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Costs of Smoking and Secondhand Smoke Exposure in California American Indian Communities

(Anniversary Report)

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Report

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A report of the American Indian Research Program, UCLA Center for Health Policy Research

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The views and opinions expressed in this report do not necessarily represent those of the Regents of the University of California, the California Rural Indian Health Board, the Indian Health Service, DHHS, the project advisory board, or any state or county executive agency that provided information for the publication.

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The Tobacco Education and Prevention Technical Support Center (TEPTS)
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Working to Keep Tobacco Sacred

The Tobacco Education and Prevention Technical Support Center (TEPTS) program is funded through the Center for Disease Control and Prevention, Office on Smoking and Health. The TEPTS Center is funded with two cooperative agreement grants from 2005-2010 to provide American Indian specific tobacco control outreach to California and Nevada Tribes, as well as American Indian urban programs in California, Nevada and Utah, # 5 U1A DP925117.

Who We Are

TEPTS goals are to:

- Reduce the initiation of commercial tobacco abuse among youth
- Educate youth and adults about the hazards of smoking commercial tobacco
- Reduce the amount of exposure of secondhand smoke to people in homes, work, and community buildings
- Promote cessation efforts of commercial tobacco abuse
- Educate on the sacred and traditional use of tobacco among the American Indian culture
- Provide culturally competent trainings and technical support

Acknowledgements

The California Rural Indian Health Board (CRIHB) would like to acknowledge the contributions of the Tobacco Education and Prevention Technical Support (TEPTS) Center Regional Collaborative, the CRIHB Board of Directors, the CRIHB Tribal Government's Consultation Committee, Mark LeBeau, Chairman Matt Franklin, and the Centers for Disease Control and Prevention, Office of Smoking and Health.

Additionally, the American Indian Research Program, UCLA Center for Health Policy Research would like to acknowledge the contributions of Dr. Nathaniel Cobb, Dr. Doris Cook, Professor Sam Deloria, Dr. Daniel Dickerson, Dr. David Espey, Annie Fair, Professor Carol Goldberg, Dr. David Homa, Irene Ma, Dr. Robert Merritt, Dr. Luis R. Peña, Dr. Michael Trujillo, Meghan Wohr, Kurt Schweigman who developed the vision for this anniversary report, Gwen Driscoll and the communication program at the UCLA Center for Health Policy Research. Lastly, we would like to acknowledge Professor E. Richard Brown and the California Health Interview Survey staff and funders; without their ongoing contributions to the health of California's population, we would not have accurate data on the American Indian population to produce this report.

Your Life Is Our Future.
You CAN Stop Smoking Today!
1-800-NO-BUTTS

CALIFORNIA RURAL INDIAN HEALTH BOARD, INC.

June 8, 2010

Dear Readers,

In 2000, the American Indian Tobacco Education Network (AITEN) of the California Rural Indian Health Board, Inc., funded by a grant through the California Department of Health Services, Tobacco Control Section published the *Cost of Smoking and Environmental Tobacco Exposure in California American Indian Communities.* Through its work with tribal communities, AITEN identified a need for specific information and data on the negative effects of smoking and second hand smoke on the health and economic status of American Indians in California. Prior to the *Cost of Smoking* publication, data on the health effects of commercial tobacco upon American Indian communities had not been readily available without extensive research and statistical manipulation. The purpose of the original manuscript was to fill in this gap of information and make it available to tribal leaders, their members and communities.

Ten years after the original publication, commercial tobacco use among American Indians continues to be higher than any other racial group and is the number one preventable cause of death in the United States. The Tobacco Education and Prevention Technical Support (TEPTS) Center, funded by the Centers for Disease Control, Office of Smoking and Health has partnered with the University of California Los Angeles Center for Health Policy Research to update the *Cost of Smoking* manuscript and release an anniversary edition. This updated manuscript, keeping with the AITEN tradition, presents current data for tribal leaders, their members, and communities on commercial tobacco use and its negative health, economic and cultural impact. This manuscript will allow tribes, tribal leaders and tribal communities the opportunity to make informed decisions regarding commercial tobacco issues.

This data serves to empower American Indians in California to formulate strategies, as well as policies and ordinances, which will promote healthier tribal communities for future generations. TEPTS and the California Rural Indian Health Board, Inc., which has a long history of health advocacy for tribal communities, encourage tribal leaders and community members to use this information and address these issues as they see fit. We ask you to join us in our efforts to advocate for improved community health, and for tribal health needs.

James Allen Crouch, MPH
Executive Director
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I. Executive Summary

Since European contact, American Indians in California have been impacted by numerous health problems and epidemics. Public health and modern medicine have helped to reduce many of the deadly epidemics that affected California tribes and their tribal members. Infectious diseases such as small pox and polio no longer plague our communities, but other chronic diseases such as diabetes and heart disease have taken their place. One hazardous substance, commercial tobacco, has been directly linked to many of these chronic health problems and health effects. Many tribal programs and efforts have focused on preventing and reducing commercial tobacco at the individual level, and some communities have taken a community-wide prevention approach.

This publication, *Costs of Smoking and Secondhand Smoke Exposure in California American Indian Communities,* serves as a guidebook and includes new data and new approaches to commercial tobacco prevention and control that tribes and communities may localize to match their needs and health agenda. The major guidebook sections review the following topics:

- Commercial tobacco and its health effects and associated illnesses
- Commercial tobacco behaviors and associated risk factors
- Secondhand smoke and its effects on pregnancy and children
- Tribal and community commercial tobacco prevention program models
- Financial impact of commercial tobacco
- Commercial tribal tobacco control policy approaches

Tribes have the inherent and sovereign right and responsibility to protect the health of their tribal and community members. Tobacco is one of the greatest preventable health threats to native communities. Native people use commercial tobacco at greater rates than other racial and ethnic populations, and therefore carry a greater burden with tobacco's health consequences and costs. Tribes may choose to address commercial tobacco at a community-wide and policy level—just as federal, state and local governments have—in addition to their existing health programs that target an individual's commercial tobacco use. A public health approach provides a community health approach that is flexible and can accommodate local culture and priorities while focusing on the health and wellbeing of all community members.

The following are highlights of the key findings in this publication:

- Health Effects and Associated Illnesses of Commercial Tobacco Use
  - Commercial tobacco use causes respiratory disease, cardiovascular disease, one third of all cancers, is a risk factor for diabetes and increases the complications of diabetes. Commercial tobacco use is associated with psychiatric and substance use disorders, and is co-morbid with binge drinking.

- American Indians in California: Tobacco Behaviors and Associated Risk Factors
  - Similar to national trends; studies conducted to date have also found high smoking rates for American Indians relative to other California populations. Utilizing data from the 2007 California Health Interview Survey (CHIS 2007) the smoking prevalence for American Indians and Alaska Natives age 18 and older was 19.7%. Over one-quarter of AIANs (25.5%) are former smokers.

- The smoking rate for American Indian adolescents in California is similar to the statewide *All Races* rate of 6% [1]
- While American Indians have the highest rates of tobacco smoking in California, they tend to smoke fewer cigarettes per day than other populations [1, 2].

❖ Health Insurance, Access to Care and Usual Source of Care
- Nonelderly American Indians are nearly two times as likely to be uninsured compared to non-Latino whites (28% versus 10%, respectively). More than one-third of nonelderly American Indians (41%) have employment-based insurance.
- Most American Indians in California do not qualify for health coverage through the Indian Health Service (IHS) in California because they are members of tribes in other states. Only 10% of American Indians in California statewide report coverage by the Indian Health service [3]. Twenty-seven per cent (27%) of American Indians from California Tribes report Indian Health Service health coverage [1].
- Nearly one in five American Indian adults in California (19%) report that they do not have a usual source of health care [1].

❖ Secondhand Smoke and Its Effects on Pregnancy and Children
- Smoking, Pregnancy and Breastfeeding
  - Pregnant women who smoke cigarettes run an increased risk of miscarriage, stillborn or premature infants, or infants with low birthweight. Maternal smoking may also be associated with learning and behavioral problems in children. Smoking more than one pack of cigarettes per day during pregnancy nearly doubles the risk that the affected child will become addicted to tobacco if that child starts smoking [4].
  - In California the percent of American Indian women who smoked during pregnancy was 9.4% for the years 1996 -1998 [5].
  - Nicotine is an addictive drug that passes into breast milk, can make babies fussy and can reduce breast milk production.
- The most common place children are exposed to secondhand smoke is in their own home. In California, one in ten American Indian children (10%) live in a home where smoking occurs [1].
- Sudden Infant Death Syndrome (SIDS), ear infections and asthma are all health effects of secondhand smoke exposure.

❖ Tribal and Community Tobacco Prevention
- Quitting smoking has immediate as well as long-term benefits for individuals and their loved ones. It is important for communities and individuals to know that stopping smoking is possible. Indeed, one-half of Natives in California who ever smoked have been successful at quitting [1].
- Cessation is often thought of as an individual person's health behavior or responsibility; however, communities can put in place cessation programs and mechanisms that support healthy behaviors.
- There are three types of evidence-based Community Health Education programs recommended and proven effective. These are: social marketing tobacco interventions; community mobilization to restrict access to tobacco products for minors; and worksite wellness policies and health education interventions.

❖ Costs of Commercial Tobacco Related Morbidity and Mortality
- When a person becomes ill or dies from smoking-related disease, there are also

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families and communities that are affected. In addition to the human suffering and loss of life that occurs, there are easily measured losses in productivity and health care spending that can be estimated. When we look at the cost of smoking for American Indians in California, we find that it is extremely high—$795 million per year.

- Additional findings include the impact of cigarette smoking on productivity losses for California Indians due to their increased risks for disease. Health risks for ischemic heart disease—one of many types of heart disease—increase with people who smoke. The yearly productivity losses that are attributable to smokers who have this disease are in the millions of dollars.
- There are additional costs for the care of infants born to American Indian women who smoke during pregnancy [6]. The estimated costs are $1.76 million for the cost of additional care at delivery and for infants in the neonatal period.
- When one person becomes ill or dies from a smoking-related disease, a family is also affected. The community as a whole also suffers due to the loss of that person's cultural or traditional knowledge, friendship, societal and community contributions. For every community member lost to early death, there is a loss in knowledge, community contribution and family relationships.

❖ Tribal Tobacco Control Policy

- Because American Indians have the highest rates of commercial tobacco use, our communities are suffering disproportionately from tobacco-related deaths and disease. Tribes should prioritize tobacco control policy in order to protect the sustainability of future generations.
- Tribal policies regarding tobacco control can be organized into three categories of intervention [23]:
  - Reducing tobacco use initiation
  - Increasing tobacco use cessation
  - Reducing exposure to secondhand smoke
- As sovereign nations, Indian tribes can develop tobacco policies based on five standard policy approaches used to control commercial tobacco use: taxation; control of availability; smoking bans and restrictions; control of tobacco industry advertising; and education and cessation treatment.
- Tribal governments and tribal community members can play an important role in protecting our communities from the next wave of loss due to cancer and other tobacco-related diseases by adopting policies that reduce the harmful effects of commercial tobacco use.
- Monetary costs do not reflect all the losses suffered when just *one* American Indian person dies from commercial tobacco abuse, but they do send a dramatic message regarding the financial losses that are incurred. Tribes can take a leadership role to address these losses through policy changes, ordinances and educational efforts. An example of this would be to develop policies which protect American Indian community members from secondhand smoke. While each tribe may vary in what they do, even one small step against the tobacco industry can help to positively impact American Indian families, communities and lives. We encourage tribal leaders and members to consider what they will do to protect future generations.

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II. Sacred Tobacco Use

"Tobacco is a sacred gift from the Creator; Tobacco deserves respect."
- (Anonymous)

Tobacco has played an important role with many American Indian tribes for time immemorial. Creation stories and other native legends share the importance that tobacco has with many tribes. Many of them teach about the relationship American Indian people have with the earth and all of creation. Tobacco is used in medicinal ways with many tribes. It is important that each tribe recognizes its own traditional practices with this medicine. Traditional uses of native tobacco do not always involve smoking. It is often used as an offering when praying to the Creator, or it may be given as a gift for an elder or medicine person. When gathered, stored and used according to tribal traditions, it can promote good health and assist with spiritual guidance and growth.

Many native traditions teach about moderation and respect. Uses of native tobacco require both moderation according to tribal beliefs and practices, *and* respect in order to prevent abuse and misuse of a powerful gift of medicine. These traditional beliefs and values are used by the commercial tobacco industry to market certain tobacco products, such as "American Spirit" brand in American Indian communities, and to specifically target some tribes through extensive promotions, advertising and sponsorship campaigns, such as sponsoring some pow-wow and rodeo events in tribal communities [7]. Because youth are particularly vulnerable to tobacco-industry promotions and advertising, action against these tobacco industry practices can help tribal communities to keep tobacco sacred [8].

By separating traditional tobacco use from commercial tobacco use, we can begin to address the urgent health issues for American Indians associated with commercial tobacco use while respecting tobacco's sacred role within many native communities [9].

Yokut Creation

In the old days, there was nothing in this world. It was just full of water. The birds and animals were here first. Eagle said, "I'm tired of living over this water. I want a little oak to grow up there in the middle." This happened…

There was also present five varieties of ducks, Haiyano, Hoboda, Waclcina, Teututpoi, and a very little one. They were going to try to get some dirt up from under the water. Eagle sent Dove after some tobacco which he needed to mix with the sand. Dove got it and gave it to the chief. Eagle said to the littlest duck, "Can you go to the bottom and get some sand?" He tied a milkweed string to the duck's foot, and the bird dived into the water. He stayed down all day and half the night. He died without striking the bottom. Eagle pulled him out, and restored him to consciousness. The little duck told his friends that he had not reached the bottom. All the other ducks tried with the same result.

The Eagle called on Turtle to try. He said he was willing. He went down and remained under the water a whole day and a whole night. He was nearly dead when he came up to the surface. While he was under the water he had barely succeeded in scratching the bottom with his fingertips. Some sand was lodged under his fingernails. Eagle got out this sand. Eagle, the chief, then rolled the sand and tobacco together and pounded them into mortar. He took up a handful of the mixture and scattered it toward the south, east, north, and lastly toward the west. As he did so he said, "In twelve days all this water will go down." This happened. All the birds and animals were able to walk about on the ground.

Cayton, Yokuts Mono Chiefs and Shamans, Reprinted from "Traditional Tobacco Use in Southern California," News From Native California.

III. Health Effects and Associated Illnesses of Commercial Tobacco Use

In this section we present brief reviews and data on the leading health effects and associated illnesses of commercial tobacco use on American Indians in California*, which include respiratory effects and illnesses, cardiovascular disease and cancer. This is followed by brief reviews of two select tobacco co-morbidities: first diabetes and second, mental health. Secondhand smoke will be discussed later in this guidebook. This section is not intended to be a comprehensive resource on the pathophysiology of tobacco and its effects on people. The evidence is clear; commercial tobacco use causes disease and death. We provide additional resources in the Appendices for further information on the pathophysiology of tobacco use.

* American Indians refers to American Indians and Alaska Natives throughout this guidebook. Where we use the term California tribe we specifically mean persons who are members of Indigenous tribes geographically located in the state of California.

Tobacco and Respiratory Effects and Illnesses

Smoking causes lung diseases such as chronic obstructive pulmonary disease (COPD), which includes chronic bronchitis and emphysema. About 90% of all deaths from chronic obstructive lung diseases are attributable to cigarette smoking [10].

Tobacco and Cardiovascular Disease

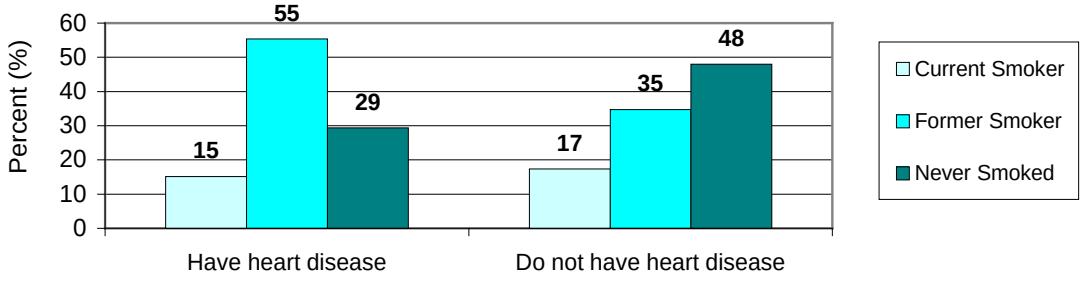
Smoking causes coronary heart disease, the leading cause of death in the United States. Cigarette smokers are 2–4 times more likely to develop coronary heart disease than nonsmokers. Cigarette smoking approximately doubles a person's risk for stroke. Cigarette smoking causes reduced circulation by narrowing the blood vessels (arteries).

There is about a 25- 30% increase in the risk of coronary heart disease from exposure to secondhand smoke.

Fifteen percent of California American Indian adults over the age of 45 who have been diagnosed with heart disease currently smoke; 55% of adults who have heart disease are former smokers compared to 35% of adults who do not have heart disease (Exhibit 1).

Exhibit 1.

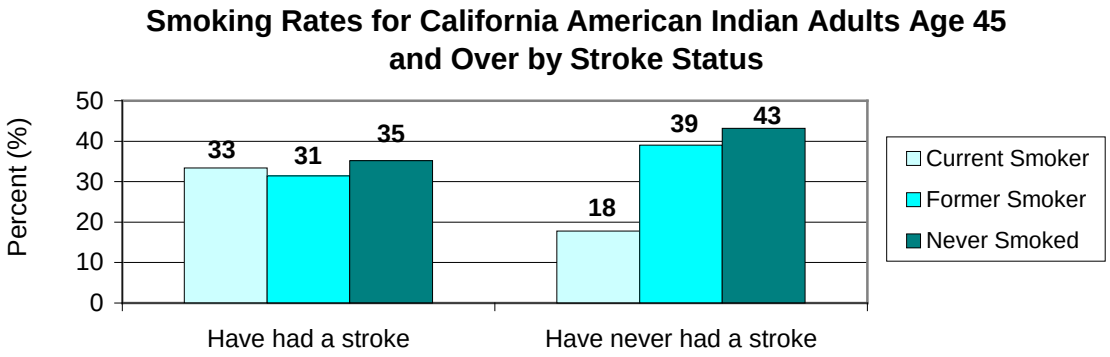
Smoking Rates for California American Indian Adults Age 45 and Over by Heart Disease Status



Source: 2007 California Health Interview Survey

Current smoking rates are nearly twice as high among California American Indian adults over the age of 45 who have had a stroke; 35% of those who have had a stroke have never smoked compared to 43% of those who have never had a stroke (Exhibit 2).

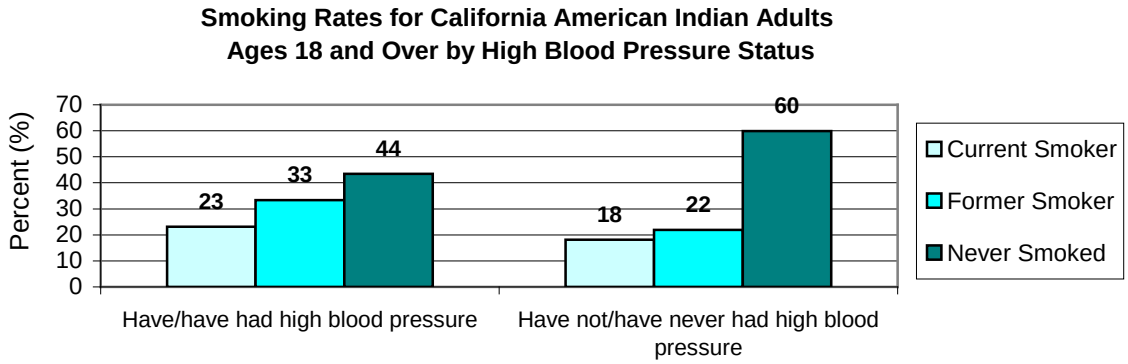
Exhibit 2.



Source: 2005 California Health Interview Survey

Current and former smoking rates are higher for California American Indian adults over the age of 18 for those who have high blood pressure compared to those who do not have high blood pressure (Exhibit 3).

Exhibit 3.



Source: 2007 California Health Interview Survey

Tobacco and Cancer

Cancer is a disease that begins if new cells—the body's basic building material—grow when the

body does not need them to grow or when old cells do not die when they should. These *extra* cells build up and form a lump called a tumor. A tumor can grow if it is not treated. There are two types of tumors. One causes cancer (malignant tumor) and the other does not (benign tumor). See the Resources section in Appendices for information on cancer, and the Cancer 101 tutorial shared by Guthrie in collaboration with the Northwest Portland Area Indian Health Board at *www.healthpolicy.ucla.edu* or *http://www.npaihb.org/programs/project/ntccp_cancer_101/* [11].

While the cancer incidence rate is decreasing among whites, it is increasing among AIAN populations. Cancer is the second leading cause of death for AIANs 55 years and over. Nationally, AIANs have fewer new cases of cancer reported each year (lower cancer incidence) than other races/ethnicities, but are diagnosed more frequently with late-stage disease and have the poorest survivorship from cancer compared to other populations [2, 3, 12]. This may be attributable to lower screening to detect screenable cancers such as colonoscopy, and higher risk factors of tobacco use behavior.

Tobacco use is a risk factor for lung, kidney and colorectal cancers, and is associated with stomach cancer. Other risk factors for cancer include obesity, no physical activity and alcohol use. Cigarette smoking accounts for about one-third of all cancers, including 90% of lung cancer cases. It is the second leading cancer for American Indian men and women both nationally and in California. Smoking and obesity together account for 20 -30% of kidney and renal cancers in the U.S. American Indians have the highest rates of kidney and gallbladder cancer. Kidney and renal cancer rank fourth both nationally and in California for American Indians. Smoking is associated with an increased risk of developing or dying from colorectal cancer. Colon and rectal cancers rank third both nationally and in California for American Indians [2].

Cancer screening is very important in diagnosing cancer at early, treatable stages of the disease. Colonoscopy, sigmoidoscopy and fecal occult blood testing (FOBT) are screening tools used for the detection of colon cancer. American Indians are not meeting the Healthy People 2010 guidelines for colorectal screening [2]. According to CHIS 2007, 70% of American Indians age 50 and over report ever having a colon screening; this is similar to other races/ethnicities with a statewide *All Races* rate of 75%. It is important to note that American Indians age 50 and over who are current smokers are *less* likely to have ever had a colon screening compared to current nonsmokers, 56% compared to 72%.

SURGEON GENERAL'S WARNING: Smoking
Causes Lung Cancer, Heart Disease
Emphysema, And May Complicate Pregnancy.

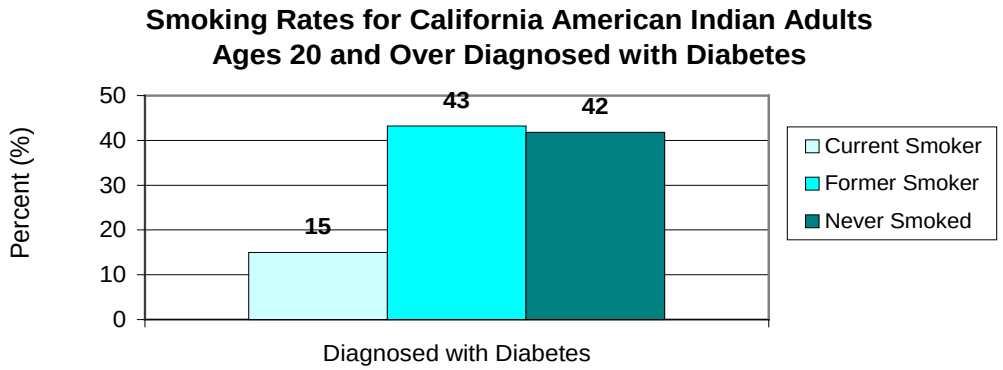
Tobacco and Diabetes

Commercial tobacco use is a risk factor for diabetes [13]. Heart and blood vessel (circulatory) problems are the main causes of sickness and death for people with diabetes. Smoking commercial tobacco increases a person's risk of circulatory problems, as well as high blood pressure and high cholesterol [14].

Smoking exacerbates the harmful effects of diabetes by increasing insulin resistance and worsening diabetes control. In those people with type 1 or type 2 diabetes, smoking increases microvascular and macrovascular complications; it heightens the risk of death from heart disease and stroke; and it increases the incidence of neuropathy, nephropathy, retinopathy and gum disease [15]. Quitting smoking will lower this risk. See Appendix E for additional resources.

Fifteen percent of California American Indian adults over the age of 20 who have been diagnosed with diabetes currently smoke. Since those who have diabetes and also smoke are at greater risk for circulatory problems, which leads to greater risk for infection/amputation, this group should be targeted for smoking cessation intervention programs to prevent further diabetes complications (Exhibit 4).

Exhibit 4.



Source: 2005 and 2007 pooled California Health Interview Survey

Tobacco and Mental Health

In general U.S. populations, nicotine dependence has been found to be significantly associated with various psychiatric and substance use disorders. For example, in a study utilizing the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) data, nicotine dependence was found to be associated with all psychiatric and substance use disorders studied in a nationally-represented sample [16]. In addition, smoking is highly comorbid among binge drinking [17, 18]. Data from the 2007 California Health Interview Survey show that 39% of American Indian adult males and 24% of females report binge drinking in the last year, defined as consuming five or more drinks during a single occasion for males, and four or more drinks for women. Binge drinking behaviors persist in older age groups–particularly with males–with 31% of American Indian males ages 50-54, 36% ages 55-59 and 14% age 60 and over reporting binge drinking in the past year. In addition, due to significant psychosocial stressors known to exist in the American Indian population, including high rates of abuse, violence, suicide and trauma, smoking rates may be higher due to the known association between anxiety and mood disorders and smoking [16].

IV. American Indians in California, Tobacco Behaviors and Associated Risk Factors

The American Indian Population

Nationally, the AIAN population is increasing at about 1.8% a year, not including tribes gaining federal recognition. According to the 2000 U.S. Census, 4.3 million adults in the United States (1.3%) are American Indian [19, 20]. More American Indians reside in California than in any other state. California is home to 107 federally recognized tribes. Although an estimated 11% of American Indian adults are members of California Indigenous tribes, the majority of American Indians living in California are members of tribes with reservations outside of the state [1]. About two-thirds of American Indian people (64%) live in urban areas of California. American Indians are two times more likely to be poor or near poor than non-Latino whites, 55% vs. 24%, respectively.

Low socioeconomic status is a risk factor for smoking. For example, low income [21], low educational attainment [22], and low levels of health coverage [23] are all significant risk factors for smoking. Behavioral risk factors are strongly influenced by social, environmental and economic conditions.

Tobacco Use Rates Among American Indian Adults and Adolescents Indicate a Significant Public Health Problem

Cigarette smoking is the single most preventable cause of premature death in the United States. Smoking among American Indian adults is a significant public health issue. Nationally, they have the highest smoking rates (32.4%) compared to non-Latino African Americans at 23% and non-Latino whites at 21.9%[24]. Also, American Indians experience significant tobacco-related health disparities [25-27]. Higher smoking rates have been known to exist in the northern plains and western states (49-58% and 24-40%, respectively) than in the southwestern states (10-19%);[2, 28-31].

American Indian adolescents also have the highest prevalence of smoking compared to adolescents from any other racial/ethnic group in the U.S. [32]. In a study among youths ages 12-17 from across the U.S. conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) and Centers for Disease Control and Prevention (CDC), American Indian youth demonstrated the highest cigarette smoking prevalence (23.1%), which was considerably higher than the next highest ethnic group, non-Latino whites at 14.9% [33]. In addition, attitudes towards smoking have been shown to differ between American Indian adolescents compared to adolescents from other groups. For instance, one study comparing Indian youth from schools on or near reservations across the U.S. compared to youth from the Monitoring the Future (MTF) study, found that Indian youth demonstrated a lower perception of harm from regular tobacco use [34]. In another study, an intervention incorporating skills plus community involvement intervention for American Indian adolescents did not prove effective [35].

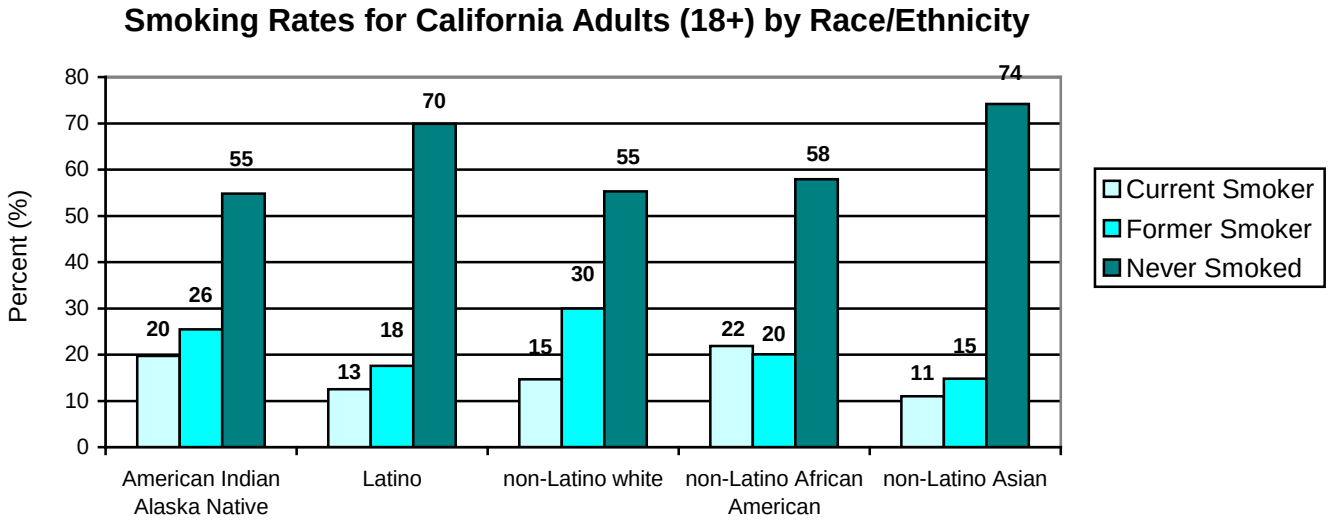
Tobacco Use Among American Indians in California

Similar to national trends, studies conducted to date have also found high smoking rates for American Indians relative to other California populations. Utilizing data from the 2001 California Health Interview Survey, for example, smoking rates among American- Indian adults ranged from 23.7% to 35.2% [3, 31]. The rate has been reported as high as 40% in some Northern

California tribal communities [29]. Also, according to the 2005 California Tobacco Survey (CTS), the smoking prevalence for American Indians was 28.1%, an increase from the 1999 CTS rate of 25.4%. The smoking rate for American Indian adolescents in California is similar to the statewide *All Races* rate of 6% (data is pooled from CHIS 2005 and CHIS 2007; 2007 California Health Interview Survey). While American Indians have the highest rates of tobacco smoking in California, they tend to smoke fewer cigarettes per day than other populations (Data not shown; 2007 California Health Interview Survey; [1, 2].

One in five California American Indian adults over the age of 18 currently smoke tobacco and one in four are former tobacco smokers; 55% of American Indian adults have never smoked (Exhibit 5).

Exhibit 5.



Source: 2007 California Health Interview Survey

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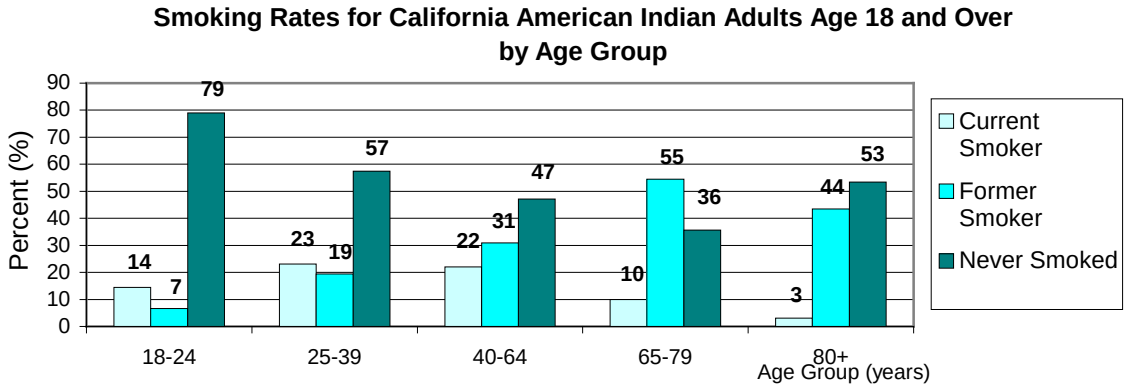
Current smoking rates are highest for California American Indian adults ages 25-39. Smoking rates begin to decline at the age of 40 and by age 64, a full 50% of American Indian adults have quit smoking (Exhibit 6).

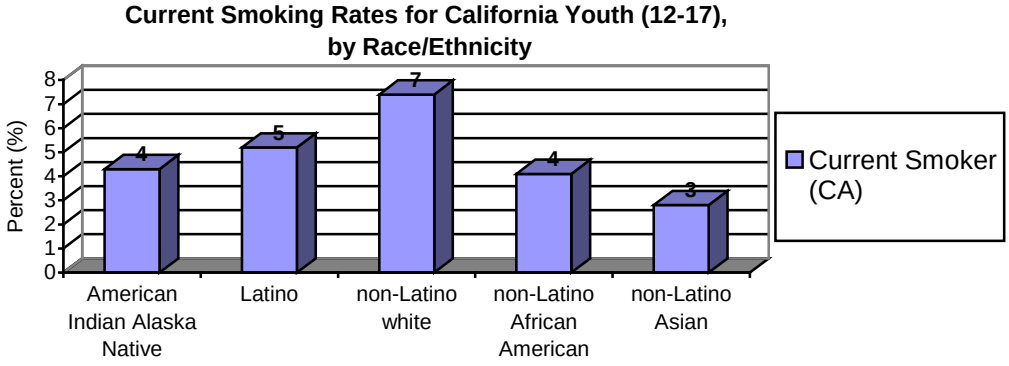
Exhibit 6.



Source: 2007 California Health Interview Survey

Four percent of California American Indian youth ages 12-17 are current smokers. Youth/adolescent smoking rates in California appear to be similar across all races/ethnicities, with non-Latino Asian youth reporting the lowest smoking rates (Exhibit 7).

Exhibit 7.



Source: 2005 and 2007 pooled California Health Interview Survey

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Health Insurance, Access to Care and Usual Source of Care
Having health insurance coverage, a regular place to go when one is sick or needs health advice, and financial resources are important facilitators to quality health care and good health. Without these a person faces many barriers to good health.

Nonelderly American Indians are nearly two times as likely to be uninsured compared to non-Latino whites, 28% versus 10%, respectively. More than one-third of nonelderly American Indians (41%) have employment-based insurance. This is substantially lower than the 67% of non-Latino whites with employment-based insurance. In addition to health insurance coverage, most American Indians in California do not have health coverage through the Indian Health Service (IHS) as they are members of tribes in other states. Only 10% of American Indians in California statewide report coverage by the IHS [3]. Twenty-seven percent of American Indians from California Tribes report Indian Health Service health coverage [1].

Having a usual source of care is a key aspect of access to health care. Nationally, more than one-third of uninsured AIANs report that they do not have a usual source of care [36]. Nearly one in five of American Indian adults in California (19%) report that they do not have a usual source of care compared to 8% of non-Latino whites [1].

In the Beginning…
A Legend from the Cahuilla Indians

Mukai and Tamaioit (the first created beings) then said they should have something to smoke to remove the darkness, just as medicine men smoke now to remove disease. They therefore planned to make tobacco. Mukai took black tobacco from his heart and Tamaioit brought forth a lighter colored tobacco. Next, they needed some way to smoke it, so they each brought forth another substance from the heart. Mukai's was dark, Tamaioit's was light. With this they made pipes. Mukai then took a coal of fire from his heart to light the tobacco with. Now they were ready to smoke.
Mukai filled his pipe first, held it up in the air, and inhaled. He then decided to play a trick on Tamaioit, so he handed his pipe to him and said, "I am holding it up high," but he held it low, and in the dark, Tamaioit could not see it. However, Tamaioit was always suspicious of Mukai, so he reached low instead of high, as Mukai expected him to do and seized the pipe. Tamaioit then got his pipe ready to smoke, held it out to Mukai and said, "I am holding it low," and really held it that way. Mukai, thinking the same trick was being played on him, reached high and of course missed it. Therefore, Tamaioit claimed he was the wiser, because he could not be fooled.

Hooper, The Cahuilla Indians, Reprinted from "Traditional Tobacco Use in Southern California," News From Native California.

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V. Secondhand Smoke and Its Effects on Pregnancy and Children

Secondhand smoke, also known as environmental tobacco smoke, is a complex mixture of gases and particles that includes smoke from the burning cigarette, cigar, or pipe tip (sidestream smoke) and exhaled mainstream smoke. In accordance with California law, secondhand smoke was identified as a Toxic Air Contaminant on January 26, 2006. California then placed secondhand smoke on the Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) list of chemicals known to cause reproductive toxicity [37].

Smoking and Pregnancy

When a pregnant women smokes, she smokes for two–herself and her baby. This can affect the unborn child in many ways. Tobacco smoke causes blood vessels to narrow, and the baby will get less of what comes from the mother's blood─oxygen and nutrients.

Pregnant women who smoke cigarettes run an increased risk of miscarriage, stillborn or premature infants, or infants with low birth weight. Maternal smoking may also be associated with learning and behavioral problems in children. Smoking more than one pack of cigarettes per day during pregnancy nearly doubles the risk that the affected child will become addicted to tobacco if that child starts smoking [4].

Nationally, during 1999-2001 almost one out of five women who gave birth to an American Indian child (19.8%) smoked tobacco during pregnancy [38]. In California the percent of AI women who smoked during pregnancy was 9.4% for the years 1996 -1998 [5].

Breastfeeding

Nicotine is an addictive drug that passes into breast milk, can make babies fussy and can reduce the mother's milk production. Women who smoke often stop breastfeeding sooner than they planned. Smoking puts the baby at risk of having more respiratory problems. In most cases it is still better to breastfeed even if the mother is a smoker.[39][39][39]

Where Are Children Being Exposed to Environmental Tobacco Smoke?

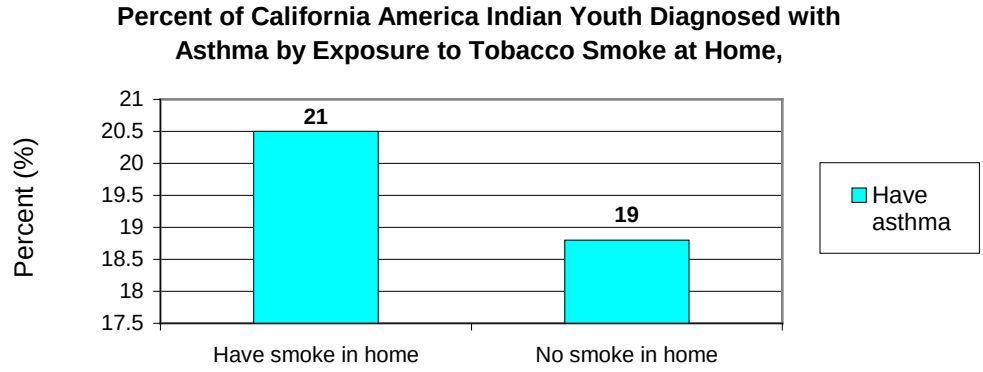
Nationally, almost 60% of U.S. children ages 3-11—or almost 22 million children—are exposed to secondhand smoke. About 25% of children ages 3-11 live with at least one smoker, compared to only about 7% of nonsmoking adults.

Each year in the United States, secondhand smoke exposure is responsible for 150,000–300,000 new cases of bronchitis and pneumonia in children that are less than 18 months old. This results in 7,500-15,000 hospitalizations annually [40].

Nationally, the most common place children are exposed to secondhand smoke is in their own home. In California, one in ten American Indian children (10%) live in a home where smoking occurs [1]. In addition, new studies document "thirdhand smoke exposure" risks to children. Thirdhand smoke, or residual exposure, is the term given to the residual of tobacco smoke contamination that settles into the environment and stays there even after a cigarette has been extinguished. The chemical particles resulting from the burning of tobacco linger on clothes, hair, upholstery and drapes, long after the smoke has cleared from the air [41]. See Appendix E for additional resources

Nearly one-quarter of California American Indian youth who have been diagnosed with asthma are exposed to tobacco smoke in their home (Exhibit 8).

Exhibit 8.



Source: 2005 and 2007 pooled California Health Interview Survey

What Diseases in Children Are Caused by Exposure to Secondhand Smoke?

SIDS

In 1999-2001, 12 of the 64 American Indian and Alaska Native infant deaths in the patient data of the California Area Indian Health Service were due to Sudden Infant Death Syndrome (SIDS), which is the leading cause of infant death [5]. This rate is almost double that of non-Hispanic white mothers according to the Indian Health Service. Infant deaths could result in much higher societal costs, due to the long period of potential life lost and potential earnings, as well as costs to parents in terms of missed work, grieving and health care costs. Based on the numbers above, for every 1,000 births in the AIAN community in California, 1.64 will die from SIDS. According to the California Department of Public Health Center for Health Statistics, there were 1,997 AIAN births in California in 2007 [42]. This means that 3.3 of these babies died from SIDS. However, because there is racial misclassification of native births in these data sources, even after adjustment, the 1.64 deaths per 1000 births rate serves as a lower threshold estimate.[1]

[1] According to the California Health Interview Survey, 70% of American Indian babies under the age of two are of Latino ancestry (those misclassified by state of CA). Accessed May 18, 2010. Available at www.askchis.com .

Ear Infections/Otitis Media
A child can be at greater risk for many infections due to exposure to secondhand smoke. Middle ear infections and lower respiratory diseases (bronchitis and pneumonia for example) occur more often (1.62 times and 1.5-2 times, respectively) when a child is exposed. In California, there were 78,600 to 188,700 physician visits per year for middle ear infection, and 18,000 to 36,000 cases of lower respiratory diseases. These infections and diseases can, in part, be prevented by eliminating children's exposure to ETS.

Asthma
Secondhand smoke exposure has been associated with increased asthma-related episodes, visits to the emergency room and related costs. Asthma is a disease that should be controlled through regular doctor visits and appropriate medication. However, when people with asthma are exposed to secondhand smoke, it can directly result in preventable attacks, missed work or school days, ER visits and hospitalizations.

The tobacco leaves were cured in the men's sweat house. First the wrappings were removed, and the tobacco was laid out on a board or large basket to dry. Since the men normally sweated themselves twice a day the heat of the sweathouse dried out the leaves in three days.
After drying, people crumbled the leaves between their hands, taking care not to make it too fine. Tobacco stems were also dried out and pounded, using a small stone pestle. Once prepared, the tobacco was stored in the women's houses. This is interesting since, except for the doctor/shaman, women rarely smoked. They did, however, weave a special lidded basket in which the tobacco was kept. As far as is known, only the tribes in northwest California made a special tobacco basket. The lid was lashed down using a leather thong, and it was made in a manner similar to the sipnuukith, the treasure or trinket basket, differing in how it was adorned.

Interviews with Phoebe Maddux, a Karuk Indian, "Tobacco Among the Karuk Indians of California," JP Harrington., Reprinted from "Traditional Tobacco Use in Northern California," News from Native California.

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VI. Tribal and Community Tobacco Prevention

This section will briefly review the importance of cessation programming and community health education approaches that are not community policy approaches. We provide multiple resources in the Appendices to learn more about this area of public health. The strongest community health approaches are those that are broad and multi-faceted. Regarding youth, for example, restricting youths' access to tobacco will help reduce initiation of tobacco use, but without cessation programming, it leaves those who are already smoking without the community support that would help them most successfully quit. Policy approaches, a major focus of this guidebook, are reviewed later in this report.

Cessation

Smoking harms nearly every organ of the body, causing many diseases and affecting the health of smokers in general. Quitting smoking has immediate as well as long-term benefits for an individual and their loved ones. It is important for communities and individuals to know that stopping smoking is possible. Indeed one-half of Natives who ever smoked have been successful at quitting [1].

Cessation is often thought of as an individual person's health behavior; however, communities can put in place programs and mechanisms that support healthy behaviors. Further policy approaches may be found in the policy section. There have been many advances in cessation science over the past decade, including the evidence that interventions incorporating a physician's recommendation that a patient quit is proven to be effective. In addition new medications are available to help stop smoking. Please refer to the resource section in order to find models that will work for your community.

"Many of the most effective tobacco education programs that serve Native peoples are developed and administered by and for Natives and have Native oversight councils to ensure the services continue to strive to meet the needs of the diverse Native communities. Such approaches empower Natives to take charge of and responsibility for their health and health care systems related to tobacco education. These types of programs are not only considered culturally appropriate, they also honor the inherent self-governance authorities of Native peoples.

"When these Native tobacco education programs are reviewed through a process evaluation or another adequate exam tool, their strengths and weaknesses can be identified and appropriate action can then be taken to further the goals of the programs. Maintaining these programs takes appropriate dedication, understanding, and communication skills, as well as a strong work ethic. Often it involves a lot of hard work. Many of my elders say it's hard being Indian in this day and age. But they never say stop being Indian, just figure out ways to keep getting it done. Their wisdom also applies to these Native tobacco education programs in that we must figure out ways to keep them going."

Mark LeBeau, Pit River Nation, MS, December 2, 2009.

Community Health Education Programs

Tobacco use is a major risk factor for cancer. Tobacco is considered a natural sacred plant among some American Indian tribes and has been used for generations for religious and ceremonial purposes. In addition, the sacred relationship between tobacco and AI communities continues to be recognized today [43]. A recent scientific literature review (February 2008) revealed no effective intervention for preventing tobacco initiation or encouraging cessation that took into account a respect for the cultural views of tobacco for American Indians. Dickerson's meta-analysis of tobacco cessation clinical trials revealed only four AIANs in *all* U.S. clinical trials, although American Indians have the highest rates of tobacco use [44]. There is a great need to fill this intervention gap for American Indian communities.

Despite the lack of culturally appropriate and Native targeted *evidence-based* or *strong* programs in the federal and academic literature, we know anecdotally that a wealth of community health education programming for tobacco control and prevention is taking place in Indian country. In addition, there are evidence-based and recommended intervention programs designed and working for other communities from which to draw. Three approaches are reviewed as follows with references to primary sources.

Social-marketing tobacco interventions are mass media campaigns intended to reduce tobacco initiation, using brief recurring messages to inform and motivate individuals to remain tobacco free. Message content is developed through formative research; messages are delivered through paid broadcast time and print space, donated time and space (as public service announcements), or a combination of both. Mass media campaigns can be combined with other interventions. This form of community-level intervention is recognized for its effectiveness in reducing tobacco use among adolescents when implemented in combination with tobacco price increases, school-based education and other community education programs.

Most tribal communities in California would not be able to implement a standard mass media campaign due to the costs associated with media in California and the complexities of residency for American Indians in California, in that the majority of AIs do not live in homogenous geographic communities. However, there are methods to adapt mass media campaigns for tribal communities or other small dispersed communities. The American Indian Research Program at the UCLA Center for Health Policy Research has a Social Marketing and Health Communications curricula which has been tested and evaluated with more than 40 tribal communities nationally that is available as a resource. See Appendix E for Community Health Education Resources: Mass media campaigns.

A second recommended intervention is to restrict access to tobacco products for minors, using a community mobilization approach. Successful approaches use tobacco policy, such as compliance of no tobacco sales to minors—with dissemination of the results through mass media events, news coverage, and presentations to civic groups and local governments. Community and school meetings and activities, as well as direct contact with local governments through testimony, petitions, letters and phone calls, also occurred. This community mobilization approach has worked across multiple demographic and geographic settings. This approach is also described as a policy approach later in this report. See Appendix E for Community Health Education Resources: Restricting Access to Tobacco for Minors.

Thirdly, worksite wellness policies and health education interventions have been proven effective. In general, smoke-free policies include private-sector rules and public-sector regulations that prohibit smoking in indoor workplaces and designated public areas. Private-sector smoke-free policies may establish a complete ban on tobacco use on worksite

property or restrict smoking to designated outdoor locations. Because tribes own multiple economic enterprises or worksites, this approach has unique possibilities in particular for tribally-owned businesses. See Appendix E for Community Health Education Resources: Worksite Settings.

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VII. Costs of Commercial Tobacco-Related Morbidity and Mortality

Cigarette smoking is the single most preventable cause of premature death in the United States. The adverse health effects from cigarette smoking account for an estimated 443,000 deaths, or nearly one of every five deaths, each year in the United States. More deaths are caused each year by tobacco use than by all deaths from human immunodeficiency virus (HIV), illicit drug use, alcohol use, motor vehicle injuries, suicides and murders combined, according to the Centers for Disease Control and Prevention [45].

Estimates of the impact of smoking on state and national populations are often based upon calculations of the mortality and the resulting costs. Mortality that can be attributed to smoking is used to estimate the years of potential life lost due to premature smoking deaths, and the productivity and economic benefits foregone because of those premature deaths. In this way, smoking costs are understood as dollar values, even though they represent loss of life, productivity and other difficult to quantify ideas. In the American Indian population, the cultural value of an elder's life undoubtedly exceeds any calculations based on the lost earnings of a person. The cultural cost of a loss of life due to smoking is difficult to quantify, so the costs reported here as indirectly and directly related to smoking are probably underestimates. The estimates are based upon multiple sources, including population data from the U.S. Census bureau on American Indians living in California, California Health Interview Survey data on smoking behaviors, gender and age, Behavioral Risk Factor Surveillance System data for California's overall population, and the level of mortality and morbidity caused by smoking as calculated by the CDC's SAMMEC (Smoking Attributable Mortality, Morbidity and Economic Costs) tool. In addition, for other elements of the cost of smoking, we drew upon Max and Rice's seminal work on the costs of smoking in California [46]. An updated version of Max's work on the cost of smoking for African Americans in California was helpful in updating the results to 2009 dollars using newer data [47].

"If current patterns of smoking persist in this country, more than six million youth will die more than 10 years prematurely due to smoking."
- Centers for Disease Control and Prevention.

Direct and Indirect costs

California American Indians who smoke cause an increase in direct and indirect health care costs due to smoking. These costs are driven by many factors, including disease-related deaths and loss of productivity. The diseases caused by smoking include various types of cancers, chronic illnesses like asthma and diabetes, and hypertension and heart disease. Although not all cancer deaths are caused by smoking, the Smoking Attributable Fraction allows us to estimate the impact of smoking on the death rates experienced by the population for each disease. In these cases, loss of life and premature death are used to approximate the overall direct and indirect costs of smoking on the American Indian population.

Based on the previous 1999 Cost of Smoking report, the value of $62,907,427 for indirect and direct smoking costs was based upon an American Indian population of 102,602 individuals (41,272 of which were estimated to be smokers). The 1999 report assumed $577.81 of direct

costs (medical care) for males and $349.05 of direct costs for females. Direct costs include money spent on health services like surgeries, medications, and office visits received by a person, as a result of health problems caused by tobacco use. Indirect costs (due to premature mortality) were $1,346.05 per male smoker and $704.48 per female smoker. Indirect costs include money spent or lost due to loss of life, disability, or loss of productivity due to tobacco related illnesses. These costs include wages that someone would never earn, because they died before we expected them to because of smoking. In 2007, the U.S. Census estimated 738,938 American Indian and Alaska Natives in California, and CHIS 2007 data indicates that one in five (19.7%) of adult AIANs are current smokers. In addition, the previous estimates of productivity losses did not include the various forms of cancer and mortality that are now understood to be linked to smoking rates.

According to Max, Rice, Sung, Zhang, and Miller (2004), in 1999, the total cost of smoking in California was $15.9 billion, which breaks down to $475 per resident, or $3,331 per smoker [46]. Direct costs represented $8.6 billion (54%), while indirect illness-related productivity costs were $1.5 billion (10%), and indirect costs related to premature death were $5.7 billion (36%). Newer data from Max, Sung, Tucker and Stark (2010) focuses on the cost of smoking in California's African-American population [47]. Unfortunately, they were not able to develop estimates for the American Indian population in California. However, using their estimates of direct health expenditures and indirect productivity losses, we would expect smoking in California to represent $16.3 billion. The total amount of spending due to smoking-related illness and mortality appears to have increased overall and per smoker. In 2009 dollars, Max, 2010 predicts health care expenditures due to smoking to be $2,498 per year per smoker, while death results in $4,490 per year per smoker of productivity loss [47].

Smoking results in $280 million in mortality and premature death costs in the American Indian population. In addition to that, direct costs due to smoking are likely to be $2,498 per smoker in the AIAN population in California–which represents $415 million. Based on the CHIS 2007 estimate of smoking in the American Indian population (19.7%), coupled with the 739,000 American Indians in California, the total cost of smoking for the AI population in the state is $795 million. Based on the Max, 2010 estimates of the cost of smoking in California, AIAN residents represent 4.4% of smoking costs. However, AIAN residents represent only 2.1% of the state population. Based on these estimates, each AIAN resident of California bears a cost of $1,076 on average per person per year. See Appendix A: Exhibit A1 for productivity losses due to smoking-related illness among California American Indian*].*

The major drivers of these productivity losses are:

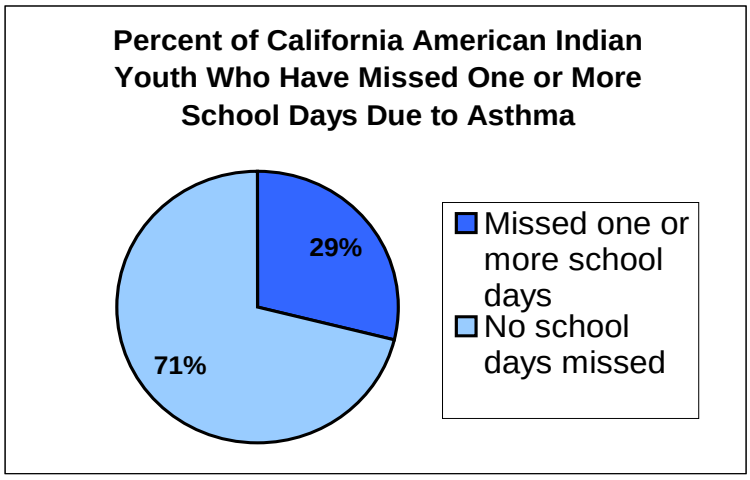
- Trachea, lung and bronchus cancer: $84.5 million
- Ischemic Heart Disease: $58.3 million
- Chronic Airway Obstruction (COPD)[2]: $60.8 million
- Stroke: $11.1 million

The majority of costs due to smoking are from lives lost and years of potential life lost due to death. Other elements, such as missed days of school due to asthma attacks, low infant birth weight and other long-term health care concerns are not easily represented in terms of money lost due to smoking.

[2] Chronic Obstructive Pulmonary Disease

Nearly three out of ten California American Indian youths ages 1-17 who currently attend school or childcare and have been diagnosed with asthma, have missed one or more days of school due to asthma (Exhibit 9).

Exhibit 9.



Source: 2007 California Health Interview Survey

How Much Does Smoking Cost Each Resident in the California American Indian Community?

In 2009 dollars, each resident (smokers and nonsmokers) of California's American Indian community bears **$1,075** in costs due to smoking. However, each smoker is responsible for **$4,180**. For example, for every one smoker, four people bear the health and economic burden associated with smoking.

Cultural Loss Due to Smoking

It is very difficult to place a dollar value on loss of life, especially in the American Indian community. Older members of the family and community are called upon to pass on important traditions, knowledge and history to the younger members. While the cost of a death of an elder may be lower overall than the death of a younger member of the community in simple monetary terms (i.e. lost wages and years of productivity lost), the actual value that the elder brings in maintaining and supporting the community should not be underestimated. The loss of cultural capital due to death could be even higher than the human capital loss (measured in years of life and potential earnings in those years) or actual spending on health care.

"An Elder's health is important as they give and pass down knowledge, culture and traditional components that would be lost without their willingness to share."
- Anonymous

Yurok Tobacco Use

When an Indian takes his pipe to smoke, he inhales his smoke and keeps it in his lungs for ten or fifteen seconds and then blows it out through his nose mostly, some through the mouth, and then he gives a slow grunt, saying a few words in a plain audible tone. These words are to the Woges…wishing the Woges would give them good luck, long life, and that they could see them come back, or that they themselves could go to see them and be with them, and many other kinds of wishes for the Woges. The old women doctors use tobacco very freely and have pipes that hold a handful of tobacco at a single smoking, and they ask the Woges to give them good luck in curing a sick person. The doctors are about the only ones of the women that smoke. The Indians have the most complete control over themselves and can smoke one, two, or three times a day, or quit for a week or longer without a murmur… They hold the pipes upwards if sitting or standing, and it is only when lying on the back that one seems to enjoy the smoke with perfect ease, however they can handle the pipe to take a smoke in any position.

Lucy Thompson, To the American Indian, reprinted from "Traditional Tobacco Use in Northern California," News from Native California.

VIII. Tribal Tobacco Control Policy

Why Should Tribes Prioritize Tobacco Control?

Rates of commercial tobacco smoking are very high among American Indians in comparison to other groups. As mentioned in Exhibit 6, 17% of 18 to 24 year olds and approximately one-fourth of adults ages 25 to 39 are current smokers. These people, although relatively young, are putting their health at risk and increasing their likelihood of health care spending and health problems later in life. Unhealthy behaviors now lead to expensive illnesses and premature loss of life later on. Without the introduction of smoking cessation programs, commercial tobacco prevention education, and other policy solutions to commercial tobacco designed to target American Indians, it is very likely that American Indians will continue to experience high health care spending given the relatively small size of the population. In addition, they will continue to lose members of their community to premature death and reduced quality of life due to lung cancer, heart disease and various other conditions.

Commercial tobacco use is responsible for enormous financial, personal and community loss. In California in 1999, it killed over 43,000 smokers, along with hundreds of thousands more suffering from tobacco-related disease and the premature loss of loved ones. Based on population change since 1999, it is likely that by 2007, smoking was responsible for almost 49,000 deaths. According to the CDC, 36,684 deaths on average from 2000 to 2004 were the result of smoking-related illnesses for people over the age of 35 (SAMMEC). Although adults are impacted disproportionately (adults over age 35 represent 65% of the population, but 75% of the deaths are due to smoking), smoking- related illness also impacts children and infants. Sudden Infant Death Syndrome (SIDS) and respiratory distress in infants result in thousands of deaths per year throughout the country, and childhood diseases like asthma have increased in prevalence since 1980 [48].

Because American Indians have the highest rates of commercial tobacco use, our communities are suffering disproportionately from tobacco-related deaths and disease [49]. Current commercial tobacco use, along with poor nutrition and sedentary lifestyles, are causing cancer to play a greater role in the disease burden of native communities than it has throughout our long history [2, 50]. Since commercial tobacco use is the largest *preventable* cause of premature death in the United States and a leading contributor to many types of cancer and disease, tribes should prioritize tobacco control policy as a cost-effective method of disease prevention [50-52]. Tribes must focus on tobacco control policy to begin to stem the millions of dollars lost due to smoking in the California American Indian population.

It is clear the cost of smoking is too heavy a burden on the American Indian community, but the dollar amount does not contain the full story. The health and safety of our future generations are at risk. In order to protect the sustainability of future generations, tribal communities must prioritize tobacco prevention and tobacco control policy in order to reduce the adverse effects of tobacco use and secondhand smoke on our people. Communities must focus on protecting health.

“Taking charge of tobacco policy is an aspect of sovereignty. The adverse effects of tobacco use and secondhand smoke are damaging the sustainability of future generations of Native people. Reducing tobacco use is the right policy to follow to protect our future generations.”
Carole Goldberg, JD, UCLA Professor of Law

“Sovereignty allows us to live self-sufficient and live the way our ancestors wanted us to, maintaining our culture while strengthening our everyday cultural values, beliefs, and customs to provide a future for our young ones and provide consistency and direction for the present.”
Chairman Matt Franklin from the Ione Band of Miwok Indians

“As tribal leaders, when we exercise our sovereign rights we honor our ancestors and continue to respect our culture! We have the power to change the future for our people and that is sovereignty in its best form.”
Chairman Matt Franklin from the Ione Band of Miwok Indians

Tribal Tobacco Control Policies

Tribal governments and tribal community members can play an important role in protecting our communities from the next wave of loss due to cancer and other tobacco-related diseases by adopting policies that reduce the harmful effects of commercial tobacco use. To protect our health and the health of future generations, tribes must consider comprehensive tobacco control policies that focus on the community as a whole, not only on individuals. The impact of commercial tobacco use and secondhand smoke is felt by the entire community, so the entire community should be involved in the solution [53-55].

Tribal policies regarding tobacco control can be organized into three categories of intervention [56]:

1. **Reducing tobacco use initiation**
2. **Increasing tobacco use cessation**
3. **Reducing exposure to secondhand smoke**

As sovereign nations, Indian tribes can develop tobacco policies to state their official position on tobacco use in public places, the availability of and access to commercial tobacco, taxation of commercial tobacco, cessation, treatment and prevention education options, and exposure to tobacco industry advertising [57].

The 1998 Master Settlement Agreement

In 1998, the Master Settlement Agreement (MSA) was reached between 46 state attorneys general and four major tobacco companies [58]. Key requirements of the MSA include tobacco industry payments to the states through 2025 (with no restrictions on how the funds are to be used), limited restrictions to youth marketing and distribution practices, and the creation of a foundation to study youth tobacco use and to provide tobacco education [59, 60].While many state officials promised to use the funds to improve public health by funding tobacco control, especially for children, only a small proportion of these funds have actually been spent on tobacco-control programs [59, 61-63].

American Indians and the Master Settlement Agreement

Few states have dedicated specific MSA funds to minority communities who bear a disproportionate burden of tobacco-related disease and suffering. Not only are minority communities not receiving funds to support culturally-specific tobacco interventions, but AIAN governments were explicitly excluded from the MSA negotiations despite the AIAN population being included in the formula used by the states to determine the amount of money the states would receive from the settlement. Because the MSA was negotiated between state attorneys general and the tobacco companies, state attorneys general could not negotiate on behalf of tribes due to tribal sovereignty. Instead, language in the MSA did not exclude tribes from filing their own claims on their behalf and several tribal lawsuits against tobacco companies have followed. See *http://www.tcsg.org/tobacco/minorities/minorities.htm* for information on tribal lawsuits [64].

Tobacco Control on Reservations

Comprehensive tobacco-control policy addresses commercial tobacco use in a variety of settings and through various formal and informal social institutions, such as: official tribal facilities (council meeting rooms, private work spaces, communal gathering spaces); tribal casinos and other business environments; schools; other indoor working environments; and the

home environment [65].

There are five standard policy approaches to control commercial tobacco use that have been used by local and state governments, and may also be used at the tribal level. Within each policy approach, a community should determine which policy or combination of policies works best for them based upon mutual values, beliefs and priorities. See the Resources section in the Appendices for more detailed information on each policy approach.

Policy Tools for Tobacco Control

Exhibit 10 presents three broad goals for tobacco-control policy and the standard policy tools that have been proven effective in accomplishing each goal: reducing initiation; increasing cessation; and reducing exposure to secondhand smoke. An X marks the particular goal or goals that are addressed by each policy approach.

Exhibit 10. Policy Tools for Tobacco Control

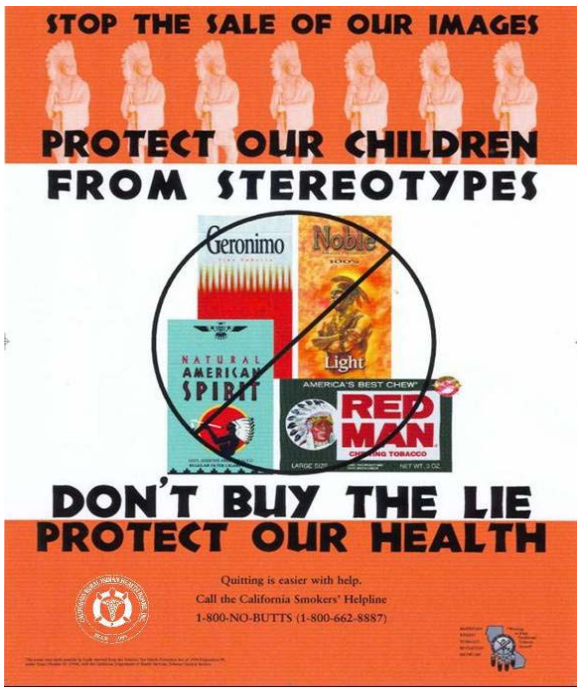
	Goals of Tobacco Control Policy		
Policy Approaches	**Reducing Initiation**	**Increasing Cessation**	**Reducing Exposure to Second Hand Smoke**
Taxation	**X**	**X**	
Control of Availability	**X**		
Smoking Bans and Restrictions	**X**	**X**	**X**
Control of Tobacco Industry Advertising	**X**		
Education and Cessation Treatment	**X**	**X**	

1. ***Taxation*** Access to cheaper cigarettes on Indian reservations is associated with higher tobacco use rates, especially among youth, and lower quit rates [66, 67]. Tobacco taxation is an underutilized tool on tribal reservations, although it is regarded as one of the most effective tobacco prevention and control tools. It has been proven to provide community benefits including decreased tobacco consumption, increased likelihood that a smoker will make a *quit attempt*, and an additional source of revenue that can be directed toward tobacco-control activities, such as youth tobacco prevention education [68, 69]. Taxing tobacco on tribal land will allow tribes to begin to recover some of the smoking-related costs burdening the American Indian community.

2. ***Control of Availability*** If a community chooses to allow the sale of tobacco on reservation land, they can choose to control the availability of tobacco by regulating where and by whom it is sold and by restricting access to youth. Active enforcement of tobacco sales laws, restricting self-service outlets (e.g. vending machines, counter-top cigarette displays in stores, and internet tobacco retailers who rarely verify the age of the purchaser) in areas accessible to youth, and retailer education are a few of the tools available to restrict access to youth [54, 56, 70].

3. ***Smoking Bans and Restrictions*** Smoking bans are used to ban or limit the consumption of tobacco products in certain areas. Restricting tobacco use in the workplace, official tribal buildings, schools and community gathering places is shown to reduce exposure to secondhand smoke and is associated with decreased heart attack rates [71]. Because there is no risk-free level of exposure to secondhand smoke, smoking bans and restrictions are key components of any comprehensive tribal tobacco-control policy [40]. Community education to promote home-smoking bans and restrictions is an important tool to protect infants and children who get most of their secondhand smoke exposure in the home [72]. Tribes can work to keep tobacco sacred by placing restrictions on commercial use and emphasizing the beneficial role of sacred tobacco use [56, 68]. *[*See Appendix B for examples of tribal smoking bans.

4. ***Control of Tobacco Industry Advertising*** Tobacco industry advertising continues to target some tribes, especially youth and adolescents, through extensive promotions, advertising and sponsorship campaigns (such as sponsoring pow-wow and rodeo events in tribal communities). Close association of tobacco with significant events and rituals in American Indian (but not Alaska Native) communities is exploited by the tobacco industry to market certain tobacco products, such as the "American Spirit" brand in tribal communities. Tribes can establish policies that restrict tobacco industry advertising and produce "counter-marketing" campaigns to highlight the harmful effects of commercial tobacco use.



5. ***Tobacco Education and Cessation Treatment*** Tobacco education programs targeted at youth and adolescents are effective in reducing tobacco use initiation when combined with other policy tools such as tobacco taxes, smoking bans and restrictions to youth access [56]. Reducing and delaying tobacco use initiation is an important strategy as commercial tobacco is more likely to cause addiction the younger the initiation. For those who already use commercial tobacco, communities can educate people on the benefits of quitting and can invest in cessation treatment options. Tribes should educate members about the high costs of commercial tobacco use and the importance of keeping tobacco sacred.

Smoke-Free Casinos

In California, over half of the federally recognized tribes operate gaming establishments [73]. Within tribal casinos, about one in four workers are American Indian or Alaska Native [74]. Thus, a significant number of natives are being exposed to secondhand smoke in their work areas because many casinos have not yet adopted clean indoor-air policies. Native organizations are working to establish smoke-free casinos by showing that the majority of people prefer and support smoke-free entertainment and that casinos would not lose business if they adopted smoke-free policies [75]. For more information on smoke-free casinos, visit the TEPTS Web site at *www.crihb.org* and the California Clean-Air Project Web site at *http://ccap.etr.org/index.cfm?fuseaction=resources.casinos*

"Eighty percent of tribal casino guests and staff in California, including 98% of non-smokers, prefer to play or work in a smoke-free environment.
***- A survey by the* American Indian Tobacco Education Network, 2003.**

IX. Appendices

A. Exhibit A1. Productivity Losses

Exhibit A1: Productivity Losses Due to Smoking Related Illness Among California American Indians, 2008 Dollars

	Gender	Death Rate per 100,000 People	Population Estimate	Smoking Attributable Deaths in Population	Productivity Losses in Dollars per Death (due to Years Life Lost)	Overall Productivity Losses
Lip, Oral Cavity, Pharynx Cancer	Male	5.3	368421	19.53	$ 152,926.00	$2,986,080.94
	Female	1.3	370557	4.82	$ 152,926.00	$736,681.40
Esophogeal Cancer	Male	9	368421	33.16	$ 152,926.00	$5,070,703.49
	Female	1.8	370557	6.67	$ 152,926.00	$1,020,020.40
Stomach	Male	3.4	368421	12.53	$ 152,926.00	$1,915,599.09
	Female	0.9	370557	3.34	$ 152,926.00	$510,010.20
Pancreas	Male	4.5	368421	16.58	$ 152,926.00	$2,535,351.74
	Female	4.4	370557	16.30	$ 152,926.00	$2,493,383.19
Larynx	Male	2.8	368421	10.32	$ 152,926.00	$1,577,552.20
	Female	0.4	370557	1.48	$ 152,926.00	$226,671.20
Trachea, Lung, Bronchus Cancer	Male	90.1	368421	331.95	$ 152,926.00	$50,763,376.01
	Female	59.6	370557	220.85	$ 152,926.00	$33,774,008.67
Cervix Uteri	Male	0	368421	0.00	$ 152,926.00	$0.00
	Female	0.5	370557	1.85	$ 152,926.00	$283,339.00
Kidney and Renal Pelvis	Male	3.9	368421	14.37	$ 152,926.00	$2,197,304.84
	Female	0.2	370557	0.74	$ 152,926.00	$113,335.60
Urinary Bladder	Male	6.7	368421	24.68	$ 152,926.00	$3,774,857.04
	Female	1.3	370557	4.82	$ 152,926.00	$736,681.40
Acute Myeloid Leukemia	Male	1.4	368421	5.16	$ 152,926.00	$788,776.10
	Female	0.4	370557	1.48	$ 152,926.00	$226,671.20
Ischemic Heart Disease	Male	71.3	368421	262.68	$ 152,926.00	$40,171,239.84
	Female	32	370557	118.58	$ 152,926.00	$18,133,695.93
Other Heart Disease	Male	14.8	368421	54.53	$ 152,926.00	$8,338,490.18
	Female	6.2	370557	22.97	$ 152,926.00	$3,513,403.59
Cerebrovascular Disease	Male	11.2	368421	41.26	$ 152,926.00	$6,310,208.78
	Female	8.5	370557	31.50	$ 152,926.00	$4,816,762.98
Atherosclerosis	Male	2.2	368421	8.11	$ 152,926.00	$1,239,505.30
	Female	0.6	370557	2.22	$ 152,926.00	$340,006.80
Aortic Aneurysm	Male	7.4	368421	27.26	$ 152,926.00	$4,169,245.09
	Female	2.3	370557	8.52	$ 152,926.00	$1,303,359.39
Other Arterial Disease	Male	0.5	368421	1.84	$ 152,926.00	$281,705.75
	Female	0.7	370557	2.59	$ 152,926.00	$396,674.60
Pneumonia/Influenza	Male	12.2	368421	44.95	$ 152,926.00	$6,873,620.28
	Female	5.2	370557	19.27	$ 152,926.00	$2,946,725.59
Bronchitis/Emphysema	Male	10.1	368421	37.21	$ 152,926.00	$5,690,456.13
	Female	6.6	370557	24.46	$ 152,926.00	$3,740,074.79
Chronic Airway Obstruction	Male	62.4	368421	229.89	$ 152,926.00	$35,156,877.50
	Female	45.3	370557	167.86	$ 152,926.00	$25,670,513.30
Total						**$280,822,969.52**

Source: Predicted Smoking Attributable Mortality Rate from the CDC Adult SAMMEC System, using 2004 California Death and Resident Population Data and 2007 California Health Interview Survey AIAN Smoking Rates

Note: Based on population of 738,978 AI in California; 368,421 Male, 370,557 Female. U.S. Census Bureau, 2007.

B. Tribal Resolutions

SAMPLE TRIBAL TOBACCO POLICY STATEMENTS

The following represent sample statements from policies adopted by tribes in the Northwest.
These examples can be modified to fit your tribe's situation.

Part 1 – Reasons for the Policy

Whereas, the tribal council is the governing body of the _____tribe; and

Whereas, the _____tribe is concerned about the health of all its members; and

Whereas, smoking has been identified by the U.S. Surgeon General as the nation's single most preventable cause of disease and premature death; and

Whereas, secondhand smoke is responsible for the death of 53,000 non-smokers each year; and

Whereas, youth who are exposed to tobacco smoke in their homes or community are more likely to become addicted themselves; and

Whereas, smoking rates in Indian Country are higher than those of the general population; and

Whereas, daily habitual use has caused tobacco to become a health hazard and lose its traditional sacredness; and

Whereas, Indian youth are the future of our tribe and deserve to breathe clean air.

Part 2 – Smoke-free or Specific Areas That Allow Smoking

Be it resolved, that as of (Date) all tribal facilities and vehicles will be tobacco free. This tribe bans smoking and the use of smokeless tobacco in all tribal buildings, offices and vehicles.

-OR-

Be it resolved, that as of (Date) smoking will be permitted in the bingo hall (example) only. All other areas including private offices, waiting areas, Elder's rooms, and Head Start classrooms will be smoke free.

-OR-

Be it resolved, that commercial Tobacco use shall not occur within a reasonable distance, not to be less than ten (10) feet, of any entrance of any enclosed area where smoking is prohibited or of any service line that extends out of doors.

-OR-

Be it resolved, that as of (Date) all tribal housing will be smoke free. This tribe bans smoking and the use of smokeless tobacco in all housing or apartments owned by the tribe.

-OR-

Be it resolved, that tribal smoke shops will sell tobacco products only to those 18 or older and will require ID. Cigarette vending machines will no longer be permitted on tribal property.

-OR-

Be it resolved, that smokeless/chewing tobacco will not be permitted inside tribal buildings. When used outside it should be disposed of in a sanitary manner.

-OR-

Be it resolved, that the council is committed to assisting all tribal members who wish to "kick the commercial tobacco habit."

-OR-

Be it further resolved that the _____ Tribe advocates the use of tobacco only in its traditional/ceremonial manner.

Part 3 – Penalty and Who Will Manage

Be it resolved that all tribal members and employees will take responsibility for reminding one another and visitors of the No Smoking policy.

Be it further resolved that any controversy, question or complaints regarding this policy should be directed to _____ for final determination.

-OR-

Be it resolved that the _____ tribal council will impose a fine of $100 (example) for smoking within a tribal building following a verbal warning.

-OR-

Be it resolved that it shall be the responsibility of employers to provide a smoke-free work place for all employees, but employers are not required to incur any expense to make structural and/or other physical modifications.

-OR-

Be it resolved that "No Smoking" signs or the international "no smoking" symbol (consisting of a pictorial representation of a burning cigarette enclosed in a red circle with a red bar across the cigarette) shall be clearly, sufficiently and conspicuously posted in every building or other area where smoking is prohibited by this article, by the owner, manager, or other person having control of such building or other area, including private residences used as a child care, adult day care or health care facility.

Every public place where smoking is prohibited by this section shall have posted at every entrance a conspicuous sign stating that smoking is prohibited.

C. Literature Review Methods

A literature review was conducted to identify tobacco use and tobacco control literature for American Indians. Dates used for the search were from 1999 to 2009. In the first literature search Pubmed, Social Science Citation Index and the National Library of Medicine Catalog databases were searched using the terms American Indian, Alaska Native, Native American and tobacco. A second literature search was performed using the additional search terms casino and master settlement agreement. Additional articles were identified through reading the above publications and searching publications from relevant federal agencies (CDC, U.S. DHHS, SAMHSA) and organizations, and by contacting members of the Mayo Spirit of Eagles Network members and our academic partners.

D. Methods

Data gathered is based upon various documents including the “Costs of Smoking in California, 1999” publication. Those calculations are an underestimate for the year 2009 due to the higher costs of health care, and greater losses in productivity (due to the higher wages and values of contributions to society) in comparison to 1999 data. The document “Health Effects of Exposure to Environmental Tobacco Smoke” was also relied upon for determinations of the effects of secondhand smoke. Much of that data was used as it was reported in that document. Due to the higher rates of cigarette smoking and potential exposure to environmental tobacco smoke among American Indians of California, these values are also likely to be underestimates. In order to determine the rate of the diseases examined in this study, mortality data was used. When estimating costs, mortality rates, the years of potential life lost, and future productivity are defined as the outcomes of mortality and morbidity due to tobacco use. This is likely to be an underestimate of the true costs of smoking, which could include health conditions and diseases that also result in loss of productivity and physical limitations that cannot be quantified directly. To predict indirect costs, the CDC’s Smoking-Attributable Mortality, Morbidity, and Economic Cost (SAMMEC) calculator was used to estimate the per person indirect and direct health care costs, which were applied to the American Indian population. However, it is still likely that costs related to smoking are underestimated by this report. The cost data has been inflated to 2009 dollars using the Consumer Price Index published by the Bureau of Labor Statistics, because the cost and mortality data used in calculating the estimates is from 1999-2004, while the population data used are from 2004 to 2007. Because of the biases in the methodology, the data presented here on the costs of smoking can be considered a conservative estimate.

E. Resources

Federal Resources

Comprehensive resource for information on smoking and tobacco use:
Centers for Disease Control and Prevention: Office on Smoking and Health (OSH)
http://www.cdc.gov/tobacco/

DHHS Administration for Native Americans: *http://www.acf.hhs.gov/programs/ana/*

Indian Health Service: *http://www.ihs.gov*

Indian Health Service - National Epidemiology Program:
http://www.ihs.gov/MedicalPrograms/Epi/index.asp

National Cancer Institute: *http://www.nci.nih.gov*

Substance Abuse and Mental Health Services Administration (SAMHSA)
http://www.samhsa.gov/

US DHHS, Office of Minority Health: *http://www.omhrc.gov*

State Resources

California Department of Public Health, Tobacco Control Program
http://www.cdph.ca.gov/programs/Tobacco/Pages/default.aspx

Information on the 1994 Master Settlement Agreement (MSA):
California Office of the Attorney General:
http://www.ag.ca.gov/tobacco/msa.php

> For additional information on tribal lawsuits against the tobacco industry, see:
> *http://www.tcsg.org/tobacco/minorities/minorities.htm*

Tribal Tobacco Policy

Excellent resource for tribes, health clinics and workers, and community organizations:
Tobacco Education and Prevention Technical Support Center (TEPTS)
http://www.crihb.org/health-resources/tobacco-control.html

A national network that actively involves American Indian and Alaska Native Tribes and Tribal Organizations and other stakeholders in addressing commercial tobacco use among AIAN populations:
National Native Commercial Tobacco Abuse Prevention Network (NNCTAPN)
http://keepitsacred.org/network/

Links to sample policies, community readiness assessments, smoke-free workplace adds and information on why tribes should establish smoke-free policies:

Tribal Smoke-Free Policy Tool Kit
http://www.keepitsacred.org/toolkit/

Implementing Tobacco Control into the Primary Health Care Setting (Fieldbook). Indian Health Service Tobacco Control Task Force, U.S. Department of Health and Human Services. Version 2. 2009.Available at:
http://bandura.sbs.arizona.edu/hcp/IHS/downloads/IHS%20Fieldbook%20Final_2009.pdf

For additional downloadable resources, see also:
http://bandura.sbs.arizona.edu/hcp/IHS/external_downloads.htm

Links to state and national resources, tobacco fact sheets and publications, trainings, and the National Native Tobacco Prevention Speakers Pool:
Northwest Portland Area Indian Health Board: National Tribal Tobacco Prevention Network
http://www.npaihb.org/programs/nttpn_history_goals/

A comprehensive tribal tobacco policy workbook:
Craig SN, *et. al*., 2005 Tribal Tobacco Policy Workbook. Portland, OR. Northwest Portland Area Indian Health Board, Western Tobacco Prevention Project, 2005. Available at:
http://www.npaihb.org/images/projects_docs/WTPP//Final%20Policy%20Workbook.pdf

Prevention Resources

Native American Tobacco Education Fact Sheets:
http://natamcancer.org/factsheets.html

Northwest Portland Area Indian Health Board: NW Tribal Cancer Control Project
Cancer 101: Cancer Among American Indians and Alaska Natives.
Powerpoint presentations and learning modules available at:
http://www.npaihb.org/programs/project/ntccp_cancer_101/

Community Health Education Resources

Mass Media Campaigns
Guide to Community Preventive Services. Reducing tobacco use initiation: mass media education campaigns combined with other interventions. Available at:
www.thecommunityguide.org/tobacco/initiation/massmediaeducation.html/
Last Updated: 2000.

Restricting Access to Tobacco for Minors
Guide to Community Preventive Services. Restricting minors' access to tobacco products: community mobilization with additional interventions. Available at:
www.thecommunityguide.org/tobacco/restrictingaccess/communityinterventions.html
Last updated: 01/15/2010.

Worksite Settings
Guide to Community Preventive Services. Decreasing Tobacco Use in Worksite Settings.
Available at: *www.thecommunityguide.org/tobacco/worksite/index.html*
Last updated: 01/15/2010.

Educational Resources

The Legacy Tobacco Documents Library (LTDL) contains more than 10 million documents (50+ million pages) created by major tobacco companies related to their advertising, manufacturing, marketing, sales, and scientific research activities:
Legacy Tobacco Documents Library, University of California, San Francisco
Available at: *http://www.legacy.library.ucsf.edu/*

American Indian specific materials and publications:
Tobacco Education Clearinghouse of California
www.tobaccofreecatolog.org

Smoking and Diabetes

Information, links and resources on diabetes and smoking:
The California Diabetes Program
http://www.caldiabetes.org/

The California Diabetes Program: Smoking Cessation Continuing Education Program
An online training session that includes information on the effects of tobacco and nicotine, the physiology of smoking – especially for people with diabetes, clinical guidelines for tobacco cessation, the ***Ask Advise Refer*** intervention for cessation, pharmacotherapy, and tools and resources. *http://www.caldiabetes.org/content_display.cfm?ContentID=1144*

A community-based, American Indian, non-profit resource:
Native American Cancer Research: Diabetes – What are the complications?
http://natamcancer.org/page183.html

Secondhand Smoke

Centers for Disease Control and Prevention: Office of Smoking and Health: Secondhand Smoke:
http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/general_facts/index.htm

2006 Surgeon General's Report – The Health Consequences of Involuntary Exposure to Tobacco Smoke:
http://www.cdc.gov/tobacco/data_statistics/sgr/2006/index.htm

Thirdhand Smoke

MayoClinic.com: Quit Smoking and The Dangers of Thirdhand Smoke
http://www.mayoclinic.com/health/thirdhand-smoke/MY00591

The California Clean Air Project (CCAP)

Information on secondhand smoke as a toxic substance and California policy to protect from secondhand smoke:
http://ccap.etr.org/index.cfm?fuseaction=resources.casinos

Fact sheet on tribal casinos and secondhand smoke:
http://ccap.etr.org/base/documents/TribalCasinosFactSheet.doc

Smokeless Tobacco

Health Information about chewing tobacco and snuff and resources for quitting:
http://www.cancer.gov/cancertopics/smokeless-tobacco

Spit Tobacco: A Guide for Quitting
http://www.nidcr.nih.gov/OralHealth/Topics/SpitTobacco/SpitTobaccoAGuideforQuitting.htm

Smoking Cessation

Free helpline that can help you quit smoking:
California's Smokers Helpline
http://www.californiasmokershelpline.org/

Comprehensive tools to help you quit smoking:
http://www.smokefree.gov/

Smoking cessation tools and resources especially for women:
http://women.smokefree.gov/

Comprehensive tobacco cessation resource and quitline:
http://1800quitnow.cancer.gov/

1-800-QUIT-NOW (1-800-784-8669)

Tobacco cessation and other health information resources for Alaska Native and American Indian people:
South Central Foundation Tobacco Cessation Information and Links:
http://www.scfhealthinfo.com/ht/tobaccocessation.cfm

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