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Perspectives on Tobacco Use Among Native Hawaiian Populations:

A Review of the Literature

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Abstract

Asian Americans and Pacific Islanders (AAPIs) as an aggregate group have low smoking rates compared to other ethnic groups. Disaggregated data reveals high rates of tobacco use and tobacco related disease among Native Hawaiian (NH) populations. Through an extensive review of current literature, the author of this paper found studies about (a) NH adult and adolescent smoking rates, (b) determinants of smoking behavior, and (c) NH attitudes toward smoking. However, there are few studies that provide information about cessation programs that have provided positive outcomes for NH populations. In order to find scholarly articles about NH cigarette smoking, the author used these key words and phrases “Native Hawaiian, smoking”, “Native Hawaiian tobacco use”, “Native Hawaiian cessation programs”, “Native Hawaiian youth tobacco”, and “Native Hawaiian tobacco related health disparities”. After reading each article, the author categorized it as either (a) tobacco-related illness, (b) determinants of smoking – adult, (c) determinants of smoking – adolescent, (d) cessation – adult, or (e) cessation – youth. Key ideas from each article were used to inform the review of the literature. Findings from this literature review and subsequent recommendations by this author for culturally appropriate smoking prevention, education, and cessation programs were given to APICAT staff. The review and recommendations can serve as a basis for (a) potential grant writing by APICAT and (b) development of smoking cessation services for Native Hawaiian communities in Washington State.

Purpose

As an aggregate group, Asian Americans and Pacific Islanders (AAPIs) have among the lowest smoking rates when compared with other ethnic groups (Lew, 1998). However, when the data are disaggregated, certain groups within AAPIs have rates of tobacco use higher than the United States national average. Native Hawaiians have disproportionately higher smoking rates, 21.9% as compared to 12.7% of Asians and 13.2% of whites (CDC, 2008), as well as higher rates of tobacco-related illness such as cardiovascular disease and lung cancer compared to Chinese, Filipino, Japanese, and White smokers (CDC, 2010). There is thus there is a need for culturally designed smoking cessation programs for Native Hawaiian adult and adolescent populations (Aluli, Reyes, & Tsark, 2007).

Specific Aims

In this review of the literature, the author examined (a) the prevalence of cigarette smoking among the Native Hawaiian (NH) population, (b) the reasons for the prevalence of higher cigarette smoking rates in this population, (c) the associated health risks in the NH population related to smoking, (d) existing cessation programs that target NH populations, and (e) provide recommendations for adapting existing cessation programs to the NH population.

As a result of the literature review, the author provided a list of websites with links to relevant information regarding cigarette smoking, health risks associated with tobacco use, and cessation programs relevant to Native Hawaiians. (See Appendix A).

Background and Significance

This project was completed as background material for possible grant writing and program development by the organization Asian Pacific Islander Coalition Against Tobacco (APICAT). Based in Seattle, Washington and funded by the Washington State Department of Health (DOH), APICAT addresses tobacco control issues within the AAPI community by supporting culturally competent prevention, education, and cessation efforts with adults and youth in an effort to build community capacity in tobacco prevention and control (APICAT, 2010).

APICAT partners with the Asian Pacific Partners for Empowerment, Advocacy, and Leadership (APPEAL), a national organization that works to build community capacity in tobacco control in Asian American, Pacific Islander, and Native Hawaiian communities (APPEAL, 2010). APPEAL's mission, as stated on their website is:

To champion social justice and achieve parity and empowerment for Asian Americans, Native Hawaiians and other Pacific Islanders by supporting and mobilizing community-led movements through advocacy and leadership development on critical public health issues. (APPEAL, 2010).

Since 1994, APPEAL's work has included (a) developing community capacity building models, leadership development, and advocacy, (b) training over 600 community leaders across the US and Pacific Islands to conduct tobacco control activities in their communities, (c) conducting

over 300 capacity building trainings with organizations nation-wide, (d) publishing educational kits on Asian American and Native Hawaiian and Pacific Islander tobacco control issues, including making tobacco use and cessation relevant to these communities, and (e) developing and advocating a national tobacco control policy framework for a comprehensive approach to Asian American and NHPI tobacco control issues (APPEAL, 2010).

Methods

Methods used by this author to collect information included the following: (a) extensive search of internet databases including PubMed, EBSCOHost, Academic Search Complete; (b) manual searches from the reference list of articles reviewed, and (c) searches on the websites of Hawaii Department of Health, Centers for Disease Control, World Health Organization, and the United States Census Bureau. For these searches, the author used the following key words and phrases: (a) “Native Hawaiian, smoking”, (b) “Native Hawaiian tobacco use”, (c) “Native Hawaiian cessation programs”, (d) “Native Hawaiian youth tobacco”, and (e) “Native Hawaiian tobacco related health disparities”.

After searching key words and phrases in the databases mentioned above and completing manual searches, the author of this paper reviewed 47 articles. The majority of these articles provided information regarding statistics on Asian American and Native Hawaiian and Other Pacific Islander smoking rates. The author found few resources about culturally tailored smoking cessation programs.

Review of the Literature

History of Diversity of the Hawaiian Population

In 1959, Hawaii became the 50th state in the United States; however, its history extends back roughly 1,500 years (GoHawaii.com). The Hawaiian Islands are located to the southeast of the continental United States, 2,390 miles from California, 3,850 miles from Japan, 4,900 miles from China, and 5,280 miles from the Philippines, making it the most isolated population in the world (Hawaii Fast Facts and Trivia). The Hawaiian Islands consist of eight main islands, six of which are inhabited.

Polynesians from the Marquesas Islands were the first people to inhabit Hawaii in the 2nd Century with settlers from Tahiti arriving 500 years later. The Tahitians helped further influence the Hawaiian culture by instituting a social hierarchy and bringing their beliefs of gods and demi-gods. In 1778, Captain James Cook arrived on Kauai, Hawaii's northern-most island. All of the Hawaiian Islands were unified in 1810 by King Kamehameha. With the arrival of Protestant missionaries in 1820, Hawaii's traditional social system was abolished and Western influence began to grow. Hawaii became a port for trading, which also brought disease to many Native Hawaiians (GoHawaii.com, 2010).

In 1893, American colonists overthrew the Hawaiian Kingdom and Hawaii became a United States territory in 1898. The 1900s brought people of other races to Hawaii with the creation of sugar and pineapple plantations. These people included Japanese, Chinese, Filipino,

and Portuguese immigrants, contributing to Hawaii's diverse population today (GoHawaii.com, 2010).

Today, Hawaii remains an ethnically diverse population; only 29% of residents are Caucasian. The estimated 2009 population in Hawaii was 1,295,178 people with 9.1% being Native Hawaiian (NH) and other Pacific Islander (PI). Compared to the 0.2% Native Hawaiian and Pacific Islander (NHPI) population in the United States, most NHPI's reside in Hawaii (US Census Bureau, 2009). A person who identifies as Native Hawaiian can trace ancestry back to the Polynesian settlers prior to 1778 (Aluli, Reyes, & Tsark, 2007). Native Hawaiians have since migrated across the US: California had the largest NHPI population of any state at 282,000 (U.S. Census Bureau, 2007). Honolulu County had the largest percentage of NHPIs (179,000), and Clark County, NV had the largest increase in NHPIs nationwide from 2007 to 2008 (U.S. Census Bureau, 2007). According to the Office of Minority Health (2009), U.S. states with significant NHPI populations were California, Washington, Texas, New York, Florida, and Utah. Thirty percent of these populations are under the age of 18 (Office of Minority Health, 2009).

Very diverse and isolated from the US mainland, Hawaii and Native Hawaiians alike have retained aspects of their cultural traditions which are integrated into their daily lives. Migration of Native Hawaiians to the US mainland has brought growing numbers to California, Florida, Nevada, New York, Utah, and Washington State. This influx of culturally diverse Native Hawaiians has created a need to integrate culturally appropriate interventions into health care of Native Hawaiians.

Asian Americans and Pacific Islanders as Cultural Groups

Until recently, AAPIs were considered one ethnic group in census data and in many scholarly research studies (Lew & Tanjasiri, 2003). There are many differences between Asian Americans and Pacific Islanders including differences within each of these two groups. To better understand the health risks and needs of each group, one must differentiate Asian Americans from Pacific Islanders, as well as groups within Asian Americans and Pacific Islanders.

According to the United States Census Bureau (2010), Asians are defined as persons who trace their ancestry to continental Asian as well as its outer islands including Japan and the Philippines. A separate category denotes Native Hawaiian and Other Pacific Islanders (NHOPI/NHPI) which include those with ancestors native to the Hawaiian Islands, Polynesia, Melanesia, and Micronesia, (U.S. Census Bureau, 2000; Papa Ola Lokahi, 2007).

Growing numbers of Native Hawaiians and other Pacific Islanders suggest an increased need to disaggregate data for health related research and program planning. Native Hawaiians were categorized as Asian American and Pacific Islander along with all other racial groups of Asian and Pacific Islander roots prior to the 2010 census. This creates a need to clearly define the population group of Native Hawaiians to (a) track trends in tobacco use, especially smoking, and disease prevalence related to tobacco use, (b) plan relevant smoking cessation programs and (c) track smoking trends in Native Hawaiian populations for use in future research.

Health Status

Common misconceptions and stereotypes associated with the Asian American community, such as the label of model minority, have contributed to the false assumption that AAPIs do not suffer from the major disease that affect other Americans (Lew, 1998). Hawaii-

based research studies have found that Native Hawaiians are at higher risk for cardiovascular disease, coronary heart disease, and stroke than Chinese, Filipino, Japanese, and whites living in Hawaii. This study also found that Native Hawaiians are dying at younger ages from major cardiovascular disease as compared to Chinese, Filipino, Japanese, and whites living in Hawaii (Aluli, Reyes, & Tsark, 2007).

Lew (1998) states that,

There are significant segments of the community that face greater risk for certain diseases, including tobacco-related diseases. Unfortunately, the national data on smoking among AAPIs lump all of the groups together, perpetuating the myth that tobacco is not a problem in the AAPI community (p. 1819).

These misconceptions and aggregated data have resulted in the lack of identification of specific needs of the NHPI community related to tobacco use prevention and cessation.

Tobacco Related Health Risks for the Native Hawaiian Population

Lung cancer.

Tobacco use has cost the State of Hawaii \$309 million in health care, \$283 million in lost productivity, and \$585 in taxes per household per year (Tsark & Santos, 2006). Nationwide, lung cancer affects 84.6 men in every 100,000 and 55.2 in 100,000 women and was the leading cause of cancer death among both men and women (CDC, 2005). In a comparison between Hawaii and US cancer rates in 2006, Hawaii's lung cancer rate among men was 66.6 in 100,000 as compared to 82.7 in 100,000 nationwide (CDC, 2006). Disaggregated data from 2000

showed that 49.0 in 100,000 API men and 26.9 in 100,000 API women had lung cancer (CDC, 2000).

In a multiethnic cohort study of over 215,000 men and women living in California and Hawaii with five self-reported racial and ethnic groups, Haiman, Stram, Wilkens, & Pike (2006) found that 20.1% of Native Hawaiian men smoked compared to 15% for Japanese American and white men while Native Hawaiian women were found to be the most frequent current smokers. Among participants who reported low levels of smoking, as defined as 10 cigarettes per day, Asians and whites had one-third the risk of Native Hawaiians for lung cancer, with similar findings among those with higher levels of smoking

In addition, Native Hawaiians, men and women, had among the highest rates of lung cancer and 80-90% of cases were related to cigarette smoking. Native Hawaiian men experienced small-cell carcinoma twice as much as all other racial and ethnic groups. Furthermore, Asians had substantially lower lung cancer incidence rates than Native Hawaiians (Haiman, Stram, Wilkens, & Pike, 2006).

The National Cancer Institute (NCI) created the Special Population Network (SPN) to promote cancer awareness and establish infrastructure in medically underserved populations, including Pacific Islanders (Chu & Hubbell, 2008). Pacific Islanders were chosen as a special population because of the cancer related health disparities in the community which lead to decreased awareness and increased incidence of cancer (Chu & Hubbell, 2008). The SPN program funded cancer related research in Pacific Islander communities which have provided

new information about the cancer control needs of Pacific Islanders nationwide (Chu & Hubbell, 2008).

Cardiovascular disease.

Across all racial and ethnic groups, tobacco use is the leading preventable cause of cardiovascular disease and is related to approximately one in 10 deaths worldwide. Fifty-four percent of these deaths were from coronary artery disease and 25% from stroke (Jackson, 2010). For Native Hawaiians, mortality from cardiovascular disease (CVD) is higher than in all other ethnic groups living in Hawaii (Aluli, Reyes, & Tsark, 2007; Casken, 2001). Previous studies have shown that Native Hawaiians had a higher prevalence of CVD and were dying from CVD at younger ages (Aluli, Reyes, & Tsark, 2007). Contributing to this prevalence of CVD in Native Hawaiians were poor diets, low rates of physical activity, high rates of overweight and obesity and less likelihood of being aware of adverse health conditions (Moy, Sallis, & David, 2010; Office of Minority Health, 2007). According to Moy, Sallis, & David (2010), the NHPI sample had less healthy lifestyles and higher prevalence of chronic disease, including CVD, as compared to other racial and ethnic groups. These studies have suggested a need for further education on tobacco use and related illnesses in NH populations since this group has a higher prevalence of CVD when compared to other racial and ethnic groups.

Native Hawaiians had higher mortality rates than the state of Hawaii and the US for CVD, coronary heart disease, and stroke. The state of Hawaii's mortality rates for cardiovascular disease was 52.5% lower than rates among Native Hawaiians 66.5% lower for coronary heart disease, and 31.3% lower for stroke (Aluli, Reyes, & Tsark, 2007). This group

also had the youngest mean age at death from CVD, coronary heart disease, and stroke compared to Chinese, Filipino, Japanese, and whites living in Hawaii in 2005 (Aluli, Reyes, & Tsark, 2007). The mean age of death for Native Hawaiians from CVD, coronary heart disease, and stroke were 65.2, 66.1, and 69.2 , respectively, as compared to 74.8, 77.0, and 77.2 for whites, and 78.6, 77.6, and 78.9 for Japanese (Aluli, Reyes, & Tsark, 2007).

Cardiovascular disease and lung cancer are leading causes of death and cancer death among Americans. Haiman, Stram, Wilkens, & Pike (2006) found that Native Hawaiians have increased rates of lung cancer incidence despite smoking rates comparable to that of whites and Asians. As with lung cancer, prevalence of CVD in Native Hawaiians is higher than whites and Asians and death from CVD occurs at earlier ages for Native Hawaiians. The NH population could benefit from further education on tobacco use and tobacco related illness.

Tobacco Use in Asian American Pacific Islander Populations

In the United States, tobacco is the most preventable cause of disease and death (Lew, 1998 ; Kaholokula, et.al, 2006). An estimated 443,000 deaths in the US have been attributed to cigarette smoking per year with over half due to lung cancer and ischemic heart disease (CDC, 2010). In 2008, a survey estimated that one in five American adults smoke as well as 30% of Americans age 18 to 29 (Saad, 2008).

Impact of the tobacco industry.

In 2008 in the United States, AAPIs made up 4.7% of the total population (U.S. Census Bureau, 2010). Asian Americans and Pacific Islanders have increased prevalence of tobacco use

due to industry targeting and the stressors of assimilation, which puts them at greater risk for tobacco-related diseases including coronary heart disease and lung cancer (Lew, 1998). The US tobacco industry has recognized the growing market of potential consumers as Asians and Pacific Islanders immigrate to the United States in increasing numbers (Muggli, Pollay, Lew & Joseph, 2002). Hawaiians are among the largest subgroup of Pacific Islanders in the US; this makes this population a target in the tobacco industry. Since the industry views this group as potential new consumers, industry marketing is increased in low-income neighborhoods and Native Hawaiians tend to have low socioeconomic status, and a lack of community capacity to counter the tobacco industry (Muggli, Pollay, Lew, & Joseph, 2002).

Muggli, Pollay, Lew, & Joseph (2002) found increased tobacco advertising in ethnic minority communities, with advertisements being three to five times more likely to appear in these communities as compared to predominantly white ones. These community specific advertising campaigns also feature models that ethnically match the neighborhood demographics (Muggli, Pollay, Lew, & Joseph, 2002). The US Surgeon General's report in 1998 was the first to acknowledge Asian Americans and Pacific Islanders as major targets of tobacco industry targeting (Muggli, Pollay, Lew, & Joseph, 2002).

In a review of tobacco industry internal documents, Muggli, Pollay, Lew, & Joseph (2002) found that:

From 1988 to 1995, Philip Morris, RJ Reynolds, Lorillard Tobacco Company, and Brown and Williamson studied the AAPI market through various US based marketing research firms. In 1988, the tobacco industry's US leader, Philip Morris, retained the marketing firm of Fraiser Smith to conduct a market study on the AAPI consumer market and concluded that there was "...a significant opportunity in all Asian development areas" due to its population growth in the USA.

This research by the tobacco industry also found that Asian populations had a predisposition for smoking since tobacco use rates were high in their home countries. Also, AAPIs would demonstrate large purchasing power and consumer loyalty in order to assimilate into American culture (Muggli, Pollay, Lew, & Joseph, 2002). Although industry targeting has highly influenced the rates of tobacco use in AAPI populations, there are other factors that contribute to high smoking rates among NH populations.

Disaggregated Data: Comparing AAPI and NH Smoking Rates

The 2004 Hawaii Behavioral Risk Factor Surveillance System (BRFSS) found that 17% of adults among all racial and ethnic groups living in Hawaii were current smokers; thus, Hawaii had the third lowest smoking rate in the country (Mitschke, Matsunaga, Loebel, Tatafu, & Robinett, 2008). However, disaggregated data illustrate a great range of disparities in smoking rates by ethnicity and age, most notably that Native Hawaiians have smoking rates that exceed the state average (Mitschke, et al, 2008). The 2004 BRFSS also found that 22.5% of adults aged 18 to 34 years were current smokers, the highest smoking rate among all adult age groups (Mitschke, et al, 2008). A study conducted by Kaholokula, Braun, Santos, & Healani (2008) found that indigenous people of the United States have the highest smoking prevalence compared to all other ethnic groups, with a 32% smoking rate among Native Hawaiians (671) as compared to 10.4% of Asians and 21.9% of non-Hispanic whites (CDC , 2006). National data also show that 23% of American men smoke, compared to 19% of women (CDC, 2008). (See Appendix B).

Tobacco Use in Native Hawaiian Populations

Prevalence and cessation in adult populations.

According to 2005 Hawaii BRFSS data, 17% of adults in Hawaii were current smokers with 27.9% of Native Hawaiian adults being current smokers (Tsark & Santos, 2006). Tsark and Santos surveyed 503 Native Hawaiian smokers in 2000 and 500 Native Hawaiian smokers in 2004. Of the 2004 sample, 40% of current smokers wanted to quit completely, 16% wanted to reduce the amount they smoked, 26% considered quitting but did not feel ready, 8% did not intend to quit, and 11% were unsure (Tsark & Santos, 2006). Most of the people surveyed had attempted to quit at some time in their life with more quit attempts by females than males. Seventy four percent of those surveyed said they were advised by their primary care providers to quit smoking, 62% felt that their smoking habit had impacted their health and wellbeing, and over half were very concerned about their children's exposure to tobacco smoke (Tsark & Santos, 2006). The survey also found that 50% of the smokers surveyed started smoking regularly prior to their eighteenth birthday and 41% began between the ages of 18 and 24 (Tsark & Santos, 2006).

Prevalence in adolescent populations.

Mitschke, et al (2008) reported that 29.6% of middle school students and 53.6% of high school students in Hawaii had ever tried smoking, according to the 2003 Youth Tobacco Survey data. Current smoking rates, defined as cigarette smoking in the past month, are 8.4% for

middle school and 18.7% for high school students (Mitschke, et al, 2008). Similar to adult smoking rates, Native Hawaiian youth have the highest smoking rates among middle school students and rates among this ethnic group have increased most dramatically compared to other major ethnic groups in Hawaii (Mitschke et al, 2008 ; Glanz, Mau, Steffen, Maskarinec, & Arriola, 2007).

The 2007 National BRFSS results also included that 20% of students had smoked cigarettes at least one day during the 30 days prior to survey administration, 7.9% of students had used smokeless tobacco on at least one day during the 30 days prior to survey administration, and 14.2% of students had smoked a whole cigarette before they were 13 years old (CDC, 2007). There is a growing concern in Hawaii about the high smoking rates seen in non-white youth, especially related to the health consequences of these smoking rates (Glanz, et al, 2007). The California Healthy Kids Survey (CHKS) reported a 52% lifetime smoking rate among Pacific Islander 9th graders, compared to 21% for Chinese 9th graders. Pacific Islander 9th graders also had the highest rate of 30-day smoking rates at 20% (Wong, Klinge, & Price, 2003). The Hawaii Student Alcohol and Other Drug Use Survey (HSAD) also found the highest prevalence rates among NHPI groups for ATOD with 27% of Native Hawaiian students reporting cigarette use in the past 30 days (Wong, Klinge, & Price, 2003).

Factors influencing smoking in adolescent population.

The range of factors influencing tobacco use among Native Hawaiian youth have not been clearly identified except for marketing and media influences, low socioeconomic status, and access to tobacco products (Glanz, et al, 2007 ; Wong, Klinge, & Price, 2003). In Glanz et al

(2007), parent and peer smoking behavior were strongly related to adolescent smoking. Glanz, Maskarinec, and Carlin (2005) found that higher socioeconomic status was significantly related to lower ever-smoking status among adolescents. To gain insight into other social determinants of smoking, Glanz, Mau, Steffen, Maskarinec, & Arriola (2007) conducted a study that examined the prevalence, correlates, and implications of tobacco use among Native Hawaiian youth. The study also took into account the possible influence of cultural values and beliefs on smoking behavior.

Ethnicity and smoking.

According to Glanz, et al (2007), further research is needed about self-identification of ethnicity in Native Hawaiians because multiple ethnic labels due to mixed ethnic backgrounds give this group multiple ethnic labels to choose from. Prior research has found associations between strong ethnic identity and lower rates of tobacco use among African American and Hispanic adolescents; however, this has not been explored in NHPI groups (Glanz, et al, 2007). Among Asian American and Pacific Islander youth, parental disappointment was a factor in deciding not to smoke in comparison to Caucasian youth, however differences among Asian American and Native Hawaiian groups were not examined (Mitschke, et al, 2008). Glanz, et al (2007) aimed to explore the effects of ethnic self-identification on smoking behavior among Native Hawaiian youth as well as gain insight into the demographic, social influence, psychological, and cultural variables associated with smoking.

In a similar study, Glanz, Maskarinec, & Carlin (2005) explored the effects of ethnicity and sense of coherence on tobacco use among adolescents in 20 schools across four of the

Hawaiian Islands. Consistent findings in both studies included (a) increased smoking rates among youth from lower socioeconomic statuses, (b) older age, (c) female gender, (d) fewer biological parents at home, (e) lower grade point average, (f) enrollment in public school, and (g) parents who smoke at home (Glanz, et al, 2007 ; Glanz, Maskarinec, & Carlin, 2005). Among the major ethnic groups in Hawaii, Native Hawaiians are more likely to experience higher rates of poverty, unemployment, incarceration, lower rates of education, and worse health outcomes (Glanz, et al, 2007). These factors may contribute to increased smoking rates in Native Hawaiian youth. In a comparison of the California Healthy Kids Survey (CHKS) and the Hawaii Student Alcohol and Other Drug Survey (HSAD), higher rates of alcohol, tobacco, and other drug (ATOD) use were higher among students that did not expect to graduate from a four-year college (Wong, Klinge, & Price, 2003).

Another study found that middle school youth felt pressure to smoke from family, school, and peers, especially when receiving mixed messages from role models about tobacco use (Mitschke, et al, 2008). Results from a literature review by Kim, Ziedonis, & Chen (2007) show that peer and parental smoking behavior were most likely to predict adolescent smoking behavior. Other factors found to influence smoking behavior included social meanings of smoking such as not wanting to refuse an offer; psychological meanings such as forgetting problems, feeling independent, depression, and low self-esteem; and functional meanings such as having more energy (Kim, Ziedonis, & Chen, 2007).

In a review of the literature on tobacco use in AAPIs, Kim, Ziedonis, & Chen (2007) found that NHPI adolescents had the highest lifetime and current smoking rates, compared to all

other AAPI groups. The age of smoking initiation varied from study to study, however AAPI youth were found to begin smoking at older ages than Caucasians (Kim, Ziedonis, & Chen, 2007). Lifetime, current, and daily smoking rates among adolescents in Hawaii were higher than their racial and ethnic counterparts in California (Kim, Ziedonis, & Chen, 2007).

In Hawaii, Native Hawaiian adults and adolescents have higher smoking rates than people of other racial and ethnic backgrounds of similar age. A number of factors may contribute to these higher smoking rates such as low SES, less education, parent and peer smoking behavior, and sense of ethnic identity. Though there is limited research on Native Hawaiian smoking rates outside of the state of Hawaii, existing literature provides insight into possible social determinant of smoking for this population.

Culturally Informed Smoking Cessation Programs

Adults.

Chen's review of smoking cessation research for AAPIs found no peer-reviewed articles on Native Hawaiians or Pacific Islanders (2001). A study from New Zealand illustrated components of a successful cessation program for Maori (the indigenous peoples of New Zealand) women (Kaholokula, Braun, Santos, & Chang, 2008). This program, called Aukati Kai Paipa, was operated within Maori communities by Maori quit coaches who had a high degree of credibility within their respective communities and familiarity with Maori customs and practices, making it culturally appropriate. Results from this study found that 29% of Maori women enrolled in the program successfully quit smoking, compared to 12.5% who quit in the same time period, without enrolling in the study (Kaholokula, Braun, Santos, & Chang, 2008).

Based on the outcomes of this study, Kaholokula, Braun, Santos, & Chang (2008) suggested that a similar program culturally tailored to Native Hawaiians could potentially lead to a similar outcome. These authors then conducted a qualitative investigation among Native Hawaiian former and current adult smokers in a large rural community of Hawaii (Kaholokula, Braun, Santos, & Chang, 2008).

Kaholokula, Braun, Santos, & Chang's (2008) study recruited Native Hawaiian adults who currently or previously smoked participate in focus groups through the Kohala Health Research (KHR) Project, formerly known as the Native Hawaiian Health Research Project. Focus groups were used to determine key themes to identify supports for or barriers to smoking cessation. These supports and barriers were categorized as social, psychological, physical, political, economic, or behavioral (Kaholokula, Braun, Santos, & Chang, 2008). Study results suggested smoking cessation preferences for the adults combined behavioral and pharmacological approaches enhanced by highlighting the negative effects of smoking on family members, especially children, and also including spiritual and religious supports (Kaholokula, Braun, Santos, & Chang, 2008). Behavioral approaches to smoking cessation mentioned in this study included quitting cold turkey, gradually cutting back the number of cigarettes smoked, and quitting other activities such as drinking coffee and alcohol that may trigger smoking (Kaholokula, Braun, Santos, & Chang, 2008). Physical strategies included a pharmacological aid, support groups, support from nonsmoking friends, and spiritual beliefs (Kaholokula, Braun, Santos, & Chang, 2008).

Adolescents.

Research on adult smoking cessation programs that target all adults regardless of race or ethnicity has been extensive. Six thousand studies on adult tobacco-use cessation have been published as of 2003 (Backinger, McDonald, Ossip-Klein, Colby, Maule, Fagan, Husten, & Colwell, 2003). Youth smoking cessation however, was addressed in only 70 published articles with limited information about Native Hawaiian youth. Backinger et al (2003) emphasized a need for more research on youth tobacco cessation because current published literature does not have strong scientific support, nor does it draw from randomized controlled trials. There is a need for effective tobacco cessation programs for youth in light of unsuccessful quit attempts by 75% of youth who smoke and 40% of youth smokers were interested in help to quit smoking (Backinger, et al, 2003). Researchers concluded, after a review of youth cessation programs, the existence of significant gaps in the research including, especially a lack of scientifically rigorous trials evaluating interventions for youth (Backinger, et al, 2003).

Recommendations for future studies on youth tobacco cessation included (a) increasing the numbers of participants in studies, (b) identifying and following through with study follow-up to reliably determine tobacco abstinence, and (c) standardization of terms regarding quit rates. Studies have found differences from 2.5% to 17% quit rates among the same group of youth because “quitting smoking” was not clearly defined for participants (Backinger, et al, 2003). The use of youth vernacular and youth characteristics should also be used in future studies to ensure that study questions are written in terms that youth will understand and to help tailor cessation interventions to youth depending on the characteristics defined in the studies (Backinger, et al, 2003). This includes clearly defining terms and using language appropriate for the youth’s reading level.

Smoking cessation information is lacking for all youth; however, evaluation of culturally tailored programs is even less common. Native Hawaiian adolescents reported the highest self-perceived need for help in regards to ATOD use (Wong, Klinge, & Price, 2003). Based upon the HSAD and CHSK surveys, the self-identified treatment needs for Native Hawaiian adolescents may exceed that of whites (Wong, Klinge, & Price, 2003). More research needs to be conducted to (a) determine cessation needs for all youth, (b) determine effective practices in youth cessation, and (c) specifically tailor interventions for Native Hawaiian youth.

Culturally tailored smoking cessation for Native Hawaiians is a fairly new concept as there is little published literature regarding cessation programs for this population. However, the Kohala Health Research Project is making advances in determining barriers to Native Hawaiian adult smoking cessation. Ideally, their focus group findings will guide further research and inform future smoking cessation programs for Native Hawaiians in Hawaii and the US mainland.

Review of Existing Smoking Cessation Programs for Adults and Youth

The American Lung Association (ALA) has a Freedom From Smoking program that helps adults quit smoking by teaching them certain skills. This program is offered as a group clinic, online program, self-help book, and offers the use of a cessation counselor. The program not only helps smokers to quit, but also helps smokers to prepare to quit prior to setting a quit date (ALA, 2008).

The ALA's program for youth is called Not-On-Tobacco (N-O-T) designed for youth 14 to 19 years. Not-On-Tobacco is a voluntary, 10 week program that has reached 150,000 teens in

48 states characterized by group activities and an emphasis on total health as well as teaching youth how to deal with peer pressure, stress, cravings, and nicotine withdrawal (ALA, 2008).

There was no adaptation of the N-O-T program for specific racial or cultural groups.

The American Heart Association (AHA) does not have a smoking cessation program. Their website, however, has information on quitting that is categorized into five steps: (a) setting a quit date and signing a no-smoking contract, (b) choosing a quit method, (c) deciding if you need medications to help quit, (d) planning for your quit date, and (e) stopping on your quit day (AHA, 2009). These 5 steps were generic across all racial and cultural groups, without culturally tailored information or interventions for diverse populations.

The Office of Minority Health (OMH) reported that Native Hawaiians have higher rates of smoking than non-Hispanic whites and they also have less access to cancer prevention and control programs (OMH, 2009). Though the OMH reports on minority health issues, they do not have their own smoking cessation program, nor do they recommend specific programs for minority populations according to the OMH website.

Public Health - Seattle and King County has a Community Tobacco Cessation Partnership that is based on the US Department of Health and Human Services recommendations for best practice in treating tobacco use and dependence (Public Health – Seattle & King County, 2010). Public Health partners with 30 community clinics that provide regular Basic Tobacco Intervention Service (BTIS) trainings, provides smoking cessation to sexual minorities and the homeless but does not specifically tailor interventions to communities of color (Public Health – Seattle & King County, 2010).

Though there are existing smoking cessation programs available to all Americans through the American Lung Association and Seattle and King County's public health department, there are no programs clearly designed to meet the smoking cessation needs of particular cultural groups, including Native Hawaiians.

Prevention of Smoking Initiation in Native Hawaiian Populations

With increased industry targeting, the AAPI community needs to build its capacity to respond to these marketing campaigns. Tobacco use prevention efforts are needed in AAPI communities, especially among Native Hawaiians, since their smoking rates are among the highest smoking in this group. Lew's research identified AAPI communities as having a very low to low ability to respond to tobacco issues within their communities due to lack of research, infrastructure, programs, and policy development (1998). Although AAPI communities have had low community capacity to respond to tobacco industry targeting, Lew (1998) found that the state of Hawaii has increased capacity due to their unique racial demographics and the increased priority given to tobacco control. In response to the need for increased community capacity for tobacco prevention, the APPEAL Network, which stands for Asian Pacific Partners for Empowerment, Advocacy, and Leadership, was funded by the CDC in 1994 to work on tobacco control in minority communities (Lew, 1998). APPEAL conducts capacity-building training sessions with community leaders in states across the nation, including Hawaii (Lew, 1998).

One of APPEAL's programs is the National Asian American and Pacific Islander Network to Eliminate Health Disparities (NAPNEHD) (APPEAL, NAPNEHD, 2010). This program works to

eliminate health disparities, especially around cardiovascular disease associated with smoking, physical inactivity, and nutrition, in NHPI communities through community education, community collaboration, policy change, leadership and training, and technical assistance (APPEAL, NAPNEHD, 2010).

Another program offered through APPEAL is the Cross Cultural Leadership program. This program brings together community leaders from across the US for training on tobacco control issues for Asian American, Native Hawaiian, and Pacific Islander communities (APPEAL, APPEAL Leadership Program, 2010). Fellows are trained in capacity building, leadership development, and technical assistance to support local tobacco control projects (APPEAL, APPEAL Leadership Program, 2010). After completing the training, the community leaders are given the opportunity to collaborate with each other and plan and implement a tobacco control activity for their individual communities (APPEAL, APPEAL Leadership Program, 2010). Past examples of projects include a tobacco control information booth at the Kauai Farm Bureau County Fair, creation of a website for the Kauai Tobacco Free Community Coalition, and developing a multi-lingual radio public service announcement geared toward youth in Hawaii (APPEAL, APPEAL Leadership Program, 2010).

Hawaii and Smoking Cessation Protocols

As a result of the research completed by Tsark and Santos (2006), the five Native Hawaiian Health Care Systems planned to adopt a systems-wide protocol for approaching all clients who smoke and to build capacity among staff to address tobacco use in Native Hawaiian populations. The systems-wide protocol will incorporate interviewing techniques that will be

used to screen all clients for tobacco use, implement brief intervention services to all identified smokers, set quit dates for those who feel ready, and connect those who are ready to quit with cessation services and resources (Tsark & Santos, 2006). Between January and August 2006, 1265 smokers among the five health care systems were provided with brief intervention services, 5000 quit kits were distributed to smokers, and numerous trainings and presentations were held throughout the community (Tsark & Santos, 2006).

Withy, Lee, & Renger (2007) explored another approach to tobacco initiation prevention and smoking cessation by using Native Hawaiian spiritual principles in conjunction with standard drug and substance abuse treatment. In past programs, cultural factors such as cultural identity and pride were shown to have a positive impact on substance abuse recovery in Maori communities in New Zealand and Native Americans and Alaskan Natives in the US (Withy, Lee & Renger, 2007). These same principles were applied to a Native Hawaiian substance abuse recovery group on the island of Molokai, HI. This program drew from 21 Hawaiian spiritual and cultural values and was specifically targeted toward adolescents (Withy, Lee & Renger, 2007). Although this study has not yet been evaluated, it provides insight into elements of prevention to explore when working with Native Hawaiian smokers. Based upon research done by Withy, Lee, & Renger (2007), the incorporation of these 21 Hawaiian spiritual and cultural values into recovery programs for adolescent substance abusers may increase self esteem, sense of empowerment, cultural identity and pride; the 21 values have been useful in substance abuse programs for Maori and Native American populations. (See Appendix C for the 21 values).

Recommendations for Culturally Informed Smoking Cessation Programs for Native Hawaiians

Although little research has been done on culturally informed smoking cessation programs for Native Hawaiian adults and youth, existing research and literature can inform future studies and smoking cessation programs. Based upon the success of the Aukati Kai Paipa program in Maori communities in New Zealand, a similar approach to smoking cessation may create the same successful outcomes for Native Hawaiians. Programs led by Native Hawaiian community members that incorporate cultural beliefs, values, and language may create a more supportive environment for participants and lead to better outcomes. The incorporation of spiritual, religious, and familial support into NH smoking cessation programs may also lead to increased success for adult participants, as suggested by the focus groups conducted at the Kohala Health Research Project.

Building upon or adapting an existing youth smoking cessation program such as the American Lung Association's N-O-T program may be the best way to reach Native Hawaiian youth smokers. Teaching youth skills on resisting cravings and peer pressure as well as helping them manage stress and nicotine withdrawal symptoms would benefit the youth after the program has ended. Incorporating Native Hawaiian cultural beliefs and values as well as using Native Hawaiian teachers and leaders may also make the messages more effective and relevant to the youth.

Based upon findings from the substance abuse program on Molokai, HI, Withy, Lee, & Renger (2007), have suggested that increased understanding of individual smokers' needs through cultural awareness and culturally tailored programs can increase treatment success.

By teaching traditional Native Hawaiian cultural and spiritual values in smoking cessation, youth may be more receptive to treatment, find treatment more worthwhile, and have an increased willingness to help others quit smoking, as was found with the substance abuse program graduates on Molokai (Withy, Lee, & Renger, 2007).

Relevance to Advanced Practice Nursing

Based upon the review of the literature, this author has concluded that tobacco use and related illnesses as well as culturally relevant smoking cessation programs need to be more clearly addressed in Native Hawaiian communities. Disaggregated data have shown high smoking rates among Native Hawaiians as well as high rates of cardiovascular disease and lung cancer compared to other racial and ethnic groups. The disproportional use of tobacco use and tobacco related disease in Native Hawaiian populations clearly suggest a need for increased education and culturally relevant prevention and cessation programs. Also, further research about smoking patterns and factors associated with smoking in Native Hawaiian communities should extend beyond the Hawaiian Islands into the mainland United States in order to improve the health of these communities.

Social justice is one of the competencies of advanced public health nursing. Addressing the prevalence of smoking and tobacco related illness in Native Hawaiian populations can be useful in reducing health disparities and increasing access to culturally relevant care which may produce better health related outcomes in this population.

Through the review of the literature, this author conclude there is a need for more research devoted to tobacco use and smoking cessation in Native Hawaiian communities. With

increased access to disaggregated data over the past 10 years, there has been increased concern about tobacco use in Native Hawaiian populations. Further research can include development, implementation, and evaluation of successful tobacco cessation programs for Native Hawaiian youth and adult populations. Future research on Native Hawaiian tobacco use and factors related to smoking initiation and smoking cessation can potentially increase the development of culturally competency educational programs related to prevention of smoking initiation and smoking cessation by identifying the unique needs of this population and also provide a basis for practitioners to use to develop effective ways to engage Native Hawaiians in smoking cessation. With regards to research, further studies on Native Hawaiian smoking cessation will help evaluate as well as complement existing research in order to turn the findings into practice.

Implications for public health departments.

Public health departments, especially in areas with large Native Hawaiian populations, would benefit from future research on Native Hawaiian tobacco use and tobacco related disease. With more information about supports and barriers to tobacco initiation, successful cessation programs, and perceptions of tobacco use, public health departments can better educate Native Hawaiian communities.

Using Native Hawaiian cultural values based upon published works and incorporating these values into existing smoking cessation programs, such as Not-On-Tobacco and Freedom from Smoking, would increase the relevance of these programs to the NH community. By teaching Native Hawaiians the ways in which tobacco use affects their community, tobacco use

and smoking cessation both become more relevant which will increase the success of smoking cessation programs.

Research by Tsark and Santos (2006) suggest that addressing tobacco use through the incorporation of interviewing techniques and brief intervention services may help identify Native Hawaiian smokers that feel ready to quit. Health care providers could then refer Native Hawaiian patients to culturally tailored smoking cessation programs if more research is done to create and implement such programs. Incorporating brief intervention services into primary care may encourage those who want to quit to take the next step by connecting current smokers with information and smoking cessation programs. If these programs are specifically designed for Native Hawaiian populations, enrollment and successful completion may be increased.

References

- Aluli, N.; Reyes, P.; Tsark, J. (2007). Cardiovascular disease disparities in Native Hawaiians. *Journal of Cardiometabolic Syndrome*, (Fall 2007), 250-253.
- American Heart Association. (2009). Getting ready to quit smoking. Retrieved from <http://www.americanheart.org/presenter.jhtml?identifier=3048013>.
- American Lung Association. (2008). About N-O-T. Retrieved from <http://www.notontobacco.com/about-n-o-t.php>.
- American Lung Association. (2008). Freedom from smoking. Retrieved from <http://www.ffsonline.org/>.
- Asian Pacific Islander Coalition Against Tobacco. (2010). Retrieved from <http://www.apicat.org>.
- Asian Pacific Partners for Empowerment, Advocacy, and Leadership. (2010). About. Retrieved from <http://www.appealforcommunities.org>.
- Asian Pacific Partners for Empowerment, Advocacy, and Leadership. (2010). APPEAL leadership program. Retrieved from <http://appealforcommunities.org/appealleadershipprogram>.
- Asian Pacific Partners for Empowerment, Advocacy, and Leadership. (2010). NAPNEHD. Retrieved from <http://appealforcommunities.org/napnehd>.
- Backinger, C., McDonald, P., Ossip-Klein, D., Colby, S., Maule, C., Fagan, P., Husten, C. & Colwell, B. (2003). Improving the future of youth smoking cessation. *American Journal of Health Behavior*, 27(Suppl 2), S170-S184.

Casken, J. (2001). Improved health status for Native Hawaiians: Not just what the doctor ordered. *Wicazo SA Review*, (Spring), 75-89.

Centers for Disease Control and Prevention. (2000). Rates of New Lung Cancer Cases. Retrieved from <http://www.cdc.gov/Features/dsLungCancer/>

Centers for Disease Control and Prevention. (2005). Rates of new lung cancer cases. Retrieved from <http://www.cdc.gov/Features/dsLungcancer/>.

Centers for Disease Control and Prevention. (2006). United States Cancer Statistics. Retrieved from <http://apps.nccd.cdc.gov/uscs/statevsnational.aspx>

Centers for Disease Control and Prevention. (2007). 2007 national youth risk behavior survey. Retrieved from http://www.cdc.gov/HealthyYouth/yrbs/pdf/yrbs07_us_overview.pdf.

Centers for Disease Control and Prevention. (2007). November 2007. Cigarette smoking among adults-US, 2007. *Morbidity and Mortality Weekly Report*, 56(44), 1157-1161.

Centers for Disease Control and Prevention. (2008). Behavioral Risk Factor Surveillance System 2007-2008: Hawaii. Retrieved from http://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2010/pdfs/states/hawaii.pdf
http://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2010/pdfs/states/hawaii.pdf.

Centers for Disease Control and Prevention. (2010). Tobacco use. Targeting the nation's leading killer: At a glance 2010. Retrieved from <http://www.cdc.gov/chronicdisease/resources/publications/aag/osh.htm>.

Chu, K. & Hubbell, A. (2008). Reducing cancer health disparities: Perspective of the National Cancer Institute. *Cancer Detection and Prevention*, 32 (Suppl 1), S1-S3.

Glanz, K., Maskarinec, G., & Carlin, L. (2005). Ethnicity, sense of coherence, and tobacco use among adolescents. *Annals of Behavioral Medicine*, 29(3), 192-199.

Glanz, K., Mau, M., Steffen, A., Maskarinec, G., & Arriola, K. (2007). Tobacco use among Native Hawaiian middle school students: Its prevalence, correlates and implications. *Ethnicity and Health*, 12(3), 227-244.

GoHawaii.com. (2010). Hawaii History. Retrieved from <http://gohawaii.com/statewide/travel-tips/history>.

Haiman, C., Stram, D., Wilkens, L., & Pike, M. (2006). Ethnic and racial differences in the smoking-related risk of lung cancer. *The New England Journal of Medicine*, 354(4), 333-342.

Hawaii Fast Facts and Trivia. (2010). Retrieved from <http://www.50states.com/facts/hawaii.htm>.

Hawaii History. (2010). Retrieved from <http://www.GoHawaii.com>.

Hawaii Quick Facts (2009). United States Census Bureau. Retrieved from <http://quickfacts.census.gov/qfd/states/15000.html>.

Jackson, G. (2010). Tobacco: The most important preventable cause of cardiovascular disease. *The International Journal of Clinical Practice*, 64(3), 279-284.

- Kaholokula, J., Braun, K., Santos, J., & Chang, Healani. (2008). Culturally informed smoking cessation strategies for Native Hawaiians. *Nicotine Tobacco Research, 10*(4), 671-681
- Kim, S., Ziedonis, D., & Chen, K. (2007). Tobacco use and dependence in Asian American and Pacific Islander adolescents: A Review of the Literature. *Journal of Ethnicity and Substance Abuse, 6*(3), 113-142.
- Lew, R. (1998). A national effort to reduce tobacco use among Asian Americans and Pacific Islanders. *Cancer Supplement, 83* (8) , 1818 – 1820.
- Lew, R. & Tanjasiri, S.P. (2003). Slowing the epidemic of tobacco use Among Asian Americans and Pacific Islanders. *American Journal of Public Health, 93*(5), 764-768.
- Mitschke, D., Matsunaga, D., Loebel, K., Tatafu, E., & Robinett, H. (2008). Multi-ethnic adolescents' attitudes toward smoking: A focus group analysis. *The Science of Health Promotion, 22*(6), 383-398.
- Moy, K., Sallis, J., & David, K. (2010). Health indicators of Native Hawaiian and Pacific Islanders in the United States. *Journal of Community Health, 35*, 81-92.
- Muggli, M.E., Pollay, R.W., Lew, R., & Joseph, A.M. (2002). Targeting of Asian Americans and Pacific Islanders by the tobacco industry: results from the Minnesota Tobacco Document Depository. *Tobacco Control 11*, 201-209.
- Office of Minority Health. (2007). Health status of Asian American and Pacific Islander women. *U.S. Department of Health & Human Services*. Retrieved from <http://minorityhealth.hhs.gov/templates/content.aspx?ID=3721>.
- Office of Minority Health. (2009). Native Hawaiian and other Pacific Islanders. Retrieved from <http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlID=71>.

Papa Ola Lokahi. (2007). Threads in the human tapestry: The disaggregation of the API identifier and the importance of having the NHOPI (Native Hawaiian and Other Pacific Islander) category in data collection, analysis, and reporting. Honolulu, HI. Retrieved from http://www.papaolalokahi.org/coconut/news/pdf/Disaggregation_API_AAPI.pdf.

Public Health – Seattle & King County. (2010). Community tobacco cessation partnership. Retrieved from <http://www.kingcounty.gov/healthservices/health/drugs/tobacco/ctcp.aspx>.

Tobacco use: Targeting the nation's leading killer. (2010). *National Center for Chronic Disease Prevention and Health Promotion. CDC*. Retrieved from http://www.cdc.gov/chronicdisease/resources/publications/aag/pdf/2010/tobacco_2010.pdf.

Questions and answers for Census 2000 data on race. March 14, 2001. United States Census Bureau. Retrieved from <http://www.census.gov/Press-Release/www/2001/raceqandas.html>.

Saad, L. (2008). U.S. smoking rate still coming down. *Gallup Consulting*. Retrieved from <http://www.gallup.com/poll/109048/us-smoking-rate-still-coming-down.aspx>.

Tsark, J. & Santos, L.A. (2006). Collaborating resources for systems-wide change in tobacco cessation". *Imi Hale – Native Hawaiian Cancer Network*.

United States Census Bureau. (2007). Asian Pacific Americans by the numbers. Retrieved from <http://www.infoplease.com/spot/asiancensus1.html>.

United States Census Bureau. (2010). State and county quick facts: Race. Retrieved from http://quickfacts.census.gov/qfd/meta/long_68184.htm.

Withy, K.; Lee, W.; & Renger, R. (2007). A practical framework for evaluating a culturally tailored adolescent substance abuse treatment programme in Molokai, Hawaii. *Ethnicity and Health, 12*(5), 483-496.

Wong, M.M., Klinge, R.S., & Price, R.K. (2004). Alcohol, tobacco, and other drug use among Asian American and Pacific Islander adolescents in California and Hawaii. *Addictive Behaviors, 29*, 127-141.

Appendix A

Web Resources for Smoking Cessation

Existing Smoking Cessation Programs

American Heart Association. Getting ready to quit smoking.
<http://www.americanheart.org/presenter.jhtml?identifier=3048013>

American Lung Association. Freedom from Smoking.
<http://www.ffsonline.org/>

American Lung Association. Not on Tobacco.
<http://www.notontobacco.com/about-n-o-t.php>

Coalition for a Tobacco-Free Hawaii.
<http://www.tobaccofreehawaii.org>

Public Health – Seattle & King County. Community tobacco cessation partnership.
<http://www.kingcounty.gov/healthservices/health/drugs/tobacco/ctcp.aspx>

Native Hawaiian Health Resources

Department of Native Hawaiian Health
<http://www3.jabsom.hawaii.edu/dnhh/>

Imi Hale
<http://www.imihale.org/>

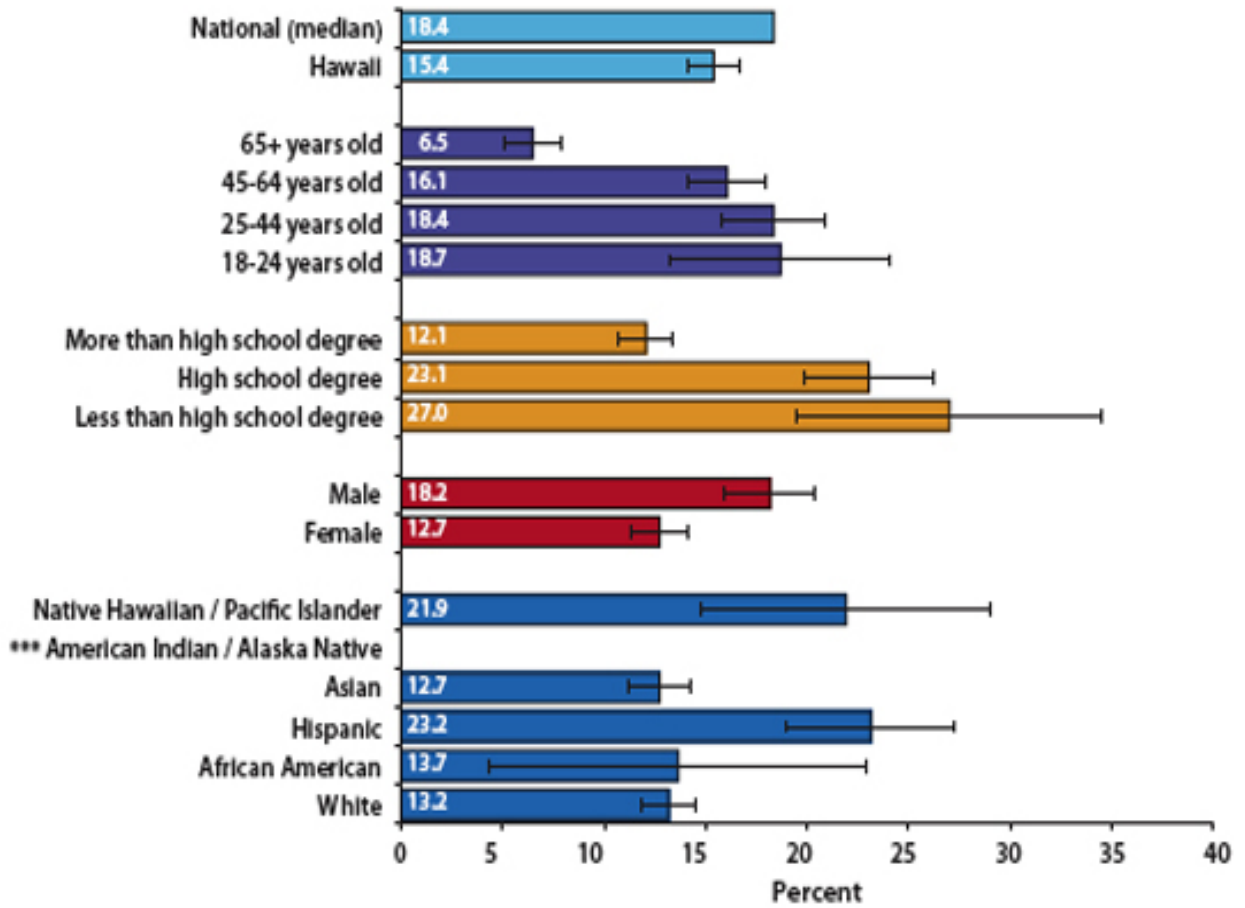
Napuuwai Native Hawaiian Healthcare System
<http://www.napuuwai.com/>

Native Hawaiian Healthcare
<http://www.nativehawaiianhealth.net/>

Papa Ola Lokahi
<http://papaolalokahi.org/>

Appendix B

Current Smoking among Adults by Demographic Characteristics



*** Data not shown because sample size is less than 50.

Source: BRFSS, 2007-2008

Centers for Disease Control, 2008

Figure 1

Twenty one principles of Pono curriculum¹.

Withy, Lee, Renger (2007)

<i>Aloha Ke Akua</i> God is love	companion Friendly	<i>Laulima</i> first time Cooperation Working together
<i>Na Kupuna</i> Elders	<i>Malama</i> To take care	<i>Ho'opaipai</i> To Encourage
<i>Lokomaika'i</i> Kindness Good will Generosity	Honor <i>Alaka'i</i> To lead Share with all	<i>Lokahi</i> Unity, agreement
<i>Ha'aha'a</i> Humility	<i>Kama'ilio</i> Conversation	<i>Kokua</i> Assist Help Comfort
<i>Huikala</i> To cleanse Purify Forgive	<i>Kukakuka</i> Discussion	<i>Koho like</i> Choose together
<i>Ho'o pono pono-</i> To right a wrong	<i>Mihi</i> To repent	<i>'Olu'olu</i> Please Kind Loving
<i>Kupono</i> Just Honest Upright Fair	<i>Kako'o</i> To support Assist Help	<i>Ahonui</i> Fortuna
<i>Kupa'a</i> -Steadfast Support the truth, loyal, faithful	<i>Akahai</i> Gentle Try for	
<i>Hoalohalo</i> Beloved		