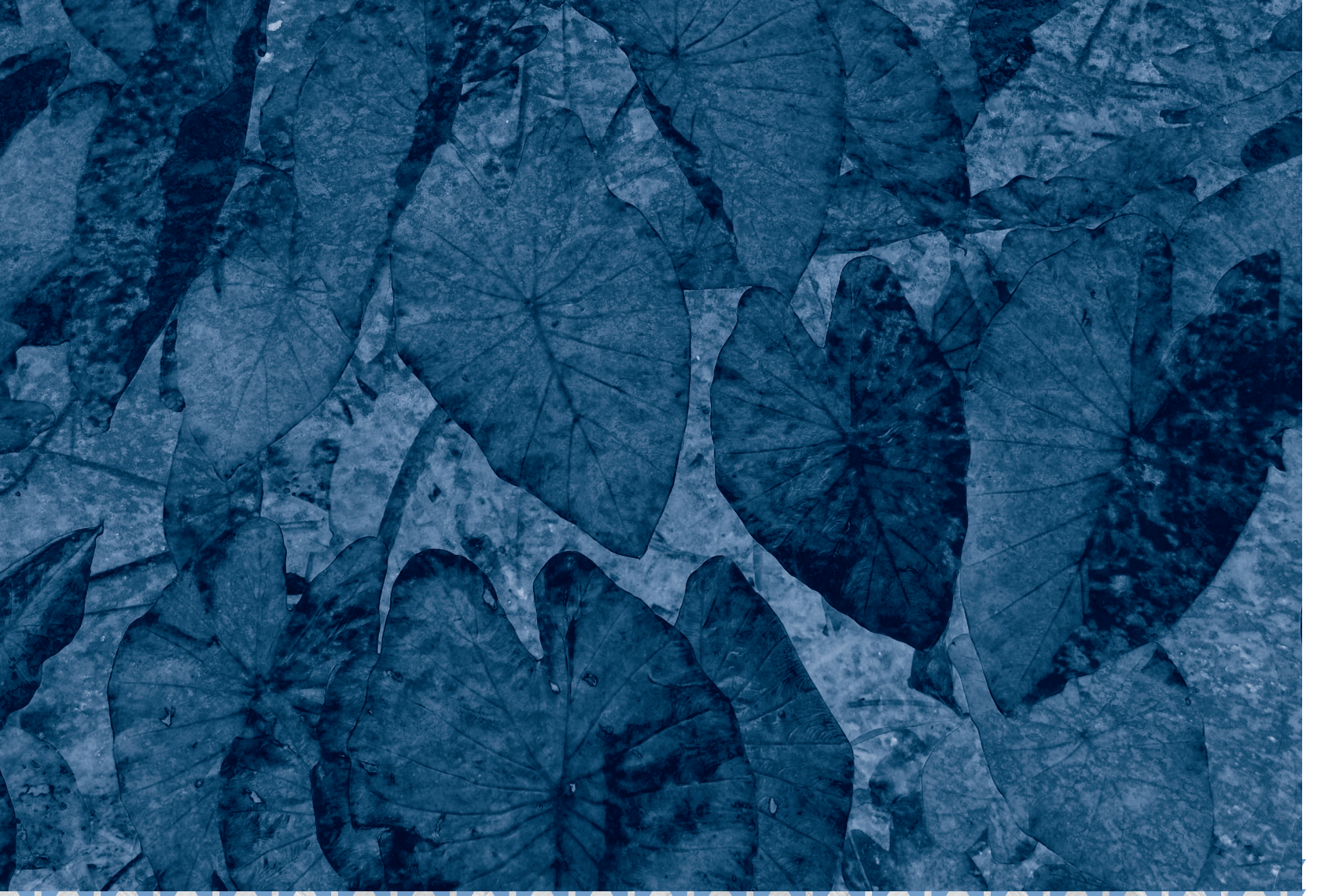
Prochaska JO, DiClemente CC, Norcross JC (1992). In search of how people change. *American Psychologist*, 47:1102–4

Siahpush M, R Borland, J Taylor, GK Singh, Z Ansari and A Serraglio (2006). The association of smoking with perception of income inequality, relative material well-being and social capital. *Social Science and Medicine*, 63; 2801–2812.

State of Hawai'i. *Annual Synar Report*: 42 U.S.C 300x-26. for FFY06 and FFY07.

SAMHSA. State Synar Non-Compliance Rate Table FFY 1997–2005. Available at: http://prevention.samhsa.gov/tobacco/synartable_print.htm. Accessed 5/11/2009.

Tang H GL Greenwood, DW Cowling, JC Lloyd, AG Roeseler, and DG Bal (2004). Cigarette smoking among lesbians, gays and bisexuals: How serious a problem? (United States). *Cancer Causes and Control 2004*; 15(8):797–803.



Linda Lingle, Governor of Hawai'i
Chiyome Leinaala Fukino, M.D., Director of Health

Published by:
Hawai'i State Department of Health
Chronic Disease Management and Control Branch
July 2010

For more information, please contact Ann Pobutsky at
(808) 586-4485 or by e-mail to ann.m.pobutsky@doh.hawaii.gov.

Nondiscrimination in Services:
We provide access to our activities without regard to race, color, national origin (including language), age, sex, religion or disability. Write or call our Affirmative Action Officer at P.O. Box 3378, Honolulu, HI 96801-3378, or at 808-586-4616 within 180 days of the problem.