
M E M O R A N D U M

DATE: October 13, 2006
TO: City Council Members
FROM: Russell Weeks
RE: Proposed Ordinance: Prohibiting Smoking Tobacco Products in City Parks, Recreational Areas, Cemeteries and Near Mass Gatherings
CC: Cindy Gust-Jenson, Rocky Fluhart, Sam Guevara, Ed Rutan, Chris Burbank, Gary Mumford, Boyd Ferguson, Abbie Vianes, Thomas Guinney

This memorandum addresses items pertaining to a proposed ordinance that would prohibit smoking tobacco products in city parks, public squares, Library Square, recreational areas, cemeteries and near mass gatherings. The City Council is scheduled to hold a public hearing on the proposed ordinance Tuesday, October 17. The Council also will hold a briefing in the work session before the public hearing.

NEW INFORMATION

There is a variety of new information pertaining to this issue. Council staff has broken the information into sections with a series of subheads. Staff put the new information before the *Options* and *Potential Motions* sections of this memorandum because the information may pertain to options and motions the City Council may consider.

CHANGES TO PROPOSED ORDINANCE

Since the October 10 briefing, the Administration has made a limited number of changes in the proposed ordinance to clarify it. The changes are:

- Under the *Definitions* section, adding golf courses to the umbrella term “city park,” and deleting “pocket parks” and “linear parks” because the two categories are not used as legal terms to describe public park property in Salt Lake City. Mini-parks fall under city-owned parks, and the Park Blocks linear parks on 500 West Street already are defined as public squares. It probably also should be noted that this version and earlier versions of the proposed ordinance exempts “designated smoking areas” from the term “city park.” Finally, other City sites that may be considered recreation areas are the Sunday Anderson Westside Senior Citizen Center, the Unity and Sorensen centers, Raging Waters, the Northwest Multipurpose Center, the Dee Smith Tennis Facility, and Wasatch Springs (the former site of the Children’s Museum of Utah), according to the Administration.
- The definition of “mass gathering” has been changed to read: “Mass gathering means an outdoor assembly of 500 or more people on city-owned property that reasonably can be expected to continue for two or more hours.” The words “city-owned property” have

been added to differentiate between events on public property and events on private property.

COMMENTS BY THOMAS GUINNEY, SALT LAKE VALLEY BOARD OF HEALTH

Staff contacted Mr. Guinney to discuss items he mentioned at the City Council briefing on October 10. Mr. Guinney is working with others to prepare potential legislation to bring to the Legislature. The potential bill would address prohibiting smoking tobacco products in parks and other outdoor venues.

During the telephone discussion with City Council staff Mr. Guinney made several observations about what might be an effective law:

- Municipalities adopting ordinances that prohibit tobacco smoking in public outdoor venues lay a foundation of showing a need for statewide legislation.
- The goal of the potential legislation would be to “institute cultural change” in which people of their own volition would not smoke in outdoor public venues. Mr. Guinney estimated that attaining the goal would take about three years.
- The most effective law is one that the public enforces by itself.

Given those, Mr. Guinney suggested some potential changes to the proposed ordinance:

- Prohibitions against smoking tobacco products on sidewalks, in the Salt Lake City Cemetery, and on golf courses should be eliminated. The suggestions are based in part on the experience of the group Mr. Guinney is working with to prepare legislation and in part on the functions of sidewalks, cemeteries and golf courses. It should be noted that the current ordinance would prohibit smoking only on sidewalks in the interiors and the perimeters of parks, according to the City Attorney’s Office.
- The infraction fine of \$299 is too high because instituting social change should not be punitive. Potential enforcement of an ordinance could be an ascending scale of oral warning, written warning and a fine at a minimal cost, possibly \$25. It should be noted that the \$299 fine in the ordinance is a not-to-exceed cap and could be less. It also should be noted that the fine is the same as the fines for a variety of other proscribed conduct in City parks.

An ordinance “should be something that tells the smoking community, ‘We’re going to work with you,’” Mr. Guinney said.

COMMENTS BY POLICE CHIEF CHRIS BURBANK

The following comments by Chief Chris Burbank were made based on a City Council request during the October 10 briefing:

Any ordinance banning smoking in certain areas will be challenging for the Police Department to enforce. Although smoking is a considerable health problem, we believe this is not necessarily a law enforcement issue that should compete for already scarce resources, especially in light of the demands placed upon the Police Department by serious crime incidents such as narcotics and part one crime. Enforcement of any version of the ordinance would solely be based on encounters that occur while officers are going about their daily routines.

We would not anticipate or desire calls coming into the Police Department regarding individuals smoking in banned areas. This certainly has the potential to overwhelm our dispatch center.

Sincerely,

Chris Burbank
Chief of Police

ESTIMATED COST OF INSTALLING NO-SMOKING SIGNS

In response to a City Council question, the Administration estimates that the total cost to the City to install signs informing the public that smoking is prohibited under the ordinance is \$11,244. The Administration estimates that about 400 signs would be necessary to inform the public at all locations addressed in the ordinance – except for the Bonneville Shoreline Trail. According to the Administration, the Salt Lake Valley Health Department would pay for the actual signs. The City would pay for 400 sign posts at \$15 each, nuts and bolts, and labor.

ADDITIONAL COUNCIL STAFF RESEARCH

During the October 10 briefing some questions were raised about levels of concentration of tobacco smoke in an outdoor area. Council staff obtained a copy of *Measurements of Outdoor Air Pollution from Secondhand Smoke on the UMBC (University of Maryland at Baltimore's Catonsville) Campus*. The item is a study of outdoor smoke concentration at that campus, particularly around building entrances.¹ The study was done by James Repace, a research physicist and former senior policy analyst and scientist with the Environmental Protection Agency and a consultant for the Occupational Health and Safety Administration.

A summary of the study:

- Very few published data are available on outdoor levels of SHS (secondhand smoke).
- A 2004 pilot study by another researcher indicated that secondhand tobacco smoke concentrations at outdoor patios, airport sidewalks, parks and public sidewalks ... at times where tobacco smokers were intermittently active ... in some cases could be comparable to concentrations in indoor settings.
- Secondhand smoke concentrations are more variable outdoors than indoors because outdoor secondhand smoke did not accumulate, and outdoor transient peaks were more sensitive to distances between someone smoking tobacco and people near the person smoking and to wind conditions.
- The 2004 pilot study indicated that at distances of 1 meter to 2 meters (1.1 yards to 2.2 yards) from a tobacco source, mean outdoor secondhand smoke-particle concentrations declined by about 75 percent.
- The 2004 pilot study indicated that for each point source (number of tobacco smokers) tobacco plume concentration will increase in strength and decrease with distance from the source and higher wind speeds.
- Mr. Repace's own study indicated that secondhand smoke odor can be smelled from as far away as 7 meters (23 feet), and irritation to people's tissues from secondhand smoke could start at 4 meters (13 feet) from the source of the secondhand smoke.

- It is only after 7 meters (23 feet) that particulate matter and other items connected to smoking fall to “background levels.”
- The larger the number of smokers, the greater the concentration of secondhand smoke, and the greater the potential for secondhand smoke concentration to dissipate at distances greater than 7 meters.

The study concluded that the university should place ashtrays and signs warning smokers to refrain from smoking at least 20 feet away from building entrances.

OPTIONS

- Close the public hearing and consider adopting the proposed ordinance.
- Close the public hearing and do not adopt the proposed ordinance.
- Close the public hearing and adopt the proposed ordinance with amendments.
- Close the public hearing and refer the proposed ordinance to a future meeting for further discussion and consideration.
- Continue the public hearing to a future meeting for more comment.

POTENTIAL MOTIONS

PERTAINING TO THE PUBLIC HEARING

- I move that the City Council close the public hearing.
- I move that the City Council close the public hearing and refer this matter to (a future meeting) for further consideration.
- I move that the City Council continue the public hearing to (a future date), and consider the next item on the agenda.

PERTAINING TO THE ISSUE

- I move that the City Council adopt the proposed ordinance.
- I move that the City Council move to the next item on the agenda.
- I move that the City Council adopt the proposed ordinance with the following amendments:
 - That sidewalks on the perimeters of parks and recreation areas be exempted from the ordinance. (This amendment would allow people smoking tobacco to continue walking along sidewalks on the edges of parks instead of crossing the street.)
 - That sidewalks, the Salt Lake City Cemetery, and golf courses should be eliminated as areas where smoking tobacco products would be prohibited. (Suggestion by Tom Guinney.)
 - That the Director of Parks shall have the authority to designate areas where smoking tobacco products is permitted within the public property affected by the ordinance. (This amendment is based on issues of proximity between people who do not smoke and those who do at the October 10 briefing. It should be noted

that the Administration holds that the Director of Parks already has the authority to designate smoking areas.)

- That smoking tobacco be prohibited within (25, 30, 35, 40) feet of areas where people congregate within the boundaries of parks, including areas such as playgrounds, water features, bowers, picnic areas, concession stands and sporting courts, and in the Salt Lake City Cemetery, and recreational areas. (Again, this potential motion deals with people’s proximity to each other in places of activity in outdoor public facilities. Also, please see Bullet No. 3 under Issues/Questions for Consideration.)
- That smoking tobacco products be prohibited within (25, 30, 35, 40) feet of all publicly-owned places where people congregate including sidewalks, streets, bus stops, and other outdoor facilities and venues. (This proposed amendment stems from the City Council briefing on October 10.)
- That the \$299 infraction fine be omitted from the ordinance and replaced with the following enforcement – Oral warning for first offense, written warning for second offense, \$25 citation for third offense. (Suggestion by Tom Guinney.)

KEY POINTS

- The proposed ordinance would prohibit smoking tobacco in all “city-owned parks, public squares, ball diamonds, golf courses, soccer fields, and other recreation areas, Library Square, city-owned cemeteries, and trails, but not designated smoking areas.” It also would prohibit smoking tobacco products within 50 feet of all mass gatherings – defined as an “outdoor assembly of 500 or more people on city-owned property that reasonably can be expected to continue for two or more hours.”
- Salt Lake City has 72 public parks and recreation areas, one public cemetery, and two areas designated as “public squares, malls and pleasure grounds,” golf courses, and a variety of trails where the ordinance would appear to apply.^{II}
- The proposed ordinance would create a separate chapter in the City Code to prohibit smoking tobacco in City-owned outdoor facilities. The penalty for violating the proposed ordinance would be an infraction punishable by a fine “not to exceed ... \$299.” The fine would be the same as the penalty for all other violations of park and playground rules include drinking alcoholic beverages, injuring animals and destroying public property.
- The proposed ordinance may be viewed as a step in concert with a Salt Lake Valley Board of Health resolution adopted February 3, 2006 in which the Board found it “prudent, reasonable and necessary” to urge municipal legislative bodies in Salt Lake County to adopt an ordinance that would “protect the public health and welfare by prohibiting smoking in public parks, gathering places, recreational areas, and plazas.”^{III}
- Salt Lake City has amended rules and regulations for public parks several times to proscribe activities and conduct that may have been allowed previously.

- Police Chief Chris Burbank said that the Police Department probably would not add personnel to enforce the ordinance when violations occur as officers encounter them on their daily routines.
- The proposed ordinance exempts Native Americans using a “traditional pipe” as part of a native tribal religious ceremony and people “smoking or using smoking materials to exercise protected First Amendment activity, such as smoking or use of materials for bona fide religious purposes.”

Issues/Questions for Consideration

- Is it in the public interest to prohibit smoking tobacco in Salt Lake City public parks?
- Should sidewalks on the perimeters of parks and other public facilities be included in the proposed prohibition?
- Although the proposed ordinance has been described as a public health issue, and others have spoken of prohibiting smoking in public parks as a way to initiate cultural change, the proposed ordinance also represents a change in the social compact that will have an effect on a sizeable minority -- nonetheless a minority -- of Salt Lake City residents. Under the social compact, the issue may not be a right to smoke tobacco or a right to be free from tobacco smoke, but the right of the majority and a minority to enjoy public facilities without intruding on each other. Given that, is there a way to address the concerns of both groups? Given that, do the public health benefits of prohibiting smoking tobacco outweigh the rights of tobacco smokers to enjoy public facilities?

Discussion/Background

The Administration transmittal includes the executive summary of a report of the United States Surgeon General titled *The Health Consequences of Involuntary Exposure to Tobacco Smoke*. The summary contains a variety of conclusions starting on Page 9 and ending on Page 14 that City Council members may wish to review. However, the major conclusion cited by the Administration is found on Page 9 and says, “The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke.” The report appears to focus mostly on the effects of secondhand smoke in homes and in workplaces.

A document attached to this memorandum and titled *Tobacco Prevention and Control in Utah* provides the following statistics:

- Although adult tobacco smoking in Utah since 1999 has declined at twice the rate of the rest of the United States, and tobacco smoking by youths has decreased significantly, more than 200,000 people in Utah continue to use tobacco.^{IV}
- The figure translates into an overall rate of 11.2 percent of Utah’s population. Broken down further the rate is 13.4 percent among men; 9.4 percent among women; 4.8 percent for people with college degrees; and 30.2 percent for people with less than a high-school education. The report also indicates that people “among some racial and ethnic communities” also have a higher rate of smoking tobacco than the overall percentage.^V
- More than 1,100 adults in Utah die each year as a result of their own smoking, and an estimated 140 to 250 deaths among adults, children and babies are caused by secondhand smoke exposure.^{VI}

Given similar national and statewide figures, the Salt Lake Valley Board of Health on February 3, 2005 adopted a resolution in which the Board “hereby supports advocates and urges the various municipal legislative bodies in Salt Lake County to enact ordinances within their jurisdictions establishing all public parks, gathering places, recreational areas and plazas as smoke free.”^{VII}

The Board of Health resolution cited a variety of findings about the effects of secondhand smoke, including the potential of children to model their behavior after adults. The resolution also noted that city councils in Clinton, Sandy and West Jordan had adopted ordinances restricting smoking tobacco in outdoor public places.

It should be noted that at the February 3, 2005 meeting the Board adopted the resolution instead of an outright regulatory ban “at this time.” According to minutes of the meeting:

The staff’s research has shown that although a number of communities have found it prudent for the health of their citizens to ban smoking in parks and on beaches, so far these communities have all done so by ordinances enacted by their municipal legislative bodies. Further, given the Board of Health’s narrow authority specifically designated by the State Legislature to adopt measures that promote and protect public health, regulations the Board adopts must be supported by sound scientific evidence demonstrating a rational relationship between the regulated behavior and its threat to the public’s health.

Currently, staff believes that preliminary research is promising, but does not meet this standard. Therefore, until more conclusive scientific research can demonstrate a stronger relationship between outdoor tobacco smoke and negative health effects, they recommend that instead of adopting a regulation, the Board adopt a resolution encouraging the local legislative bodies of Salt Lake County to adopt “smoke-free venues” ordinances.^{VIII}

It should be noted that cities in the nation have adopted ordinances prohibiting smoking tobacco in public outdoor areas. The Administration transmittal indicates that communities in 28 of the 50 United States have ordinances/regulations or policies that prohibit smoking at parks, zoos, and youth sports, trails and beaches. City Council staff found one site on the Internet with a link to an article in the Chicago Tribune that estimated the number of cities nationwide that have restricted outdoor smoking at 400. Council staff could not find the article in the Chicago Tribune archives to determine the date of article. According to the California Clean Air Project, 57 cities in that state – including San Diego, Los Angeles, Sacramento, and San Francisco – restrict or prohibit tobacco smoking in at least some outdoor venues.^{IX}

Here is a list of Utah cities that have restricted or prohibited smoking tobacco in public outdoor venues:

- Clinton – adopted an ordinance in 2003 that restricted smoking in public parks.
- Sandy – in 2004 restricted smoking in public parks and baseball fields.
- West Jordan – adopted an ordinance in 2004 restricting smoking in public parks and the rodeo arena.
- Logan – adopted an ordinance in 2005 prohibiting smoking in public parks.
- Hyde Park – adopted an ordinance in 2005 prohibiting smoking in public parks.
- Midvale – adopted an ordinance in 2006 prohibiting smoking in parks and outdoor areas.

- Riverton – adopted an ordinance in 2006 prohibiting smoking at playgrounds, and sports fields.
- Spanish Fork – adopted an ordinance in 2006 prohibiting tobacco use in outdoor recreation facilities.
- South Jordan – adopted an ordinance prohibiting tobacco use in parks, recreational areas and the city cemetery on September 5, 2006.

In addition, the Utah State Fair has designated smoke free zones since 2004. Cache County prohibited smoking tobacco on the first night of its 2006 county fair. Summit County created smoke free areas at its fairgrounds in 2006, and Tooele County restricted smoking in county-owned places in 2006.^x

As noted in the *Key Points* section, the proposed ordinance would prohibit smoking in about 80 to 85 public parks or areas and within 50 feet of an event on city-owned property that drew 500 or more people for two or more hours. Public squares such as Washington Square and the 500 West Park blocks would be included in that number because City Code 15.12.020 which establishes public squares says in part, restrictions relating to public parks and playgrounds under this code, as amended, shall be fully applicable to the public properties designated in section 15.12.030 of this chapter.”

Tobacco smoking still would be permitted on City streets, sidewalks and designated smoking areas. However, the smoking prohibition would include sidewalks within City parks, public squares, Library Square, recreational areas and cemeteries and extend to sidewalks around the perimeter of those facilities.

It probably should be noted again that the penalty for violating the proposed ordinance is an infraction with a fine not to exceed \$299, but police officers will have the discretion to issue a warning for a first offense if they deem it is in the best interest of the city.

Clearly, Salt Lake City government has proscribed activity and conduct in public parks. A copy of City regulations from 1920 includes a prohibition of unleashed dogs and a requirement that dogs be on a six-foot leash. The prohibition was unaltered until fairly recently. It appears that the City prohibited the consumption and possession of alcoholic beverages in 1965, according to City records.

ⁱ Please see Attachment No. 6.

ⁱⁱ Please see Attachment No. 1.

ⁱⁱⁱ Please see Attachment No. 2.

^{iv} *Tobacco Prevention and Control in Utah*, Page 2.

^v *Ibid*, Pages 2 and 6.

^{vi} *Ibid*, Page 7.

^{vii} Please see Attachment No. 2.

^{viii} Please see Attachment No. 4.

^{ix} Please see Attachment No. 5.

^x All statistics from *Tobacco Prevention and Control in Utah*, Page 17.

SALT LAKE CITY ORDINANCE

No. _____ of 2006

(No Smoking in City Parks, Recreational Areas, and Cemeteries, and Near Mass Gatherings)

AN ORDINANCE ENACTING CHAPTER 15.30 OF THE SALT LAKE CITY CODE,
PROHIBITING SMOKING IN CITY PARKS, RECREATIONAL AREAS, AND
CEMETERIES, AND NEAR MASS GATHERINGS.

WHEREAS, Salt Lake City Corporation (the "City") has authority to protect the public health, welfare, and sanitation; and

WHEREAS, based on the findings of the Utah Legislature in Utah Code Section 78-38-.5, the City hereby finds that the U.S. Environmental Protection Agency (EPA) has determined that environmental tobacco smoke is a Group A carcinogen, in the same category as other cancer causing chemicals such as asbestos; and

WHEREAS, the EPA has determined that there is no acceptable level of exposure to Class A carcinogens; and

WHEREAS, the EPA has determined that exposure to environmental tobacco smoke also causes an increase in respiratory diseases and disorders among exposed persons; and

WHEREAS, the United States Surgeon General has determined that secondhand smoke exposure causes disease and premature death in children and adults who do not smoke; and

WHEREAS, the United States Surgeon General has determined that children exposed to secondhand smoke have an increased risk of sudden infant death syndrome, acute respiratory infections, ear problems, bronchitis, pneumonia, and more severe asthma; and

WHEREAS, the United States Surgeon General has determined that exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer; and

WHEREAS, the United States Surgeon General has determined that the scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke; and

WHEREAS, reliable studies have shown that breathing side stream or secondhand smoke is a significant health hazard, in particular for elderly people, individuals with cardiovascular disease, and individuals with impaired respiratory function, including asthmatics and those with obstructive airway disease; and

WHEREAS, the American Cancer Society and the National Cancer Institute have reported that that between 35,000 to 40,000 nonsmokers, including 6,000 children, die each year from diseases caused by secondhand smoke; and

WHEREAS, the Americans with Disabilities Act, which requires that disabled persons have access to public places and work places, deems impaired respiratory function to be a disability; and

WHEREAS, the health care costs and lost productivity incurred by smoking-related disease and death represent a heavy and avoidable financial drain on our community; and

WHEREAS, the United States Surgeon General has determined that concentrations of cancer-causing and toxic chemicals are potentially higher in secondhand smoke than in the smoke inhaled by smokers; and

WHEREAS, the 2004 Behavioral Risk Factor Surveillance Survey indicates that 87% of Salt Lake County residents would support smoking restrictions at parks; and

WHEREAS, cigarette butts are not biodegradable and discarding cigarette butts and tobacco onto the ground in places such as city parks, recreational areas, and cemeteries, and at the locations of mass gatherings is unsightly, unclean, and particularly hazardous to small children and animals who handle and sometimes ingest them, which can lead to serious health effects; and

WHEREAS, smoke free parks are important for the health of children and adults; and

WHEREAS, because children imitate adult behavior, the elimination of smoking in places such as city parks, recreational areas, and cemeteries, and near mass gatherings furthers the goal of reducing youth smoking; and

WHEREAS, the Salt Lake Valley Board of Health Department, as a policy-making body designated by statute to protect the public's health, has deemed it prudent, reasonable, and necessary to support, advocate, and urge that municipal legislative bodies in Salt Lake County adopt an ordinance: (1) protecting the public health and welfare by prohibiting smoking in public parks, gathering places, recreational areas, and plazas; and, (2) guaranteeing the right of nonsmokers to breathe smoke-free air, and to recognize that the need to breathe smoke free air shall have priority over the desire to smoke; and

WHEREAS, the City finds that the prohibition of smoking in the City's parks, recreational facilities, and cemeteries, and near mass gatherings serves to protect the health, safety, and welfare of persons in the City.

NOW, THEREFORE, be it ordained by the City Council of Salt Lake City, Utah:

SECTION 1. That Chapter 15.30, Salt Lake City Code, be, and the same hereby is,

enacted to read as follows:

Chapter 15.30 Smoking Prohibited in City Parks, Recreational Areas, and Cemeteries, and Near Mass Gatherings

15.30.010. Definitions

A. "City park" means and includes city-owned parks, public squares, ~~Library Square, ball diamonds, golf courses, pocket parks,~~ soccer fields, and other recreation areas, Library Square, city-owned cemeteries, ~~linear parks,~~ and trails, but not designated smoking areas.

B. "Mass gathering" means an outdoor assembly of 500 or more people on city-owned property that reasonably can be expected to continue for two or more hours.

C. "Smoke" or "smoking" means and includes: possession, carrying, or holding a lighted pipe, cigar, or cigarette of any kind, or any other lighted smoking equipment, or the lighting or emitting or exhaling of smoke of a pipe, cigar, or cigarette or any kind, or of any other lighted smoking equipment.

15.30.020. Prohibitions

Smoking is hereby prohibited in all city parks and within fifty (50) feet of all mass gatherings. A violation of this ordinance is an infraction punishable by a fine not to exceed two hundred ninety-nine dollars (\$299.00) but not by imprisonment. Police officers shall have the discretion to issue a "warning" if they deem it is in the best interests of the city for the first offense.

15.30.030. Exceptions

A. American Indian/Alaska Native Ceremonies

1. A person is exempt from the restrictions of this chapter if the person:

a. Is a member of an American Indian/Alaska Native tribe whose members are recognized as eligible for the special programs and services provided by the United States to American Indians/Alaska Natives who are members of those tribes;

b. Is an American Indian/Alaska Native who actively practices an American Indian/Alaska Native religion, the origin and interpretation of which is from a traditional American Indian/Alaska Native culture;

c. Is smoking tobacco using the traditional pipe of an American Indian/Alaska

Native tribal religious ceremony, of which tribe the person is a member, and is smoking the pipe as part of that ceremony; and

d. The ceremony is conducted by a pipe carrier, American Indian/Alaska Native spiritual person, or medicine person recognized by the tribe of which the person is a member and by the American Indian/Alaska Native community.

2. A religious ceremony using a traditional pipe under this section is subject to any applicable state or local law, except as provided in this section.

B. First Amendment Activities

A person is exempt from the restrictions of this chapter if the person is smoking or using smoking materials to exercise protected First Amendment activity, such as smoking or use of materials for bona fide religious purposes.

15.30.040. Posting of Signs

“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 it) shall be clearly and conspicuously posted in every city park.

SECTION 2. EFFECTIVE DATE. That this Ordinance shall take effect on the date of its first publication.

Passed by the City Council of Salt Lake City, Utah, this _____ day of _____, 2006.

CHAIRPERSON

ATTEST:

CHIEF DEPUTY CITY RECORDER

Transmitted to the Mayor on _____.

Mayor's Action: _____ Approved. _____ Vetoed.

MAYOR

ATTEST:

CHIEF DEPUTY CITY RECORDER

(SEAL)

Bill No. _____ of 2006

Published: _____.

I:\Ordinance 06\Enacting 15.30 re smoking in public parks 10-12-06.doc

CCT 12 2006

SALT LAKE CITY ORDINANCE

No. _____ of 2006

(No Smoking in City Parks, Recreational Areas, and Cemeteries, and Near Mass Gatherings)

AN ORDINANCE ENACTING CHAPTER 15.30 OF THE SALT LAKE CITY CODE,
PROHIBITING SMOKING IN CITY PARKS, RECREATIONAL AREAS, AND
CEMETERIES, AND NEAR MASS GATHERINGS.

WHEREAS, Salt Lake City Corporation (the "City") has authority to protect the public health, welfare, and sanitation; and

WHEREAS, based on the findings of the Utah Legislature in Utah Code Section 78-38-.5, the City hereby finds that the U.S. Environmental Protection Agency (EPA) has determined that environmental tobacco smoke is a Group A carcinogen, in the same category as other cancer causing chemicals such as asbestos; and

WHEREAS, the EPA has determined that there is no acceptable level of exposure to Class A carcinogens; and

WHEREAS, the EPA has determined that exposure to environmental tobacco smoke also causes an increase in respiratory diseases and disorders among exposed persons; and

WHEREAS, the United States Surgeon General has determined that secondhand smoke exposure causes disease and premature death in children and adults who do not smoke; and

WHEREAS, the United States Surgeon General has determined that children exposed to secondhand smoke have an increased risk of sudden infant death syndrome, acute respiratory infections, ear problems, bronchitis, pneumonia, and more severe asthma; and

WHEREAS, the United States Surgeon General has determined that exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer; and

WHEREAS, the United States Surgeon General has determined that the scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke; and

WHEREAS, reliable studies have shown that breathing side stream or secondhand smoke is a significant health hazard, in particular for elderly people, individuals with cardiovascular disease, and individuals with impaired respiratory function, including asthmatics and those with obstructive airway disease; and

WHEREAS, the American Cancer Society and the National Cancer Institute have reported that that between 35,000 to 40,000 nonsmokers, including 6,000 children, die each year from diseases caused by secondhand smoke; and

WHEREAS, the Americans with Disabilities Act, which requires that disabled persons have access to public places and work places, deems impaired respiratory function to be a disability; and

WHEREAS, the health care costs and lost productivity incurred by smoking-related disease and death represent a heavy and avoidable financial drain on our community; and

WHEREAS, the United States Surgeon General has determined that concentrations of cancer-causing and toxic chemicals are potentially higher in secondhand smoke than in the smoke inhaled by smokers; and

WHEREAS, the 2004 Behavioral Risk Factor Surveillance Survey indicates that 87% of Salt Lake County residents would support smoking restrictions at parks; and

WHEREAS, cigarette butts are not biodegradable and discarding cigarette butts and tobacco onto the ground in places such as city parks, recreational areas, and cemeteries, and at the locations of mass gatherings is unsightly, unclean, and particularly hazardous to small children and animals who handle and sometimes ingest them, which can lead to serious health effects; and

WHEREAS, smoke free parks are important for the health of children and adults; and

WHEREAS, because children imitate adult behavior, the elimination of smoking in places such as city parks, recreational areas, and cemeteries, and near mass gatherings furthers the goal of reducing youth smoking; and

WHEREAS, the Salt Lake Valley Board of Health, as a policy-making body designated by statute to protect the public's health, has deemed it prudent, reasonable, and necessary to support, advocate, and urge that municipal legislative bodies in Salt Lake County adopt an ordinance: (1) protecting the public health and welfare by prohibiting smoking in public parks, gathering places, recreational areas, and plazas; and, (2) guaranteeing the right of nonsmokers to breathe smoke-free air, and to recognize that the need to breathe smoke free air shall have priority over the desire to smoke; and

WHEREAS, the City finds that the prohibition of smoking in the City's parks, recreational facilities, and cemeteries, and near mass gatherings serves to protect the health, safety, and welfare of persons in the City.

NOW, THEREFORE, be it ordained by the City Council of Salt Lake City, Utah:

SECTION 1. That Chapter 15.30, Salt Lake City Code, be, and the same hereby is,

enacted to read as follows:

Chapter 15.30 Smoking Prohibited in City Parks, Recreational Areas, and Cemeteries, and Near Mass Gatherings

15.30.010. Definitions

A. "City park" means and includes city-owned parks, public squares, ball diamonds, golf courses, soccer fields, and other recreation areas, Library Square, city-owned cemeteries and trails, but not designated smoking areas.

B. "Mass gathering" means an outdoor assembly of 500 or more people on city-owned property that reasonably can be expected to continue for two or more hours.

C. "Smoke" or "smoking" means and includes: possession, carrying, or holding a lighted pipe, cigar, or cigarette of any kind, or any other lighted smoking equipment, or the lighting or emitting or exhaling of smoke of a pipe, cigar, or cigarette or any kind, or of any other lighted smoking equipment.

15.30.020. Prohibitions

Smoking is hereby prohibited in all city parks and within fifty (50) feet of all mass gatherings. A violation of this ordinance is an infraction punishable by a fine not to exceed two hundred ninety-nine dollars (\$299.00) but not by imprisonment. Police officers shall have the discretion to issue a "warning" if they deem it is in the best interests of the city for the first offense.

15.30.030. Exceptions

A. American Indian/Alaska Native Ceremonies

1. A person is exempt from the restrictions of this chapter if the person:

a. Is a member of an American Indian/Alaska Native tribe whose members are recognized as eligible for the special programs and services provided by the United States to American Indians/Alaska Natives who are members of those tribes;

b. Is an American Indian/Alaska Native who actively practices an American Indian/Alaska Native religion, the origin and interpretation of which is from a traditional American Indian/Alaska Native culture;

c. Is smoking tobacco using the traditional pipe of an American Indian/Alaska

Native tribal religious ceremony, of which tribe the person is a member, and is smoking the pipe as part of that ceremony; and

d. The ceremony is conducted by a pipe carrier, American Indian/Alaska Native spiritual person, or medicine person recognized by the tribe of which the person is a member and by the American Indian/Alaska Native community.

2. A religious ceremony using a traditional pipe under this section is subject to any applicable state or local law, except as provided in this section.

B. First Amendment Activities

A person is exempt from the restrictions of this chapter if the person is smoking or using smoking materials to exercise protected First Amendment activity, such as smoking or use of materials for bona fide religious purposes.

15.30.040. Posting of Signs

“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 it) shall be clearly and conspicuously posted in every city park.

SECTION 2. EFFECTIVE DATE. That this Ordinance shall take effect on the date of its first publication.

Passed by the City Council of Salt Lake City, Utah, this _____ day of _____, 2006.

"

CHAIRPERSON

ATTEST:

CHIEF DEPUTY CITY RECORDER

Transmitted to the Mayor on _____.

Mayor's Action: _____ Approved. _____ Vetoed.

MAYOR

ATTEST:

CHIEF DEPUTY CITY RECORDER

(SEAL)

APPROVED AS TO FORM
Salt Lake City Attorney's Office
Date 10-12-06
By Boyd Ferguson

Bill No. _____ of 2006
Published: _____.



- [List of Parks](#)
- [Parks Reservations](#)
- [City Cemetery](#)
- [Graffiti Removal](#)
- [Contact Us](#)
- [Parks Home](#)

Search for Parks in alphabetical order

- [A - C](#) [D - E](#)
- [F - G](#) [H - L](#)
- [M - O](#) [P - R](#)
- [S - U](#) [V - Z](#)

List of Parks

Park and Address	Amenities	Reservation Available
11th Ave 11th Ave M St	Basketball 1/2 Court, Tennis Courts, A.D.A. Playground, Jogging Track, Cement Volleyball,	
17th South River Park 1700 S. 1150 W.	Restroom, Soccer Fields	
5th Ave and C Street 5th Ave C Street	Tennis Courts	
6th East Mini 215 South 600 East	Playground	
9th South River Park 900 South 1400 East	Picnic Tables	
Arcadia Park 1825 South Lakeline Dr.(2950 E)	Benches, Drinking Fountain, Bonneville Shoreline Trailhead	
Artesian Well 500 E 800 S	Drinking Fountain, Benches	
Beatrice Evans Park 1250 E 10th S	Sand Box, Benches	
City Creek North Temple & State St	Pond & Creek, Benches, Drinking Fountain	
Constitution 1300 W 200 N	Tennis Courts, Softball Diamond, Soccer, Playground, Pavilions with Tables, Grass Volleyball	Pavilion- first come first serve
Cotton Park 300 East Downington	Playground, Gazebo, Benches,	
Cottonwood Park 300 N 1600 W	(3) Small shelters with 1 table in each, (1) medium bowery with (8) small tables, gold mile walking path with quarter mile markers, (1) playground, (1) volleyball sand box, (1) 1/2 court basketball, (1) A.D.A. restroom	Pavilion- first come first serve
Curtis Mini Park 2300 W. 1430 S	Playground	
Davis Park 1980 E 950 S	Playground, Benches, Drinking Fountain	
Dee Glen Smith Tennis 2425 E 1216 S	Tennis Courts, Pro-shop	Reservation required 583-9451

Dilworth Park 2100 E 1900 S	Tennis Courts, Ball field	
Donner 2710 East 940 South	A.D.A. Playground, Benches	
Elizabeth Sherman Mini Park 2400 S. Highland Drive	Benches	
Ensign Downs 800 North 80 East	Softball Field, Tennis Courts, Benches, Playground, Grass Volleyball	
Fairmont 900 E 2361 S	Bowery, Tables, Fireplace. A.D.A. Playgrounds, Tennis Courts, Sand Volleyball, Swimming Pool, Soccer Fields, A.D.A Restroom, Pond, Horseshoe Pits. Moose Grove, soft ball field. NO water hook-up	Main Grove Bowe <u>Reservation</u> (seats 200) \$40 , 4-BBQ'S North Bowery <u>Reservation</u> (seats 200) \$40 , BBQ'S Very limited parkin Non-resident \$50
Faultline 1050 East 400 South	A.D.A. Playground, Benches, Fountain,	
Fire Station Tennis 1015 West - 300 N.	(2)Tennis Courts	
First Encampment 1700 S 500 E	Monuments, Benches	
Freedom Trail Memory Grove 375 N.Canyon Road	Off leash area.	
Galagher Tot Lot 560 E. 650 S	Playground	
Glendale 1200 W. 1700 S	Tennis Courts, Restroom, Ball field, Tennis Courts	
Glendale Youth 855 W 1355 S	Ballfield, A.D.A. Playground, A.D.A. Restrooms	
Guadalupe 619 West 500 North	(2) 1/2 Basketball Courts, Playground, Benches	
Herman Frank's Park 700 E 1300 S	Ball Fields, A.D.A. Restroom, Playground, off leash area	
Hidden Hollow 1255 E 2160 S	River, Trees, Bushes, Walkways, Benches	
Inglewood Park 1040 E 1125 S	A.D.A. Playground, Benches	
Jackson 500 North Grand St	Playground, Pavilions with Table	Pavilion- first come first serve
Jefferson Park West Temple 1000 S	A.D.A. Playground	
Jordan Park 1060 South 900 West	2 Bowerys, Tables, Fireplaces, Sand Volleyball, A.D.A. Playgrounds, Tennis, Horseshoes, Ballfield,	Large Bowery <u>Reservation</u> (seats 200) \$40 ,

	International Peace Gardens, A.D.A. Restrooms. Off leash area. NO water hook-up , skate park	S.W. Terrace <u>reservatic</u> (seats 150) \$40 , BBQ'S
		Non-resident \$50
Kletting 170 North B St.	Playground	
Laird Park 1800 E 1200 S	A.D.A. Playground, Practice Ball Field, Soccer Field	
Liberty Park 600 E 1000 S.	A.D.A. Playgrounds, A.D.A. Restrooms, Bowerys, Large Lake, Concession Stand, Children's Play Area, Aviary, Horseshoe Pits, Swimming Pool, Basketball Court, Volleyball Courts, Tennis Courts, Greenhouse. NO water hook-up	Rice Terrace Bowery <u>Reservation</u> (seats 200) \$40 4- BBQ'S
		Non-resident \$50
Lindsey Gardens 9th Avenue & M St	Ball Diamonds, Playground, Bowery, A.D.A. Restroom, Tennis Courts. Off leash area. NO water hook-up	Bowery <u>Reservation</u> (seats 100) \$40
		Non-resident \$50
Madsen Park Chicago St - S. Temple	Ballfield, Playground, Basketball Court, Volleyball Court	
Memory Grove 375 North Canyon Rd	Drinking Fountains, A.D.A. Restroom, Ornamental Fountain, Monuments, Memorial House, Ottinger Hall	
Miami 1780 W 1565 N	A.D.A. Playground,	
North Gate Way Park 300 North Beck St	Benches, Picnic Trellis Area, A.D.A. Restroom	
Oak Hills Ball Diamonds Wasatch Blvd. 1220 S	Ball Fields, A.D.A. restrooms	
Parley Pratt Plaza 2300 E 2100 S	Monument, Benches	
Parley's Way 2810 E 2400 S	Playground	
Peace Gardens	Flower Beds	
Pioneer Park 300 W 350 S	Tennis Court, Volleyball, Basketball, A.D.A. Restroom, A.D.A. Playground	
Poplar Grove 800 South 1200 West	Bowery, Horseshoes, Sand Volleyball, A.D.A. Playground, Basketball, Tennis Courts, Little League, Shuffleboard, A.D.A. Restroom, ball field. NO water hook-up , drinking fountain	Bowery <u>Reservation</u> (seats 200) \$40 8- BBQ'S
		Non-resident \$50
Popperton Park 1350 East 11th Ave	Soccer Fields, Playground	
	A.D.A. Playground	

Post St. Tot Lot 950 W 500 S		
Pugsley 340 West 2100 South	Playground	
Redwood Meadows 1780 W 400 N	Playground	
Reservoir 1300 E. South Temple	Tennis Courts, A.D.A. Playground	
Richmond 450 E 600 S	Volleyball, A.D.A. Playground, Shelter,	
Riverside Park 739 North 1400 West	Tennis Courts, Soccer Fields, Football, Little League, Practice Softball, Bowerys, A.D.A. Restrooms, Basketball 1/2 Court, Horseshoe, Grass Volleyball, A.D.A. Playgrounds, soft ball field. NO water hook-up	Lion's Bowery <u>Reservation</u> (seats 100) \$40 , BBQ'S Large Bowery <u>Reservation</u> (seats 200) \$40
		Non-resident \$50
Rosewood 1200 W 1300 N	Tennis Courts, Cement Volleyball, Soccer Fields, A.D.A. Restroom, 2 Softball, 1 Baseball Field	
Rotary Glen 800 South 2270 East	Bowery, tables, minimal power, Restrooms are 600 feet up dirt road. No water hook-up. Drinking fountain, NO BBQ'S, Portable toilets.	Bowery <u>Reservation</u> (seats 50) \$40 Very limited parking
		Non-resident \$50
Sherwood Park 1500 West - 400 S	Bowerys, Baseball fields, Softball field, Cement Volleyball, A.D.A. Restroom, A.D.A. Playgtound, NO water hook-up , drinking fountain on the restroom.	South Bowery <u>Reservation</u> (seats 200) \$40 , North Bowery <u>Reservation</u> (seats 200) \$40 , BBQ'S
		Non-resident \$50
Shipp 579 4th Ave	Playground, Benches	
Silver Mini 500 North Center St	A.D.A. Playground, Benches	
Stratford Park 20th E 2600 S	Playground, Soccer Field	
Sunnyside Park 840 South 1600 East	Bowery, Grass Volleyball, Tennis Courts, Basketball, Football, Soccer, Lacrosse, A.D.A. Playground, A.D.A. Restroom, Softball Fields, Little League baseball. NO water hook-up	Bowery <u>Reservation</u> (seats 200) \$40 8- BBQ'S Very limited parking
		Non-resident \$50
Swede Town	Basketball Court, Playground	

1500 N 800 W

Taufer Park Mini
300 E 700 S

A.D.A Playground

Van Ness Tot Lot
430 E 850 S

Playground

Victory Park
250 South 1000 East

A.D.A. Playground

Warm Springs
900 N. Beck Street

Tennis Courts, A.D.A. Playground, softball field

Wasatch Hollow
1700 S 1700 E

Playground, Drinking Fountain, River, Benches, A.D.A. Restrooms

Washington Park Parleys Canyon. Exit 134 on I-80 East

Bowery, Tables, Lights, Firepit, Fireplace, Softball, Horseshoes, Cement Volleyball, Horseshoes, Softball, Cement Volleyball, A.D.A. Restrooms, A.D.A. Playground

Mt Dell Bowery
Reservation
(seats 200) **\$75**,
BBQ'S Washingt
Bowery
Reservation
(seats 200) **\$75**,
BBQ

Non-resident **\$100**

Westminster Park
990 East 1700 South

Playground, Gazebo

Westpointe
1100 North 2000 West

Bowery, Softball, Little League, A.D.A. Restrooms, Tennis Courts, Basketball Court, Soccer Fields, A.D.A. Playground, **NO water hook-up**

Bowery
Reservation
(seats 100) **\$40**
Non-resident **\$50**

[Back to Top of Page](#)

[Parks Main Page](#)

RESOLUTION OF THE SALT LAKE VALLEY BOARD OF HEALTH
ADVOCATING THAT THE VOTER-ELECTED MUNICIPAL LEGISLATIVE
BODIES OF SALT LAKE COUNTY ADOPT AN ORDINANCE PROHIBITING
SMOKING IN PUBLIC PARKS, RECREATIONAL AREAS, GATHERING
PLACES, AND PLAZAS.

WHEREAS, the Salt Lake Valley Board of Health ("Board") is authorized to establish and operate reasonable programs related to public health, welfare and sanitation under authority granted in Section 26A-1-114, Utah Code Annotated, 1953 as amended, and Section 9.04.050 of the Salt Lake County Code of Ordinances; and

WHEREAS, the Board hereby finds that:

1. The U.S. Environmental Protection Agency (EPA) has determined that environmental tobacco smoke is a Group A carcinogen, in the same category as other cancer-causing chemicals such as asbestos.
2. Children exposed to secondhand smoke have an increased risk of asthma, respiratory infections, bronchitis, pneumonia, sudden infant death syndrome, developmental abnormalities, and cancer.
3. Reliable studies have shown that breathing side stream or secondhand smoke is a significant health hazard, in particular for elderly people, individuals with cardiovascular disease, and individuals with impaired respiratory function, including asthmatics and those with obstructive airway disease.
4. The Americans with Disabilities Act, which requires that disabled persons have access to public places and workplaces, deems impaired respiratory function to be a disability.
5. The health care costs and lost productivity incurred by smoking-related disease and death represent a heavy and avoidable financial drain on our community.
6. Preliminary studies indicate exposure to secondhand smoke in outdoor places may reach levels as high as indoor venues.
7. Discarding cigarette butts and tobacco onto the ground in places such as parks, gathering places, recreational areas, and plazas is unsightly, unclean and particularly hazardous to small children who handle and sometimes ingest them.
8. Because children often model adult behavior, the elimination of smoking in places such as public parks, gathering places, recreational areas and plazas furthers the goal of reducing youth smoking.
9. The City Councils of Clinton, Sandy, and West Jordan in addition to numerous municipal legislative bodies in California have adopted ordinances restricting smoking outdoors.
10. The municipal legislative bodies in Salt Lake County may legislate on health and safety matters as well as social policy and economic issues.

WHEREAS, the Board, as a policy making body designated by statute to protect the public's health, deems it prudent, reasonable and necessary to support, advocate, and urge that municipal legislative bodies in Salt Lake County adopt an ordinance: (1) protecting the public health and welfare by prohibiting smoking in public parks, gathering places, recreational areas, and plazas; and (2) guaranteeing the right of nonsmokers to breathe smoke free air, and to recognize that the need to breathe smoke free air shall have priority over the desire to smoke.

NOW, THEREFORE, BE IT RESOLVED BY THE SALT LAKE VALLEY BOARD OF HEALTH THAT:

1. The Board hereby supports, advocates and urges the various municipal legislative bodies in Salt Lake County to enact ordinances within their jurisdictions establishing all public parks, gathering places, recreational areas, and plazas as smoke free.

DATED this 3 day of February, 2005

SALT LAKE VALLEY BOARD OF HEALTH

By: Cheryl Cook
Cheryl Cook, Chair

Tobacco Prevention and Control in Utah

Sixth Annual Report - August 2006



Make Your Life A Little Easier.

The TRUTH™

2006 The TRUTH smoking cessation series "Make Your Life A Little Easier"

Utah Department of Health
Tobacco Prevention and Control Program

Letter From The Executive Director

A Message from the Executive Director's Office Utah Department of Health

I am pleased to present the sixth annual report of Utah Department of Health tobacco prevention and control activities funded through the Tobacco Settlement Restricted Account and Cigarette Tax Restricted Account. This report highlights the accomplishments of the Department's Tobacco Prevention and Control Program (TPCP) and its many partners in their effort to reduce tobacco use and save lives.

Utah's comprehensive approach to preventing and controlling tobacco use is making an impact. Since 1999:

- Adult smoking declined at twice the rate of the rest of the United States.
- Utah remains the only state with an adult smoking rate below 12%.
- Youth smoking decreased by 38%. Experimentation with smoking among high school students reached a historic low of 25%.
- Smoking during pregnancy decreased by 23%.
- The rate of children exposed to secondhand smoke in their homes decreased by more than 50%.

Despite great progress, much remains to be done. More than 200,000 Utahns continue to use tobacco. Smoking rates remain high among Utahns with low education and income levels and among some racial and ethnic communities. Each year, more than 1,100 Utah adults die as a result of their own smoking, and an estimated 140 to 250 adults, children, and babies die due to secondhand smoke exposure. The Utah economy loses a staggering \$530 million annually to smoking-attributable medical and productivity costs. To entice people to use tobacco, major tobacco companies spend more than \$60 million each year marketing tobacco products in Utah – several times more than what Utah spends on anti-tobacco programming.

The TPCP and its many partners, including local health departments, schools, and numerous community-based organizations, reach tens of thousands of Utahns through school and community-based prevention programs, quitting services, media messages, and policy development and enforcement efforts. As long as tobacco costs our healthcare system millions of dollars and continues to cause preventable disease and death among our citizens, we must maintain our commitment to help smokers quit and prevent children from starting to use tobacco. I thank the Utah State Legislature for its long-standing support for tobacco prevention and control. We look forward to making further strides in reducing the disease, disability, and death caused by tobacco use.

Sincerely,



David N. Sundwall, M.D.
Executive Director

Table of Contents

Key Accomplishments	4
Tobacco Use in Utah	6
Program Overview	8
The TRUTH Campaign	9
Quit Programs	12
Youth Tobacco Use Prevention	14
Reducing Exposure to Secondhand Smoke	16
Reducing Tobacco Use Among All Utahns	18
Bear River Counties	20
Central Utah Counties	21
Davis County	22
Salt Lake County	23
Southeastern Utah Counties	24
Southwest Utah Counties	25
Summit County	26
Tooele County	27
TriCounty	28
Utah County	29
Wasatch County	30
Weber-Morgan Counties	31
Acknowledgments	32
Funded Partners	33
Use of Funds	34
Notes and References	35

Key Accomplishments



Since 2000, when Master Settlement Agreement-funded programs were initiated, Utah has made considerable progress in the fight against tobacco addiction. Reductions in youth and adult tobacco use, along with increased protection from secondhand smoke exposure lead to health and economic benefits for Utahns. The Tobacco Prevention and Control Program (TPCP) maintains focus on its mission to:

Prevent Youth From Starting to Use Tobacco

- Recall of The TRUTH anti-tobacco advertisements was exceptionally high. Ninety-eight percent of Utah youth age 13 to 17 reported that they had seen or heard The TRUTH anti-tobacco advertisements in the past month. Eighty-six percent reported that they found The TRUTH campaign ads convincing.¹
- Since 2001, illegal tobacco sales to underage youth declined by 50%.² Compared to students nationwide, Utah students who smoke are six times less likely to use stores as their usual source of cigarettes.^{3,4}
- Since 2002, 189 schools in 10 Utah school districts have participated in a project to strengthen school tobacco policies, tobacco education, and policy enforcement. In 2006, local health departments helped with tobacco policy reviews and updates in 5 additional school districts.
- 1,200 active Phoenix Alliance coalition members from 25 counties engaged 2,000 peers in anti-tobacco education and street marketing.

Help Tobacco Users Quit

- The TRUTH campaign continued to reach smokers with messages that encouraged quit attempts and informed about quit services. Ninety-seven percent of adult smokers reported seeing The TRUTH ads in the past month. Eighty-nine percent were aware of the Utah Tobacco Quit Line and 69% reported knowing about Utah's online quit service, QuitNet.⁵
- More than 50% of adult smokers reported that they thought about quitting after seeing The TRUTH ads.⁵
- Nearly 80% of adult smokers reported that they wanted to quit and 60% made a quit attempt of at least one day.⁶
- During fiscal year 2006, more than 12,000 Utah tobacco users enrolled in TPCP-sponsored tobacco cessation services.
- Since its inception in 2001, the Utah Tobacco Quit Line provided assistance to more than 30,000 Utahns.⁷
- Smokers who enrolled in TPCP-sponsored quit services were at least twice as likely to quit as smokers who tried on their own.
- The majority of quit service users reduced their tobacco use or quit for an extended period of time.
- Quit Line and QuitNet users were very satisfied with quit services.^{7,8}
- The Ending Nicotine Dependence (END) program served 1,032 youth who were cited by Utah courts for tobacco possession. Most END participants liked the END class and would recommend the class to friends who use tobacco.⁹

Key Accomplishments

Protect Utahns From Secondhand Smoke

- Local health departments, community programs, the TPCP website, and The TRUTH campaign worked together to inform Utahns about the devastating effects of secondhand smoke exposure and to encourage smoke-free homes, cars, workplaces, and recreational venues.
- Since 2001, child exposure to secondhand smoke in the home declined by 53%.¹⁰
- The percentage of Utahns with rules that prohibit smoking in the home continued to increase. In 2005, 91% of Utah adults reported that smoking is not allowed inside their homes.⁶
- Since 2005, more than 2,500 additional multi-housing units became smoke-free.
- Since 2003, fewer Utahns reported worksite exposure to secondhand smoke.⁵ A further decrease in workplace exposure is expected as a result of the 2006 Utah Indoor Clean Air Act (UICAA) amendments that will phase out smoking in taverns, private clubs, and other previously exempt venues.

Eliminate Tobacco-Related Disparities

- Utahns with lower education and income levels and Utah minority populations continued to report higher smoking rates.
- To provide quit assistance, the Medicaid program and the Association for Utah Community Health offered counseling and prescriptions for quit medications to 454 uninsured and Medicaid-insured tobacco users.
- The TPCP-funded ethnic networks continued to educate the Hispanic, Native American, African American, and Pacific Islander communities about tobacco use, recruit anti-tobacco advocates, and consult the TPCP about culturally appropriate messages, services, and data collection.
- Community groups serving low income populations surveyed 1,200 community members about secondhand smoke policies and received 255 smoke-free home pledges.

Utah's Tobacco Prevention and Control Program (TPCP)

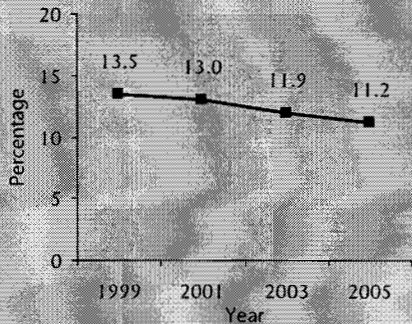
Mission

The Tobacco Prevention and Control Program (TPCP) leads the fight against tobacco-related death, disease and economic burdens in Utah by mobilizing the state to support tobacco-free lifestyles and environments. The TPCP and its partners provide programs and policies that are comprehensive, evidence-based, culturally-appropriate and cost-effective in order to:

- Prevent youth from starting to use tobacco
- Help tobacco users quit
- Protect Utahns from secondhand smoke
- Eliminate tobacco-related disparities

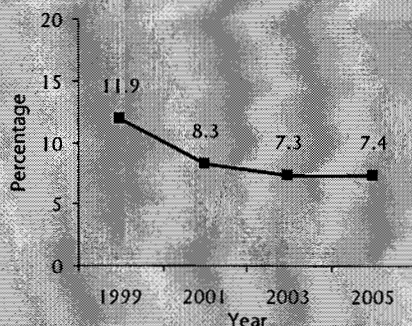
Tobacco Use in Utah

Figure 1.
Percent of Adults Who Report Current Cigarette Smoking, Utah 1999-2005 (Odd Years, Age-Adjusted Data)



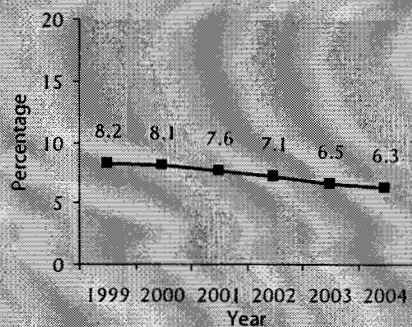
Source: Utah BRFSS⁵

Figure 2.
Percent of High School Students Who Report Current Cigarette Smoking, Utah 1999-2005 (Odd Years)



Source: Utah YRBS⁴

Figure 3.
Percent of Pregnant Women Who Report Cigarette Smoking, Utah 1999-2004



Source: Utah Vital Statistics⁶

Utah's Smoking Rates Remain at Historic Lows

Adult Tobacco Use

- With a current smoking rate of 11.2%, Utah continues to be the only state that meets the Healthy People 2010 Objective of reducing cigarette smoking to 12% or less. Since 1999, adult smoking decreased by 17% (Figure 1).⁶

- Men continued to have higher smoking rates than women. In 2005, men reported a smoking rate of 13.1%; women reported a rate of 9.4%. However, both groups showed comparable rates of decline in smoking since 1999.⁶

- Smoking disproportionately impacts Utahns with less education and income. For example, the 2005 smoking rate among Utahns with less than high school education was 30.2% compared to 4.8% for college-educated Utahns.⁶

Youth Tobacco Use

- In 2005, the percentage of high school students who reported that they had ever tried cigarettes reached a historic low of 25.0%. In 1991, when smoking experimentation was first measured, 48.8% of students reported that they had tried cigarette smoking.⁴

- In 2005, 7.4% of high school students reported that they had smoked in the past 30 days, a 38% decrease since 1999 (Figure 2).⁴

The Utah high school smoking rate is 68% lower than the national average of 23.0%.⁴

- Since 2001, the rate of illegal sales to underage youth during tobacco retailer compliance checks decreased by 50%.²

Tobacco Use Among Pregnant Women

- Smoking among pregnant women decreased by 23%, from 8.2% in 1999 to 6.3% in 2004 (Figure 3).¹¹
- The risk of smoking during pregnancy varies by age and education. Pregnant teens and pregnant women with high school education or less continue to report smoking rates of 10% or higher.¹¹

Exposure to Secondhand Smoke (SHS)

- Since 2001, child and adolescent exposure to secondhand smoke at home declined by 53%, from 6.0% in 2001 to 2.8% in 2005 (for numbers of children exposed see Figure 4).¹⁰ As a result, more than 20,000 fewer Utah children are at risk for secondhand smoke-related health problems.^{10,12}
- Children who live in rented apartments or houses are more than twice as likely to be exposed to secondhand smoke in their homes than children who live in owned homes.¹⁰

FACT: Since 1999, Utah's adult smoking rate declined by 17%; Utah's youth smoking rate declined by 38%. Since 2001, the number of Utah children exposed to secondhand smoke in their homes has been cut in half.

Tobacco Use in Utah

Tobacco Control Saves Lives and Money

Tobacco-Related Disease and Death

- Smoking remains the leading preventable cause of death in the United States. Approximately 440,000 people die from tobacco use each year, and more than 8.6 million people have at least one serious illness caused by smoking.¹³
- In Utah, more than 1,100 adults die each year as a result of their own smoking. An estimated additional 140 to 250 deaths among adults, children and babies are caused by secondhand smoke exposure.¹⁴
- Smoking causes about 90% of lung cancer deaths in men and almost 80% in women.¹⁵ Lung cancer is the leading cause of cancer-related deaths in Utah and the U.S. Utah's lung and bronchus cancer incidence has declined since the early 1990s (Figure 5).¹⁶ Further reductions in adult cigarette smoking are expected to lead to fewer lung cancer cases and fewer deaths caused by lung cancer.
- Children and adolescents who smoke are less physically fit and have more respiratory illnesses than their nonsmoking peers. They are at risk for impaired lung growth, cancer, heart disease, and weakened immune systems.¹⁵
- Smoking during pregnancy can result in pre-term delivery, low birth weight, infant respiratory diseases, other infant illnesses, other obstetric complications, and infant death.¹⁵
- Children exposed to secondhand smoke are at an increased risk for sudden infant death syndrome, acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.¹⁷
- Exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer.¹⁷

Health Effects

- Diseases caused by smoking include bladder, esophageal, laryngeal, lung, oral, and throat cancers; cervical, kidney, pancreatic, and stomach cancers; aortic aneurysm; acute myeloid leukemia; cataracts; pneumonia; periodontitis; chronic lung diseases; coronary heart and cardiovascular diseases.¹⁵

Smoking-Attributable Expenditures

- In Utah, smoking causes an estimated \$530 million in annual health-related economic costs and productivity losses (Figures 6 and 7).¹⁸
- National studies estimate that for every smoker who quits, \$8,000 in medical care costs are saved.¹⁹

FACT: More than 200,000 Utah smokers remain at risk for tobacco-related disease and death.^{4,6,12} A long-term commitment to tobacco control is necessary to continue to save lives and reduce smoking-related costs.

Figure 4. Number of Children Exposed to SHS at Home, Utah 2001, 2003, 2004, and 2005

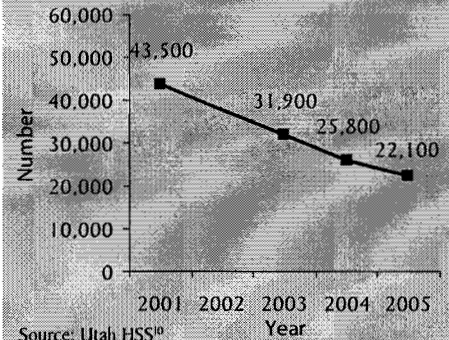


Figure 5. Age-Adjusted Cancer Incidence Rates for Lung and Bronchus Cancer, Incidence per 100,000 Population, Utah 1993-2003

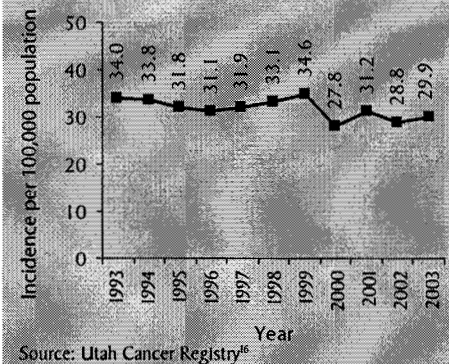


Figure 6. Smoking Attributable Medical Expenditures, Utah 1998

Ambulatory	\$106 million
Hospital	\$71 million
Nursing Home	\$46 million
Prescription Drugs	\$28 million
Other	\$22 million
Total	\$273 million

Source: SAMMEC Program¹⁸

Figure 7. Average Annual Smoking-Attributable Productivity Losses, Utah 1997-2001

Men	\$188.5 million
Women	\$68.7 million
Total	\$257.2 million

Source: SAMMEC Program¹⁸

Program Overview

Fact: The Tobacco Prevention and Control Program (TPCP) at the Utah Department of Health contains all components of a comprehensive program that has been shown to save lives.²⁰ All segments of the program complement each other and undergo ongoing evaluation and improvement.

The TRUTH Campaign

- TV and radio ads, billboards, posters, community events, and other media educate Utahns about the dangers of tobacco, link to quit services, and promote smoke-free environments.

TPCP Quit Services

- The Utah Tobacco Quit Line, Utah QuitNet, and local counseling programs for youth, adults, and pregnant women offer free or low-cost quit services.
- Partnerships with Medicaid and the Association for Utah Community Health provide counseling and free quit medication to uninsured and Medicaid-insured tobacco users.

Preventing Youth Tobacco Use

- School and community-based prevention programs and efforts to enhance tobacco policies help youth stay tobacco-free.

Reducing Youth Access to Tobacco

- Retailer education and compliance checks conducted by local health departments and law enforcement reduce youth access to tobacco.

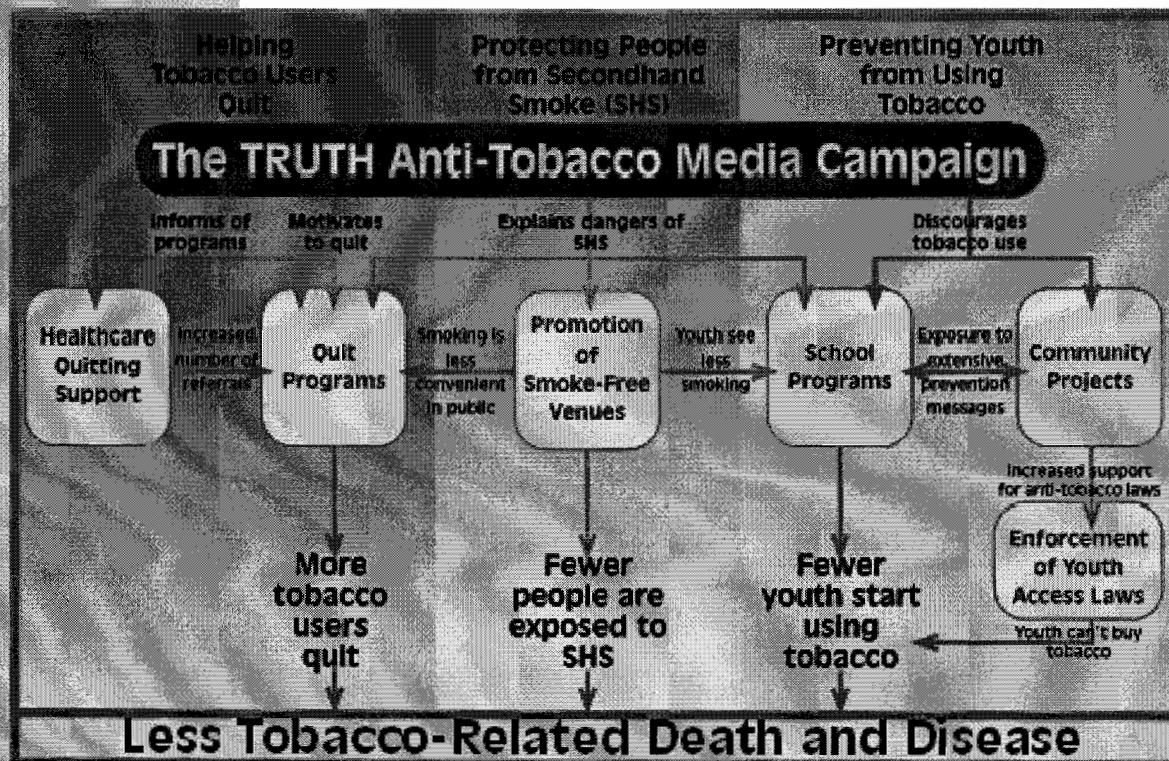
Protecting Utahns From Secondhand Smoke (SHS)

- Efforts to strengthen tobacco policies protect Utahns from SHS exposure in workplaces, homes, and recreational settings.
- Businesses receive help in complying with the Utah Indoor Clean Air Act.

Reducing Tobacco Use Among All Utahns

- Four community-based organizations serving Utah's Hispanic, Native American, African American, and Pacific Islander communities develop culturally appropriate plans to assure that tobacco prevention and control messages and services reach all Utahns.

Tobacco Prevention and Control Program Goals and Strategies



The TRUTH Campaign

The TRUTH Messages Reach Utahns

Tobacco Industry Marketing

The tobacco industry spends an estimated \$63.7 million each year to market and advertise its deadly products to Utahns.²¹ Aggressive tobacco industry marketing demands an equally aggressive public education campaign to prevent youth smoking and exposure to secondhand smoke and to inform tobacco users about quitting options.

Exposing Utahns to The TRUTH Ads

Utah's The TRUTH anti-tobacco marketing campaign counters tobacco advertising with messages for youth, adults, pregnant women, and ethnic minorities. More than 90% of Utahns remember seeing or hearing The TRUTH ads in the past month (Figures 8 and 9).^{1,5,6} The majority of tobacco users are aware of Utah's quit services.⁵

Recall of The TRUTH campaign and quit services	Youth	Adult Smokers	Adult Nonsmokers
Remember seeing or hearing anti-tobacco ads in the last month	98%	97%	91%
Know about the Utah Tobacco Quit Line	82%	89%	71%
Know about Utah QuitNet	60%	69%	56%
Thought about quitting after seeing the ads	-	51%	-

Source: TPCP Youth and Adult Media Surveys^{1,5}

Utah Leads in Youth Exposure to Anti-Tobacco Advertising

Media research shows that targeted audiences must be exposed to media messages at least three times per week on a long-term basis to be effective.^{22,23} A recent national study of state-funded anti-tobacco media campaigns found

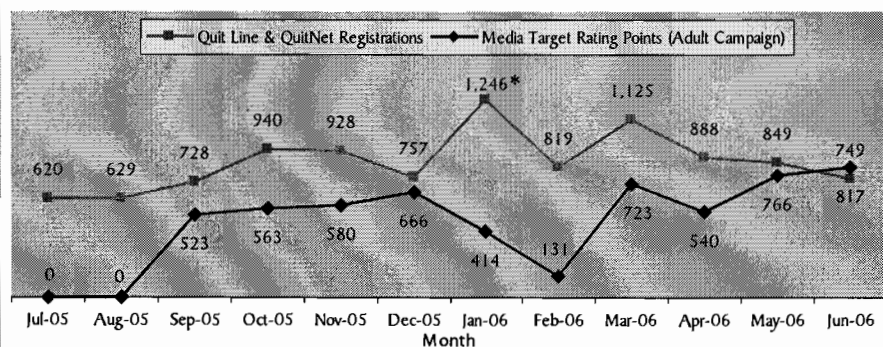
that Utah's The TRUTH campaign reached youth more frequently than any other campaign included in the study.²⁴ Ongoing exposure to The TRUTH messages is crucial for continuing declines in Utah's tobacco use rates.

The TRUTH Campaign Drives Participation in Quit Services

The TRUTH anti-tobacco advertisements inform Utah smokers about telephone and online quit services.

As shown in the graph below, increased intensity of The TRUTH ads leads to increased service registrations.

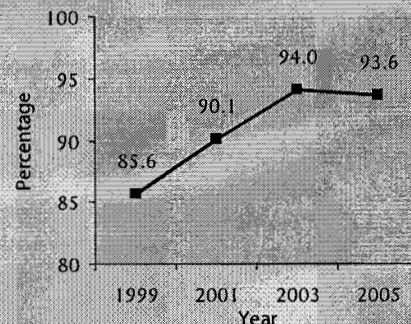
Figure 10. Quit Service Registrations and Media Target Rating Points by Month, FY2006



Source: Utah Tobacco Quit Line, Utah QuitNet, and Crowell/Love contractor reports, 2005-2006^{7,8,25}

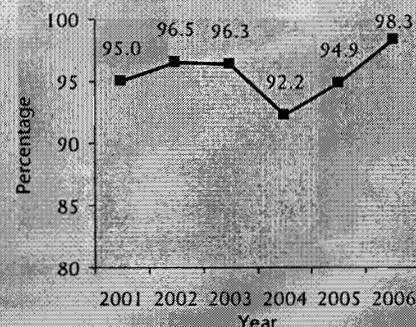
* Note: Increased registrations in January are likely due to New Year's resolutions to quit smoking.

Figure 8. Percent of Adults Who Saw Anti-Tobacco Ads in the Past Month, Utah 1999, 2001, 2003, 2005



Source: Utah BRFSS⁴

Figure 9. Percent of Youth (13-17) Who Saw Anti-Tobacco Ads in the Past Month, Utah 2001-2006*



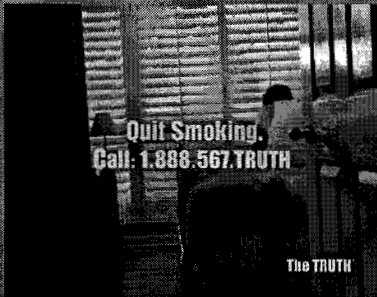
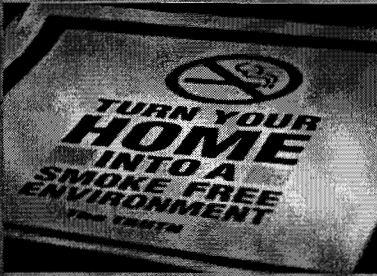


Source: TPCP Youth Media Survey¹

*Note: The survey methodology assessing youth ad recall was changed between 2003 and 2004 and between 2005 and 2006.

The TRUTH Campaign

Utahns Find The TRUTH TV Ads Motivational and Convincing

An independent evaluation of The TRUTH television ads found that the ads reach and influence their target audiences. Below is a listing of telephone survey results by audience.^{1,5}

I Did It - Phase IV "Make Your Life A Little Easier"		Youth	Adult Smokers	Adult Nonsmokers
People whose lives are complicated by smoking (coughing, dental problems, smelly clothes) are encouraged to call the Quit Line.				
	Recall:			
	Remembered seeing the ad	58%	75%	64%
	Opinions of Ad Viewers:			
	Found the ad convincing	92%	58%	64%
	Behavior Changes of Ad Viewers:			
	Thought about quitting	-	49%	-
Made a quit attempt	-	65%	-	
Encouraged someone to quit smoking	67%		49%	
Secondhand Smoke (SHS)		Youth	Adult Smokers	Adult Nonsmokers
People are exposed to SHS in homes, cars, and workplaces, and the dangers of SHS are explained.				
	Recall:			
	Remembered seeing the ad	50%	70%	62%
	Opinions of Ad Viewers:			
	Found the ad convincing	93%	59%	78%
	Behavior Changes of Ad Viewers:			
	Stopped smoking indoors	-	45%	-
Asked someone not to smoke around them	66%	-	52%	
I Did It - Phase III			Adult Smokers	Adult Nonsmokers
Smokers receive messages encouraging them to quit smoking and throw away their cigarettes.				
	Recall:			
	Remembered seeing the ad		60%	59%
	Opinions of Ad Viewers:			
	Found the ad convincing		42%	59%
	Behavior Changes of Ad Viewers:			
	Thought about quitting		38%	-
Made a quit attempt		60%	-	
Encouraged someone to quit smoking		-	43%	
Svarnik and Byll			Youth	
Two young men dressed as medieval knights talk about fighting tobacco.				
	Recall:			
	Remembered seeing the ad		79%	
	Opinions of Ad Viewers:			
	Found the ad convincing at discouraging smoking		55%	
	Found the ad convincing at encouraging teens to quit		60%	
	Behavior Changes of Ad Viewers:			
Encouraged someone to quit smoking		54%		

Note: Spaces were left blank if the question was not asked of the given population.

The TRUTH Campaign

Students, The TRUTH Were Recognized for Anti-Tobacco Ads

Youth Create Anti-Tobacco Messages

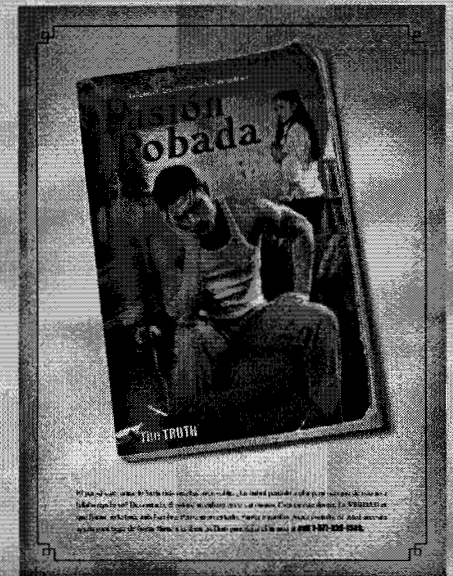
The Truth from Youth Anti-Tobacco Advertising Contest, open to 4th and 5th graders, is a creative forum for students to learn about the dangers of tobacco before junior high school when they are more likely to start experimenting with it. More than 3,000 entries came from 100 participating schools with 1st, 2nd, and 3rd place winners chosen in billboard, television and radio categories. The contest's Best of Show, a radio ad entitled "Semi", began airing in late June.

More than 3,500 middle to high school students in 12 schools crafted anti-tobacco messages as part of the School Jamz competition, reaching 27,000 students. The messages came in many

forms, including one school's Day of the Dead, where students represented how many people die each day from tobacco-related diseases. Six student groups won pizza parties for themselves and U92 radio station dance parties for their schools.

Latino Group Recognizes The TRUTH Campaign

The TRUTH campaign works closely with Hispanic community leaders to produce and distribute culturally and linguistically appropriate television ads, radio ads, posters, and billboards. The Latino Community Information and Education Center recognized The TRUTH campaign this year for contributions to the Center and the Latino community.



The TRUTH campaign geared toward Hispanics employs the style of Spanish soap operas and novellas to encourage tobacco users to quit.



School Jamz Contest winners educate students in their school about tobacco's devastating effect on the health of Utahns.

Prestigious Radio Mercury Awards Recognize The TRUTH Campaign Ad

The Radio Mercury Awards which recognize excellence in radio advertising selected a public service message created by Utah's The TRUTH campaign as a finalist in the

public service category. The TRUTH radio ad "Answering Machine", features a person's brain leaving reminders to quit smoking on its own answering machine. The ad also took the top honor as best public service message in the 2005 national Silver Microphone Awards.

Quit Programs

"I smoked for seven years, and oh, did I love it. I smoked everywhere and all the time. I smoked in my apartment, between classes, in my car, and constantly while I was with friends or at the bar. But eventually, I got that constant mild sore throat; I got head colds every couple months; I was paying out the wazoo for a pack of smokes. And I decided to quit, this time for good.

Don't get me wrong, I'd tried quitting at least 13 or 14 times before, but when I found QuitNet, I decided that I had had enough, and though part of me would always love smoking, I wanted to love not smoking more.

Today, I am only eight days away from being entirely smoke free for one year, and I am so proud of myself. Really, if I can quit, absolutely anyone can. It's the truth. Advice: Write in the Q journal [QuitNet web diary], so you can read it later and remind yourself that the real you, who's not having the nicotine craving, really wants to be a non-smoker."

"Evacrednow," Utah QuitNet User



Demand for Utah Tobacco Cessation Services Remains High

Health and Economic Benefits of Quitting Tobacco Use

Smokers who quit greatly reduce their risk of dying prematurely. The excess risk of developing heart disease may be reduced by as much as half within one to two years after quitting. Ten years after quitting, the risk of lung cancer is 30% to 50% less than the risk of those who continue to smoke.²⁶

Each percentage point decline in Utah's adult smoking rate is expected to lead to a reduction in future health care costs of \$132 million. Each one percent reduction in youth smoking will lead to \$88 million in future health care savings.²⁷

FACT: Helping smokers quit is one of the three most valuable preventive health services in medical practice. It saves more money than it costs and provides enormous health benefits.²⁸

Demand for Utah Quit Services

In 2005, nearly 80% of Utah adult smokers reported that they wanted to quit and 60% made a quit attempt of at least one day.⁶ Use of telephone, group, or individual counseling can double or triple a person's chances of quitting for good.²⁶

Quit Services Increase Quit Rates

On average, former smokers make 8 to 11 quit attempts before succeeding.²⁹ Only 7% to 8% of smokers are able to quit without help.³⁰ The TPCP worked with health care providers, local health departments, health insurance companies, and The TRUTH campaign to provide access to free quit services for youth, adults, and pregnant women. TPCP-funded counseling services greatly increased smokers' quit success.

Quit Services Provided by TPCP

- **Utah Tobacco Quit Line**
The Quit Line offers free telephone counseling and sends quitting information by mail. Smokers who call the Quit Line benefit from specialized services for youth, adults, and pregnant women; anonymity; counseling at night and on weekends; multi-language capacity; options for scheduled sessions and spontaneous calls; and freedom from transportation, childcare, and group-based scheduling conflicts.
- **Utah QuitNet**
Utah's free online tobacco cessation support program is part of a worldwide quitting network. It offers quit guides, personalized cessation plans, peer support, and quitting assistance from trained counselors.
- **Medicaid Program for Pregnant Women**
The TPCP partners with Medicaid to identify pregnant women who use tobacco and provide counseling and quitting medications. In addition to increasing quit success among pregnant women, this partnership brought more than \$200,000 in federal matching funds to Utah in FY 06.
- **Ending Nicotine Dependence (END)**
END is a court-mandated multi-session tobacco education and quit program for youth who violate Utah laws that prohibit underage tobacco possession.
- **Not On Tobacco (NOT)**
NOT is a voluntary tobacco cessation class for youth who want to stop smoking.

Quit Programs

Quit Success Increased due to TPCP-Funded Services

Utah Tobacco Quit Line - FY06 Participation in Quit Services and Quit Rates

Participation	Type of Service	Quit Success (Adults)
7,028 Utahns registered with the Quit Line (6,646 adults and 567 youth) ⁷	One-Time Counseling	33% reduced tobacco use 21% quit tobacco use
	Intensive Program (Multiple Counseling Sessions)	58% reduced tobacco use 33% quit tobacco use

Other Quit Services - FY 06 Participation in Quit Services and Quit Rates

Quit Service	Participation	Quit Success
Utah QuitNet ⁸	3,250 new registrations 6,775 QuitNet member visits 39,955 non-member visits	63% reduced tobacco use 53% quit tobacco use
Medicaid Program for Pregnant Women ³¹	614 tobacco users served	44% reduced tobacco use 34% quit tobacco use
Ending Nicotine Dependence (END) ⁹	1,036 tobacco users served	50% reduced tobacco use 18% quit tobacco use
Not On Tobacco (NOT) ³²	197 tobacco users served	45% reduced tobacco use 29% quit tobacco use

Satisfaction With Quit Services

- Eighty-one percent of adult Quit Line users and 91% of youth were satisfied with Quit Line services.⁷
- Seventy-nine percent of court-mandated END participants reported that they liked the END class.⁹

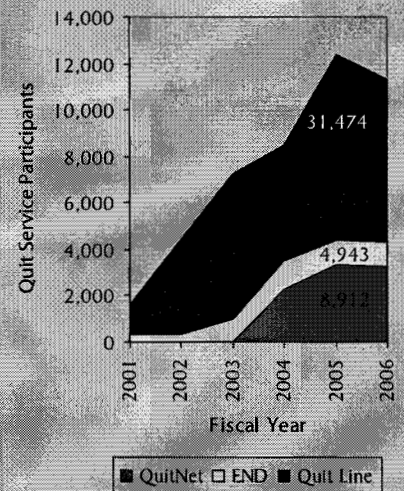
Healthcare Provider Partnership

Brief interventions by healthcare providers can increase smokers' chances of quitting successfully.³⁰ The percentage of Utah smokers who reported that they received quitting advice from their healthcare provider declined in the past few years.⁶ To reverse this trend, the TPCP and its partners expanded

collaboration with health insurance companies and developed and distributed The TRUTH Network Guide, a new quitting resource for providers.

- In FY06, three health insurance companies offered reimbursement and one planned to offer reimbursement for tobacco cessation services.
- Instead of just encouraging their patients to quit using tobacco, healthcare providers can use a fax referral system to send consenting smokers' contact information to the Quit Line. A Quit Line counselor follows-up by calling the patient. The Utah Quit Line received 739 fax referrals from clinics across the state, a 41% increase since FY2005.⁷

Figure 11.
Number of Quit Service Participants by Type of Service and Fiscal Year, Utah Fiscal Year 2001 to Fiscal Year 2006



Sources: Utah Tobacco Quit Line, Utah QuitNet, and END reports, Fiscal Year 2001-2006^{7,8,9}
Note: The numbers in the graph indicate the total number of service participants for all fiscal years for each service.



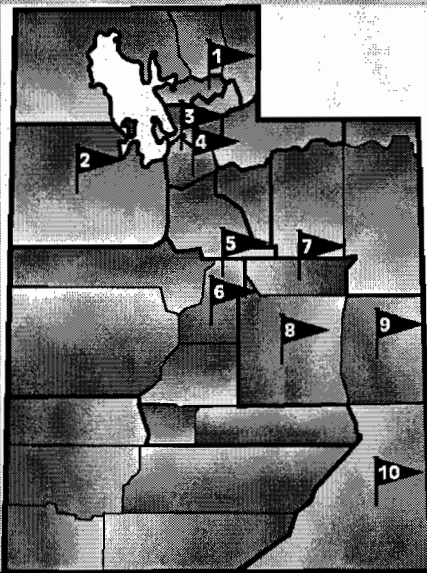
We enjoy more
good night kisses.

to quit smoking call: 1888.567.TRUTH

Youth Tobacco Use Prevention

FACT: Kids who smoke are at risk for poor respiratory health, decreased physical fitness, poor performance in school, and other health-compromising behaviors such as alcohol and drug use.^{15,33}

Figure 12.
Utah School Districts With District-Wide Comprehensive School Tobacco Policy Interventions, Utah 2002-2006



- 1 Weber (policy passed in FY05)
- 2 Tooele (policy passed in FY05)
- 3 Salt Lake (in progress)
- 4 Granite (policy updated in FY04)
- 5 North Sanpete (policy passed in FY04)
- 6 South Sanpete (policy passed in FY05)
- 7 Carbon (policy updated in FY02)
- 8 Emery (in progress)
- 9 Grand (policy passed in FY02)
- 10 San Juan (policy passed in FY03)

Utah Students Received a Variety of Prevention Messages

School District Policy Projects

The Center for Disease Control and Prevention's (CDC) School Health Guidelines state that school programs to prevent tobacco use and addiction are most effective if they:

- Prohibit tobacco use at all school facilities and events.
- Encourage and help students and staff to quit using tobacco.
- Provide developmentally appropriate instruction in grades K–12 that addresses the social and psychological causes of tobacco use.
- Are part of a coordinated school health program.
- Are reinforced by community wide efforts to prevent tobacco use and addiction.³⁴

Since 2002, the TPCP has funded 10 school districts (189 schools) to establish comprehensive tobacco policies in accordance with the CDC's School Health Guidelines (Figure 12). In FY06, the school districts focused on enhancing tobacco policies and policy enforcement and ensuring that progress will be sustained.

Gold Medal Schools

The TPCP continued to collaborate with Utah's Gold Medal School (GMS) program. The GMS program, which was started in 2002 by the Utah Department of Health, provides assistance to elementary schools to improve health-related policies.

- During FY06, 168 schools participated in the GMS program.
- 21 schools reached "Bronze Medal" status for adopting and enforcing a comprehensive tobacco policy.
- 33 schools reached "Silver Medal" status for establishing a tobacco

cessation referral system.

- 39 schools reached "Gold Medal" status for organizing a tobacco-free health event for students, parents, and teachers.
- 75 schools were recognized for exceeding overall gold status criteria they had met in previous years and maintaining tobacco-related policy requirements.

Local Health Department Partnerships

Utah's twelve local health departments (LHDs) coordinated community and school programs to prevent children from becoming tobacco users. These programs included:

- Partnerships with 13 school districts and 4 trade and alternative schools to enhance tobacco policies.
- Marketing and overseeing the Anti-Tobacco Advertising Contest in elementary schools across the state.
- Providing support to local youth groups and coordinating peer-to-peer education and youth involvement in efforts to strengthen tobacco policies.
- Informing approximately 400,000 community members about the dangers of tobacco use during prevention, quitting, and secondhand smoke education activities.

School-Based Prevention Programs

During the 2005/2006 school year, 7,000 4th to 8th graders participated in LHD-sponsored tobacco prevention classes and more than 1,500 students completed pre- and post-test evaluations.

- 98% of the students reported that they would not smoke or use chewing tobacco in the next year.
- Students' knowledge of the addictive nature of tobacco increased significantly.³⁵

FACT: Almost all adult daily smokers tried smoking before the age of 18. Preventing youth tobacco use reduces future addiction in adults.

Youth Tobacco Use Prevention

Policies and Peer Education Strengthened Anti-Tobacco Norms

Youth Access to Tobacco

Since 2001, illegal tobacco sales to underage youth decreased from 16.0% to 8.0% (Figure 13).² The TPCP, local health departments, law enforcement, and tobacco retailers worked together to coordinate retailer education, compliance checks, and recognition of outlets that do not sell tobacco to youth. In a collaborative effort, the TPCP and local health departments developed and distributed a new comprehensive retailer education guide ("We ID Everyone") with training materials for new employees, posters, window clings, and register stickers. In 2005, only 2.5% of Utah high school smokers listed stores as their usual source for obtaining cigarettes.³ Nationwide 15.2% of high school smokers said that they usually bought their cigarettes in stores (Figure 14).⁴ These buy rates decreased in Utah and the US.

FACT: Since 2001, illegal tobacco sales to underage youth in Utah declined by 50%.² Utah students who smoke are six times less likely to buy cigarettes in stores than students nationwide.^{3,4}

College Tobacco Policy Interventions

With growing youth advertising restrictions, the tobacco industry has increasingly focused on 18 to 24 year-olds to recruit new smokers. To counter these activities, the TPCP funded colleges to strengthen their tobacco policies. Since 2003, six Utah colleges have passed enhanced policies that limit smoking on campus, regulate enforcement of smoking restrictions, and improve access to quit services.

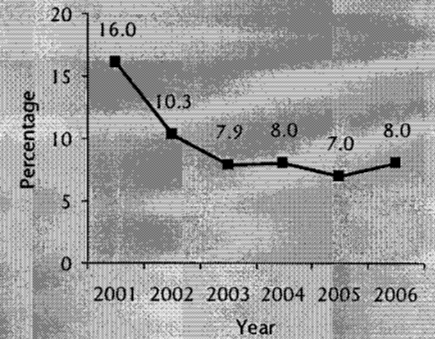
Phoenix Alliance

Allowing youth to develop and spread anti-tobacco messages is a key component of tobacco prevention programs. In its fifth year, the Phoenix Alliance, Utah's youth-led anti-tobacco advocacy coalition focused on personalizing tobacco-related disease and death statistics. The Phoenix Alliance maintained an interactive website, and conducted street marketing and peer-to-peer education events in Utah schools, at concerts, and public venues. Throughout the year, 1,200 coalition members from 25 Utah counties reached nearly 2,000 peers with prevention messages.



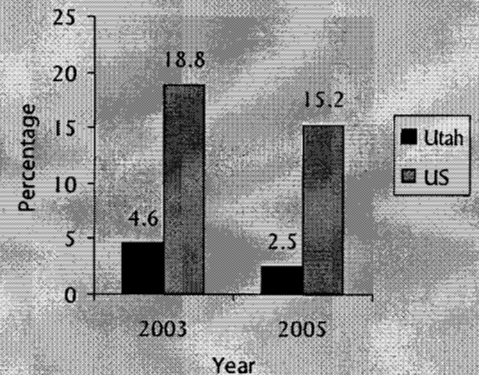
Phoenix Alliance youth educate Utahns about the number of people who die from tobacco-related diseases.

Figure 13. Percent of Retail Outlets Who Sold Tobacco to Underage Youth During Compliance Checks, Utah SFY2001-2006



Source: TPCP Compliance Check Summary²

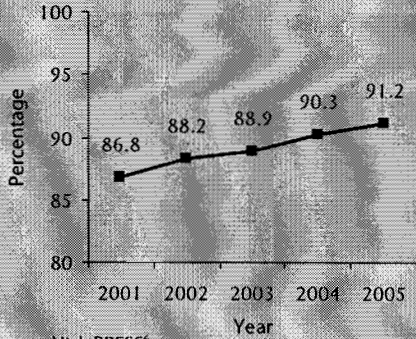
Figure 14. Percent of High School Smokers Under Age 18 Who Usually Got Their Cigarettes From a Store by Location, Utah and US, 2003 and 2005



Sources: Utah YTS and US YRBS^{3,4}

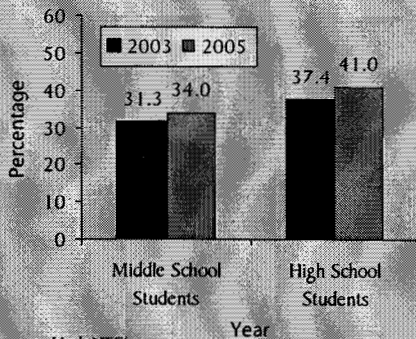
Reducing Exposure to Secondhand Smoke

Figure 15.
Percent of Adults Who Established No Smoking Rules in Their Homes, Utah 2001-2005



Source: Utah BRFS⁶

Figure 16.
Percent of Students Who Were Exposed to Tobacco Smoke in a Room or Car in the Past Seven Days by School Type, Utah, 2003 and 2005



Source: Utah YTS⁷

Utahns Reduced SHS Exposure at Home And Work

Health Consequences of Secondhand Smoke (SHS) Exposure

The 2006 Surgeon General Report on the "Health Consequences of Involuntary Exposure to Tobacco Smoke" concludes that SHS causes premature death and disease in children and adults who do not smoke. In 2005, more than 49,000 adult nonsmokers died of SHS-related lung cancer or coronary heart disease, and 430 newborns died of SHS-related sudden infant death syndrome. In addition, SHS causes other respiratory problems such as coughing, production of phlegm, and reduced lung function.¹⁷

FACT: There is no risk-free level of exposure to secondhand smoke.¹⁷

TPCP Intervenes to Protect Nonsmokers

The TPCP and its partners:

- Inform the public about SHS issues through The TRUTH campaign, local health education initiatives, and the TPCP website.
- Encourage citizens to adopt voluntary smoke-free policies in homes and cars.
- Educate businesses and community decision makers about compliance with the Utah Indoor Clean Air Act (UICAA), posting of SHS signage, and interventions to better protect workers and the public.
- Educate local municipalities and multi-unit housing owners and tenants about policies that protect users of recreation venues and tenants from secondhand smoke.

Utahns Take Action to Protect Their Children

In 2001, 6% of Utah children were exposed to secondhand smoke in their homes.¹⁰ By 2005, this rate had declined by more than 50%. As a result, approximately 20,000 fewer children are at risk for SHS-related health problems. However, 22,000 children continue to be exposed to SHS in their homes.^{10,12} Children who live in rental housing remain at higher risk than those in owned homes.¹⁰

Fewer Utahns Allow Smoking in Their Homes

More than 90% of Utah adults do not allow smoking inside their homes. Since 2001, increasing numbers of Utahns decided to make their homes smoke-free (Figure 15).⁶

Most Utahns Are Protected at Work

The estimated percentage of Utah adults who reported exposure to SHS in their work area decreased from 14.4% in 2003 to 12.6% in 2005.^{5,36} A further decrease in workplace exposure is expected due to the 2006 UICAA amendments that will phase out smoking in taverns, private clubs, and other previously exempt venues.

Utah Students Report SHS Exposure Indoors and in Cars

More than one third of Utah high school and middle school students continue to report exposure to tobacco smoke indoors and in cars (Figure 16).³ Student exposure to SHS has not decreased since 2003.

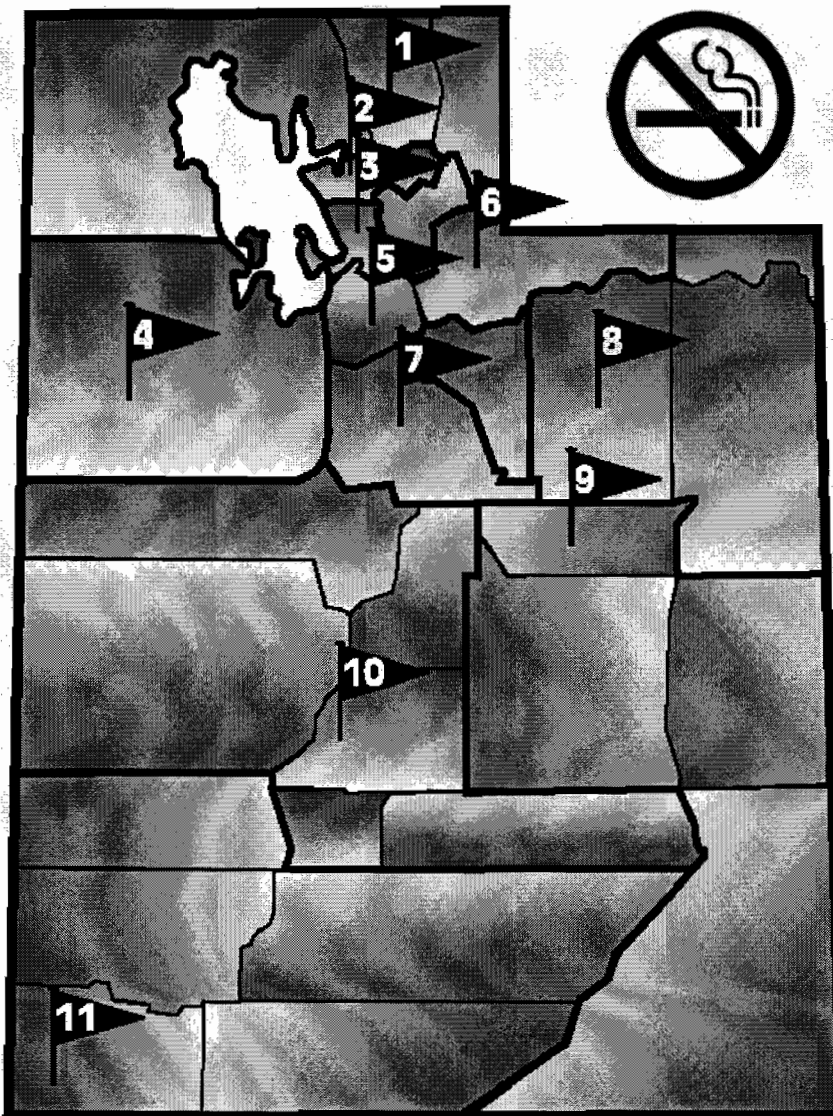
**SMOKE FREE
STARTS NOW**

Reducing Exposure to Secondhand Smoke

Local Policies Protect Utahns From Secondhand Smoke

Fact: Policies creating completely smoke-free environments are the most economical and efficient approach to providing protection from involuntary exposure to tobacco smoke.¹⁷

In the past few years, increasing numbers of Utah communities, housing units, educational institutions, and businesses developed or expanded voluntary smoke-free policies. The map shows policies that were developed due to increased awareness about the risks of secondhand smoke and policies developed in partnership with tobacco prevention and control programs across the state.

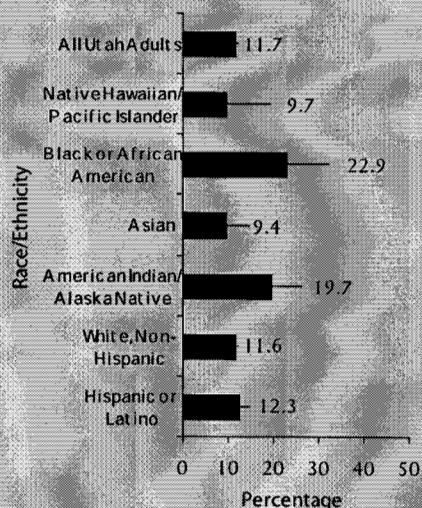


- 1 Cache County: First night of county fair smoke-free (2006); Logan and Hyde Park City pass smoke-free parks ordinances (2005); two worksites strengthen tobacco policies (2005-2006).
- 2 Ogden: 93 housing units smoke-free (2006); 1 business smoke-free (9/2006).
- 3 Davis County: 117 units smoke-free (2005); 240 units smoke-free (2006); Clinton City ordinance restricts smoking in public parks (2003); Head Start bans smoking in vehicles (2006).
- 4 Tooele County: Bans smoking in all county-owned vehicles (2005); restricts smoking in county-owned places (2006); softball team bans smoking (2006).
- 5 Salt Lake County: 1,607 units smoke-free (2006); Salt Lake Community College bans smoking inside, near buildings (2006); Utah State Fair Rodeo bans tobacco ads (2006); Sandy City parks, baseball fields smoke-free (2004); West Jordan restricts smoking in rodeo arena, parks (2004); Salt Lake Valley Board of Health calls for smoke-free outdoor venues (2005); Utah State Fair designates smoke-free zones (2004-2005); Midvale City prohibits smoking in parks, outdoor areas (2006); Riverton City bans smoking in playgrounds, sports fields (2006); five bars, clubs ban smoking ahead of statewide ordinance (2006); University of Utah Hospital restricts smoking (2006).
- 6 Summit County: Smoke-free areas in fairgrounds (2006).
- 7 Utah County: 306 units smoke-free (2006); assisted living facility restricts employee smoking (2005); Spanish Fork bans tobacco use in outdoor recreation facilities (2006); Utah Valley State College passes comprehensive policy that includes restrictions on tobacco use and bans sales on campus (2006).
- 8 Neola: Rodeo bans tobacco ads and sponsorship (2006).
- 9 Price: Smoke-free Greek festival (2006).
- 10 Richfield: 24 units smoke-free (2006); Snow College bans tobacco use in residence halls and tobacco ads on campus (2004).
- 11 St. George: 124 units smoke-free (2006); Dixie Regional Medical Center passes policy that restricts smoking (2006); Dixie State College passes policy that restricts tobacco use and bans sales on campus (2006).

The list at right contains information about the numbered flags. Some of these items are smoking policies in apartments, townhouses and condominium units which vary in strength. They range from smoking bans in the unit itself to bans anywhere on the premises. Since 2005, more than 2,500 Utah housing units went smoke-free.

Reducing Tobacco Use Among All Utahns

Figure 17.
Percent of Adults Who Reported
Current Tobacco Smoking by Race
and Ethnicity, Utah 2000-2005
(Aggregated Data, Age-Adjusted)



Source: Utah BRFSS⁶

Eliminating Disparities Requires Equal Access to Services

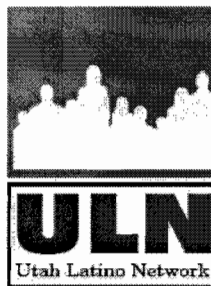
Income, education level, race and ethnicity are indicators of tobacco use and its devastating health effects. Utahns with low incomes and fewer years of formal education, as well as some minority groups, have significantly higher rates of tobacco use compared to the general population.⁶

TPCP works to eliminate these disparities by helping tobacco prevention, education and cessation services reach all Utahns equally.

Networks Organize and Reach Out

In their second year of TPCP funding, the community-based Ethnic Tobacco and Health Networks coalesced around efforts to reduce tobacco use and associated health problems in their populations. This year each network expanded its geographic reach from the Wasatch region to southern and northern areas in Utah. Each Network also completed its 5-year strategic plan for reducing tobacco disparities and ensuring anti-tobacco programs reach their communities. The plans call for creating statewide coalitions of anti-tobacco advocates, educating community leaders about tobacco-related inequalities, improving data collection within these small population groups, ensuring the cultural and linguistic appropriateness of educational materials, and building capacity to conduct tobacco prevention and cessation activities.

The groups increased awareness about their Networks and their tobacco prevention messages by attending or organizing more than 50 community events this past year, reaching thousands of people. To make tobacco prevention and cessation a priority, the Networks stressed tobacco's contribution to health problems prevalent in their communities.



For example, hundreds of Latinos attended a health fair in Moab this spring in which the Utah Latino Network (ULN) participated. The

ULN followed up by training 30 area Latinos in community advocacy and tobacco prevention.



Likewise, the African American network, Harambee, conducted tobacco-related outreach associated with other health issues, community advocacy, and

civil rights events, such as Martin Luther King Day and Black History Month. The annual 4-day Juneteenth Festival draws thousands in attendance and the Network made a strong anti-tobacco presence. Harambee's youth members disseminated tobacco facts and broadcast teen-oriented public service announcements to the crowds.

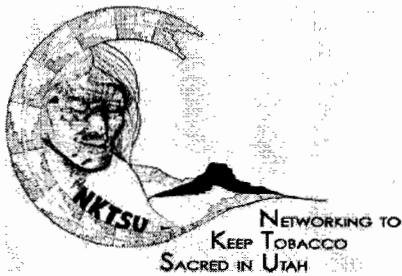


In addition to a strong presence at community events, the Pacific Islander Ethnic

Network (PIEN) sponsored an essay contest for high school students titled "Why I Should Be Smoke-Free." More than a dozen Pacific Islander students participated. The PIEN also reached Pacific Islanders through its website www.pitobaccoutah.org.

Reducing Tobacco Use Among All Utahns

The American Indian network, Networking to Keep Tobacco Sacred in Utah (NKTSU), hosted a 3-day conference in March where the nationally recognized California Rural Indian Health Board's Tobacco Education Prevention Technical Support Center conducted community tobacco education and cessation training for representatives from all Utah tribes.



Networks Promote, Assess Quit Line

Following a visit by NKTSU's coordinator to the Quit Line phone bank and later Network approval, the Quit Line phone number was added to The TRUTH posters directed toward Native Americans, and NKTSU began distributing the number via other materials. Quit Line statistics show a sizeable increase in use by American Indian adults.

The ULN helped evaluate the Quit Line by recruiting 10 members of the Latino community to call and pose as people looking for cessation help. The callers rated the service by certain criteria, such as cultural competency. The TPCP shared the results with the Quit Line.

Networks Improve Tobacco Data

The percentages of adult smokers in most minority groups are higher than those of the general population.⁶ While standard health surveys gather data on tobacco use among Utah's minority populations, small population numbers limit the applicability of the data. To obtain detailed data that can inform policy and program development for

minority groups, the Networks consult the TPCP in ways to improve survey and other research methods. Improving knowledge about tobacco use is a high priority for the Networks.

Last year, the Networks conducted informal surveys to assess community needs as they developed their strategic plans. The PIEN, for example, surveyed 245 Pacific Islander high school students in Salt Lake County. Results from this non-random survey suggest that tobacco use among Pacific Islanders differs from majority youth. Though these are not generalizable data, the results can help shape future research and inform program development. Limited funding has been a barrier to collecting statistically significant data at the community level.

Low-Income and Rural Populations Get Help Kicking the Habit

The TPCP partnered with Medicaid and the Association for Utah Community Health to provide enhanced quit services for more than 454 uninsured and Medicaid-insured tobacco users. The program provided 892 prescriptions for quit medications.^{31,37} Also, The TRUTH campaign brought its message to rural areas by running ads in movie theaters in locations with high tobacco use.

Community Groups Establish Smoke-Free Environments

The TPCP funded community-based organizations that focus on low-income populations and minority groups. With 10-month grants, 8 organizations focused on establishing secondhand smoke policies (SHS) and gathering data on SHS among their populations. In total, the groups surveyed nearly 1,200 individuals and took steps toward establishing smoke-free environments in many venues. Also from their efforts, 255 homes pledged to become smoke-free.



NKTSU coordinator, Eru (Ed) Napia presents his poster at the World Conference on Tobacco and Health held in Washington, D.C., July 2006. The poster highlights the steps to coalition building among Utah's tribal population and the distinction between sacred tobacco use and commercial tobacco misuse.

Bear River Counties

Tobacco Use in Bear River

Adult Cigarette Smoking (2003-05) ⁹	6.6%
Youth Cigarette Smoking (2005) ¹	9.2%
Pregnant Women Smoking (2004) ¹¹	4.1%
Homes With No-Smoking Rule (2003-05) ⁶	92.7%
Quit Line Registrations (FY 2006) ⁷	336
QuitNet Registrations (FY 2006) ⁸	178
Anti-Tobacco Ad Recall (2003-05) ¹⁰	92.3%

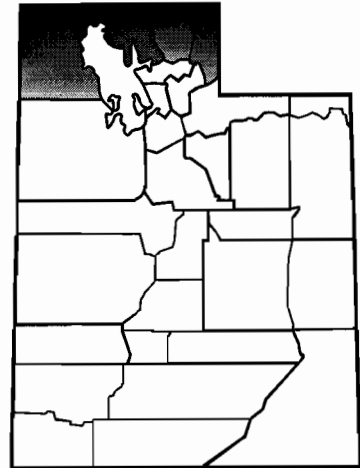


Bear River Governing Youth Council members Jonathan El-Bakri, Mallory Poole, Amy Nielsen, Marissa Nielsen, and Patrick Risk (left to right) promote a smoke-free Cache County Fair. As a result of youth advocacy and education, the 2006 Cache County Fair began with a smoke-free family night.

Bear River Health District Counties:
Box Elder, Cache, Rich

Changes in Tobacco-Related Risk

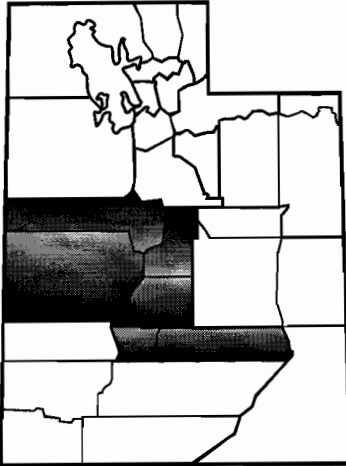
- Since the late 1990s, the estimated age-adjusted adult smoking rate in Bear River Health District decreased by 30%.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy decreased by 31%.¹¹
- The estimated rate of children exposed to SHS in their homes decreased from 2.8% in 2001 to 1.2% in 2004/2005 (combined data).¹⁰
- During State Fiscal Year 2006, 8.7% of Bear River stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 22%.²



Bear River Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	276 youth	Quit Rate: 17% Reduction Rate: 48%*
Marketing the Quit Line in Spanish language magazines	4,000 readers twice a year	Latinos received information about quit programs.
First Step prenatal program	11 pregnant women	Two pregnant women completed the program.
Adult support group	8 adults	Participants received quit information.
Promoting healthcare provider quit interventions through The TRUTH Network Guide	12 clinics, 2 hospitals	Healthcare providers received information on quit services and Quit Line fax referral system.
Prevention Programs		
TOT/GRAT curricula**	679 students	Students increased tobacco-related knowledge.
Promotion of Truth From Youth Anti-Tobacco Advertising Contest	Students in prevention classes and PTA Health & Safety project	Students created 330 anti-tobacco ads. Local winners' ads were distributed through schools.
Involving youth coalitions in promoting comprehensive tobacco policies in schools	Cache, Logan and Box Elder school districts	13 elementary schools completed school policy assessments.
Conducting certification program for retailers who sell tobacco	15 tobacco outlets	15 retailers received training and certification (Total: 70 of 82 stores are certified).
Promotion of Smoke-free Policies		
Assessment and education about smoke-free policy at Cache County Fair (Governing Youth Council)	GYC youth, community, city council	City Council adopted resolution for the first night of the Cache County Fair to be smoke-free family night.
Smoke-free homes campaign (Governing Youth Council and Hispanic Health Coalition)	Participants in community events sponsored by the Hispanic coalition	44 Spanish-speaking participants signed a smoke-free home pledge.
Assessing and updating worksite tobacco policies	4 businesses	2 businesses enhanced their policies. 2 businesses completed policy assessments.
*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.		
** TOT: Tobacco On Trial /GRAT: Get Real About Tobacco		

Central Utah Counties



Changes in Tobacco-Related Risk

- Since the late 1990s, the estimated age-adjusted adult smoking rate in Central Utah Public Health District decreased by 18%.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy remained unchanged.¹¹
- The estimated rate of children exposed to SHS in their homes decreased from 7.4% in 2001 to 4.8% in 2004/2005 (combined data).¹⁰
- During State Fiscal Year 2006, 12.1% of Central Utah stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 8%.²

Tobacco Use in Central Utah

Adult Cigarette Smoking (2003-05) ⁶	13.4%
Youth Cigarette Smoking (2003) ³	17.4%
Pregnant Women Smoking (2004) ¹¹	10.1%
Homes With No-Smoking Rule (2003-05) ⁶	89.8%
Quit Line Registrations (FY 2006) ⁷	216
QuitNet Registrations (FY 2006) ⁸	71
Anti-Tobacco Ad Recall (2003-05) ⁶	93.1%

Central Utah Public Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	7 youth	1 teen reduced tobacco use.
First Step prenatal program	9 pregnant women	Participants received quit support and referrals to the Quit Line.
Adult one-on-one quitting support	23 adults	Quit Rate: 22% Reduction Rate: 17%
Encouraging healthcare providers to offer quit counseling and referrals	62 healthcare providers	Healthcare providers received information on quitting services.
Prevention Programs		
Promoting the Truth From Youth Anti-Tobacco Advertising Contest	Schools in 6 Central Utah counties	4th and 5th grade students created 1,300 anti-tobacco ads for the statewide contest.
Supporting comprehensive school tobacco policies	North and South Sanpete school districts	Health department provided community support for policy enforcement.
Phoenix Alliance partnership	324 youth	Community youth received education on tobacco. Local youth was elected to the Phoenix Alliance Speakers' Bureau and 4 were involved in the Youth Advisory Board.
Informing Central Utah residents about tobacco issues and services	2,992 participants in health fairs/other public events	Community received tobacco information and education at public events.
Promotion of Smoke-free Policies		
Strengthening secondhand smoke policies in apartment buildings	4 apartment complexes	Owners and tenants were educated about SHS and the benefits of smoke-free policies.
Supporting college policy initiatives	Snow College, Richfield and Ephraim campuses	Supported campus policy work and community education about the benefits of smoke-free parks.
TCM (Targeted Case Management) partnership	13 nurses	Nurses distributed secondhand smoke brochures and quit service information during TCM visits.
Encouraging smoke-free worksites	15 worksites	Worksites received support to actively reduce employee and customer exposure to secondhand smoke and encourage quitting.

*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.

"Central Utah Public Health Department's tobacco education and quit program is a great resource for our company. It helps create a good work atmosphere and is a positive influence at Twelve Timbers. We hope that it betters the lives of our employees not only at work, but all around."

Jim Holt, Owner of Twelve Timbers, Richfield, Utah

Central Utah Public Health District
Counties: Juab, Millard, Piute, San Pete, Sevier, Wayne

Davis County

Tobacco Use in Davis County

Adult Cigarette Smoking (2003-05) ²	8.3%
Youth Cigarette Smoking (2005) ³	6.2%
Pregnant Women Smoking (2004) ¹¹	5.2%
Homes With No-Smoking Rule (2003-05) ⁶	92.9%
Quit Line Registrations (FY 2006) ⁷	488
QuitNet Registrations (FY 2006) ⁸	310
Anti-Tobacco Ad Recall (2003-05) ⁴	95.7%

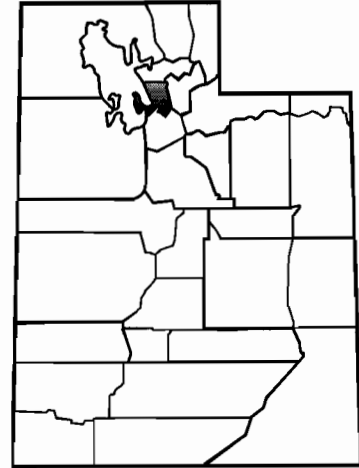


"Clearfield Job Corps is partnering with the Davis County Health Department to reduce the 60% smoking rate among our students. To help the students quit, we offer youth smoking cessation classes, strengthen center tobacco policies, and educate students and staff about the dangers of tobacco."

Keith Wilder, Clearfield Job Corps Mini-Grant Coordinator

Changes in Tobacco-Related Risk

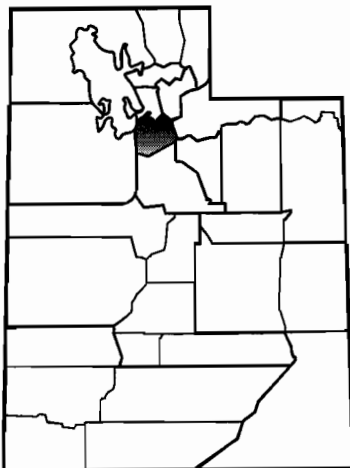
- Since the late 1990s, the estimated age-adjusted adult smoking rate in Davis County decreased by 24%.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy decreased by 30%.¹¹
- During State Fiscal Year 2006, 9.3% of Davis County stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 44%.²



Davis County Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	98 youth	Quit Rate: 16.5% Reduction Rate: 71%*
Teen Tobacco Reduction Program	58 youth	Quit Rate: 47% Reduction Rate: 24%
Encouraging healthcare providers to offer quit program referrals & treatment	98 healthcare providers	Healthcare providers received education in quit counseling and information about referral and quit services.
Distributing Quit Kits, First Step workbooks, and materials that promote the Quit Line and QuitNet.	1,747 community members at worksites and educational settings	Knowledge of quit resources and referrals to quit services were increased.
Prevention Programs		
Training teachers in TNT curriculum**	16 teachers; 2 GMS mentors	Teachers ensured that 645 students received tobacco prevention education.
Promoting the Truth From Youth Anti-Tobacco Advertising Contest	19 classes in 12 elementary schools	4th and 5th graders created 262 local anti-tobacco ads for the statewide contest.
Promoting comprehensive tobacco policies in schools	Middle school coordinators, selected elementary schools	Draft policy and implementation plan have been developed.
Supporting Gold Medal School (GMS) school health policy initiative	16 elementary schools	Comprehensive school tobacco policies have been adopted and enforced by all 16 GMS in Davis County.
Promotion of Smoke-free Policies		
Promoting smoke-free homes	4,670 health fair attendants and CHEC program participants	Participants received smoke-free home kits and SHS brochures.
Enhance campus tobacco policy	450 students at Davis Applied Technology Center (DATC)	DATC created a tobacco policy coalition, conducted tobacco-free activities, and began to strengthen its tobacco policy.
Strengthening tobacco policies of local trade schools	1 trade school	Assessments and tobacco policy education were completed at Clearfield Job Corps.
Promoting enhanced workplace tobacco policies	6 Head Start programs	Improved tobacco policy was adopted.
*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.		
**TNT: Towards No Tobacco		

Salt Lake County



Changes in Tobacco-Related Risk

- Since the late 1990s, the estimated age-adjusted adult smoking rate in Salt Lake County decreased by 25%.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy decreased by 27%.¹¹
- The estimated rate of children exposed to SHS in their homes decreased from 7.6% in 2001 to 3.9% in 2004/2005 (combined data).¹⁰
- During State Fiscal Year 2006, 6.4% of Salt Lake stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 61%.²

Tobacco Use in Salt Lake County

Adult Cigarette Smoking (2003-05) ⁶	12.5%
Youth Cigarette Smoking (2005) ³	15.2%
Pregnant Women Smoking (2004) ¹¹	6.9%
Homes With No-Smoking Rule (2003-05) ⁶	88.1%
Quit Line Registrations (FY2006) ⁷	2,581
QuitNet Registrations (FY2006) ⁸	1,563
Anti-Tobacco Ad Recall (2003-05) ⁴	94.6%

Salt Lake Valley Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	236 youth	Quit Rate: 21% Reduction Rate: 39%*
First Step prenatal program	26 referrals; 10 participants	Participants received Quit Kits and one-on-one quit support.
Promoting healthcare provider quit interventions through The TRUTH Network Guide	109 clinicians and 4 staff	Healthcare providers received education in quit counseling and information about referral and quit services.
Promoting quit services to community members	Participants of health fairs and community/school events; workers	237,069 adults and 335 youth were exposed to tobacco prevention and quit education.
Prevention Programs		
Training teachers in TOT/TNT curricula**	30 schools participated in promotion	20 schools taught TOT, 2 schools taught TNT. 2,238 students participated in programs.
Promoting the Truth From Youth Anti-Tobacco Advertising Contest and School Jamz Contest	8,560 students participated in the promotion	Students created 328 local anti-tobacco ads for the statewide contest.
Supporting school districts in developing comprehensive tobacco policies	Granite and Salt Lake school districts	SLVHD provided support and technical assistance in policy development and promotion, curricula, instruction, quit services, and community involvement.
Maintaining the TAAT coalition (Teen Advocates Against Tobacco)	37 active members	TAAT assisted with contest promotions and community education and played key-role in smoke-free parks initiatives.
Promotion of Smoke-free Policies		
Educating the community about smoke-free parks	Community, park directors, city employees	Riverton, Sandy, and Midvale City passed resolutions/ordinances to limit or prohibit smoking in parks.
Supporting campus policy initiatives	University of Utah, Salt Lake Community College, Westminster	Up to 30,000 students were exposed to tobacco education. U of U passed policy banning smoking in hospital atrium.
Promoting smoke-free apartments and homes	17 apartment managers/ reps and 47 tenants	Participants received education on SHS and smoke-free homes; 11 smoke-free home pledges were collected.
*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.		



"The goal of the council is to make public gatherings safe for everyone."

Mayor JoAnn B. Seghini, Midvale City

Southeastern Utah Counties

Tobacco Use in Southeastern Utah

Adult Cigarette Smoking (2003-05) ⁶	19.3%
Youth Cigarette Smoking (2005) ³	20.0%
Pregnant Women Smoking (2004) ¹¹	12.6%
Homes With No-Smoking Rule (2003-05) ⁶	80.0%
Quit Line Registrations (FY'2006) ⁷	279
QuitNet Registrations (FY'2006) ⁸	76
Anti-Tobacco Ad Recall (2003-05) ⁶	88.7%

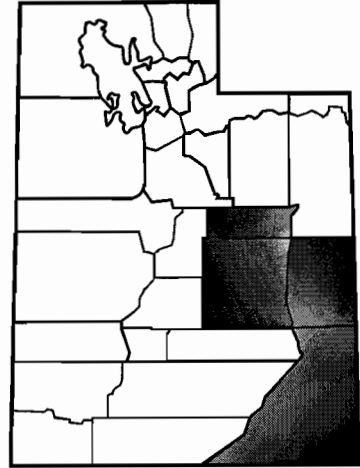
"The quit line referral system is a good start and has helped us link patients to quit services. I would suggest expanding and improving the system to better assist people who don't have telephones or low income patients who need help with quit medications."

Russell Hunt, Physician Assistant,
Helper Clinic, Price, Utah

Southeastern Utah Health District
Counties: Carbon, Emery, Grand, San Juan

Changes in Tobacco-Related Risk

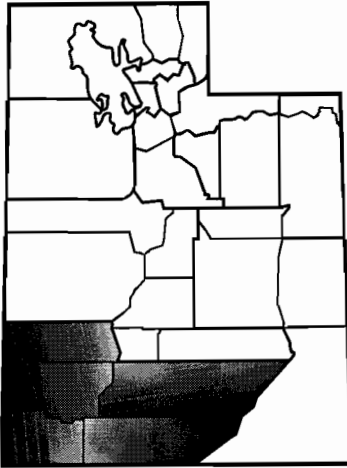
- Since the late 1990s, the estimated age-adjusted adult smoking rate in Southeastern Utah Health District decreased by 11%.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy decreased by 25%.¹¹
- The estimated rate of children exposed to SHS in their homes decreased from 17.6% in 2001 to 7.3% in 2004/2005 (combined data).¹⁰
- During State Fiscal Year 2006, 8.4% of Southeastern Utah stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 32%.²



Southeastern Utah District Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	107 youth	Quit Rate: 21% Reduction Rate: 57%*
Prenatal program (partnership with WIC, Medicaid, and Baby Your Baby)	274 pregnant women	Participants received quit support.
Marketing the Quit Line through newspaper and movie ads	7,000 newspaper readers; 10,000 moviegoers	Newspaper readers received quit line information through 244,478 ad placements in Carbon County and 52,728 ad placements in Emery County.
Promoting healthcare provider quit interventions through The TRUTH Network Guide	47 healthcare providers	Healthcare providers received information on quitting services.
Providing quit support and referral to quit programs	390 community members	Participants received quit support and referrals to statewide quit programs.
Prevention Programs		
Supporting school districts in promoting comprehensive school tobacco policies	Carbon, Grand, and San Juan school districts	Southeastern Utah District Health Department provided technical assistance for enhancing and enforcing comprehensive school tobacco policies.
Supporting Gold Medal Schools programs in elementary schools	9 elementary schools	2 schools obtained Bronze status, 2 obtained Silver, and 5 obtained Gold for exemplary school health policies.
Conducting retailer and worksite education to inform about Utah tobacco laws	1,144 participants	Management and workers of local businesses received tobacco education and referrals to quit services.
Promotion of Smoke-free Policies		
Partnership with the College of Eastern Utah (CEU)	CEU coalition	No-smoking signage was updated. Coalition was working toward updating the student and employee tobacco policy.
Partnership with local coalitions to develop smoke-free policies for recreational venues and multiple-dwelling units	City councils, local coalitions	Partnerships were formed and initial assessments of tobacco policy options completed.
*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.		

Southwest Utah Counties



Changes in Tobacco-Related Risk

- Since the late 1990s, the estimated age-adjusted adult smoking rate in Southwest Utah Public Health District showed no decline.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy has not declined.¹¹
- Since 2001, the estimated rate of children exposed to SHS in their homes remained unchanged.¹⁰
- During State Fiscal Year 2006, 7.1% of Southwest Utah stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 69%.²

Tobacco Use in Southwest Utah

Adult Cigarette Smoking (2003-05) ⁶	12.9%
Youth Cigarette Smoking (2005) ³	9.1%
Pregnant Women Smoking (2004) ¹¹	7.9%
Homes With No-Smoking Rule (2003-05) ⁶	91.2%
Quit Line Registrations (FY 2006) ⁷	296
QuitNet Registrations (FY 2006) ⁸	187
Anti-Tobacco Ad Recall (2003-05) ⁶	91.3%

Southwest Utah Public Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	125 youth	Quit Rate: 13% Reduction Rate: 41%*
First Step prenatal program	20 pregnant women	Quit Rate: 53% Reduction Rate: 29%
Adult one-on-one quit support	62 adults	Quit Rate: 44% Reduction Rate: 44%
Encouraging healthcare providers to offer quit program referrals & treatment	18 clinics	Healthcare providers received education in quit counseling and information about referral and quit services. Efforts led to 40 referrals to adult quit programs.
Prevention Programs		
Supporting Gold Medal Schools (GMS) programs in elementary schools	13 elementary schools	All 13 schools maintained or improved their GMS status by enhancing health policies and programs.
Promoting the Truth From Youth Anti-Tobacco Advertising Contest	Prevention coordinators in Washington County schools	4th and 5th grade students created 44 local anti-tobacco ads for the statewide contest.
Conducting comprehensive retailer education program to prevent tobacco sales to underage youth	249 class participants in 55 classes	The rate of illegal sales declined from more than 20% (2001) to 7.1%. ¹²
Promotion of Smoke-free Policies		
Educating the Hispanic Community about the risks of SHS exposure	Hispanic community leaders/organizations	200 recipients of SHS information kits were educated on the dangers of SHS.
Promoting smoke-free policies at rodeos	Rodeo attendees in Kane County	Audience received information on secondhand smoke, quit programs, and tobacco-free events.
Assessing support for smoke-free policies at Washington County Parks and Recreation	75 survey respondents	Surveys to assess attitudes were completed and analyzed.
Assisting the Paiute Indian Tribe in establishing smoke-free housing policies	Tribal representative	Steps were taken toward developing a smoke-free housing policy.
Working with Dixie State College to enhance campus policy	Dixie State College students, staff and faculty	Dixie State College enhanced enforcement of the new campus smoking policy
*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.		



"Southwest Utah Public Health Department's Health Care Provider Tobacco Dependence Training was most beneficial to the nursing students at Southern Utah University. The program gave nurses the tools and confidence to make immediate interventions with their clients. I will continue to have each of my nursing students receive this most critical health promotion training. Thank you for improving health care practice."

Susanne F. Wilke, RN, MS
Southern Utah University, Nursing Program

Southwest Utah Public Health District
Counties: Beaver, Garfield, Iron, Kane, Washington

Summit County

Tobacco Use in Summit County

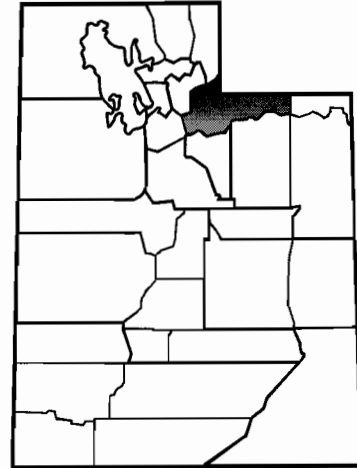
Adult Cigarette Smoking (2003-05) ^a	9.0%
Youth Cigarette Smoking (2005) ³	10.4%
Pregnant Women Smoking (2004) ¹¹	2.6%
Homes With No-Smoking Rule (2003-05) ⁶	88.6%
Quit Line Registrations (FY'2006) ⁷	47
QuitNet Registrations (FY'2006) ⁸	46
Anti-Tobacco Ad Recall (2003-05) ⁶	91.6%



Teen Advocates of Summit County (T.A.S.C.) youth group members advocate for a smoke-free Summit County Fair. Their presentation to Fair Board resulted in the designation of smoke-free areas throughout the fair grounds to promote a "family-friendly" environment.

Changes in Tobacco-Related Risk

- Since the late 1990s, the estimated age-adjusted adult smoking rate in Summit County remained unchanged.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy remained unchanged.¹¹
- During State Fiscal Year 2006, 12.5% of Summit County stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 48%.²

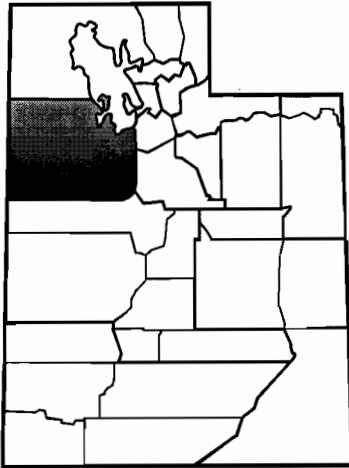


Summit County Public Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
Partnership with Community Home Nursing to educate pregnant women and new mothers about the effects of tobacco use and secondhand smoke and distribute cessation resources (First Step program) and referral information	60 pregnant women	60 women received quit information; 5 women enrolled in the First Step tobacco cessation program for pregnant women.
Promoting healthcare provider quit interventions through The TRUTH Network Guide	6 healthcare providers	6 clinics received training in tobacco cessation interventions and use of referrals to quit services
Using local media to inform the community about tobacco cessation resources and the dangers of spit tobacco use	1,800 residents	2 advertisements about the Quit Line and the dangers of spit tobacco use reached 1,800 residents through local cable station.
Prevention Programs		
TOT/TNT curricula*	367 students	Students increased their tobacco-related knowledge.
Promoting the Truth From Youth Anti-Tobacco Advertising Contest	Students in tobacco prevention classes	Summit County students created 396 local anti-tobacco ads for the statewide contest.
Promoting comprehensive tobacco policies in schools	North Summit High School	North Summit High School revised and strengthened its school tobacco policy.
Promotion of Smoke-free Policies		
Summit County Smoke-Free Fair Project	10 members of the Teen Advocates of Summit County (T.A.S.C.) youth group	Presentation to Fair Board resulted in designation of smoke-free areas throughout the fair grounds to promote "family-friendly" environment.
Informing the community about the dangers of secondhand smoke exposure	631 community members	Head Start programs, community groups, and school groups throughout Summit County received education and literature about the risks of secondhand smoke exposure.

* TOT: Tobacco On Trial /TNT: Towards No Tobacco

Tooele County



Changes in Tobacco-Related Risk

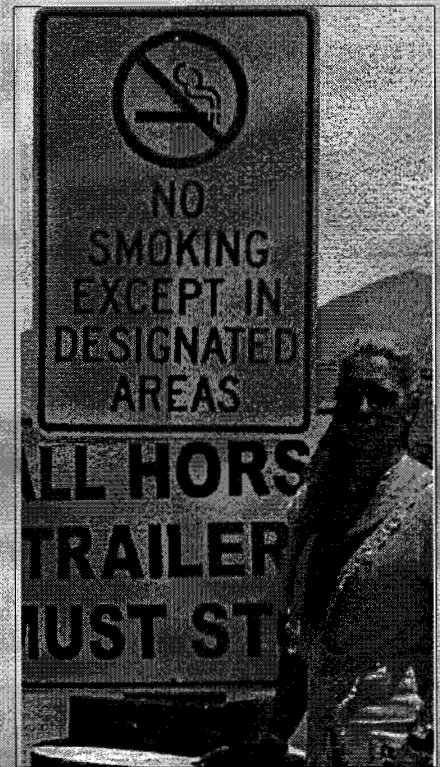
- Since the late 1990s, the estimated age-adjusted adult smoking rate in Tooele County decreased by 15%.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy remained unchanged.¹¹
- The estimated rate of children exposed to SHS in their homes decreased from 9.2% in 2001 to 4.7% in 2004/2005 (combined data).¹⁰
- During State Fiscal Year 2006, 12.1% of Tooele County stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 48%.²

Tobacco Use in Tooele County

Adult Cigarette Smoking (2003-05) ⁶	16.9%
Youth Cigarette Smoking (2005) ³	10.0%
Pregnant Women Smoking (2004) ¹¹	9.1%
Homes With No-Smoking Rule (2003-05) ⁶	89.1%
Quit Line Registrations (FY'2006) ⁷	141
QuitNet Registrations (FY'2006) ⁸	101
Anti-Tobacco Ad Recall (2003-05) ⁶	96.6%

Tooele County Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	22 youth	Quit Rate: 19% Reduction Rate: 46% *
Prenatal program (partnership with WIC, Medicaid, and BYB)	27 pregnant women	Participants received quit support.
Women, Infant, and Children (WIC) prenatal program	359 pregnant women	Participants received quit support and referrals to quit services.
Promoting healthcare provider quit interventions through The TRUTH Network Guide	84 physicians and dentists	Healthcare providers received training in tobacco cessation interventions and use of referrals to quit services
Providing quit support and referral to statewide quit programs	437 adults (community and worksites)	Participants received one-on-one counseling and referrals to the Quit Line.
Prevention Programs		
Supporting the school district in maintaining comprehensive tobacco policies in schools	4,500 parents and students	Health department provided tobacco education support to school district through newsletters, training, and assemblies.
Promoting the Truth From Youth Anti-Tobacco Advertising Contest	26,000 Tooele residents exposed to newspaper ad	Tooele students created more than 200 local anti-tobacco ads. 17 ads were submitted to the statewide competition.
Conducting retailer education to prevent underage tobacco sales	137 tobacco retailers	Retailers received the new "We ID Everyone" tobacco education kits.
Promotion of Smoke-free Policies		
Promoting enhanced work-place tobacco policies	Cargil Salt, Tooele Federal Credit Union, Detroit Diesel, County Employees	Employers provide incentives to employees who attempt to quit smoking.
Educating county residents about secondhand smoke and quit programs	26,000 readers	9 articles about the dangers of secondhand smoke and quit resources were published in the Tooele Transcript.
Educating about smoke-free park policies	County Commissioners, County Attorney, Tooele County/City Park Directors	Tooele County passed an ordinance that limits smoking in county-owned public places to designated areas.
Educating about smoke-free sports	Tooele County Girls' softball team	Girls' softball team revised by-laws to include a no-smoking policy.
*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.		



Kim Clausing, Tobacco Prevention Coordinator at the Tooele County Health Department shows newly enacted smoking restrictions at the Desert Peak Recreation Area. Tooele County Commissioners passed an ordinance that limits smoking to designated areas in public places owned by Tooele County.

TriCounty

Tobacco Use in TriCounty

Adult Cigarette Smoking (2003-05) ²	20.4%
Youth Cigarette Smoking (2005) ³	13.9%
Pregnant Women Smoking (2004) ¹¹	15.8%
Homes With No-Smoking Rule (2003-05) ⁶	79.1%
Quit Line Registrations (FY2006) ⁷	106
QuitNet Registrations (FY2006) ⁸	68
Anti-Tobacco Ad Recall (2003-05) ⁶	91.9%

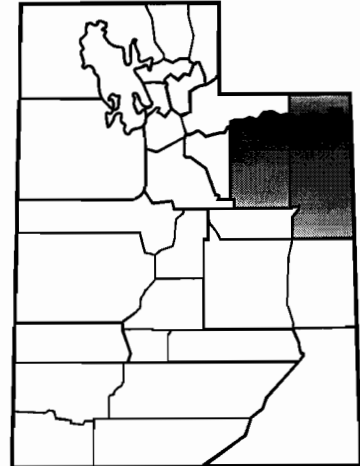


Through TriCounty Health Department's second annual Scholarship Program, one student from each TriCounty area high school was given a \$500 scholarship mini-grant. Recipients assisted TriCounty Health Department with educating elementary school students and the community on the ill effects of tobacco use. Scholarship students helped with the annual SafeKids Fair by educating citizens on the effects of tobacco use and second hand smoke.

TriCounty Health District Counties:
Daggett, Duchesne, Uintah

Changes in Tobacco-Related Risk

- Since the late 1990s, the estimated age-adjusted adult smoking rate in TriCounty showed no decline.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy remained unchanged.¹¹
- The estimated rate of children exposed to SHS in their homes decreased from 16.7% in 2001 to 12.3% in 2004/2005 (combined data).¹⁰
- During State Fiscal Year 2006, 10.4% of TriCounty stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 44%.²

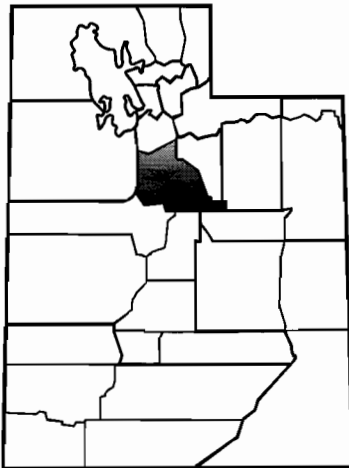


TriCounty Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	50 youth	Quit Rate: 16% Reduction Rate: 69%*
Marketing the Quit Line and QuitNet	6,000 TriCounty residents	Community received Quit Line information at health fairs, worksite education projects, and through prenatal programs.
Prenatal program (partnership with WIC, Medicaid, and Baby Your Baby)	75 pregnant women contacted	5 women quit; 20 reduced tobacco use.
Promoting healthcare provider quit interventions through The TRUTH Network Guide	45 healthcare providers	Providers received training in tobacco cessation interventions and use of referrals to quit services.
Prevention Programs		
Tobacco 101	700 students	Students received tobacco prevention education.
Promoting the Truth From Youth Anti-Tobacco Advertising Contest	9,500 students reached with the promotion	TriCounty students created 200 local anti-tobacco ads.
Involving youth groups in tobacco education	5 peer educators	Peer educators assisted with tobacco education and promotion of smoke-free policies. As a result, Constitution Park is developing a smoke-free policy.
Promotion of Smoke-free Policies		
Distributing news releases, public service announcements (local radio), and brochures educating about smoke-free environments	42,650 TriCounty residents	Participants were informed about the health risks of secondhand smoke.
Partnership with Head Start	1,000 parents and children	Parents and children received information about quit services, voluntary smoke-free home and car policies, and smoke-free policy on Head Start property.
Assessing worksite tobacco policies	60 retailers 1 worksite (150 employees)	Workgroup was established to develop worksite wellness policy.

*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.

Utah County



Changes in Tobacco-Related Risk

- Since the late 1990s, the estimated age-adjusted adult smoking rate in Utah County showed no decline.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy remained unchanged.¹¹
- During State Fiscal Year 2006, 8.6% of Utah County stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 20%.²

Tobacco Use in Utah County

Adult Cigarette Smoking (2003-05) ⁶	6.7%
Youth Cigarette Smoking (2005) ³	4.2%
Pregnant Women Smoking (2004) ¹¹	3.1%
Homes With No-Smoking Rule (2003-05) ⁶	95.7%
Quit Line Registrations (FY'2006) ⁷	639
QuitNet Registrations (FY'2006) ⁸	297
Anti-Tobacco Ad Recall (2003-05) ⁶	91.5%

Utah County Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	139 youth	Quit Rate: 19% Reduction Rate: 51%*
First Step prenatal program	189 pregnant women	Quit Rate: 20% Reduction Rate: 11%
Marketing the Quit Line/QuitNet at residential treatment centers	267 participants (19 workshops at 7 locations)	Participants received a 3-lesson class including quit information and referrals to the Quit Line and QuitNet.
Promoting healthcare provider quit interventions through The TRUTH Network Guide	309 healthcare providers in 31 clinics	Healthcare providers received education/training in tobacco cessation interventions and use of referrals to quit services.
Informing Utah County residents about tobacco issues and quit services	2,298 participants in health fairs/other public events	Utah County Health Department staff provided information and education at 30 community events.
Prevention Programs		
Promoting the Truth From Youth Anti-Tobacco Advertising and School Jamz Contests	1,975 students and administrators reached with promotions	Utah County 4th and 5th grade students created 221 local anti-tobacco ads. One high school received a School Jamz award.
Promoting comprehensive tobacco policies in schools	Landmark, East Shore, and Independence staff	Current policies were assessed at three alternative high schools.
Conducting retailer training to prevent underage tobacco sales	260 participants	The rate of illegal sales declined from 10.7% in 2001 to 8.6%.
Promotion of Smoke-free Policies		
Promoting smoke-free policies at parks and recreation facilities	Spanish Fork Recreation (192 participants)	Spanish Fork Recreation a "no tobacco use" policy for its facilities.
Working with the Utah Valley State College (UVSC) coalition to enforce campus policy	UVSC students, staff, and faculty	UVSC enhanced enforcement of the new campus smoking policy.
SHS campaigns in American Fork, North Orem, Springville/Spanish Fork	40,180 participants	Participants received comprehensive SHS information during 7 SHS campaign events.
Assisting businesses, government agencies, and apartment complexes in UICAA compliance	16 sites	Sites were evaluated and UICAA compliance ensured through education and policy enhancements.
Strengthening SHS policies	11 MDU managers	Completed tobacco policy assessments.
*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.		



BYU baseball players kick off the "Rip It Don't Dip It" Campaign, which eliminated all tobacco use at Spanish Fork Parks.

Wasatch County

Tobacco Use in Wasatch County

Adult Cigarette Smoking (2003-05) ⁶	9.4%
Youth Cigarette Smoking (2005) ³	12.6%
Pregnant Women Smoking (2004) ¹¹	5.7%
Homes With No-Smoking Rule (2003-05) ⁶	90.6%
Quit Line Registrations (FY 2006) ⁷	30
QuitNet Registrations (FY 2006) ⁸	20
Anti-Tobacco Ad Recall (2003-05) ⁶	91.5%

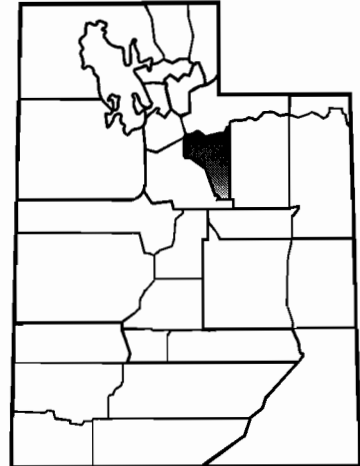


"Thank you for the opportunity to represent the Tobacco Free Champion Program with High School Rodeo. Keeping tobacco out of High School Arenas will help our young rodeo athletes be champions, tobacco free."

Joani Schena - 2005/2006 Utah High School Rodeo Queen

Changes in Tobacco-Related Risk

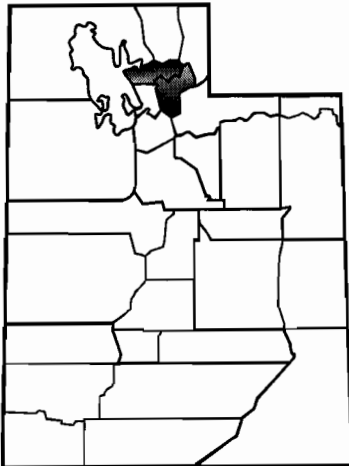
- Since the late 1990s, the estimated age-adjusted adult smoking rate in Wasatch County decreased by 27%.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy remained unchanged.¹¹
- The estimated rate of children exposed to SHS in their homes decreased from 4.2% in 2001 to 2.2% in 2004/2005 (combined data).¹⁰
- During State Fiscal Year 2006, 9.1% of Wasatch County stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 35%.²



Wasatch County Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	12 youth	5 youth reduced tobacco use.
First Step prenatal tobacco cessation program	3 pregnant women	1 participant quit. 1 participant was referred to Quit Line services.
Prevention Programs		
TOT/TF4 curricula**	936 students	Students increased their knowledge of tobacco-related issues.
Preparing tobacco prevention teacher kits and training teachers in prevention curriculum, local tobacco data and school guidelines to prevent tobacco use.	30 teachers	Teachers of 8th and 9th grade advisory classes increased their knowledge in tobacco prevention education.
Supporting Gold Medal Schools programs in elementary schools	1,900 students	3 elementary schools are working on obtaining platinum level for exemplary school health policies.
Promoting the Truth From Youth Anti-Tobacco Advertising Contest	179 4th and 5th grade students reached with the promotion	Wasatch County 4th and 5th grade students created local anti-tobacco ads.
Educating parents to raise tobacco-free children	1,634 parents and students reached through newsletters	Parents learned techniques to help children avoid using tobacco. Families received information on secondhand smoke policies and quit services.
Promotion of Smoke-free Policies		
Community conference to educate about secondhand smoke and smoke-free policies	1,000 Wasatch County residents	Community members received information on secondhand smoke policies, techniques to prevent youth tobacco use, and quit services.
Working with Utah high school rodeo clubs to enforce tobacco-free rodeos	3,500 participants at 12 rodeos across the state	Tobacco policies were publicized and judges were engaged in improving enforcement of rodeo tobacco policies.
Educating the community about secondhand smoke through local radio ads.	8,000 radio listeners	Listeners received information on secondhand smoke.
*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.		
** TOT: Tobacco On Trial/TF4: Tobacco Free 4th Grade Prevention Curriculum		

Weber-Morgan Counties



Changes in Tobacco-Related Risk

- Since the late 1990s, the estimated age-adjusted adult smoking rate in Weber-Morgan Health District decreased by 20%.⁶
- Birth certificates indicate that since 1999, smoking during pregnancy decreased by 25%.¹¹
- The estimated rate of children exposed to SHS in their homes decreased from 9.0% in 2001 to 6.4% in 2004/2005 (combined data).¹⁰
- During State Fiscal Year 2006, 6.9% of Weber-Morgan stores sold tobacco to underage youth during compliance checks. Since 2001, the illegal sales rate decreased by 58%.²

Tobacco Use in Weber-Morgan Counties

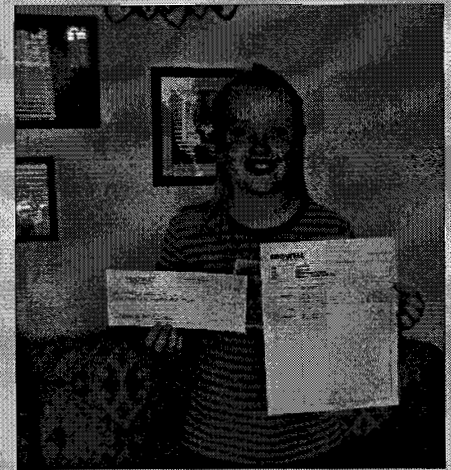
Adult Cigarette Smoking (2003-05) ⁶	12.2%
Youth Cigarette Smoking (2005) ³	9.6%
Pregnant Women Smoking (2004) ¹¹	9.7%
Homes With No-Smoking Rule (2003-05) ⁶	88.8%
Quit Line Registrations (FY'2006) ⁷	564
QuitNet Registrations (FY'2006) ⁸	330
Anti-Tobacco Ad Recall (2003-05) ⁶	94.4%

Weber-Morgan Health Department Activities to Reduce Tobacco Use

Projects	Participants	Outcomes
Quit Programs		
END teen class*	28 youth	Youth learned about quitting.
Teen Tobacco Reduction Program	124 youth	Awareness of the dangers of tobacco use was promoted.
First Step prenatal program	12 pregnant women	Participants received counseling and quit support.
Encouraging healthcare providers to offer quit program referrals & treatment	37 physicians; 49 staff members; 35 dental hygienists	Healthcare providers received education in quit counseling and information on referral and quit services.
Prevention Programs		
TOT curriculum**	1,387 students	Students increased their knowledge of tobacco-related issues.
Promoting the Truth From Youth Anti-Tobacco Advertising Contest	5,600 students reached with the promotion	Students from Weber-Morgan counties created 413 local anti-tobacco ads for the statewide contest.
Training students in teaching and nursing programs at Weber State University in tobacco education	8 presentations	Students' awareness of tobacco-related issues and prevention education increased.
Promoting anti-tobacco message and healthy life-styles with Governing Youth Counsel (GYC) and policy makers	14 GYC youth	Weber-Morgan's initiative led to statewide resolution recognizing the GYC mission to fight tobacco and promote healthy life-styles. The Resolution was signed by the Governor on March 10, 2006.
Peer leadership program	138 youth	Students assisted community with tobacco policy advocacy and prevention activities.
Promotion of Smoke-free Policies		
Assisting worksites in revising tobacco policies	1 worksite	FMC Jetways revised tobacco policy and will be smoke-free after September 1, 2006.
Promoting smoke-free homes	825 community members	Families with increased risk for tobacco use received literature, incentives, and pledge cards to establish and maintain smoke-free homes.

*END: Ending Nicotine Dependence program. Quit and reduction rates were calculated for students who completed pre- and post-test evaluations.

** TOT: Tobacco On Trial



Andrea Hancock, elementary school student from Riverdale, Utah, received the 2006 Truth From Youth Advertising Contest "Best of Show" award for her radio advertisement entitled "Semi." Andrea's advertisement was produced by The TRUTH campaign and aired on Utah radio stations.

Weber-Morgan Health District Counties:
Morgan, Weber

Acknowledgments

The Utah Department of Health would like to thank its many partners who led the fight against tobacco in Utah over the past year. Their commitment to preventing children from starting and helping smokers quit has led to great progress in reducing tobacco-related disease and death.

Special thanks for providing data and feedback for this report go to the following:

- Utah's Tobacco Control Advisory Committee:
 - Tamara Lewis, M.D., M.P.A., M.P.H., Intermountain Healthcare, Committee Chair
 - Lloyd Berentzen, M.B.A., Bear River Health Department
 - Craig Cutright, American Lung Association
 - Gary Edwards, M.S., Salt Lake Valley Health Department
 - Mary Lou Emerson, M.S., Utah Substance Abuse and Anti-Violence Coordinating Council
 - Sharon Hansen, M.S., Cornerstone Counseling Center
 - Brent Kelsey, Utah Division of Substance Abuse and Mental Health
 - Beverly May, M.P.A., Campaign for Tobacco-Free Kids
 - Jesse Soriano, M.A., M.S., University of Utah
 - Shauna Johnson, Utah Parent Teacher Association
 - Teresa Theurer, Utah State Board of Education
 - Kara Thompson, American Heart Association
- The Tobacco Prevention and Control Program (TPCP) at the Utah Department of Health
- Tobacco prevention and control program staff and health promotion directors at Utah's twelve local health departments
- The TPCP's independent evaluation team at the University of Colorado Health Sciences Center
- The Crowell/Love Partnership which serves as the contractor for the TPCP's The TRUTH marketing campaign
- Utah's school districts, the TPCP's ethnic networks, and other local programs in communities and schools throughout Utah
- The report writing and epidemiology staff at the Utah Department of Health, Bureau of Health Promotion

Funded Partners

American Lung Association of Utah
Asian Association of Utah
Association for Utah Community Health
Bear River Health Department
Bear River Middle School
Bear River Elementary and Secondary
School Policy Partnership
Boys and Girls Clubs of Greater Salt
Lake
Brigham Young University Department
of Health Sciences
Cache High Alternative School
Central Utah Public Health Department
Clearfield Job Corps
Cliffhanger Recreation
Comunidades Unidas
Crowell/Love Partnership
Davis Applied Technology Center
Davis County Health Department
Davis County Youth Council
Dixie State College Wellness Center
Free & Clear, Inc.
Global Accessories
Grand County School District
Granite School District
Green River Community Center
Head Start
Heart Disease and Stroke Prevention
Program
Heritage Club
Indian Walk-In Center
Logan Parks and Recreation
Logan Regional Hospital
Medicaid
Midvale City's Community Building
Community Initiative
Millard High School
Mount Logan School
Mountainview Mushrooms, LLC, Fillmore
National Tongan American Society
New Zion Community Advocates, Inc.
North Sanpete School District

Office of Epidemiology
Paiute Indian Tribe of Utah
Project Success Coalition, Inc.
The Queen Center Inc.
QuitNet.com, Inc.
Rocky Mountain Center for Health
Promotion & Education
Salt Lake American Muslim
Salt Lake City School District
Salt Lake Valley Health Department
Salt Lake Valley Health Department
Public Health Nursing Bureau
San Juan School District
Snow College, Ephraim campus
Snow College, Richfield campus
South Cache School
South Sanpete School District
Southeastern Utah Health Department
Southwest Utah Public Health
Department
Summit County Health Department
Tooele Community Tobacco Coalition
Tooele County Health Department
Tooele County Women, Infants, and
Children Program
Tooele County Youth Court
Tooele School District
TriCounty Health Civic Committee
TriCounty Health Department
University of Colorado Health Sciences
Center
Utah County Health Department
Utah Partners for Health
Utah Peace Institute
Utah State University Wellness Center
Utah Valley State College Wellness
Education
Vietnamese Volunteer Youth Association
Volunteer Center of Washington County
Wasatch County Health Department
Weber-Morgan Health Department

Use of Funds

State TPCP Revenue

Utah Tobacco Settlement Account: \$4,090,700

Cigarette Tax Restricted Account*: \$3,131,500

One-time carry over: \$372,055

*All FY 2006 funds allocated to tobacco prevention and control through the Cigarette Tax Restricted Account were expended in FY 2006.

Federal and Private TPCP Revenue

Federal and private revenue are dependent on ability to match with state funds.

Medicaid match for The TRUTH campaign and Utah Quit Line: \$748,229

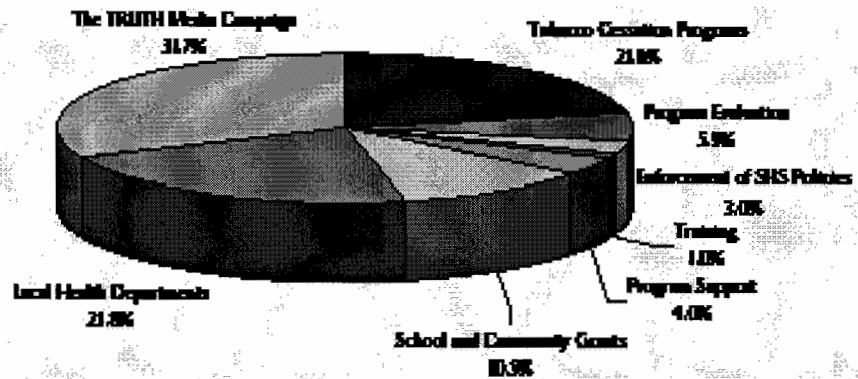
Centers for Disease Control and Prevention (CDC): \$1,385,650

In-Kind Revenue: Marketing Campaign Added-Value

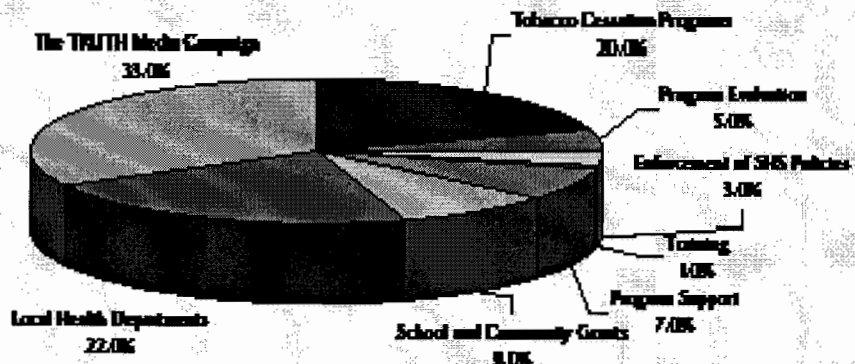
Media vendors donate approximately \$2 for every dollar spent on media.

Increased airing of ads, news specials, and other media events: \$7,013,169

Revenue Appropriation: Utah Tobacco Settlement Account and Cigarette Tax Restricted Account



Revenue Appropriation: All Cash Revenue (Not In-Kind)

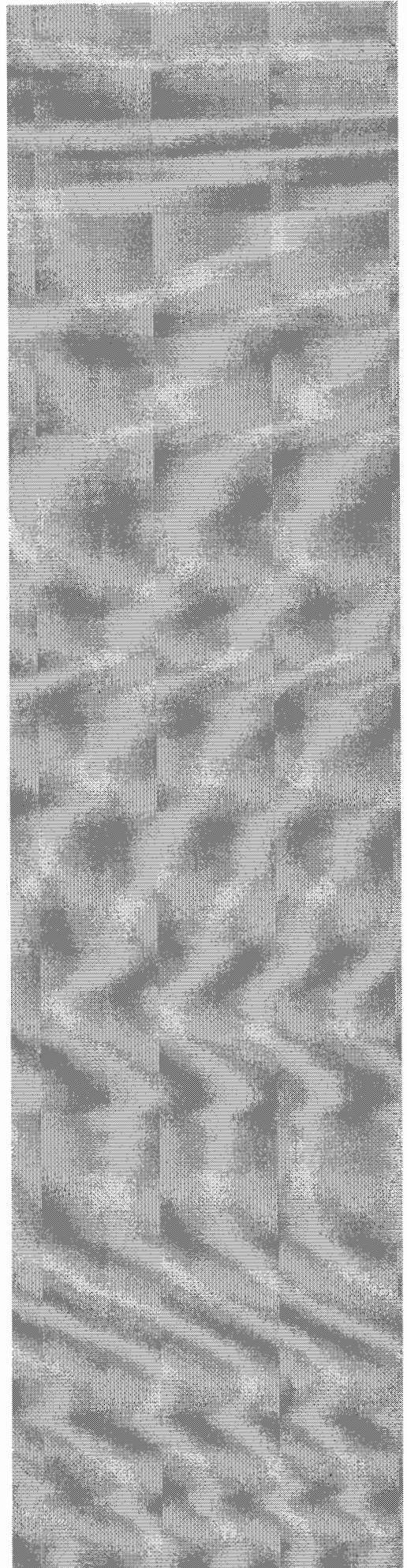


Notes and References

- 1 West DR. (2006). *2006 Utah Tobacco Prevention and Control Media Campaign Evaluation – Youth Report*. Salt Lake City: Utah Department of Health, Tobacco Prevention and Control Program. Note: Changes in survey methodology included a change in the questions assessing ad recall between 2003 and 2004 and a change from reporting unweighted data to reporting weighted data between 2005 and 2006.
- 2 Tobacco Prevention and Control Program. (2006). Compliance Check Summary data, SFY2001-2006, (provisional data). Salt Lake City: Utah Department of Health.
- 3 Tobacco Prevention and Control Program. (2005). *Utah Youth Tobacco Survey – Summary Report*. Salt Lake City: Utah Department of Health.
- 4 YRBSS: Youth Risk Behavior Surveillance System. Youth Online: Comprehensive Results. Retrieved August 15, 2006, from <http://apps.nccd.cdc.gov/yrbss/>.
- 5 West DR. (2006). *2006 Utah Tobacco Prevention and Control Media Campaign Evaluation – Adult Report*. Salt Lake City: Utah Department of Health, Tobacco Prevention and Control Program.
- 6 Utah Department of Health. *Behavioral Risk Factor Surveillance System (BRFSS), 1984–2005*. Salt Lake City: Utah Department of Health, Center for Health Data.
- 7 Tobacco Prevention and Control Program. Utah Tobacco Quit Line progress reports and annual evaluation reports, 2001-2006. Salt Lake City: Utah Department of Health. Note: Quit rates, reduction rates and satisfaction rates for the Utah Tobacco Quit Line are based on six-month follow-up survey responses from adult Quit Line participants. Quit rates refer to 30-day abstinence rates. Reduction rates exclude quitters. Nonrespondents were not included in rate calculation. The survey was based on a random sample for English-speaking adults. The survey completion rate was 27%.
- 8 Tobacco Prevention and Control Program. *Utah QuitNet contract reports, 2004–2006*. Salt Lake City: Utah Department of Health. Note: Quit rates, reduction rates and satisfaction rates for Utah QuitNet are based on 3-month follow-up survey responses from participants and refer to 30-day abstinence rates. The survey completion rate was 10%. Nonrespondents were not included in rate calculations. Reduction rates exclude quitters.
- 9 Tobacco Prevention and Control Program. Ending Nicotine Dependence program data, 2001-2006. Salt Lake City: Utah Department of Health. Note: Quit, reduction, and satisfaction rates for END are based on post-tests given on the last day of the class and refer to 7-day abstinence rates. A limited number of classes were taught in school settings and included voluntary students in addition to court-mandated students. Nonrespondents were not included in rate calculation. Reduction rates exclude quitters.
- 10 Utah Department of Health. *Utah Health Status Survey, 2001–2005*. Salt Lake City: Utah Department of Health, Center for Health Data.
- 11 Utah Birth Certificate Database. Retrieved on April 20, 2006 from Utah Department of Health, Center for Health Data, Indicator-Based Information System for Public Health website: <http://ibis.health.utah.gov/>.
- 12 Population Estimates from the Governor's Office of Planning and Budget. Retrieved on August 11, 2006 from Utah Department of Health, Center for Health Data, Indicator-Based Information System for Public Health website: <http://ibis.health.utah.gov/>.
- 13 National Center for Chronic Disease Prevention and Health Promotion. (2006). *Targeting Tobacco Use: The Nation's Leading Cause of Death*. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved on August 11, 2006 from <http://www.cdc.gov/nccdphp/publications/aag/osh.htm>.
- 14 National Center for Chronic Disease Prevention and Health Promotion. (2005). *CDC Tobacco Control Highlights 2005 – Utah*. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved on August 11, 2006 from <http://apps.nccd.cdc.gov/statesystem/>.
- 15 U.S. Department of Health and Human Services. (2004) *The Health Consequences of Smoking: A Report of the Surgeon General*. Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health.
- 16 Cancer Registry. Retrieved on August 11, 2006 from Utah Department of Health, Center for Health Data, Indicator-Based Information System for Public Health website: <http://ibis.health.utah.gov/>.
- 17 U.S. Department of Health and Human Services. (2006) *The Health Consequences of Involuntary Exposure to Tobacco Smoke. A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health.
- 18 National Center for Chronic Disease Prevention and Health Promotion. (2006). *Adult Smoking-Attributable Mortality, Morbidity, and Economic Cost*. Retrieved on August 14, 2006 from <http://apps.nccd.cdc.gov/sammec/reports.asp>.
- 19 Campaign for Tobacco-Free Kids. (2001). *Rough Formula for Estimating Future State Tobacco Control Savings*. Retrieved on August 14, 2006 from <http://tobaccofreekids.org/research/factsheets/pdf/0119.pdf>.
- 20 U.S. Department of Health and Human Services. (2000). *Reducing Tobacco Use: A Report of the Surgeon General*. Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health.
- 21 Campaign for Tobacco-Free Kids. (2005). *State-Specific Tobacco Company Marketing Expenditures 1998 to 2003*. Retrieved on August 14, 2006 from <http://tobaccofreekids.org/research/factsheets/pdf/0271.pdf>. Note: Due to a change from prorating estimates based on state population numbers to cigarette packs sold per state, the current Utah estimate is lower than data published before 2005.
- 22 Naples, M. (1979). *Effective frequency: the relationship between frequency and advertising effectiveness*. New York, NY: Association of National Advertisers.
- 23 Jones, J.P. (1995). *When Ads Work: New Proof that Advertising Triggers Sales*. New York, NY: Lexington Books.
- 24 Centers for Disease Control and Prevention. (2005). *Estimated Exposure of Adolescents to State-Funded Anti-Tobacco Television Advertisements – 37 States and the District of Columbia, 1999–2003*. Morbidity and Mortality Weekly Report (MMWR). October 28, 2005, 54(42):1077-1080.
- 25 Tobacco Prevention and Control Program. (2006). *The TRUTH Marketing Campaign contract report, FY2006*. Salt Lake City: Utah Department of Health.
- 26 U.S. Department of Health and Human Services. (1990). *The Health Benefits of Smoking Cessation: A Report of the Surgeon General*. Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health.
- 27 Campaign for Tobacco-Free Kids. (2005). *Benefits and Savings From Each One Percentage Point Decline in Utah Smoking Rates*. Washington, DC: Campaign for Tobacco-Free Kids.
- 28 Partnership for Prevention. (2006). Priorities for America's Health: Capitalizing on Life-Saving, Cost-Effective Preventive Services. Retrieved on August 15, 2006 from <http://www.prevent.org/content/view/46/96/>.
- 29 U.S. Department of Health and Human Services. (2001). *Women and Smoking: A Report of the Surgeon General*. Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health.
- 30 Fiore, M.C., Bailey, W.C., Cohen, S.J., et al. (2000). *Treating Tobacco Use and Dependence. Clinical Practice Guideline*. Washington, DC: U.S. Department of Human Services, Public Health Service.
- 31 Tobacco Prevention and Control Program. (2006) *Utah Medicaid Tobacco Cessation Program contract report, FY2006*. Salt Lake City: Utah Department of Health. Note: Medicaid pregnant women program quit and reduction rates are based on a census of all closed cases. Reduction rates exclude quitters.
- 32 Tobacco Prevention and Control Program. (2006). *"Not On Tobacco" contract report, FY2006*. Salt Lake City: Utah Department of Health. Note: Quit rates and reduction rates for NOT are based on post-tests given on the last day of the class and refer to 7-day abstinence rates. Nonrespondents were not included in rate calculations. Reduction rates exclude quitters.
- 33 U.S. Department of Health and Human Services. (1994) *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health.
- 34 Division of Adolescent and School Health. (2006). Tobacco School Health Guidelines. Retrieved on August 15, 2006 from <http://www.cdc.gov/HealthyYouth/tobacco/guidelines/summary.htm>.
- 35 Tobacco Prevention and Control Program. (2006). *Tobacco Prevention Survey database FY2006*. Salt Lake City: Utah Department of Health. Note: Prevention pre- and post-tests were collected from a convenience sample of 1,600 students out of approximately 7,000 students served.
- 36 Social Research Institute. University of Utah. (2003). *Anti-Tobacco Media Campaign Evaluation. Report 5: Summer 2003* Salt Lake City: Utah Department of Health, Tobacco Prevention and Control Program.
- 37 Tobacco Prevention and Control Program. (2006). *Association for Utah Community Health tobacco cessation program contract report, FY2006*. Salt Lake City: Utah Department of Health.

**Utah Department of Health
Tobacco Prevention and Control Program
1 (877) 220-3466
www.tobaccofreeutah.org
www.health.utah.gov**

To view the FY06 Tobacco Prevention and Control report online, please go to www.tobaccofreeutah.org and click on the "FY 2006 Annual Report" link or go directly to www.tobaccofreeutah.org/tpcpsy06report.pdf.



**SALT LAKE VALLEY HEALTH DEPARTMENT
BOARD OF HEALTH MINUTES**

February 3, 2005 - 7:30AM
Government Center N2003

BOARD MEMBERS PRESENT:

Cheryl D. Cook, Chair
Tom Guinney
Sue Lemmon
Dr. Kristen Ries
Mayor JoAnn Seghini
Dr. George Van Komen

Sam Granato
Dr. William Kidder
Nano Podolsky
Alan Seegrist
Barbara Thomas
Cecilia Walker

EXCUSED:

Councilman David Wilde

GUESTS/STAFF MEMBERS:

Pam Davenport
Kent Miner
Craig Anderson
Royal DeLegge
Dan Kinnersley
Dr. Ed Clark (Primary Children's)
Suzanne Kirkham, Interim Exec. Director

Leslie Workman
Kathy Chambers
Bob Jeppesen
Jean Nielsen
Bill Barnes (Primary Children's)
Megan Smith
Andy Bishop, Staff

The meeting was called to order at approximately 7:35 AM by Cheryl D. Cook, Chair of the Salt Lake Valley Health Department.

MINUTES:

Cheryl asked if there was a motion to approve the minutes from the January 6, 2005, Board of Health meeting, and the November 22, 2004 Special Board of Health meeting? ***Motion:*** *Barbara Thomas made the motion to approve the minutes as written of the January 6, 2005, Board of Health meeting and the November 22, 2004 Special Board of Health meeting minutes, as written. The motion was seconded by Cecilia Walker and approved unanimously.*

SALT LAKE COUNTY MAYOR'S OFFICE:

Cheryl introduced Salt Lake County Mayor Peter Corroon and asked to him to make a few comments to the Board. Mayor Corroon thanked the Board for their efforts and plans to attend the Board of Health meetings as often as his schedule allows and will keep updated with information from Jean Nielsen.

Mayor Corroon said he was aware of the Board's concerns regarding communication with the Mayor's office; however, he would like to see if the problem could be resolved without removing the Health Department from the Human Services portfolio and making it a separate department. Mayor Corroon said that he has an open door policy, and if there are questions or concerns, please feel free to contact his office.

Cheryl said the Board's Executive Committee had met with Mayor Corroon for more than an hour, and it was their feeling that they had been heard. They would like to proceed with Mayor Corroon's suggestion, as well.

Cheryl said that Jean Nielsen was appointed as the Mayor's representative to serve on the Selection Committee for the Executive Director search.

CHAIR'S REPORT:

Executive Committee:

At the January 6th Board meeting, Barbara Thomas, Tom Guinney and Dr. George Van Komen expressed an interest in serving on the Board of Health's Executive Committee. The vote to approve their appointment to this committee was tabled until it could be listed on the agenda as an action item. Cheryl asked if there was a motion to approve these three as members of the Executive Committee? **Motion:** *Dr. William Kidder made the motion to appoint Barbara Thomas, Tom Guinney and Dr. George Van Komen to serve as members of the Board of Health's Executive Committee. The motion was seconded by Sam Granato and approved unanimously.*

Fiscal Subcommittee:

Also, at the January 6th Board meeting, Dr. George Van Komen, Barbara Thomas, Cecilia Walker and Tom Guinney agreed to serve as members of the Board's Fiscal subcommittee. Cheryl asked if there was a motion to appoint these Board members to the Fiscal subcommittee? **Motion:** *Nano Podolsky made the motion to appoint Dr. George Van Komen, Barbara Thomas, Cecilia Walker and Tom Guinney as members of the Board of Health's Fiscal subcommittee. The motion was seconded by Sam Granato and approved unanimously.*

A handout listing the Board of Health's committees and subcommittees and the Board members who participate on them was distributed for review. Board members were asked to review it for accuracy and to determine if there are committees and/or subcommittees on which they would like to participate. Please give Andy any changes to the list or interest as soon as possible. She will make the changes and e-mail the revised list prior to the next Board meeting.

Sue Lemmon said when the Medical Advisory Committee was formed, the Communicable Disease subcommittee had been folded in to it and was no longer a subcommittee.

A discussion was held regarding UALBH and which Board member(s) represent or participate with this group. Sue Lemmon, Barbara Thomas, Donna Tanner, and Cecilia Walker have all been participants. Barbara Thomas said that some of the meetings are on Friday nights, which makes it difficult for her to attend, so if another Board member would be interested in participating, she wouldn't mind someone else attending. Sue said the focus is going to become more pertinent. They, generally, only do four meetings a year, and they are doing some things like phone conferences. She thinks it's going to be a lot more active this year. Cheryl asked if Sue, Barbara and Cecilia would discuss it and bring it back to the Board's March meeting?

Executive Director Search:

Cheryl said the Executive Director's search is currently in open recruitment until February 22nd. Applications should be ready to be distributed to the Screening Committee by March 7th. The Screening Committee should have at least a week to review the applications before meeting to determine their selections for the interview process with the Selection Committee. It was suggested the Screening Committee should open the meeting and then adjourn to a closed Executive Session to discuss the candidates for the position. The Screening Committee meeting will be held on Friday, March 18th at 3:00 PM at a location to be determined. Andy will update the selection process calendar and send it to the Board.

Sam Granato will not be able to attend the March 18th meeting so he will review the applications and let Cheryl know his selections and comments.

DIRECTOR'S REPORT:

Safe Kids Fair:

Suzanne introduced Kathy Chambers and asked her to tell the Board about the upcoming Safe Kids Fair. Kathy said the Safe Kids Fair was being held February 25th and 26th at the South Towne Exposition Center in Sandy. As in past years, many fun and educational events are planned. The first 100 kids receive a bike helmet. Kids are free up to the age of 14. Admission for 14 years and older is \$5.00 at the door. Tickets for the Fair were distributed to Board members. Let Andy know if additional tickets are needed.

National Wear Red Day:

Suzanne said that tomorrow (February 4th) is National Wear Red Day, which is intended to raise heart awareness in women. Commemorative pins for this event were distributed to Board members. They were encouraged to wear red tomorrow and to wear the pin in support of the day.

Legislative Update:

Dan Kinnersley was asked to update the Board on the Legislative session. A handout was distributed updating the Board on the bills the County and Health Department are watching and their status. Some of the bills he highlighted were: HB 25 - Direct Entry Midwife Act, which we strongly oppose; HB 31 Vision Care for Medicaid Recipients, which we support; HB32 Dental Services for Adults on Medicaid, which we support; and SB 77 - Indoor Clean Air Act,

which we support (Tom Guinney said this bill had been circled and was not anticipated to make it out of the senate).

Dan said the Health and Human Services Appropriations Committee will be meeting this week on the Utah Department of Health's budget. It was thought that level funding will be the outcome.

Miscellaneous:

Suzanne recognized and praised Craig Anderson from the District Attorney's office for his help in collecting an additional \$350,000 in fees for the Health Department. Cheryl thanked him on behalf of the Board.

Suzanne said that Board members whose terms expire in June of this year were sent letters asking for their interest in being reappointed. Everyone has agreed to an additional term. The paperwork will be put together and forwarded through the appropriate channels for approval.

Tobacco Regulation Update:

The staff has recommended that the Board not adopt a regulation banning smoking outdoors at this time, but rather adopt a resolution encouraging and advocating that the voter-elected municipal legislative bodies of Salt Lake County adopt "smoke-free venues" ordinances.

The staff's research has shown that although a number of communities have found it prudent for the health of their citizens to ban smoking in parks and on beaches, so far these communities have all done so by ordinances enacted by their municipal legislative bodies. Further, given the Board of Health's narrow authority specifically designated by the State Legislature to adopt measures that promote and protect public health, regulations we adopt must be supported by sound scientific evidence demonstrating a rational relationship between the regulated behavior and its threat to the public's health.

Currently, staff believes that preliminary research is promising, but does not meet this standard. Therefore, until more conclusive scientific research can demonstrate a stronger relationship between outdoor tobacco smoke and negative health effects, they recommend that instead of adopting a regulation, the Board adopt a resolution encouraging the local legislative bodies of Salt Lake County to adopt "smoke-free venues" ordinances.

With this in mind, Cheryl asked Craig Anderson from the District Attorney's office about drafting a resolution to be sent to the County Council to see if they would be willing to enact an ordinance.

The draft resolution was distributed for the Board's review. A discussion was held about how to move it forward. Following the discussion, Cheryl asked if there was a motion to adopt the resolution? **Motion:** *The motion was made by Alan Seegrist to approve the resolution and send*



it through the appropriate channels for eventual review by the County Council. The motion was seconded by Tom Guinney and passed unanimously.

It was suggested that Suzanne Kirkham and Jean Nielsen meet with Councilman Wilde to review the resolution. It was, also, suggested that the Board be provided with a monthly update through Suzanne or Jean.

NATIONAL CHILDREN'S STUDY:

This agenda item was taken out of order. Bill Barnes from Primary Children's Hospital introduced Dr. Ed Clark who is the Medical Director at Primary Children's Hospital and said Dr. Clark would be making the presentation to the Board.

Dr. Clark said this study has been in the planning stages for the past 5 years. It is a study of the interaction of environment and genetics in health and development of 100,000 children from birth until age 21 years. It is a collaborative project with federal agencies (EPA, NIH and CDC); the University of Utah, Primary Children's Hospital and local government; community partners that includes hospitals, physicians, advocacy groups and neighborhoods.

It will study of the environment at home, school and work. It will include biological and chemical factors, physical surroundings, social aspects, behavioral influences and outcomes, genetics and cultural and family influences.

The National Children's Study will form the basis of child health guidance, interventions and policy for generations to come.

Dr. Clark projected a map of the United States showing 96 sample sites and 8 vanguard locations. There are two vanguard locations in the West. One is Salt Lake County and the other is Orange County. Subsequent study sites will include Cache County, Utah; Bear Lake County, Idaho; and Lincoln County, Wyoming. He, showed a map with proposed Salt Lake County sampling sites and Salt Lake County births by census block.

Salt Lake County was chosen because of the following dynamics:

- .Dynamic population – 18,223 births in 2003
- .Ethnically diverse: 12% Hispanic (3,613 births), 2.9% Asian, Pacific Islanders, 0.9% Native American
- .Access to 3 to 4 generations
- .Stability – families remain in Utah
- .Experience with long-term studies

Utah has strong collaborations:

- .Major health care providers: University of Utah, IHC, Iasis and St. Mark's Hospital
- .State and local health departments
- .Federal agencies: NIH, DCD and EPA
- .Employers and media
- .Our faith groups

California Communities Prohibiting Smoking / Tobacco Use in Public Places, Outdoor Dining, Parks, Beaches, Sporting Venues and More

Revised 12/05

Anaheim: Smoke-Free Outdoor Sport Venues

Arcata (Humboldt County): Smoke-free Outdoor Plaza Park

Berkeley: All Public Places Smoke-Free, Indoors and Outdoors, including Outdoor Dining, and Waiting Lines

Buellton (Santa Barbara County): Smoke-free Entryways – 20 foot smoke-free zone around all smoke-free workplaces, Smoke-free Outdoor Dining, Smoke-free Train, Bus and Taxi Shelters.

Calexico: Smoke-free Parks, Playgrounds and or Tot Lots

Carpinteria: Smoke-Free Parks, Beaches and Waiting Lines

Capitola: Smoke-free Beaches

Davis: Smoke-Free Outdoor Public Places, including Outdoor Dining, Play Areas and Public Gardens, Fairs, Entryways to Enclosed Public Areas, Bus Stops, Ticket Lines, etc.

Dublin: Smoke-free Outdoor Dining and Waiting Lines

Firebaugh: Smoke-Free Parks

Fowler: Smoke-Free Parks

Fremont: Smoke-free outdoor areas within a “reasonable distance” of designated nonsmoking areas.

Fresno: Smoke-free Parks

Goleta (Santa Barbara County): 20-foot Smoke-free Zone around all smoke-free workplaces, Smoke-free Outdoor Dining and Smoke-free Train, Bus & Taxi Shelters

Grand Terrace (San Bernardino County): Smoke-free Parks, Playgrounds and /or Toto Lots

Huntington Beach: Smoke-free Beaches

Huntington Park: Smoke-Free Parks and Beaches

Laguna Hills (Orange County): Smoke-free Public places, including Outdoor Dining

Los Angeles: Smoke-Free Beaches, Zoos, Outdoor Sports Venues

Los Gatos: Smoke-free Outdoor Dining

Malibu: Smoke-Free Beaches and Piers

Mammoth Lakes: Smoke-Free Parks and Self-Service Display Ban for all Tobacco Products

Marina Del Rey: Smoke-free Beaches

Mendota: Tobacco-Free Parks and CUP restricting location of cigarette stores

Modesto: Smoke-free Parks, Playgrounds and/or Tot Lots

Newport Beach: Tobacco-Free Parks

Novato: Smoke-free outdoor areas “immediately adjacent” to entrance or exit from a contiguous street, sidewalk, walkway or parking lot of any building in which smoking is prohibited.

Oakland: Smoke-Free Outdoor Sports Venues, 20 foot Smoke-free Zones Around All Commercial Entryways

Orange Cove: Tobacco-Free Parks

Palm Desert: Smoke-free Parks, Playgrounds and/or Tot Lots

Palo Alto: Smoke-Free Service Locations, including Bus, Train, and Taxi Shelters, Ticket or Service Lines and Public Telephones, Areas within 20 Feet of Entrances to enclosed Public Places, Areas within Parks or Public Areas within 20 feet of Bleachers, Backstops, or Play Structures

Pasadena: Smoke-Free Parks and Golf Courses

Pine Grove (Amador County): Smoke-free Parks, Playgrounds and/or Tot Lots

Rancho Cucamonga (San Bernardino County): Smoke-free Parks, Playgrounds & Tot Lots

Redding: Smoke-Free Outdoor Sport Venues

Redlands: Smoke-free Parks

Reedley: Tobacco-Free Parks and Smoke-Free Patios for Restaurants

Sacramento: Smoke-Free Outdoor Sport Venues

San Anselmo: Smoke-free outdoor areas “immediately adjacent” to entrance or exit from a street, sidewalk, walkway or parking lot of any building in which smoking is prohibited.

San Clemente: Smoke-Free Beaches

San Diego: Smoke-Free Outdoor Sports Venues, Smoke-free Beaches

San Fernando: Smoke-Free Parks and Outdoor Sports Venues

San Francisco: Smoke-Free Outdoor Sports Venues, Smoke-free Parks

San Jose: Smoke-Free Outdoor Sport Venues

San Rafael: Smoke-free outdoor areas “immediately adjacent” to entrance or exit from a street, sidewalk, walkway or parking lot of any building in which smoking is prohibited.

San Ramon: Smoke-Free Outdoor Dining Areas for all Restaurants, Smoke-Free Outdoor Areas within 50 feet of an Entrance to any Place where Smoking is prohibited, 50 Ft. Tobacco-Free Zone around Tot Lots, Smoke-Free Outdoor Sports Venues

Santa Barbara: Smoke-free Beaches, Smoke-free Outdoor Dining, 20-foot Smoke-free Zone around all smoke-free workplaces

Santa Cruz: Smoke-free Beaches and Boardwalk and Waiting Lines

Santa Monica: Smoke-Free Parks and Beaches

Sausalito: Smoke-free outdoor areas “immediately adjacent” to entrance or exit from a street, sidewalk, walkway or parking lot to any building in which smoking is prohibited.

Seal Beach: Smoke-free Beaches

Solano Beach: Tobacco-Free Parks and Beaches

Stockton: Smoke-Free Outdoor Sports Venues

Vacaville: Tobacco-Free Parks

Venice Beach: Smoke-free Beaches

Winters: Tobacco-Free Parks

Woodland: Smoke-Free Parks

This is a selection of California communities that, as of May 2005, have adopted policies restricting or eliminating tobacco use in public places. It is not exhaustive and is subject to change.

Compiled by
CCAP, *California's Clean Air Project*, A Statewide Project of ETR Associates. Material made possible by
Grant No. 05-45720 from the California Dept. of Health Services, Tobacco Control Section.
CCAP 2210 21st Street, Sac. CA 95818, narinderd@etr.org www.ccap.etr.org Rev. 12/05

MEASUREMENTS OF OUTDOOR AIR POLLUTION FROM SECONDHAND SMOKE ON THE UMBC CAMPUS

James Repace, MSc.
Repac Associates, Inc.
101 Felicia Lane
Bowie, MD 20720
www.repac.com
June 1, 2005

Introduction.

Individual cigarettes are point sources of air pollution; smoking in groups becomes an area source. Outdoor air pollutants from individual point sources are subject to plume rise if the temperature of the smoke plume is hotter than the surrounding air; however if the plume has a small cross-section, as for a cigarette, it will rapidly cool and lose its upward momentum, and then will subside as the combustion particles and gases are heavier than air. Thus, in the case of no wind, the cigarette plume will rise to a certain height and then descend, and for a group of smokers, for example sitting in an outdoor cafe, on a hospital patio, or in stadium seats, their smoke will tend to saturate the local area with secondhand smoke (SHS). In the case where there is wind, the amount of thermally-induced plume rise is inversely proportional to the wind velocity -- doubling the wind velocity will halve the plume rise. In this case, the cigarette plume will resemble a cone tilted at an angle to the vertical. The width of the cone and its angle with the ground will depend upon the wind velocity: a higher wind will create a more horizontal but wider cone (due to increased turbulence), with uncertain impact on exposure to SHS for downwind nonsmokers. If there are multiple cigarette sources, the downwind concentrations will consist of multiple intersecting cones, i.e., overlapping plumes. As the wind direction changes, SHS pollution will be spread in various directions, fumigating downwind nonsmokers.

SHS contains a large quantity of respirable particles, which can cause breathing difficulty for those with chronic respiratory diseases or trigger an asthmatic attack in those with disabling asthma. For the remainder of nonsmokers, Junker et al. report eye, nasal and throat irritation thresholds for 24 healthy young adult females for repeated exposures over the course of 2 hours, corresponding to an SHS-PM_{2.5} concentration of about 4.4 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) (Junker, 2001).

Very few published data are available on outdoor levels of SHS. A California Air Resources Board study (CARB, 2003), measured 1 and 8 hour time-weighted average nicotine concentrations outside an airport, college, government center, office complex, and amusement park, found that at these typical outdoor locations, Californians may be exposed to SHS levels previously associated only with indoor SHS concentrations. Concentrations were strongly affected by counts of the number of smokers and moderately affected by the size of the smoking area and the measured wind speed. The CARB study indicated that outdoor SHS concentrations are detectable and sometimes comparable to indoor concentrations, and demonstrates that the number of cigarettes being smoked (i.e., total source strength), the position of smokers relative to the receptor,

temperature difference between a rising parcel of plume air and the surrounding air. (Williamson, 1973)

Thus, for each point source, the plume concentration will increase with source strength, and decrease with increasing distance from the source and with increasing wind speed. However, for a very large area source, while the pollutant concentration downwind will still decrease inversely as the wind speed, it will *increase* with downwind distance from the source as the square root of distance, or if there is an atmospheric inversion, with increase linearly with distance.

With these considerations in mind, a field study and two controlled experiments were designed and implemented on the campus of the University of Maryland at Baltimore's (UMBC) Catonsville, MD campus, at the request of UMBC's University Health Services, to perform experiments designed to quantify secondhand smoke levels outdoors in the vicinity of building entrances, in order to provide scientific data relating to whether limitations on smoking in proximity to campus building entrances were justified.

Biographical Sketch of the Principal Investigator. I am a biophysicist and an international secondhand smoke consultant with more than 60 scientific papers published on the hazard, exposure, dose, risk, and control of secondhand smoke. I have received the Flight Attendant Medical Research Institute Distinguished Professor Award, the Robert Wood Johnson Foundation Innovator Award, the Surgeon General's Medallion, and a Lifetime Achievement Award from the American Public Health Association. I am a Visiting Assistant Clinical Professor at the Tufts University School of Medicine. I was a senior policy analyst and scientist with the U.S. Environmental Protection Agency. I served as a consultant to the Occupational Safety and Health Administration, U.S. Department of Labor, on its proposed rule to regulate secondhand smoke and indoor air quality. I was also a research physicist at the Naval Research Laboratory in the Ocean Sciences and Electronics Divisions. My full CV may be viewed at www.repace.com.

The UMBC Outdoor Secondhand Smoke Studies.

Equipment and Methodology.

I deployed continuous real-time monitors for respirable particles (RSP), i.e., airborne particulate matter in the combustion size range below 3.5 microns in diameter (PM_{3.5}), and carcinogenic particulate polycyclic aromatic hydrocarbons (PPAH), which are appropriate markers for secondhand smoke and its toxicity. In addition I monitored carbon dioxide (CO₂), carbon monoxide, temperature, and relative humidity. For SHS tracer monitoring, I used real-time battery-powered instruments, including the active-mode MIE personalDataRAM (pDR-1200) and the EcoChem PAS 2000CE, a real-time respirable PPAH monitor. Outdoors, the major sources of PPAH particles are diesel exhaust and cars with defective catalytic converters. PPAH particles are submicron in size, or "nanoparticles." The calibration and deployment of these instruments is described in Repace (2004). The monitoring instruments were synchronized to each other and to a wrist watch. A time-activity diary was used to record location and clock-

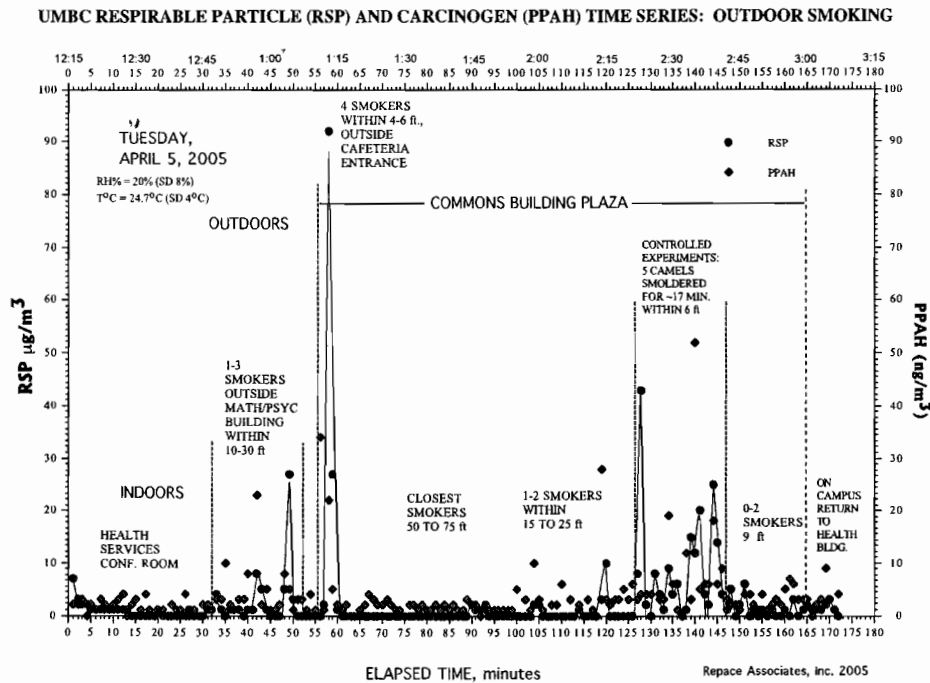


Figure 3. April 5th field study. Winds were light 3-7 mph, blowing WSW-NNW. One indoor location and several outdoor locations were sampled with smokers in close and distant proximity. A controlled experiment with cigarettes located at a point source was conducted for comparison.

April 15th Controlled Experiments.

A series of experiments were conducted on Thursday, April 14th to measure the concentration of SHS as a function of distance from the source. Based on the results of the controlled experiment of April 5th, to eliminate variation in concentration due to changes in wind direction during the time it takes to smoke a cigarette, the source was arrayed in a ring at 8 -10 points around the compass, so that no matter which way the wind blew, the monitors would pick up the smoke-plume. Up to 10 smokers were recruited by UMBC Health Services, and they smoked at 3 distances as shown in Experiments I (1-2 smokers only), III (9-10 smokers), and IV (10 smokers). Experiments II, V, and VI were conducted with smoldered Marlboro Medium Cigarettes only for comparison. Initially (Experiment I) 2 smokers were set up upwind of the monitors at 2 compass points. The levels are little different from 8 smoldered cigarettes at the same distance (Experiment II). Similarly, there is little difference between 8 smoldered cigarettes at 1.5 meters and 9.4 smokers at 2 meters. Figure 4 shows the experimental design overlaid on the smokers sitting in chairs around the centrally-located monitor.

Figure 5 shows the data for RSP and PPAH for each of the experiments as the ring diameter is increased. Figure 5 shows the data for each of the experiments as a function of time, numbers of smokers or cigarettes, and ring diameter. RSP is shown on the right-hand vertical axis, PPAH on the left-hand vertical axis, and the ring-radius (i.e., the smoker-to-monitor distance) is shown on the horizontal axis. Figure 6 shows a plot of the 3 smoldered cigarette experiments (II, V, and VI); an approximately inverse dependence of SHS-RSP concentration with source-receptor distance is displayed, while the PPAH concentration decays approximately as the square of the distance. In controlled experiments indoors, Repace (2004) observed that PPAH concentrations decreased approximately twice as fast as SHS-RSP. Figure 7 plots all of the experiments (I-VI) together, adding the smokers to the smoldered cigarettes. There is considerably more scatter in the data, likely due to the more erratic pattern of smoking by real smokers than for smoldered cigarettes. Nevertheless the same dependence with distance emerges from the curve fits. Neither concentration appears to get close to background until a distance of greater than 7 meters is reached.

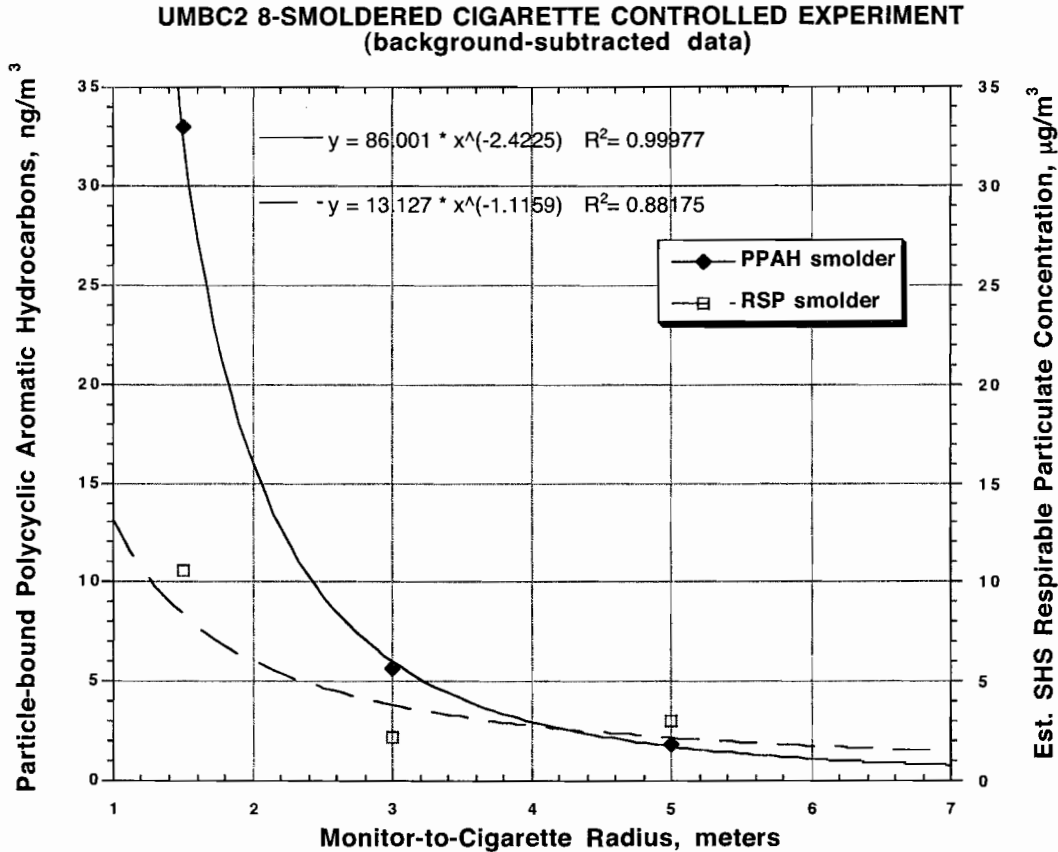


Figure 6. April 15th Experiment. Smoldered cigarettes (Marlboro Medium 100s, filtered) located at 8 equally spaced compass positions at ring radii 1.5, 3, and 5 meters. Curve fits to the PPAH and RSP curves are shown, and extrapolated to 7 meters (23 feet). PPAH declines as the inverse square of the source-receptor distance x , whereas RSP declines inversely as the distance, as expected.

While these have averaging times associated with them, the levels may be used to infer whether a given peak in figures 2 and 4 represent high or low levels of pollution. Each of these figures shows levels as high as 100 to 150 $\mu\text{g}/\text{m}^3$ outdoors in proximity to smokers, indicating that the air is in the unhealthy or Code Red range. Moreover, secondhand smoke causes a number of acute symptoms (eye, nose, and throat irritation, headaches, dizziness, and nausea) and chronic diseases (lung and nasal sinus cancer and heart disease) (CARB, 2003). Levels of irritation begin as low as 4 $\mu\text{g}/\text{m}^3$ SHS-RSP and levels of odor detection are as low as 1 $\mu\text{g}/\text{m}^3$ (Junker et al. 2001). Thus SHS odor would be detectable in our experiments as far as 7 meters from the source, and levels of irritation would begin at 4 meters from the source.

As for the PPAH carcinogens, Figures 2 through 6 show clearly that for this pollutant, levels close to smokers are elevated above background by up to 2 orders of magnitude (a factor of 100), relative to distances beyond 7 meters. Thus, it is clear that tobacco smoke pollution outdoors at significant distances from smokers must be considered as significantly unhealthy. Thus, while students or faculty asthmatics pass through a cloud of smoke, levels might be sufficient to trigger an attack, and certainly are high enough to pose a nuisance to all. Moreover, smoking in proximity to doorways or air intakes might easily be inducted into the building through posing both acute and chronic threats to building occupants.

Table 1. Levels of fine particulate (PM_{2.5}) air pollution and corresponding federal health advisory descriptors with accompanying simplified color code (US EPA, 1999).

PM _{2.5} ($\mu\text{g}/\text{m}^3$) AQI Break-points	Air Quality Index	Category	Color Code
0.0 - 15.4	0 - 50	Good	Green
15.5 - 40.4	51 - 100	Moderate	Yellow
40.5 - 65.4	101 - 150	Unhealthy SG*	Orange
65.5 - 150.4	151 - 200	Unhealthy	Red
150.5 - 250.4	201 - 300	Very unhealthy	Purple
250.5 - 350.4	301 - 400	Hazardous	Maroon
350.5 - 500.4	401 - 500	Very Hazardous	Maroon
> 505	500	(Significant Harm)**	Maroon

*SG = sensitive groups; **exists, but is not a part of the AQI. Source U.S. EPA, 1999.

[GUIDELINE FOR REPORTING OF DAILY AIR QUALITY - AIR QUALITY INDEX (AQI) United States Office of Air Quality EPA-454/R-99-010 Environmental Protection Planning and Standards July 1999 Agency Research Triangle Park, NC 27711].

Conclusions.

These experiments dispel the common misconception that smoking outdoors can be ignored because smoke plumes immediately dissipate into the environment. These controlled experiments with and without smokers show similar results: if a receptor such as a doorway, air intake, or an individual is surrounded by an area source – and this would include an entranceway with a group of smokers standing nearby – then regardless of which way the wind blows, the receptor is always downwind from the source. Cigarette smoke RSP concentrations decline approximately inversely with distance downwind from the point source, as expected, whereas cigarette smoke PPAH concentrations decline faster, at approximately inversely as the square of this distance.

COUNCIL TRANSMITTAL

TO: Rocky J. Fluhart
Chief Administrative Officer

DATE: October 1, 2006

FROM: Sam Guevara
Chief of Staff, Mayor's Office

SUBJECT: No Smoking in City Parks, Recreational Areas, and Cemeteries

STAFF CONTACT:

Sam Guevara
Mayor's Office
535-7732

Boyd Ferguson
City Attorney's Office
535-7796

DOCUMENT TYPE: Ordinance

RECOMMENDATION: Approve Ordinance

BUDGET IMPACT: Minimum budget impact is expected.

BACKGROUND/DISCUSSION: The Salt Lake City Mayor's Coalition on Alcohol, Tobacco and Other Drugs has recommended a 'no smoking' ordinance in Salt Lake City parks because of research on the impacts of second-hand smoke and because of citizens' complaints.

The 2006 Surgeon General Report (Executive Summary is attached) reports that secondhand smoke contains hundreds of chemicals known to be toxic or carcinogenic. It has been designated as a *known* Group A carcinogen by the U.S. EPA. Children exposed to secondhand smoke are at increased risk for SIDS, acute respiratory infections such as bronchitis and pneumonia, ear problems, and more severe asthma (more frequent and severe attacks). Children who are exposed to secondhand smoke are inhaling many of the same cancer-causing substances and poisons as smokers. Because their bodies are developing, infants and young children are especially vulnerable to the harmful effects of secondhand smoke.

Concentrations of many carcinogenic and toxic chemicals are *higher* in secondhand smoke than in the smoke inhaled by smokers. Breathing secondhand smoke for even a short time can have immediate adverse effects on the cardiovascular system and

interferes with the normal functioning of the heart, blood, and vascular systems in ways that increase the risk of heart attack. It causes coronary heart disease and lung cancer. Scientific evidence indicates there is *no* risk free level of secondhand smoke exposure. Involuntary smoking is a cause of disease, including lung cancer, in healthy nonsmokers. The health care costs and lost productivity represent a heavy and avoidable financial drain on our community.

The 2004 Behavioral Risk Factor Surveillance Survey (a statewide survey assessing attitudes about health issues, conducted by the Utah Department of Health) found that 87% of Salt Lake County residents would support smoking restrictions at parks.

In Utah, the following cities have passed ordinances restricting smoking: Clinton, Hyde Park, Logan, Midvale, Riverton, Sandy, Smithfield, and South Jordan. (Smoke-Free Parks is attached)

Additional Attachments:

1. Secondhand Smoke, What it Means to You (Health Consequences of Involuntary Exposure to Tobacco Smoke (CDC)
2. Letter from the American Heart Association in support of tobacco-free venues.

SALT LAKE CITY ORDINANCE

No. _____ of 2006

(No Smoking in City Parks, Recreational Areas, and Cemeteries, and Near Mass Gatherings)

AN ORDINANCE ENACTING CHAPTER 15.30 OF THE SALT LAKE CITY CODE,
PROHIBITING SMOKING IN CITY PARKS, RECREATIONAL AREAS, AND
CEMETERIES, AND NEAR MASS GATHERINGS.

WHEREAS, Salt Lake City Corporation (the "City") has authority to protect the public health, welfare, and sanitation; and

WHEREAS, based on the findings of the Utah Legislature in Utah Code Section 78-38-.5, the City hereby finds that the U.S. Environmental Protection Agency (EPA) has determined that environmental tobacco smoke is a Group A carcinogen, in the same category as other cancer causing chemicals such as asbestos; and

WHEREAS, the EPA has determined that there is no acceptable level of exposure to Class A carcinogens; and

WHEREAS, the EPA has determined that exposure to environmental tobacco smoke also causes an increase in respiratory diseases and disorders among exposed persons; and

WHEREAS, the United States Surgeon General has determined that secondhand smoke exposure causes disease and premature death in children and adults who do not smoke; and

WHEREAS, the United States Surgeon General has determined that children exposed to secondhand smoke have an increased risk of sudden infant death syndrome, acute respiratory infections, ear problems, bronchitis, pneumonia, and more severe asthma; and

WHEREAS, the United States Surgeon General has determined that exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer; and

WHEREAS, the United States Surgeon General has determined that the scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke; and

WHEREAS, reliable studies have shown that breathing side stream or secondhand smoke is a significant health hazard, in particular for elderly people, individuals with cardiovascular disease, and individuals with impaired respiratory function, including asthmatics and those with obstructive airway disease; and

WHEREAS, the American Cancer Society and the National Cancer Institute have reported that that between 35,000 to 40,000 nonsmokers, including 6,000 children, die each year from diseases caused by secondhand smoke; and

WHEREAS, the Americans with Disabilities Act, which requires that disabled persons have access to public places and work places, deems impaired respiratory function to be a disability; and

WHEREAS, the health care costs and lost productivity incurred by smoking-related disease and death represent a heavy and avoidable financial drain on our community; and

WHEREAS, the United States Surgeon General has determined that concentrations of cancer-causing and toxic chemicals are potentially higher in secondhand smoke than in the smoke inhaled by smokers; and

WHEREAS, the 2004 Behavioral Risk Factor Surveillance Survey indicates that 87% of Salt Lake County residents would support smoking restrictions at parks; and

WHEREAS, cigarette butts are not biodegradable and discarding cigarette butts and tobacco onto the ground in places such as city parks, recreational areas, and cemeteries, and at the locations of mass gatherings is unsightly, unclean, and particularly hazardous to small children and animals who handle and sometimes ingest them, which can lead to serious health effects; and

WHEREAS, smoke free parks are important for the health of children and adults; and

WHEREAS, because children imitate adult behavior, the elimination of smoking in places such as city parks, recreational areas, and cemeteries, and near mass gatherings furthers the goal of reducing youth smoking; and

WHEREAS, the Salt Lake Valley Health Department, as a policy-making body designated by statute to protect the public's health, has deemed it prudent, reasonable, and necessary to support, advocate, and urge that municipal legislative bodies in Salt Lake County adopt an ordinance: (1) protecting the public health and welfare by prohibiting smoking in public parks, gathering places, recreational areas, and plazas; and, (2) guaranteeing the right of nonsmokers to breathe smoke-free air, and to recognize that the need to breathe smoke free air shall have priority over the desire to smoke; and

WHEREAS, the City finds that the prohibition of smoking in the City's parks, recreational facilities, and cemeteries, and near mass gatherings serves to protect the health, safety, and welfare of persons in the City.

NOW, THEREFORE, be it ordained by the City Council of Salt Lake City, Utah:

SECTION 1. That Chapter 15.30, Salt Lake City Code, be, and the same hereby is,

enacted to read as follows:

Chapter 15.30 Smoking Prohibited in City Parks, Recreational Areas, and Cemeteries, and Near Mass Gatherings

15.30.010. Definitions

A. "City park" means and includes city-owned parks, public squares, Library Square, ball diamonds, pocket parks, soccer fields, and other recreation areas, city-owned cemeteries, linear parks, and trails, but not designated smoking areas.

B. "Mass gathering" means an outdoor assembly of 500 or more people that reasonably can be expected to continue for two or more hours.

C. "Smoke" or "smoking" means and includes: possession, carrying, or holding a lighted pipe, cigar, or cigarette of any kind, or any other lighted smoking equipment, or the lighting or emitting or exhaling of smoke of a pipe, cigar, or cigarette or any kind, or of any other lighted smoking equipment.

15.30.020. Prohibitions

Smoking is hereby prohibited in all city parks and within fifty (50) feet of all mass gatherings. A violation of this ordinance is an infraction punishable by a fine not to exceed two hundred ninety-nine dollars (\$299.00) but not by imprisonment. Police officers shall have the discretion to issue a "warning" if they deem it is in the best interests of the city for the first offense.

15.30.030. Exceptions

A. American Indian/Alaska Native Ceremonies

1. A person is exempt from the restrictions of this chapter if the person:

a. Is a member of an American Indian/Alaska Native tribe whose members are recognized as eligible for the special programs and services provided by the United States to American Indians/Alaska Natives who are members of those tribes;

b. Is an American Indian/Alaska Native who actively practices an American Indian/Alaska Native religion, the origin and interpretation of which is from a traditional American Indian/Alaska Native culture;

c. Is smoking tobacco using the traditional pipe of an American Indian/Alaska

Native tribal religious ceremony, of which tribe the person is a member, and is smoking the pipe as part of that ceremony; and

d. The ceremony is conducted by a pipe carrier, American Indian/Alaska Native spiritual person, or medicine person recognized by the tribe of which the person is a member and by the American Indian/Alaska Native community.

2. A religious ceremony using a traditional pipe under this section is subject to any applicable state or local law, except as provided in this section.

B. First Amendment Activities

A person is exempt from the restrictions of this chapter if the person is smoking or using smoking materials to exercise protected First Amendment activity, such as smoking or use of materials for bona fide religious purposes.

15.30.040. Posting of Signs

“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 it) shall be clearly and conspicuously posted in every city park.

SECTION 2. EFFECTIVE DATE. That this Ordinance shall take effect on the date of its first publication.

Passed by the City Council of Salt Lake City, Utah, this _____ day of _____, 2006.

CHAIRPERSON

ATTEST:

CHIEF DEPUTY CITY RECORDER

Transmitted to the Mayor on _____.

Mayor's Action: _____ Approved. _____ Vetoed.

MAYOR

ATTEST:

CHIEF DEPUTY CITY RECORDER

(SEAL)

APPROVED AS TO FORM
Salt Lake City Attorney's Office
Date 10-5-06
By Boyd Ferguson

Bill No. _____ of 2006
Published: _____

The Health Consequences of Involuntary Exposure to Tobacco Smoke

A Report of the Surgeon General



Department of Health and Human Services

The Health Consequences of Involuntary Exposure to Tobacco Smoke

A Report of the Surgeon General

2006

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of the Surgeon General
Rockville, MD

Message from Michael O. Leavitt

Secretary of Health and Human Services

This Surgeon General's report returns to the topic of the health effects of involuntary exposure to tobacco smoke. The last comprehensive review of this evidence by the Department of Health and Human Services (DHHS) was in the 1986 Surgeon General's report, *The Health Consequences of Involuntary Smoking*, published 20 years ago this year. This new report updates the evidence of the harmful effects of involuntary exposure to tobacco smoke. This large body of research findings is captured in an accompanying dynamic database that profiles key epidemiologic findings, and allows the evidence on health effects of exposure to tobacco smoke to be synthesized and updated (following the format of the 2004 report, *The Health Consequences of Smoking*). The database enables users to explore the data and studies supporting the conclusions in the report. The database is available on the Web site of the Centers for Disease Control and Prevention (CDC) at <http://www.cdc.gov/tobacco>. I am grateful to the leadership of the Surgeon General, CDC's Office on Smoking and Health, and all of the contributors for preparing this important report and bringing this topic to the forefront once again.

Secondhand smoke, also known as environmental tobacco smoke, is a mixture of the smoke given off by the burning end of tobacco products (sidestream smoke) and the mainstream smoke exhaled by smokers. People are exposed to secondhand smoke at home, in the workplace, and in other public places such as bars, restaurants, and recreation venues. It is harmful and hazardous to the health of the general public and particularly dangerous to children. It increases the risk of serious respiratory problems in children, such as a greater number and severity of asthma attacks and lower respiratory tract infections, and increases the risk for middle ear infections. It is also a known human carcinogen (cancer-causing agent). Inhaling secondhand smoke causes lung cancer and coronary heart disease in nonsmoking adults.

We have made great progress since the late 1980s in reducing the involuntary exposure of nonsmokers in this country to secondhand smoke. The proportion of nonsmokers aged 4 and older with a blood cotinine level (a metabolite of nicotine) indicating exposure has declined from 88 percent in 1988–1991 down to 43 percent in 2001–2002, a decline that exceeds the *Healthy People 2010* objective for this measure. Despite the great progress that has been made, involuntary exposure to secondhand smoke remains a serious public health hazard that can be prevented by making homes, workplaces, and public places completely smoke-free. As of the year 2000, more than 126 million residents of the United States aged 3 or older still are estimated to be exposed to secondhand smoke. Smoke-free environments are the most effective method for reducing exposures. *Healthy People 2010* objectives address this issue and seek optimal protection of nonsmokers through policies, regulations, and laws requiring smoke-free environments in all schools, workplaces, and public places.

Foreword

This twenty-ninth report of the Surgeon General documents the serious and deadly health effects of involuntary exposure to tobacco smoke. Secondhand smoke is a major cause of disease, including lung cancer and coronary heart disease, in healthy nonsmokers.

In 2005, it was estimated that exposure to secondhand smoke kills more than 3,000 adult nonsmokers from lung cancer, approximately 46,000 from coronary heart disease, and an estimated 430 newborns from sudden infant death syndrome. In addition, secondhand smoke causes other respiratory problems in nonsmokers such as coughing, phlegm, and reduced lung function. According to the CDC's National Health Interview Survey in 2000, more than 80 percent of the respondents aged 18 years or older believe that secondhand smoke is harmful and nonsmokers should be protected in their workplaces.

Components of chemical compounds in secondhand smoke, including nicotine, carbon monoxide, and tobacco-specific carcinogens, can be detected in body fluids of exposed nonsmokers. These exposures can be controlled. In 2005, CDC released the *Third National Report on Human Exposure to Environmental Chemicals*, which found that the median cotinine level (a metabolite of nicotine) in nonsmokers had decreased across the life stages: by 68 percent in children, 69 percent in adolescents, and 75 percent in adults, when samples collected between 1999 and 2002 were compared with samples collected a decade earlier. These dramatic declines are further evidence that smoking restrictions in public places and workplaces are helping to ensure a healthier life for all people in the United States.

However, too many people continue to be exposed, especially children. The recent data indicate that median cotinine levels in children are more than twice those of adults, and non-Hispanic blacks have levels that are more than twice as high as those of Mexican Americans and non-Hispanic whites. These disparities need to be better understood and addressed.

Research reviewed in this report indicates that smoke-free policies are the most economic and effective approach for providing protection from exposure to secondhand smoke. But do they provide the greatest health impact. Separating smokers and nonsmokers in the same airspace is not effective, nor is air cleaning or a greater exchange of indoor with outdoor air. Additionally, having separately ventilated areas for smoking may not offer a satisfactory solution to reducing workplace exposures. Policies prohibiting smoking in the workplace have multiple benefits. Besides reducing exposure of nonsmokers to secondhand smoke, these policies reduce tobacco use by smokers and change public attitudes about tobacco use from acceptable to unacceptable.

Research indicates that the progressive restriction of smoking in the United States to protect nonsmokers has had the additional health impact of reducing active smoking. In November 2005, CDC's Tobacco-Free Campus policy took full effect in all facilities owned by CDC in the Atlanta area. As the Director of the nation's leading health promotion and disease prevention agency, I am proud to support this effort. With this commitment, CDC continues to protect the health and safety of all of its employees and serves as a role model for workplaces everywhere.

Julie Louise Gerberding, M.D., M.P.H.
Director
Centers for Disease Control and Prevention
and
Administrator
Agency for Toxic Substances and Disease Registry

Preface
from the Surgeon General,
U.S. Department of Health and Human Services

Twenty years ago when Dr. C. Everett Koop released the Surgeon General's report, *The Health Consequences of Involuntary Smoking*, it was the first Surgeon General's report to conclude that involuntary exposure of nonsmokers to tobacco smoke causes disease. The topic of involuntary exposure of nonsmokers to secondhand smoke was first considered in Surgeon General Jesse Steinfeld's 1972 report, and by 1986, the causal linkage between inhaling secondhand smoke and the risk for lung cancer was clear. By then, there was also abundant evidence of adverse effects of smoking by parents on their children.

Today, massive and conclusive scientific evidence documents adverse effects of involuntary smoking on children and adults, including cancer and cardiovascular diseases in adults, and adverse respiratory effects in both children and adults. This 2006 report of the Surgeon General updates the 1986 report, *The Health Consequences of Involuntary Smoking*, and provides a detailed review of the epidemiologic evidence on the health effects of involuntary exposure to tobacco smoke. This new report also uses the revised standard language of causality that was applied in the 2004 Surgeon General's report, *The Health Consequences of Smoking*.

Secondhand smoke is similar to the mainstream smoke inhaled by the smoker in that it is a complex mixture containing many chemicals (including formaldehyde, cyanide, carbon monoxide, ammonia, and nicotine), many of which are known carcinogens. Exposure to secondhand smoke causes excess deaths in the U.S. population from lung cancer and cardiac related illnesses. Fortunately, exposures of adults are declining as smoking becomes increasingly restricted in workplaces and public places. Unfortunately, children continue to be exposed in their homes by the smoking of their parents and other adults. This exposure leads to unnecessary cases of bronchitis, pneumonia and worsened asthma. Among children younger than 18 years of age, an estimated 22 percent are exposed to secondhand smoke in their homes, with estimates ranging from 11.7 percent in Utah to 34.2 percent in Kentucky.

As this report documents, exposure to secondhand smoke remains an alarming public health hazard. Approximately 60 percent of nonsmokers in the United States have biologic evidence of exposure to secondhand smoke. Yet compared with data reviewed in the 1986 report, I am encouraged by the progress that has been made in reducing involuntary exposure in many workplaces, restaurants, and other public places. These changes are most likely the major contributing factors to the more than 75 percent reduction in serum cotinine levels that researchers have observed from 1988 to 1991. However, more than 126 million nonsmokers are still exposed. We now have substantial evidence on the efficacy of different approaches to control exposure to secondhand smoke. Restrictions on smoking can control exposures effectively, but technical approaches involving air cleaning or a greater exchange of indoor with outdoor air cannot. Consequently, nonsmokers need protection through the restriction of smoking in public places and workplaces and by a voluntary adherence to policies at home, particularly to eliminate exposures of children. Since the release of the 1986 Surgeon General's report, the public's attitude and social norms toward secondhand smoke exposure have changed significantly—a direct result of the growing body of scientific evidence on the health effects of exposure to secondhand smoke that is summarized in this report.

Finally, clinicians should routinely ask about secondhand smoke exposure, particularly in susceptible groups or when a child has had an illness caused by secondhand smoke, such as pneumonia. Because of the high levels of exposure among young children, their exposure should be considered a significant pediatric issue. Additionally, exposure to secondhand smoke poses significant risks for people with lung and heart disease. The large body of evidence documenting that secondhand smoke exposures produce substantial and immediate effects on the cardiovascular system indicates that even brief exposures could pose significant acute risks to older adults or to others at high risk for cardiovascular disease. Those caring for relatives with heart disease should be advised not to smoke in the presence of the sick relative.

An environment free of involuntary exposure to secondhand smoke should remain an important national priority in order to reach the *Healthy People 2010* objectives.

Richard Carmona, M.D., M.P.H., F.A.C.S.
Surgeon General

Executive Summary

The topic of passive or involuntary smoking was first addressed in the 1972 U.S. Surgeon General's report (*The Health Consequences of Smoking*, U.S. Department of Health, Education, and Welfare [USDHEW] 1972), only eight years after the first Surgeon General's report on the health consequences of active smoking (USDHEW 1964). Surgeon General Dr. Jesse Steinfeld had raised concerns about this topic, leading to its inclusion in that report. According to the 1972 report, nonsmokers inhale the mixture of sidestream smoke given off by a smoldering cigarette and mainstream smoke exhaled by a smoker, a mixture now referred to as "secondhand smoke" or "environmental tobacco smoke." Cited experimental studies showed that smoking in enclosed spaces could lead to high levels of cigarette smoke components in the air. For carbon monoxide (CO) specifically, levels in enclosed spaces could exceed levels then permitted in outdoor air. The studies supported a conclusion that "an atmosphere contaminated with tobacco smoke can contribute to the discomfort of many individuals" (USDHEW 1972, p. 7). The possibility that CO emitted from cigarettes could harm persons with chronic heart or lung disease was also mentioned.

Secondhand tobacco smoke was then addressed in greater depth in Chapter 4 (Involuntary Smoking) of the 1975 Surgeon General's report, *The Health Consequences of Smoking* (USDHEW 1975). The chapter noted that involuntary smoking takes place when nonsmokers inhale both sidestream and exhaled mainstream smoke and that this "smoking" is "involuntary" when "the exposure occurs as an unavoidable consequence of breathing in a smoke-filled environment" (p. 87). The report covered exposures and potential health consequences of involuntary smoking, and the researchers concluded that smoking on buses and airplanes was annoying to nonsmokers and that involuntary smoking had potentially adverse consequences for persons with heart and lung diseases. Two studies on nicotine concentrations in nonsmokers raised concerns about nicotine as a contributing factor to atherosclerotic cardiovascular disease in nonsmokers.

The 1979 Surgeon General's report, *Smoking and Health: A Report of the Surgeon General* (USDHEW 1979), also contained a chapter entitled "Involuntary Smoking." The chapter stressed that "attention to involuntary smoking is of recent vintage, and only limited information regarding the health effects of

such exposure upon the nonsmoker is available" (p. 11-35). The chapter concluded with recommendations for research including epidemiologic and clinical studies. The 1982 Surgeon General's report specifically addressed smoking and cancer (U.S. Department of Health and Human Services [USDHHS] 1982). By 1982, there were three published epidemiologic studies on involuntary smoking and lung cancer, and the 1982 Surgeon General's report included a brief chapter on this topic. That chapter commented on the methodologic difficulties inherent in such studies, including exposure assessment, the lengthy interval during which exposures are likely to be relevant, and accounting for exposures to other carcinogens. Nonetheless, the report concluded that "Although the currently available evidence is not sufficient to conclude that passive or involuntary smoking causes lung cancer in nonsmokers, the evidence does raise concern about a possible serious public health problem" (p. 251).

Involuntary smoking was also reviewed in the 1984 report, which focused on chronic obstructive pulmonary disease and smoking (USDHHS 1984). Chapter 7 (Passive Smoking) of that report included a comprehensive review of the mounting information on smoking by parents and the effects on respiratory health of their children, data on irritation of the eye, and the more limited evidence on pulmonary effects of involuntary smoking on adults. The chapter began with a compilation of measurements of tobacco smoke components in various indoor environments. The extent of the data had increased substantially since 1972. By 1984, the data included measurements of more specific indicators such as acrolein and nicotine, and less specific indicators such as particulate matter (PM), nitrogen oxides, and CO. The report reviewed new evidence on exposures of nonsmokers using biomarkers, with substantial information on levels of cotinine, a major nicotine metabolite. The report anticipated future conclusions with regard to respiratory effects of parental smoking on child respiratory health (Table 1.1).

Involuntary smoking was the topic for the entire 1986 Surgeon General's report, *The Health Consequences of Involuntary Smoking* (USDHHS 1986). In its 359 pages, the report covered the full breadth of the topic, addressing toxicology and dosimetry of tobacco smoke; the relevant evidence on active smoking;

Table 1.1 Conclusions from previous Surgeon General's reports on the health effects of secondhand smoke exposure

Disease and statement	Surgeon General's report
Coronary heart disease: "The presence of such levels" as found in cigarettes "indicates that the effect of exposure to carbon monoxide may on occasion, depending upon the length of exposure, be sufficient to be harmful to the health of an exposed person. This would be particularly significant for people who are already suffering from. . .coronary heart disease." (p. 7)	1972
Chronic respiratory symptoms (adults): "The presence of such levels" as found in cigarettes "indicates that the effect of exposure to carbon monoxide may on occasion, depending upon the length of exposure, be sufficient to be harmful to the health of an exposed person. This would be particularly significant for people who are already suffering from chronic bronchopulmonary disease. . . ." (p. 7)	1972
Pulmonary function: "Other components of tobacco smoke, such as particulate matter and the oxides of nitrogen, have been shown in various concentrations to affect adversely animal pulmonary. . .function. The extent of the contributions of these substances to illness in humans exposed to the concentrations present in an atmosphere contaminated with tobacco smoke is not presently known." (pp. 7-8)	1972
Asthma: "The limited existing data yield conflicting results concerning the relationship between passive smoke exposure and pulmonary function changes in patients with asthma." (p. 13)	1984
Bronchitis and pneumonia: "The children of smoking parents have an increased prevalence of reported respiratory symptoms, and have an increased frequency of bronchitis and pneumonia early in life." (p. 13)	1984
Pulmonary function (children): "The children of smoking parents appear to have measurable but small differences in tests of pulmonary function when compared with children of nonsmoking parents. The significance of this finding to the future development of lung disease is unknown." (p. 13)	1984
Pulmonary function (adults): ". . .some studies suggest that high levels of involuntary [tobacco] smoke exposure might produce small changes in pulmonary function in normal subjects. . . Two studies have reported differences in measures of lung function in older populations between subjects chronically exposed to involuntary smoking and those who were not. This difference was not found in a younger and possibly less exposed population." (p. 13)	1984
Acute respiratory infections: "The children of parents who smoke have an increased frequency of a variety of acute respiratory illnesses and infections, including chest illnesses before 2 years of age and physician-diagnosed bronchitis, tracheitis, and laryngitis, when compared with the children of nonsmokers." (p. 13)	1986
Bronchitis and pneumonia: "The children of parents who smoke have an increased frequency of hospitalization for bronchitis and pneumonia during the first year of life when compared with the children of nonsmokers." (p. 13)	1986
Cancers other than lung: "The associations between cancers, other than cancer of the lung, and involuntary smoking require further investigation before a determination can be made about the relationship of involuntary smoking to these cancers." (p. 14)	1986
Cardiovascular disease: "Further studies on the relationship between involuntary smoking and cardiovascular disease are needed in order to determine whether involuntary smoking increases the risk of cardiovascular disease." (p. 14)	1986

Table 1.1 Continued

Disease and statement	Surgeon General's report
Chronic cough and phlegm (children): "Chronic cough and phlegm are more frequent in children whose parents smoke compared with children of nonsmokers." (p. 13)	1986
Chronic obstructive pulmonary disease (COPD): "Healthy adults exposed to environmental tobacco smoke may have small changes on pulmonary function testing, but are unlikely to experience clinically significant deficits in pulmonary function as a result of exposure to environmental tobacco smoke alone." (pp. 13-14)	1986
"The implications of chronic respiratory symptoms for respiratory health as an adult are unknown and deserve further study." (p. 13)	
Lung cancer: "Involuntary smoking can cause lung cancer in nonsmokers." (p. 13)	1986
Middle ear effusions: "A number of studies report that chronic middle ear effusions are more common in young children whose parents smoke than in children of nonsmoking parents." (p. 14)	1986
Pulmonary function (children): "The children of parents who smoke have small differences in tests of pulmonary function when compared with the children of nonsmokers. Although this decrement is insufficient to cause symptoms, the possibility that it may increase susceptibility to chronic obstructive pulmonary disease with exposure to other agents in adult life, e.g., [sic] active smoking or occupational exposures, needs investigation." (p. 13)	1986
Other:	
"An atmosphere contaminated with tobacco smoke can contribute to the discomfort of many individuals." (p. 7)	1972
"Cigarette smoke can make a significant, measurable contribution to the level of indoor air pollution at levels of smoking and ventilation that are common in the indoor environment." (p. 13)	1984
"Cigarette smoke in the air can produce an increase in both subjective and objective measures of eye irritation." (p. 13)	1984
"Nonsmokers who report exposure to environmental tobacco smoke have higher levels of urinary cotinine, a metabolite of nicotine, than those who do not report such exposure." (p. 13)	1984
"The simple separation of smokers and nonsmokers within the same air space may reduce, but does not eliminate, the exposure of nonsmokers to environmental tobacco smoke." (p. 13)	1986
"Validated questionnaires are needed for the assessment of recent and remote exposure to environmental tobacco smoke in the home, workplace, and other environments." (p. 14)	1986

Sources: U.S. Department of Health, Education, and Welfare 1972; U.S. Department of Health and Human Services 1984, 1986.

patterns of exposure of nonsmokers to tobacco smoke; the epidemiologic evidence on involuntary smoking and disease risks for infants, children, and adults; and policies to control involuntary exposure to tobacco smoke. That report concluded that involuntary smoking caused lung cancer in lifetime nonsmoking adults and was associated with adverse effects on respiratory health in children. The report also stated that simply separating smokers and nonsmokers within the same airspace reduced but did not eliminate exposure to secondhand smoke. All of these findings are relevant to public health and public policy (Table 1.1). The lung cancer conclusion was based on extensive information already available on the carcinogenicity of active smoking, the qualitative similarities between secondhand and mainstream smoke, the uptake of tobacco smoke components by nonsmokers, and the epidemiologic data on involuntary smoking. The three major conclusions of the report (Table 1.2), led Dr. C. Everett Koop, Surgeon General at the time, to comment in his preface that "the right of smokers to smoke ends where their behavior affects the health and well-being of others; furthermore, it is the smokers' responsibility to ensure that they do not expose nonsmokers to the potential [*sic*] harmful effects of tobacco smoke" (USDHHS 1986, p. xii).

Two other reports published in 1986 also reached the conclusion that involuntary smoking increased the risk for lung cancer. The International Agency for Research on Cancer (IARC) of the World Health Organization concluded that "passive smoking gives rise to some risk of cancer" (IARC 1986, p. 314). In its monograph on tobacco smoking, the agency supported this conclusion on the basis of the characteristics of sidestream and mainstream smoke, the absorption of tobacco smoke materials during an involuntary exposure, and the nature of dose-response

relationships for carcinogenesis. In the same year, the National Research Council (NRC) also concluded that involuntary smoking increases the incidence of lung cancer in nonsmokers (NRC 1986). In reaching this conclusion, the NRC report cited the biologic plausibility of the association between exposure to secondhand smoke and lung cancer and the supporting epidemiologic evidence. On the basis of a pooled analysis of the epidemiologic data adjusted for bias, the report concluded that the best estimate for the excess risk of lung cancer in nonsmokers married to smokers was 25 percent, compared with nonsmokers married to nonsmokers. With regard to the effects of involuntary smoking on children, the NRC report commented on the literature linking secondhand smoke exposures from parental smoking to increased risks for respiratory symptoms and infections and to a slightly diminished rate of lung growth.

Since 1986, the conclusions with regard to both the carcinogenicity of secondhand smoke and the adverse effects of parental smoking on the health of children have been echoed and expanded (Table 1.3). In 1992, the U.S. Environmental Protection Agency (EPA) published its risk assessment of secondhand smoke as a carcinogen (USEPA 1992). The agency's evaluation drew on toxicologic information on secondhand smoke and the extensive literature on active smoking. A comprehensive meta-analysis of the 31 epidemiologic studies of secondhand smoke and lung cancer published up to that time was central to the decision to classify secondhand smoke as a group A carcinogen—namely, a known human carcinogen. Estimates of approximately 3,000 U.S. lung cancer deaths per year in nonsmokers were attributed to secondhand smoke. The report also covered other respiratory health effects in children and adults and concluded that involuntary smoking is causally associated with several adverse

Table 1.2 Major conclusions of the 1986 Surgeon General's report, *The Health Consequences of Involuntary Smoking*

1. Involuntary smoking is a cause of disease, including lung cancer, in healthy nonsmokers.
2. The children of parents who smoke compared with the children of nonsmoking parents have an increased frequency of respiratory infections, increased respiratory symptoms, and slightly smaller rates of increase in lung function as the lung matures.
3. The simple separation of smokers and nonsmokers within the same air space may reduce, but does not eliminate, the exposure of nonsmokers to environmental tobacco smoke.

Source: U.S. Department of Health and Human Services 1986, p. 7.

Table 1.3 Selected major reports, other than those of the U.S. Surgeon General, addressing adverse effects from exposure to tobacco smoke

Agency	Publication	Place and date of publication
National Research Council	<i>Environmental Tobacco Smoke: Measuring Exposures and Assessing Health Effects</i>	Washington, D.C. United States 1986
International Agency for Research on Cancer (IARC)	<i>Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans: Tobacco Smoking (IARC Monograph 38)</i>	Lyon, France 1986
U.S. Environmental Protection Agency (EPA)	<i>Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders</i>	Washington, D.C. United States 1992
National Health and Medical Research Council	<i>The Health Effects of Passive Smoking</i>	Canberra, Australia 1997
California EPA (Cal/EPA), Office of Environmental Health Hazard Assessment	<i>Health Effects of Exposure to Environmental Tobacco Smoke</i>	Sacramento, California United States 1997
Scientific Committee on Tobacco and Health	<i>Report of the Scientific Committee on Tobacco and Health</i>	London, United Kingdom 1998
World Health Organization	<i>International Consultation on Environmental Tobacco Smoke (ETS) and Child Health. Consultation Report</i>	Geneva, Switzerland 1999
IARC	<i>Tobacco Smoke and Involuntary Smoking (IARC Monograph 83)</i>	Lyon, France 2004
Cal/EPA, Office of Environmental Health Hazard Assessment	<i>Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant</i>	Sacramento, California United States 2005

respiratory effects in children. There was also a quantitative risk assessment for the impact of involuntary smoking on childhood asthma and lower respiratory tract infections in young children.

In the decade since the 1992 EPA report, scientific panels continued to evaluate the mounting evidence linking involuntary smoking to adverse health effects (Table 1.3). The most recent was the 2005 report of the California EPA (Cal/EPA 2005). Over time, research has repeatedly affirmed the conclusions of the 1986 Surgeon General's reports and studies have further identified causal associations of involuntary smoking with diseases and other health disorders. The epidemiologic evidence on involuntary smoking has markedly expanded since 1986, as have the data on exposure to tobacco smoke in the many environments

where people spend time. An understanding of the mechanisms by which involuntary smoking causes disease has also deepened.

As part of the environmental health hazard assessment, Cal/EPA identified specific health effects causally associated with exposure to secondhand smoke. The agency estimated the annual excess deaths in the United States that are attributable to secondhand smoke exposure for specific disorders: sudden infant death syndrome (SIDS), cardiac-related illnesses (ischemic heart disease), and lung cancer (Cal/EPA 2005). For the excess incidence of other health outcomes, either new estimates were provided or estimates from the 1997 health hazard assessment were used without any revisions (Cal/EPA 1997). Overall, Cal/EPA estimated that about 50,000 excess deaths

result annually from exposure to secondhand smoke (Cal/EPA 2005). Estimated annual excess deaths for the total U.S. population are about 3,400 (a range of 3,423 to 8,866) from lung cancer, 46,000 (a range of 22,700 to 69,600) from cardiac-related illnesses, and 430 from SIDS. The agency also estimated that between 24,300 and 71,900 low birth weight or pre-term deliveries, about 202,300 episodes of childhood asthma (new cases and exacerbations), between 150,000 and 300,000 cases of lower respiratory illness in children, and about 789,700 cases of middle ear infections in children occur each year in the United States as a result of exposure to secondhand smoke.

This new 2006 Surgeon General's report returns to the topic of involuntary smoking. The health effects of involuntary smoking have not received comprehensive coverage in this series of reports since 1986. Reports since then have touched on selected aspects of the topic: the 1994 report on tobacco use among young people (USDHHS 1994), the 1998 report on tobacco use among U.S. racial and ethnic minorities (USDHHS 1998), and the 2001 report on women and smoking (USDHHS 2001). As involuntary smoking remains widespread in the United States and elsewhere, the preparation of this report was motivated by the persistence of involuntary smoking as a public health problem and the need to evaluate the substantial new evidence reported since 1986. This report substantially expands the list of topics that were included in the 1986 report. Additional topics include SIDS, developmental effects, and other reproductive effects; heart disease in adults; and cancer sites beyond the lung. For some associations of involuntary smoking with adverse health effects, only a few studies were reviewed in 1986 (e.g., ear disease in children); now, the relevant literature is substantial. Consequently, this report uses meta-analysis to quantitatively summarize evidence as appropriate. Following the approach used in the 2004 report (*The Health Consequences of Smoking*, USDHHS 2004), this 2006 report also systematically evaluates the evidence for causality, judging the extent of the evidence available and then making an inference as to the nature of the association.

Organization of the Report

This twenty-ninth report of the Surgeon General examines the topics of toxicology of secondhand smoke, assessment and prevalence of exposure to secondhand smoke, reproductive and developmental health effects, respiratory effects of exposure to

secondhand smoke in children and adults, cancer among adults, cardiovascular diseases, and the control of secondhand smoke exposure.

This introductory chapter (Chapter 1) includes a discussion of the concept of causation and introduces concepts of causality that are used throughout this report; this chapter also summarizes the major conclusions of the report. Chapter 2 (Toxicology of Secondhand Smoke) sets out a foundation for interpreting the observational evidence that is the focus of most of the following chapters. The discussion details the mechanisms that enable tobacco smoke components to injure the respiratory tract and cause nonmalignant and malignant diseases and other adverse effects. Chapter 3 (Assessment of Exposure to Secondhand Smoke) provides a perspective on key factors that determine exposures of people to secondhand smoke in indoor environments, including building designs and operations, atmospheric markers of secondhand smoke, exposure models, and biomarkers of exposure to secondhand smoke. Chapter 4 (Prevalence of Exposure to Secondhand Smoke) summarizes findings that focus on nicotine measurements in the air and cotinine measurements in biologic materials. The chapter includes exposures in the home, workplace, public places, and special populations. Chapter 5 (Reproductive and Developmental Effects from Exposure to Secondhand Smoke) reviews the health effects on reproduction, on infants, and on child development. Chapter 6 (Respiratory Effects in Children from Exposure to Secondhand Smoke) examines the effects of parental smoking on the respiratory health of children. Chapter 7 (Cancer Among Adults from Exposure to Secondhand Smoke) summarizes the evidence on cancer of the lung, breast, nasal sinuses, and the cervix. Chapter 8 (Cardiovascular Diseases from Exposure to Secondhand Smoke) discusses coronary heart disease (CHD), stroke, and subclinical vascular disease. Chapter 9 (Respiratory Effects in Adults from Exposure to Secondhand Smoke) examines odor and irritation, respiratory symptoms, lung function, and respiratory diseases such as asthma and chronic obstructive pulmonary disease. Chapter 10 (Control of Secondhand Smoke Exposure) considers measures used to control exposure to secondhand smoke in public places, including legislation, education, and approaches based on building designs and operations. The report concludes with "A Vision for the Future." Major conclusions of the report were distilled from the chapter conclusions and appear later in this chapter.

Preparation of the Report

This report of the Surgeon General was prepared by the Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, Coordinating Center for Health Promotion, Centers for Disease Control and Prevention (CDC), and U.S. DHHS. Initial chapters were written by 22 experts who were selected because of their knowledge of a particular topic. The contributions of the initial experts were consolidated into 10 major chapters that were then reviewed by more than 40 peer reviewers. The entire manuscript was then sent to more than 30 scientists and experts who reviewed it for its scientific integrity. After each review cycle, the drafts were revised by the scientific editors on the basis of the experts' comments. Subsequently, the report was reviewed by various institutes and agencies

within U.S. DHHS. Publication lags, even short ones, prevent an up-to-the-minute inclusion of all recently published articles and data. Therefore, by the time the public reads this report, there may be additional published studies or data. To provide published information as current as possible, this report includes an Appendix of more recent studies that represent major additions to the literature.

This report is also accompanied by a companion database of key evidence that is accessible through the Internet (<http://www.cdc.gov/tobacco>). The database includes a uniform description of the studies and results on the health effects of exposure to secondhand smoke that were presented in a format compatible with abstraction into standardized tables. Readers of the report may access these data for additional analyses, tables, or figures.

Definitions and Terminology

The inhalation of tobacco smoke by nonsmokers has been variably referred to as "passive smoking" or "involuntary smoking." Smokers, of course, also inhale secondhand smoke. Cigarette smoke contains both particles and gases generated by the combustion at high temperatures of tobacco, paper, and additives. The smoke inhaled by nonsmokers that contaminates indoor spaces and outdoor environments has often been referred to as "secondhand smoke" or "environmental tobacco smoke." This inhaled smoke is the mixture of sidestream smoke released by the smoldering cigarette and the mainstream smoke that is exhaled by a smoker. Sidestream smoke, generated at lower temperatures and under somewhat different combustion conditions than mainstream smoke, tends to have higher concentrations of many of the toxins found in cigarette smoke (USDHHS 1986). However, it is rapidly diluted as it travels away from the burning cigarette.

Secondhand smoke is an inherently dynamic mixture that changes in characteristics and concentration with the time since it was formed and the

distance it has traveled. The smoke particles change in size and composition as gaseous components are volatilized and moisture content changes; gaseous elements of secondhand smoke may be adsorbed onto materials, and particle concentrations drop with both dilution in the air or environment and impaction on surfaces, including the lungs or on the body. Because of its dynamic nature, a specific quantitative definition of secondhand smoke cannot be offered.

This report uses the term secondhand smoke in preference to environmental tobacco smoke, even though the latter may have been used more frequently in previous reports. The descriptor "secondhand" captures the involuntary nature of the exposure, while "environmental" does not. This report also refers to the inhalation of secondhand smoke as involuntary smoking, acknowledging that most nonsmokers do not want to inhale tobacco smoke. The exposure of the fetus to tobacco smoke, whether from active smoking by the mother or from her exposure to secondhand smoke, also constitutes involuntary smoking.

Evidence Evaluation

Following the model of the 1964 report, the Surgeon General's reports on smoking have included comprehensive compilations of the evidence on the health effects of smoking. The evidence is analyzed to identify causal associations between smoking and disease according to enunciated principles, sometimes referred to as the "Surgeon General's criteria" or the "Hill" criteria (after Sir Austin Bradford Hill) for causality (USDHEW 1964; USDHHS 2004). Application of these criteria involves covering all relevant observational and experimental evidence. The criteria, offered in a brief chapter of the 1964 report entitled "Criteria for Judgment," included (1) the consistency of the association, (2) the strength of the association, (3) the specificity of the association, (4) the temporal relationship of the association, and (5) the coherence of the association. Although these criteria have been criticized (e.g., Rothman and Greenland 1998), they have proved useful as a framework for interpreting evidence on smoking and other postulated causes of disease, and for judging whether causality can be inferred.

In the 2004 report of the Surgeon General, *The Health Consequences of Smoking*, the framework for interpreting evidence on smoking and health was revisited in depth for the first time since the 1964 report (USDHHS 2004). The 2004 report provided a four-level hierarchy for interpreting evidence (Table 1.4). The categories acknowledge that evidence can be "suggestive" but not adequate to infer a causal relationship, and also allows for evidence that is "suggestive of no causal relationship." Since the 2004 report, the individual chapter conclusions have consistently used this four-level hierarchy (Table 1.4), but

evidence syntheses and other summary statements may use either the term "increased risk" or "cause" to describe instances in which there is sufficient evidence to conclude that active or involuntary smoking causes a disease or condition. This four-level framework also sharply and completely separates conclusions regarding causality from the implications of such conclusions.

That same framework was used in this report on involuntary smoking and health. The criteria dating back to the 1964 Surgeon General's report remain useful as guidelines for evaluating evidence (USDHEW 1964), but they were not intended to be applied strictly or as a "checklist" that needed to be met before the designation of "causal" could be applied to an association. In fact, for involuntary smoking and health, several of the criteria will not be met for some associations. Specificity, referring to a unique exposure-disease relationship (e.g., the association between thalidomide use during pregnancy and unusual birth defects), can be set aside as not relevant, as all of the health effects considered in this report have causes other than involuntary smoking. Associations are considered more likely to be causal as the strength of an association increases because competing explanations become less plausible alternatives. However, based on knowledge of dosimetry and mechanisms of injury and disease causation, the risk is anticipated to be only slightly or modestly increased for some associations of involuntary smoking with disease, such as lung cancer, particularly when the very strong relative risks found for active smokers are compared with those for lifetime nonsmokers. The finding of only a small elevation in risk, as in the

Table 1.4 Four-level hierarchy for classifying the strength of causal inferences based on available evidence

Level 1	Evidence is sufficient to infer a causal relationship.
Level 2	Evidence is suggestive but not sufficient to infer a causal relationship.
Level 3	Evidence is inadequate to infer the presence or absence of a causal relationship (which encompasses evidence that is sparse, of poor quality, or conflicting).
Level 4	Evidence is suggestive of no causal relationship .

Source: U.S. Department of Health and Human Services 2004.

example of spousal smoking and lung cancer risk in lifetime nonsmokers, does not weigh against a causal association; however, alternative explanations for a risk of a small magnitude need full exploration and cannot be so easily set aside as alternative explanations for a stronger association. Consistency, coherence, and the temporal relationship of involuntary smoking with disease are central to the interpretations in this report. To address coherence, the report draws not only on the evidence for involuntary smoking, but on the even more extensive literature on active smoking and disease.

Although the evidence reviewed in this report comes largely from investigations of secondhand smoke specifically, the larger body of evidence on active smoking is also relevant to many of the associations that were evaluated. The 1986 report found secondhand smoke to be qualitatively similar to mainstream smoke inhaled by the smoker and concluded that secondhand smoke would be expected to have "a toxic and carcinogenic potential that would

not be expected to be qualitatively different from that of MS [mainstream smoke]" (USDHHS 1986, p. 23). The 2004 report of the Surgeon General revisited the health consequences of active smoking (USDHHS 2004), and the conclusions substantially expanded the list of diseases and conditions caused by smoking. Chapters in the present report consider the evidence on active smoking that is relevant to biologic plausibility for causal associations between involuntary smoking and disease. The reviews included in this report cover evidence identified through search strategies set out in each chapter. Of necessity, the evidence on mechanisms was selectively reviewed. However, an attempt was made to cover all health studies through specified target dates. Because of the substantial amount of time involved in preparing this report, lists of new key references published after these cut-off dates are included in an Appendix. Literature reviews were extended when new evidence was sufficient to possibly change the level of a causal conclusion.

Major Conclusions

This report returns to involuntary smoking, the topic of the 1986 Surgeon General's report. Since then, there have been many advances in the research on secondhand smoke, and substantial evidence has been reported over the ensuing 20 years. This report uses the revised language for causal conclusions that was implemented in the 2004 Surgeon General's report (USDHHS 2004). Each chapter provides a comprehensive review of the evidence, a quantitative synthesis of the evidence if appropriate, and a rigorous assessment of sources of bias that may affect interpretations of the findings. The reviews in this report reaffirm and strengthen the findings of the 1986 report. With regard to the involuntary exposure of nonsmokers to tobacco smoke, the scientific evidence now supports the following major conclusions:

1. Secondhand smoke causes premature death and disease in children and in adults who do not smoke.
2. Children exposed to secondhand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.
3. Exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer.
4. The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke.
5. Many millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces despite substantial progress in tobacco control.
6. Eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposures of nonsmokers to secondhand smoke.

Chapter Conclusions

Chapter 2. Toxicology of Secondhand Smoke

Evidence of Carcinogenic Effects from Secondhand Smoke Exposure

1. More than 50 carcinogens have been identified in sidestream and secondhand smoke.
2. The evidence is sufficient to infer a causal relationship between exposure to secondhand smoke and its condensates and tumors in laboratory animals.
3. The evidence is sufficient to infer that exposure of nonsmokers to secondhand smoke causes a significant increase in urinary levels of metabolites of the tobacco-specific lung carcinogen 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK). The presence of these metabolites links exposure to secondhand smoke with an increased risk for lung cancer.
4. The mechanisms by which secondhand smoke causes lung cancer are probably similar to those observed in smokers. The overall risk of secondhand smoke exposure, compared with active smoking, is diminished by a substantially lower carcinogenic dose.

Mechanisms of Respiratory Tract Injury and Disease Caused by Secondhand Smoke Exposure

5. The evidence indicates multiple mechanisms by which secondhand smoke exposure causes injury to the respiratory tract.
6. The evidence indicates mechanisms by which secondhand smoke exposure could increase the risk for sudden infant death syndrome.

Mechanisms of Secondhand Smoke Exposure and Heart Disease

7. The evidence is sufficient to infer that exposure to secondhand smoke has a prothrombotic effect.

8. The evidence is sufficient to infer that exposure to secondhand smoke causes endothelial cell dysfunctions.
9. The evidence is sufficient to infer that exposure to secondhand smoke causes atherosclerosis in animal models.

Chapter 3. Assessment of Exposure to Secondhand Smoke

Building Designs and Operations

1. Current heating, ventilating, and air conditioning systems alone cannot control exposure to secondhand smoke.
2. The operation of a heating, ventilating, and air conditioning system can distribute secondhand smoke throughout a building.

Exposure Models

3. Atmospheric concentration of nicotine is a sensitive and specific indicator for secondhand smoke.
4. Smoking increases indoor particle concentrations.
5. Models can be used to estimate concentrations of secondhand smoke.

Biomarkers of Exposure to Secondhand Smoke

6. Biomarkers suitable for assessing recent exposures to secondhand smoke are available.
7. At this time, cotinine, the primary proximate metabolite of nicotine, remains the biomarker of choice for assessing secondhand smoke exposure.
8. Individual biomarkers of exposure to secondhand smoke represent only one component of a complex mixture, and measurements of one marker may not wholly reflect an exposure to other components of concern as a result of involuntary smoking.

Chapter 4. Prevalence of Exposure to Secondhand Smoke

1. The evidence is sufficient to infer that large numbers of nonsmokers are still exposed to secondhand smoke.
2. Exposure of nonsmokers to secondhand smoke has declined in the United States since the 1986 Surgeon General's report, *The Health Consequences of Involuntary Smoking*.
3. The evidence indicates that the extent of secondhand smoke exposure varies across the country.
4. Homes and workplaces are the predominant locations for exposure to secondhand smoke.
5. Exposure to secondhand smoke tends to be greater for persons with lower incomes.
6. Exposure to secondhand smoke continues in restaurants, bars, casinos, gaming halls, and vehicles.

Chapter 5. Reproductive and Developmental Effects from Exposure to Secondhand Smoke

Fertility

1. The evidence is inadequate to infer the presence or absence of a causal relationship between maternal exposure to secondhand smoke and female fertility or fecundability. No data were found on paternal exposure to secondhand smoke and male fertility or fecundability.

Pregnancy (Spontaneous Abortion and Perinatal Death)

2. The evidence is inadequate to infer the presence or absence of a causal relationship between maternal exposure to secondhand smoke during pregnancy and spontaneous abortion.

Infant Deaths

3. The evidence is inadequate to infer the presence or absence of a causal relationship between exposure to secondhand smoke and neonatal mortality.

Sudden Infant Death Syndrome

4. The evidence is sufficient to infer a causal relationship between exposure to secondhand smoke and sudden infant death syndrome.

Preterm Delivery

5. The evidence is suggestive but not sufficient to infer a causal relationship between maternal exposure to secondhand smoke during pregnancy and preterm delivery.

Low Birth Weight

6. The evidence is sufficient to infer a causal relationship between maternal exposure to secondhand smoke during pregnancy and a small reduction in birth weight.

Congenital Malformations

7. The evidence is inadequate to infer the presence or absence of a causal relationship between exposure to secondhand smoke and congenital malformations.

Cognitive Development

8. The evidence is inadequate to infer the presence or absence of a causal relationship between exposure to secondhand smoke and cognitive functioning among children.

Behavioral Development

9. The evidence is inadequate to infer the presence or absence of a causal relationship between exposure to secondhand smoke and behavioral problems among children.

Height/Growth

10. The evidence is inadequate to infer the presence or absence of a causal relationship between exposure to secondhand smoke and children's height/growth.

Childhood Cancer

11. The evidence is suggestive but not sufficient to infer a causal relationship between prenatal and postnatal exposure to secondhand smoke and childhood cancer.

12. The evidence is inadequate to infer the presence or absence of a causal relationship between maternal exposure to secondhand smoke during pregnancy and childhood cancer.
13. The evidence is inadequate to infer the presence or absence of a causal relationship between exposure to secondhand smoke during infancy and childhood cancer.
14. The evidence is suggestive but not sufficient to infer a causal relationship between prenatal and postnatal exposure to secondhand smoke and childhood leukemias.
15. The evidence is suggestive but not sufficient to infer a causal relationship between prenatal and postnatal exposure to secondhand smoke and childhood lymphomas.
16. The evidence is suggestive but not sufficient to infer a causal relationship between prenatal and postnatal exposure to secondhand smoke and childhood brain tumors.
17. The evidence is inadequate to infer the presence or absence of a causal relationship between prenatal and postnatal exposure to secondhand smoke and other childhood cancer types.

Chapter 6. Respiratory Effects in Children from Exposure to Secondhand Smoke

Lower Respiratory Illnesses in Infancy and Early Childhood

1. The evidence is sufficient to infer a causal relationship between secondhand smoke exposure from parental smoking and lower respiratory illnesses in infants and children.
2. The increased risk for lower respiratory illnesses is greatest from smoking by the mother.

Middle Ear Disease and Adenotonsillectomy

3. The evidence is sufficient to infer a causal relationship between parental smoking and middle ear disease in children, including acute and recurrent otitis media and chronic middle ear effusion.

4. The evidence is suggestive but not sufficient to infer a causal relationship between parental smoking and the natural history of middle ear effusion.
5. The evidence is inadequate to infer the presence or absence of a causal relationship between parental smoking and an increase in the risk of adenoidectomy or tonsillectomy among children.

Respiratory Symptoms and Prevalent Asthma in School-Age Children

6. The evidence is sufficient to infer a causal relationship between parental smoking and cough, phlegm, wheeze, and breathlessness among children of school age.
7. The evidence is sufficient to infer a causal relationship between parental smoking and ever having asthma among children of school age.

Childhood Asthma Onset

8. The evidence is sufficient to infer a causal relationship between secondhand smoke exposure from parental smoking and the onset of wheeze illnesses in early childhood.
9. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke exposure from parental smoking and the onset of childhood asthma.

Atopy

10. The evidence is inadequate to infer the presence or absence of a causal relationship between parental smoking and the risk of immunoglobulin E-mediated allergy in their children.

Lung Growth and Pulmonary Function

11. The evidence is sufficient to infer a causal relationship between maternal smoking during pregnancy and persistent adverse effects on lung function across childhood.
12. The evidence is sufficient to infer a causal relationship between exposure to secondhand smoke after birth and a lower level of lung function during childhood.

Chapter 7. Cancer Among Adults from Exposure to Secondhand Smoke

Lung Cancer

1. The evidence is sufficient to infer a causal relationship between secondhand smoke exposure and lung cancer among lifetime nonsmokers. This conclusion extends to all secondhand smoke exposure, regardless of location.
2. The pooled evidence indicates a 20 to 30 percent increase in the risk of lung cancer from secondhand smoke exposure associated with living with a smoker.

Breast Cancer

3. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke and breast cancer.

Nasal Sinus Cavity and Nasopharyngeal Carcinoma

4. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke exposure and a risk of nasal sinus cancer among nonsmokers.
5. The evidence is inadequate to infer the presence or absence of a causal relationship between secondhand smoke exposure and a risk of nasopharyngeal carcinoma among nonsmokers.

Cervical Cancer

6. The evidence is inadequate to infer the presence or absence of a causal relationship between secondhand smoke exposure and the risk of cervical cancer among lifetime nonsmokers.

Chapter 8. Cardiovascular Diseases from Exposure to Secondhand Smoke

1. The evidence is sufficient to infer a causal relationship between exposure to secondhand smoke and increased risks of coronary heart disease morbidity and mortality among both men and women.
2. Pooled relative risks from meta-analyses indicate a 25 to 30 percent increase in the risk of coronary

heart disease from exposure to secondhand smoke.

3. The evidence is suggestive but not sufficient to infer a causal relationship between exposure to secondhand smoke and an increased risk of stroke.
4. Studies of secondhand smoke and subclinical vascular disease, particularly carotid arterial wall thickening, are suggestive but not sufficient to infer a causal relationship between exposure to secondhand smoke and atherosclerosis.

Chapter 9. Respiratory Effects in Adults from Exposure to Secondhand Smoke

Odor and Irritation

1. The evidence is sufficient to infer a causal relationship between secondhand smoke exposure and odor annoyance.
2. The evidence is sufficient to infer a causal relationship between secondhand smoke exposure and nasal irritation.
3. The evidence is suggestive but not sufficient to conclude that persons with nasal allergies or a history of respiratory illnesses are more susceptible to developing nasal irritation from secondhand smoke exposure.

Respiratory Symptoms

4. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke exposure and acute respiratory symptoms including cough, wheeze, chest tightness, and difficulty breathing among persons with asthma.
5. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke exposure and acute respiratory symptoms including cough, wheeze, chest tightness, and difficulty breathing among healthy persons.
6. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke exposure and chronic respiratory symptoms.

Lung Function

7. The evidence is suggestive but not sufficient to infer a causal relationship between short-term secondhand smoke exposure and an acute decline in lung function in persons with asthma.
8. The evidence is inadequate to infer the presence or absence of a causal relationship between short-term secondhand smoke exposure and an acute decline in lung function in healthy persons.
9. The evidence is suggestive but not sufficient to infer a causal relationship between chronic secondhand smoke exposure and a small decrement in lung function in the general population.
10. The evidence is inadequate to infer the presence or absence of a causal relationship between chronic secondhand smoke exposure and an accelerated decline in lung function.

Asthma

11. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke exposure and adult-onset asthma.
12. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke exposure and a worsening of asthma control.

Chronic Obstructive Pulmonary Disease

13. The evidence is suggestive but not sufficient to infer a causal relationship between secondhand smoke exposure and risk for chronic obstructive pulmonary disease.
14. The evidence is inadequate to infer the presence or absence of a causal relationship between secondhand smoke exposure and morbidity in persons with chronic obstructive pulmonary disease.

Chapter 10. Control of Secondhand Smoke Exposure

1. Workplace smoking restrictions are effective in reducing secondhand smoke exposure.
2. Workplace smoking restrictions lead to less smoking among covered workers.
3. Establishing smoke-free workplaces is the only effective way to ensure that secondhand smoke exposure does not occur in the workplace.
4. The majority of workers in the United States are now covered by smoke-free policies.
5. The extent to which workplaces are covered by smoke-free policies varies among worker groups, across states, and by sociodemographic factors. Workplaces related to the entertainment and hospitality industries have notably high potential for secondhand smoke exposure.
6. Evidence from peer-reviewed studies shows that smoke-free policies and regulations do not have an adverse economic impact on the hospitality industry.
7. Evidence suggests that exposure to secondhand smoke varies by ethnicity and gender.
8. In the United States, the home is now becoming the predominant location for exposure of children and adults to secondhand smoke.
9. Total bans on indoor smoking in hospitals, restaurants, bars, and offices substantially reduce secondhand smoke exposure, up to several orders of magnitude with incomplete compliance, and with full compliance, exposures are eliminated.
10. Exposures of nonsmokers to secondhand smoke cannot be controlled by air cleaning or mechanical air exchange.

Methodologic Issues

Much of the evidence on the health effects of involuntary smoking comes from observational epidemiologic studies that were carried out to test hypotheses related to secondhand smoke and risk for diseases and other adverse health effects. The challenges faced in carrying out these studies reflect those of observational research generally: assessment of the relevant exposures and outcomes with sufficient validity and precision, selection of an appropriate study design, identification of an appropriate and sufficiently large study population, and collection of information on other relevant factors that may confound or modify the association being studied. The challenge of accurately classifying secondhand smoke exposures confronts all studies of such exposures, and consequently the literature on approaches to and limitations of exposure classification is substantial. Sources of bias that can affect the findings of epidemiologic studies have been widely discussed (Rothman and Greenland 1998), both in general and in relation to studies of involuntary smoking. Concerns about bias apply to any study of an environmental agent and disease risk: misclassification of exposures or outcomes, confounding effect modification, and proper selection of study participants. In addition, the generalizability of findings from one population to another (external validity) further determines the value of evidence from a study. Another methodologic concern affecting secondhand smoke literature comes from the use of meta-analysis to combine the findings of epidemiologic studies; general concerns related to the use of meta-analysis for observational data and more specific concerns related to involuntary smoking have also been raised. This chapter considers these methodologic issues in anticipation of more specific treatment in the following chapters.

Classification of Secondhand Smoke Exposure

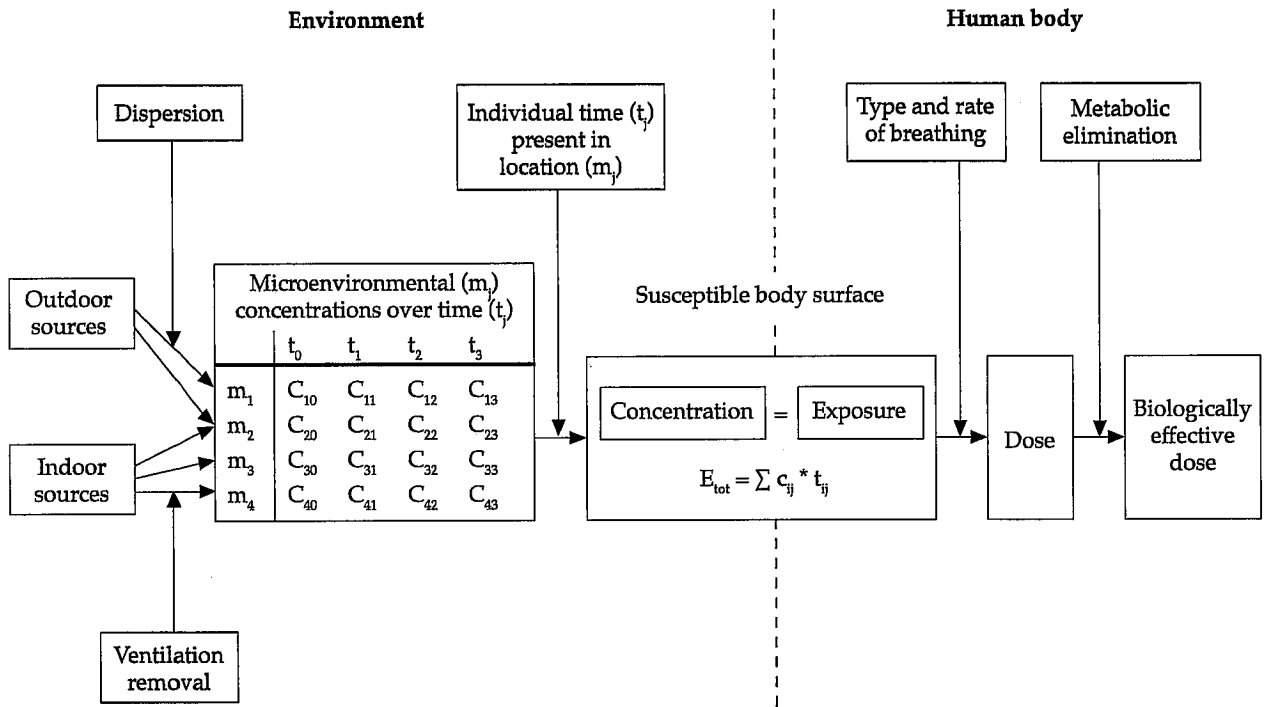
For secondhand smoke, as for any environmental factor that may be a cause of disease, the exposure assessment might encompass the time and place of the exposure, cumulative exposures, exposure during a particular time, or a recent exposure (Jaakkola and Jaakkola 1997; Jaakkola and Samet 1999). For example, exposures to secondhand smoke across the full life

span may be of interest for lung cancer, while only more recent exposures may be relevant to the exacerbation of asthma. For CHD, both temporally remote and current exposures may affect risk. Assessments of exposures are further complicated by the multiplicity of environments where exposures take place and the difficulty of characterizing the exposure in some locations, such as public places or workplaces. Additionally, exposures probably vary qualitatively and quantitatively over time and across locations because of temporal changes and geographic differences in smoking patterns.

Nonetheless, researchers have used a variety of approaches for exposure assessments in epidemiologic studies of adverse health effects from involuntary smoking. Several core concepts that are fundamental to these approaches are illustrated in Figure 1.1 (Samet and Jaakkola 1999). Cigarette smoking is, of course, the source of most secondhand smoke in the United States, followed by pipes, cigars, and other products. Epidemiologic studies generally focus on assessing the exposure, which is the contact with secondhand smoke. The concentrations of secondhand smoke components in a space depend on the number of smokers and the rate at which they are smoking, the volume into which the smoke is distributed, the rate at which the air in the space exchanges with uncontaminated air, and the rate at which the secondhand smoke is removed from the air. Concentration, exposure, and dose differ in their definitions, although the terms are sometimes used without sharp distinctions. However, surrogate indicators that generally describe a source of exposure may also be used to assess the exposure, such as marriage to a smoker or the number of cigarettes smoked in the home. Biomarkers can provide an indication of an exposure or possibly the dose, but for secondhand smoke they are used for recent exposure only.

People are exposed to secondhand smoke in a number of different places, often referred to as "microenvironments" (NRC 1991). A microenvironment is a definable location that has a constant concentration of the contaminant of interest, such as secondhand smoke, during the time that a person is there. Some key microenvironments for secondhand smoke include the home, the workplace, public places, and transportation environments (Klepeis 1999). Based

Figure 1.1 The determinants of exposure, dose, and biologically effective dose that underlie the development of health effects from smoking



Source: Samet and Jaakkola 1999. Reprinted with permission.

on the microenvironmental model, total exposure can be estimated as the weighted average of the concentrations of secondhand smoke or indicator compounds, such as nicotine, in the microenvironments where time is spent; the weights are the time spent in each microenvironment. Klepeis (1999) illustrates the application of the microenvironmental model with national data from the National Human Activity Pattern Survey conducted by the EPA. His calculations yield an overall estimate of exposure to airborne particles from smoking and of the contributions to this exposure from various microenvironments.

Much of the epidemiologic evidence addresses the consequences of an exposure in a particular microenvironment, such as the home (spousal smoking and lung cancer risk or maternal smoking and risk for asthma exacerbation), or the workplace (exacerbation of asthma by the presence of smokers). Some studies have attempted to cover multiple microenvironments

and to characterize exposures over time. For example, in the multicenter study of secondhand smoke exposure and lung cancer carried out in the United States, Fontham and colleagues (1994) assessed exposures during childhood, in workplaces, and at home during adulthood. Questionnaires that assess exposures have been the primary tool used in epidemiologic studies of secondhand smoke and disease. Measurement of biomarkers has been added in some studies, either as an additional and complementary exposure assessment approach or for validating questionnaire responses. Some studies have also measured components of secondhand smoke in the air.

Questionnaires generally address sources of exposure in microenvironments and can be tailored to address the time period of interest. Questionnaires represent the only approach that can be used to assess exposures retrospectively over a life span, because available biomarkers only reflect exposures

over recent days or, at most, weeks. Questionnaires on secondhand smoke exposure have been assessed for their reliability and validity, generally based on comparisons with either biomarker or air monitoring data as the "gold" standard (Jaakkola and Jaakkola 1997). Two studies evaluated the reliability of questionnaires on lifetime exposures (Pron et al. 1988; Coultas et al. 1989). Both showed a high degree of repeatability for questions concerning whether a spouse had smoked, but a lower reliability for responses concerning the quantitative aspects of an exposure. Emerson and colleagues (1995) evaluated the repeatability of information from parents of children with asthma. They found a high reliability for parent-reported tobacco use and for the number of cigarettes to which the child was exposed in the home during the past week.

To assess validity, questionnaire reports of current or recent exposures have been compared with levels of cotinine and other biomarkers. These studies tend to show a moderate correlation between levels of cotinine and questionnaire indicators of exposures (Kawachi and Colditz 1996; Cal/EPA 1997; Jaakkola and Jaakkola 1997). However, cotinine levels reflect not only exposure but metabolism and excretion (Benowitz 1999). Consequently, exposure is only one determinant of variation in cotinine levels among persons; there also are individual variations in metabolism and excretion rates. In spite of these sources of variability, mean levels of cotinine vary as anticipated across categories of self-reported exposures (Cal/EPA 1997; Jaakkola and Jaakkola 1997), and self-reported exposures are moderately associated with measured levels of markers (Cal/EPA 1997; Jaakkola and Jaakkola 1997).

Biomarkers are also used for assessing exposures to secondhand smoke. A number of biomarkers are available, but they vary in their specificity and in the dynamics of the temporal relationship between the exposure and the marker level (Cal/EPA 1997; Benowitz 1999). These markers include specific tobacco smoke components (nicotine) or metabolites (cotinine and tobacco-specific nitrosamines), nonspecific biomarkers (thiocyanate and CO), adducts with tobacco smoke components or metabolites (4-aminobiphenyl-hemoglobin adducts, benzo[a]pyrene-DNA adducts, and polycyclic aromatic hydrocarbon-albumin adducts), and nonspecific assays (urinary mutagenicity). Cotinine has been the most widely used biomarker, primarily because of its specificity, half-life, and ease of measurement in body fluids (e.g., urine, blood, and saliva). Biomarkers are discussed

in detail in Chapter 3 (Assessment of Exposure to Secondhand Smoke).

Some epidemiologic studies have also incorporated air monitoring, either direct personal sampling or the indirect approach based on the microenvironmental model. Nicotine, present in the gas phase of secondhand smoke, can be monitored passively with a special filter or actively using a pump and a sorbent. Hammond and Leaderer (1987) first described a diffusion monitor for the passive sampling of nicotine in 1987; this device has now been widely used to assess concentrations in different environments and to study health effects. Airborne particles have also been measured using active monitoring devices.

Each of these approaches for assessing exposures has strengths and limitations, and preference for one over another will depend on the research question and its context (Jaakkola and Jaakkola 1997; Jaakkola and Samet 1999). Questionnaires can be used to characterize sources of exposures, such as smoking by parents. With air concentrations of markers and time-activity information, estimates of secondhand smoke exposures can be made with the microenvironmental model. Biomarkers provide exposure measures that reflect the patterns of exposure and the kinetics of the marker; the cotinine level in body fluids, for example, reflects an exposure during several days. Air monitoring may be useful for validating measurements of exposure. Exposure assessment strategies are matched to the research question and often employ a mixture of approaches determined by feasibility and cost constraints.

Misclassification of Secondhand Smoke Exposure

Misclassification may occur when classifying exposures, outcomes, confounding factors, or modifying factors. Misclassification may be differential on either exposure or outcome, or it may be random (Armstrong et al. 1992). Differential or nonrandom misclassification may either increase or decrease estimates of effect, while random misclassification tends to reduce the apparent effect and weaken the relationship of exposure with disease risk. In studies of secondhand smoke and disease risk, exposure misclassification has been a major consideration in the interpretation of the evidence, although misclassification of health outcome measures has not been a substantial issue in this research. The consequences for epidemiologic studies of misclassification in general are well established (Rothman and Greenland 1998).

An extensive body of literature on the classification of exposures to secondhand smoke is reviewed in this and other chapters, as well as in some publications on the consequences of misclassification (Wu 1999). Two general patterns of exposure misclassification are of concern to secondhand smoke: (1) random misclassification that is not differential by the presence or absence of the health outcome and (2) systematic misclassification that is differential by the health outcome. In studying the health effects of secondhand smoke in adults, there is a further concern as to the classification of the active smoking status (never, current, or former smoking); in studies of children, the accuracy of secondhand smoke exposure classification is the primary methodologic issue around exposure assessment, but unreported active smoking by adolescents is also a concern.

With regard to random misclassification of secondhand smoke exposures, there is an inherent degree of unavoidable measurement error in the exposure measures used in epidemiologic studies. Questionnaires generally assess contact with sources of an exposure (e.g., smoking in the home or workplace) and cannot capture all exposures nor the intensity of exposures; biomarkers provide an exposure index for a particular time window and have intrinsic variability. Some building-related factors that determine an exposure cannot be assessed accurately by a questionnaire, such as the rate of air exchange and the size of the microenvironment where time is spent, nor can concentrations be assessed accurately by subjective reports of the perceived level of tobacco smoke. In general, random misclassification of exposures tends to reduce the likelihood that studies of secondhand smoke exposure will find an effect. This type of misclassification lessens the contrast between exposure groups, because some truly exposed persons are placed in the unexposed group and some truly unexposed persons are placed in the exposed group. Differential misclassification, also a concern, may increase or decrease associations, depending on the pattern of misreporting.

One particular form of misclassification has been raised with regard to secondhand smoke exposure and lung cancer: the classification of some current or former smokers as lifetime nonsmokers (USEPA 1992; Lee and Forey 1995; Hackshaw et al. 1997; Wu 1999). The resulting bias would tend to increase the apparent association of secondhand smoke with lung cancer, if the misclassified active smokers are also more likely to be classified as involuntary smokers. Most studies of lung cancer and secondhand smoke have used spousal smoking as a main exposure variable. As

smoking tends to aggregate between spouses (smokers are more likely to marry smokers), misclassification of active smoking would tend to be differential on the basis of spousal smoking (the exposure under investigation). Because active smoking is strongly associated with increased disease risk, greater misclassification of an actively smoking spouse as a nonsmoker among spouses of smokers compared with spouses of nonsmokers would lead to risk estimates for spousal smoking that are biased upward by the effect of active smoking. This type of misclassification is also relevant to studies of spousal exposure and CHD risk or other diseases also caused by active smoking, although the potential for bias is less because the association of active smoking with CHD is not as strong as with lung cancer.

There have been a number of publications on this form of misclassification. Wu (1999) provides a review, and Lee and colleagues (2001) offer an assessment of potential consequences. A number of models have been developed to assess the extent of bias resulting from the misclassification of active smokers as lifetime nonsmokers (USEPA 1992; Hackshaw et al. 1997). These models incorporate estimates of the rate of misclassification, the degree of aggregation of smokers by marriage, the prevalence of smoking in the population, and the risk of lung cancer in misclassified smokers (Wu 1999). Although debate about this issue continues, analyses show that estimates of upward bias from misclassifying active smokers as lifetime nonsmokers cannot fully explain the observed increase in risk for lung cancer among lifetime nonsmokers married to smokers (Hackshaw et al. 1997; Wu 1999).

There is one additional issue related to exposure misclassification. During the time the epidemiologic studies of secondhand smoke have been carried out, exposure has been widespread and almost unavoidable. Therefore, the risk estimates may be biased downward because there are no truly unexposed persons. The 1986 Surgeon General's report recognized this methodologic issue and noted the need for further data on population exposures to secondhand smoke (USDHHS 1986). This bias was also recognized in the 1986 report of the NRC, and an adjustment for this misclassification was made to the lung cancer estimate (NRC 1986). Similarly, the 1992 report of the EPA commented on background exposure and made an adjustment (USEPA 1992). Some later studies have attempted to address this issue; for example, in a case-control study of active and involuntary smoking and breast cancer in Switzerland, Morabia and colleagues (2000) used a questionnaire to assess exposure and

identified a small group of lifetime nonsmokers who also reported no exposure to secondhand smoke. With this subgroup of controls as the reference population, the risks of secondhand smoke exposure were substantially greater for active smoking than when the full control population was used.

This Surgeon General's report further addresses specific issues of exposure misclassification when they are relevant to the health outcome under consideration.

Use of Meta-Analysis

Meta-analysis refers to the process of evaluating and combining a body of research literature that addresses a common question. Meta-analysis is composed of qualitative and quantitative components. The qualitative component involves the systematic identification of all relevant investigations, a systematic assessment of their characteristics and quality, and the decision to include or exclude studies based on predetermined criteria. Consideration can be directed toward sources of bias that might affect the findings. The quantitative component involves the calculation and display of study results on common scales and, if appropriate, the statistical combination of these results across studies and an exploration of the reasons for any heterogeneity of findings. Viewing the findings of all studies as a single plot provides insights into the consistency of results and the precision of the studies considered. Most meta-analyses are based on published summary results, although they are most powerful when applied to data at the level of individual participants. Meta-analysis is most widely used to synthesize evidence from randomized clinical trials, sometimes yielding findings that were not evident from the results of individual studies. Meta-analysis also has been used extensively to examine bodies of observational evidence.

Beginning with the 1986 NRC report, meta-analysis has been used to summarize the evidence on involuntary smoking and health. Meta-analysis was central to the 1992 EPA risk assessment of secondhand smoke, and a series of meta-analyses supported the conclusions of the 1998 report of the Scientific Committee on Tobacco and Health in the United Kingdom. The central role of meta-analysis in interpreting and applying the evidence related to involuntary smoking and disease has led to focused criticisms of the use of meta-analysis in this context. Several papers that acknowledged support from the tobacco industry have addressed the epidemiologic findings for lung cancer, including the selection and quality of the

studies, the methods for meta-analysis, and dose-response associations (Fleiss and Gross 1991; Tweedie and Mengersen 1995; Lee 1998, 1999). In a lawsuit brought by the tobacco industry against the EPA, the 1998 decision handed down by Judge William L. Osteen, Sr., in the North Carolina Federal District Court criticized the approach EPA had used to select studies for its meta-analysis and criticized the use of 90 percent rather than 95 percent confidence intervals for the summary estimates (*Flue-Cured Tobacco Cooperative Stabilization Corp. v. United States Environmental Protection Agency*, 857 F. Supp. 1137 [M.D.N.C. 1993]). In December 2002, the 4th U.S. Circuit Court of Appeals threw out the lawsuit on the basis that tobacco companies cannot sue the EPA over its secondhand smoke report because the report was not a final agency action and therefore not subject to court review (*Flue-Cured Tobacco Cooperative Stabilization Corp. v. The United States Environmental Protection Agency*, No. 98-2407 [4th Cir., December 11, 2002], cited in 17.7 TPLR 2.472 [2003]).

Recognizing that there is still an active discussion around the use of meta-analysis to pool data from observational studies (versus clinical trials), the authors of this Surgeon General's report used this methodology to summarize the available data when deemed appropriate and useful, even while recognizing that the uncertainty around the meta-analytic estimates may exceed the uncertainty indicated by conventional statistical indices, because of biases either within the observational studies or produced by the manner of their selection. However, a decision to not combine estimates might have produced conclusions that are far more uncertain than the data warrant because the review would have focused on individual study results without considering their overall pattern, and without allowing for a full accounting of different sample sizes and effect estimates.

The possibility of publication bias has been raised as a potential limitation to the interpretation of evidence on involuntary smoking and disease in general, and on lung cancer and secondhand smoke exposure specifically. A 1988 paper by Vandembroucke used a descriptive approach, called a "funnel plot," to assess the possibility that publication bias affected the 13 studies considered in a review by Wald and colleagues (1986). This type of plot characterizes the relationship between the magnitude of estimates and their precision. Vandembroucke suggested the possibility of publication bias only in reference to the studies of men. Bero and colleagues (1994) concluded that there

had not been a publication bias against studies with statistically significant findings, nor against the publication of studies with nonsignificant or mixed findings in the research literature. The researchers were able to identify only five unpublished "negative" studies, of which two were dissertations that tend to be delayed in publication. A subsequent study by Misakian and Bero (1998) did find a delay in the publication of studies with nonsignificant results in comparison with studies having significant results; whether this pattern has varied over the several decades of research on secondhand smoke was not addressed. More recently, Copas and Shi (2000) assessed the 37 studies considered in the meta-analysis by Hackshaw and colleagues (1997) for publication bias. Copas and Shi (2000) found a significant correlation between the estimated risk of exposure and sample size, such that smaller studies tended to have higher values. This pattern suggests the possibility of publication bias. However, using a funnel plot of the same studies, Lubin (1999) found little evidence for publication bias.

On this issue of publication bias, it is critical to distinguish between indirect statistical arguments and arguments based on actual identification of previously unidentified research. The strongest case against substantive publication bias has been made by researchers who mounted intensive efforts to find the possibly missing studies; these efforts have yielded little—nothing that would alter published conclusions (Bero et al. 1994; Glantz 2000). Presumably because this exposure is a great public health concern, the findings of studies that do not have statistically significant outcomes continue to be published (Kawachi and Colditz 1996).

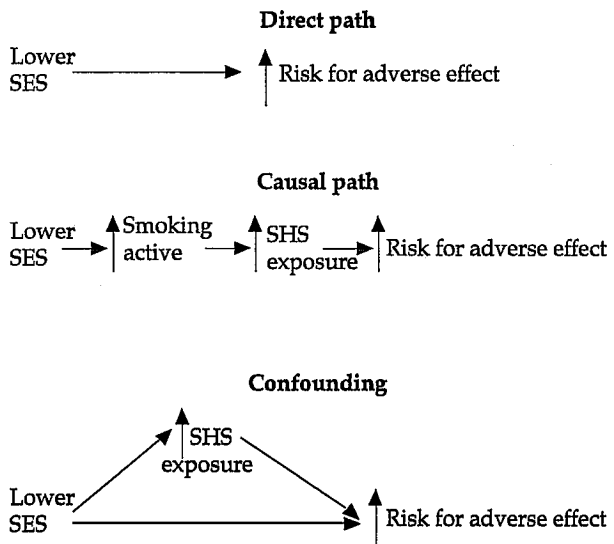
The quantitative results of the meta-analyses, however, were not determinate in making causal inferences in this Surgeon General's report. In particular, the level of statistical significance of estimates from the meta-analyses was not a predominant factor in making a causal conclusion. For that purpose, this report relied on the approach and criteria set out in the 1964 and 2004 reports of the Surgeon General, which involved judgments based on an array of quantitative and qualitative considerations that included the degree of heterogeneity in the designs of the studies that were examined. Sometimes this heterogeneity limits the inference from meta-analysis by weakening the rationale for pooling the study results. However, the availability of consistent evidence from heterogeneous designs can strengthen the meta-analytic findings by making it unlikely that a common bias could persist across different study designs and populations.

Confounding

Confounding, which refers in this context to the mixing of the effect of another factor with that of secondhand smoke, has been proposed as an explanation for associations of secondhand smoke with adverse health consequences. Confounding occurs when the factor of interest (secondhand smoke) is associated in the data under consideration with another factor (the confounder) that, by itself, increases the risk for the disease (Rothman and Greenland 1998). Correlates of secondhand smoke exposures are not confounding factors unless an exposure to them increases the risk of disease. A factor proposed as a potential confounder is not necessarily an actual confounder unless it fulfills the two elements of the definition. Although lengthy lists of potential confounding factors have been offered as alternatives to direct associations of secondhand smoke exposures with the risk for disease, the factors on these lists generally have not been shown to be confounding in the particular data of interest.

The term confounding also conveys an implicit conceptualization as to the causal pathways that link secondhand smoke and the confounding factor to

Figure 1.2 Model for socioeconomic status (SES) and secondhand smoke (SHS) exposure



Arrows indicate directionality of association.

disease risk. Confounding implies that the confounding factor has an effect on risk that is independent of secondhand smoke exposure. Some factors considered as potential confounders may, however, be in the same causal pathway as a secondhand smoke exposure. Although socioeconomic status (SES) is often cited as a potential confounding factor, it may not have an independent effect but can affect disease risk through its association with secondhand smoke exposure (Figure 1.2). This figure shows general alternative relationships among SES, secondhand smoke exposure, and risk for an adverse effect. SES may have a direct effect, or it may indirectly exert its effect through an association with secondhand smoke exposure, or it may confound the relationship between secondhand smoke exposure and disease risk. To control for SES as a potential confounding factor without considering underlying relationships may lead to incorrect risk estimates. For example, controlling for SES would not be appropriate if it is a determinant of secondhand smoke exposure but has no direct effect.

Nonetheless, because the health effects of involuntary smoking have other causes, the possibility of confounding needs careful exploration when assessing associations of secondhand smoke exposure with adverse health effects. In addition, survey data from

the last several decades show that secondhand smoke exposure is associated with correlates of lifestyle that may influence the risk for some health effects, thus increasing concerns for the possibility of confounding (Kawachi and Colditz 1996). Survey data from the United States (Matanoski et al. 1995) and the United Kingdom (Thornton et al. 1994) show that adults with secondhand smoke exposures generally tend to have less healthful lifestyles. However, the extent to which these patterns of association can be generalized, either to other countries or to the past, is uncertain.

The potential bias from confounding varies with the association of the confounder to secondhand smoke exposures in a particular study and to the strength of the confounder as a risk factor. The importance of confounding to the interpretation of evidence depends further on the magnitude of the effect of secondhand smoke on disease. As the strength of an association lessens, confounding as an alternative explanation for an association becomes an increasing concern. In prior reviews, confounding has been addressed either quantitatively (Hackshaw et al. 1997) or qualitatively (Cal/EPA 1997; Thun et al. 1999). In the chapters in this report that focus on specific diseases, confounding is specifically addressed in the context of potential confounding factors for the particular diseases.

Tobacco Industry Activities

The evidence on secondhand smoke and disease risk, given the public health and public policy implications, has been reviewed extensively in the published peer-reviewed literature and in evaluations by a number of expert panels. In addition, the evidence has been criticized repeatedly by the tobacco industry and its consultants in venues that have included the peer-reviewed literature, public meetings and hearings, and scientific symposia that included symposia sponsored by the industry. Open criticism in the peer-reviewed literature can strengthen the credibility of scientific evidence by challenging researchers to consider the arguments proposed by critics and to rebut them.

Industry documents indicate that the tobacco industry has engaged in widespread activities, however, that have gone beyond the bounds of accepted scientific practice (Glantz 1996; Ong and Glantz 2000, 2001; Rampton and Stauber 2000; Yach and Bialous

2001; Hong and Bero 2002; Diethelm et al. 2004). Through a variety of organized tactics, the industry has attempted to undermine the credibility of the scientific evidence on secondhand smoke. The industry has funded or carried out research that has been judged to be biased, supported scientists to generate letters to editors that criticized research publications, attempted to undermine the findings of key studies, assisted in establishing a scientific society with a journal, and attempted to sustain controversy even as the scientific community reached consensus (Garne et al. 2005). These tactics are not a topic of this report, but to the extent that the scientific literature has been distorted, they are addressed as the evidence is reviewed. This report does not specifically identify tobacco industry sponsorship of publications unless that information is relevant to the interpretation of the findings and conclusions.

A Vision for the Future

This country has experienced a substantial reduction of involuntary exposure to secondhand tobacco smoke in recent decades. Significant reductions in the rate of smoking among adults began even earlier. Consequently, about 80 percent of adults are now nonsmokers, and many adults and children can live their daily lives without being exposed to secondhand smoke. Nevertheless, involuntary exposure to secondhand smoke remains a serious public health hazard.

This report documents the mounting and now substantial evidence characterizing the health risks caused by exposure to secondhand smoke. Multiple major reviews of the evidence have concluded that secondhand smoke is a known human carcinogen, and that exposure to secondhand smoke causes adverse effects, particularly on the cardiovascular system and the respiratory tract and on the health of those exposed, children as well as adults. Unfortunately, reductions in exposure have been slower among young children than among adults during the last decade, as expanding workplace restrictions now protect the majority of adults while homes remain the most important source of exposure for children.

Clearly, the social norms regarding secondhand smoke have changed dramatically, leading to widespread support over the past 30 years for a society free of involuntary exposures to tobacco smoke. In the first half of the twentieth century smoking was permitted in almost all public places, including elevators and all types of public transportation. At the time of the 1964 Surgeon General's report on smoking and health (U.S. Department of Health, Education, and Welfare [USDHEW] 1964), many physicians were still smokers, and the tables in U.S. Public Health Service (PHS) meeting rooms had PHS ashtrays on them. A thick, smoky haze was an accepted part of presentations at large meetings, even at medical conferences and in the hospital environment.

As the adverse health consequences of active smoking became more widely documented in the 1960s, many people began to question whether exposure of nonsmokers to secondhand smoke also posed a serious health risk. This topic was first addressed in this series of reports by Surgeon General Jesse Steinfeld in the 1972 report to Congress (USDHEW 1972). During the 1970s, policy changes to provide smoke-free environments received more widespread

consideration. As the public policy debate grew and expanded in the 1980s, the scientific evidence on the risk of adverse effects from exposure to secondhand smoke was presented in a comprehensive context for the first time by Surgeon General C. Everett Koop in the 1986 report, *The Health Consequences of Involuntary Smoking* (U.S. Department of Health and Human Services [USDHHS] 1986).

The ever-increasing momentum for smoke-free indoor environments has been driven by scientific evidence on the health risks of involuntary exposure to secondhand smoke. This new Surgeon General's report is based on a far larger body of evidence than was available in 1986. The evidence reviewed in this report confirms the findings of the 1986 report and adds new causal conclusions. The growing body of data increases support for the conclusion that exposure to secondhand smoke causes lung cancer in lifetime nonsmokers. In addition to epidemiologic data, this report presents converging evidence that the mechanisms by which secondhand smoke causes lung cancer are similar to those that cause lung cancer in active smokers. In the context of the risks from active smoking, the lung cancer risk that secondhand smoke exposure poses to nonsmokers is consistent with an extension to involuntary smokers of the dose-response relationship for active smokers.

Cardiovascular effects of even short exposures to secondhand smoke are readily measurable, and the risks for cardiovascular disease from involuntary smoking appear to be about 50 percent less than the risks for active smokers. Although the risks from secondhand smoke exposures are larger than anticipated, research on the mechanisms by which tobacco smoke exposure affects the cardiovascular system supports the plausibility of the findings of epidemiologic studies (the 1986 report did not address cardiovascular disease). This 2006 report also reviews the evidence on the multiple mechanisms by which secondhand smoke injures the respiratory tract and causes sudden infant death syndrome.

Since 1986, the attitude of the public toward and the social norms around secondhand smoke exposure have changed dramatically to reflect a growing viewpoint that the involuntary exposure of nonsmokers to secondhand smoke is unacceptable. As a result, increasingly strict public policies to control involuntary exposure to secondhand smoke have been put in

place. The need for restrictions on smoking in enclosed public places is now widely accepted in the United States. A growing number of communities, counties, and states are requiring smoke-free environments for nearly all enclosed public places, including all private worksites, restaurants, bars, and casinos.

As knowledge about the health risks of secondhand smoke exposure grows, investigators continue to identify additional scientific questions.

- Because active smoking is firmly established as a causal factor of cancer for a large number of sites, and because many scientists assert that there may be no threshold for carcinogenesis from tobacco smoke exposure, researchers hypothesize that people who are exposed to secondhand smoke are likely to be at some risk for the same types of cancers that have been established as smoking-related among active smokers.
- The potential risks for stroke and subclinical vascular disease from secondhand smoke exposure require additional research.
- There is a need for additional research on the etiologic relationship between secondhand smoke exposure and several respiratory health outcomes in adults, including respiratory symptoms, declines in lung function, and adult-onset asthma.
- There is also a need for research to further evaluate the adverse reproductive outcomes and childhood respiratory effects from both prenatal and postnatal exposure to secondhand smoke.
- Further research and improved methodologies are also needed to advance an understanding of the potential effects on cognitive, behavioral, and physical development that might be related to early exposures to secondhand smoke.

As these and other research questions are addressed, the scientific literature documenting the adverse health effects of exposure to secondhand smoke will expand. Over the past 40 years since the release of the landmark 1964 report of the Surgeon General's Advisory Committee on Smoking and Health (USDHEW 1964), researchers have compiled an ever-growing list of adverse health effects caused by exposure to tobacco smoke, with evidence that active smoking causes damage to virtually every organ of

the body (USDHHS 2004). Similarly, since the 1986 report (USDHHS 1986), the number of adverse health effects caused by exposure to secondhand smoke has also expanded. Following the format of the electronic database released with the 2004 report, the research findings supporting the conclusions in this report will be accessible in a database that can be found at <http://www.cdc.gov/tobacco>. With an this expanding base of scientific knowledge, the list of adverse health effects caused by exposure to secondhand smoke will likely increase.

Biomarker data from the 2005 *Third National Report on Human Exposure to Environmental Chemicals* document great progress since the 1986 report in reducing the involuntary exposure of nonsmokers to secondhand smoke (CDC 2005). Between the late 1980s and 2002, the median cotinine level (a metabolite of nicotine) among nonsmokers declined by more than 70 percent. Nevertheless, many challenges remain to maintain the momentum toward universal smoke-free environments. First, there is a need to continue and even improve the surveillance of sources and levels of exposure to secondhand smoke. The data from the 2005 exposure report show that median cotinine levels among children are more than twice those of nonsmoking adults, and non-Hispanic Blacks have levels more than twice those of Mexican Americans and non-Hispanic Whites (CDC 2005). The multiple factors related to these disparities in median cotinine levels among nonsmokers need to be identified and addressed. Second, the data from the 2005 exposure report suggest that the scientific community should sustain the current momentum to reduce exposures of nonsmokers to secondhand smoke (CDC 2005). Research reviewed in this report indicates that policies creating completely smoke-free environments are the most economical and efficient approaches to providing this protection. Additionally, neither central heating, ventilating, and air conditioning systems nor separately ventilated rooms control exposures to secondhand smoke. Unfortunately, data from the 2005 exposure report also emphasized that young children remain an exposed population (CDC 2005). However, more evidence is needed on the most effective strategies to promote voluntary changes in smoking norms and practices in homes and private automobiles. Finally, data on the health consequences of secondhand smoke exposures emphasize the importance of the role of health care professionals in this issue. They must assume a greater, more active involvement in reducing exposures, particularly for susceptible groups.

The findings and recommendations of this report can be extended to other countries and are supportive of international efforts to address the health effects of smoking and secondhand smoke exposure. There is an international consensus that exposure to secondhand smoke poses significant public health risks. The Framework Convention on Tobacco Control recognizes that protecting nonsmokers from involuntary exposures to secondhand smoke in public places should be an integral part of comprehensive national tobacco control policies and programs. Recent changes in national policies in countries such as Italy and Ireland reflect this growing international awareness of the need for additional protection of nonsmokers from involuntary exposures to secondhand smoke.

When this series of reports began in 1964, the majority of men and a substantial proportion of women were smokers, and most nonsmokers inevitably must have been involuntary smokers. With the release of the 1986 report, Surgeon General Koop noted that "the right of smokers to smoke ends where their behavior affects the health and well-being of others" (USDHHS 1986, p. xii). As understanding increases regarding health consequences from even brief exposures to secondhand smoke, it becomes even clearer that the health of nonsmokers overall, and particularly

the health of children, individuals with existing heart and lung problems, and other vulnerable populations, requires a higher priority and greater protection.

Together, this report and the 2004 report of the Surgeon General, *The Health Consequences of Smoking* (USDHHS 2004), document the extraordinary threat to the nation's health from active and involuntary smoking. The recent reductions in exposures of nonsmokers to secondhand smoke represent significant progress, but involuntary exposures persist in many settings and environments. More evidence is needed to understand why this progress has not been equally shared across all populations and in all parts of this nation. Some states (California, Connecticut, Delaware, Maine, Massachusetts, New York, Rhode Island, and Washington) have met the *Healthy People 2010* objectives (USDHHS 2000) that protect against involuntary exposures to secondhand smoke through recommended policies, regulations, and laws, while many other parts of this nation have not (USDHHS 2000). Evidence presented in this report suggests that these disparities in levels of protection can be reduced or eliminated. Sustained progress toward a society free of involuntary exposures to secondhand smoke should remain a national public health priority.

References

- Armstrong BK, White E, Saracci R, editors. *Principles of Exposure Measurement in Epidemiology*. Monographs in Epidemiology and Biostatistics. Vol. 21. New York: Oxford University Press, 1992.
- Benowitz NL. Biomarkers of environmental tobacco smoke. *Environmental Health Perspectives* 1999;107(Suppl 2):349-55.
- Bero LA, Glantz SA, Rennie D. Publication bias and public health policy on environmental tobacco smoke. *Journal of the American Medical Association* 1994;272(2):133-6.
- California Environmental Protection Agency. *Health Effects of Exposure to Environmental Tobacco Smoke*. Sacramento (CA): California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Reproductive and Cancer Hazard Assessment Section and Air Toxicology and Epidemiology Section, 1997.
- California Environmental Protection Agency. *Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant. Part B: Health Effects*. Sacramento (CA): California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, 2005.
- Centers for Disease Control and Prevention. *Third National Report on Human Exposure to Environmental Chemicals*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Environmental Health, 2005. NCEH Publication No. 05-0570.
- Copas JB, Shi JQ. Reanalysis of epidemiological evidence on lung cancer and passive smoking. *British Medical Journal* 2000;320(7232):417-8.
- Coultas DB, Peake GT, Samet JM. Questionnaire assessment of lifetime and recent exposure to environmental tobacco smoke. *American Journal of Epidemiology* 1989;130(2):338-47.
- Diethelm PA, Rielle JC, McKee M. The whole truth and nothing but the truth? The research that Phillip Morris did not want you to see, November 11, 2004; <<http://image.thelancet.com/extras/03art7306web.pdf>>; accessed: January 6, 2005.
- Emerson JA, Hovell MF, Meltzer SB, Zakarian JM, Hofstetter CR, Wahlgren DR, Leaderer BP, Meltzer EO. The accuracy of environmental tobacco smoke exposure measures among asthmatic children. *Journal of Clinical Epidemiology* 1995;48(10):1251-9.
- Fleiss JL, Gross AJ. Meta-analysis in epidemiology, with special reference to studies of the association between exposure to environmental tobacco smoke and lung cancer: a critique. *Journal of Clinical Epidemiology* 1991;44(2):127-39.
- Flue-Cured Tobacco Cooperative Stabilization Corp. v. United States Environmental Protection Agency* (M.D.N.C. June 22, 1993), cited in 8.2 TPLR 3.97 (1993).
- Flue-Cured Tobacco Cooperative Stabilization Corp. v. The United States Environmental Protection Agency*, No. 98-2407 (4th Cir., December 11, 2002), cited in 17.7 TPLR 2.472 (2003) (Overturning lower court's decision invalidating EPA's findings that secondhand smoke is a "known human carcinogen").
- Fontham ET, Correa P, Reynolds P, Wu-Williams A, Buffler PA, Greenberg RS, Chen VW, Alterman T, Boyd P, Austin DF, Liff J. Environmental tobacco smoke and lung cancer in nonsmoking women: a multicenter study. *Journal of the American Medical Association* 1994;271(22):1752-9.
- Garne D, Watson M, Chapman S, Byrne F. Environmental tobacco smoke research published in the journal *Indoor and Built Environment* and associations with the tobacco industry. *Lancet* 2005; 365(9461):804-9.
- Glantz SA. The ledger of tobacco control. *Journal of the American Medical Association* 1996;276(11):871-2.
- Glantz SA. Lung cancer and passive smoking: nothing new was said. *British Medical Journal* 2000;321(7270):1222-3.
- Hackshaw AK, Law MR, Wald NJ. The accumulated evidence on lung cancer and environmental tobacco smoke. *British Medical Journal* 1997;315(7114): 980-8.
- Hammond SK, Leaderer BP. A diffusion monitor to measure exposure to passive smoking. *Environmental Science & Technology* 1987;21(5):494-7.
- Hong MK, Bero LA. How the tobacco industry responded to an influential study of the health effects of secondhand smoke. *British Medical Journal* 2002;325(7377):1413-6.
- International Agency for Research on Cancer. *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans: Tobacco Smoking*. Vol. 38. Lyon (France): International Agency for Research on Cancer, 1986.

- International Agency for Research on Cancer. *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Tobacco Smoke and Involuntary Smoking*. Vol. 83. Lyon (France): International Agency for Research on Cancer, 2004.
- Jaakkola MS, Jaakkola JJ. Assessment of exposure to environmental tobacco smoke. *European Respiratory Journal* 1997;10(10):2384-97.
- Jaakkola MS, Samet JM. Environmental tobacco smoke: risk assessment. *Environmental Health Perspectives* 1999;107(Suppl 6):823-904.
- Kawachi I, Colditz GA. Invited commentary: confounding, measurement error, and publication bias in studies of passive smoking. *American Journal of Epidemiology* 1996;144(10):909-15.
- Klepeis NE. An introduction to the indirect exposure assessment approach: modeling human exposure using microenvironmental measurements and the recent National Human Activity Pattern Survey. *Environmental Health Perspectives* 1999;107(Suppl 2):365-74.
- Lee PN. Difficulties in assessing the relationship between passive smoking and lung cancer. *Statistical Methods in Medical Research* 1998;7(2):137-63.
- Lee PN. Simple methods for checking for possible errors in reported odds ratios, relative risks and confidence intervals. *Statistics in Medicine* 1999;18(15):1973-81.
- Lee PN, Forey BA. Misclassification of smoking habits as determined by cotinine or by repeated self-report—summary of evidence from 42 studies. *Journal of Smoking-Related Diseases* 1995;6:109-29.
- Lee PN, Forey B, Fry JS. Revisiting the association between environmental tobacco smoke exposure and lung cancer risk. III: Adjusting for the biasing effect of misclassification of smoking habits. *Indoor and Built Environment* 2001;10(6):384-98.
- Lubin JH. Estimating lung cancer risk with exposure to environmental tobacco smoke. *Environmental Health Perspectives* 1999;107(Suppl 6):879-83.
- Matanoski G, Kanchanaraksa S, Lantry D, Chang Y. Characteristics of nonsmoking women in NHANES I and NHANES I Epidemiologic Follow-up Study with exposure to spouses who smoke. *American Journal of Epidemiology* 1995;142(2):149-57.
- Misakian AL, Bero LA. Publication bias and research on passive smoking: comparison of published and unpublished studies. *Journal of the American Medical Association* 1998;280(3):250-3.
- Morabia A, Bernstein MS, Bouchardy I, Kurtz J, Morris MA. Breast cancer and active and passive smoking: the role of the N-acetyltransferase 2 genotype. *American Journal of Epidemiology* 2000;152(3):226-32.
- National Health and Medical Research Council. *The Health Effects of Passive Smoking*. A scientific information paper. Canberra (Commonwealth of Australia): Canberra ACT, 1997.
- National Research Council. *Environmental Tobacco Smoke: Measuring Exposures and Assessing Health Effects*. Washington: National Academy Press, 1986.
- National Research Council. *Human Exposure Assessment for Airborne Pollutants: Advances and Opportunities*. Washington: National Academy Press, 1991.
- Ong EK, Glantz SA. Tobacco industry efforts subverting International Agency for Research on Cancer's second-hand smoke study. *Lancet* 2000;355(9211):1253-9.
- Ong EK, Glantz SA. Constructing "sound science" and "good epidemiology": tobacco, lawyers, and public relations firms. *American Journal of Public Health* 2001;91(11):1749-57.
- Pron GE, Burch JD, Howe GR, Miller AB. The reliability of passive smoking histories reported in a case-control study of lung cancer. *American Journal of Epidemiology* 1988;127(2):267-73.
- Rampton S, Stauber J. *Trust Us, We're Experts: How Industry Manipulates Science and Gambles with Your Future*. Los Angeles: J.P. Tarcher, 2000.
- Rothman KJ, Greenland S. *Modern Epidemiology*, 2nd ed. Philadelphia: Lippincott-Raven, 1998.
- Samet JM, Jaakkola JJK. The epidemiologic approach to investigating outdoor air pollution. In: Holgate ST, Samet JM, Koren HS, Maynard RL, editors. *Air Pollution and Health*. San Diego: Academic Press, 1999:431-60.
- Scientific Committee on Tobacco and Health. *Report of the Scientific Committee on Tobacco and Health*. London: The Stationery Office, 1998.
- Thornton A, Lee P, Fry J. Differences between smokers, ex-smokers, passive smokers and non-smokers. *Journal of Clinical Epidemiology* 1994;47(10):1143-62.
- Thun M, Henley J, Apicella L. Epidemiologic studies of fatal and nonfatal cardiovascular disease and ETS exposure from spousal smoking. *Environmental Health Perspectives* 1999;107(Suppl 6):841-6.
- Tweedie RL, Mengersen KL. Meta-analytic approaches to dose-response relationships, with application in studies of lung cancer and exposure to environmental tobacco smoke. *Statistics in Medicine* 1995;14(5-7):545-69.

- U.S. Department of Health and Human Services. *The Health Consequences of Smoking: Cancer. A Report of the Surgeon General*. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service, Office on Smoking and Health. 1982. DHHS Publication No. (PHS) 82-50179.
- U.S. Department of Health and Human Services. *The Health Consequences of Smoking: Chronic Obstructive Lung Disease. A Report of the Surgeon General*. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service, Office on Smoking and Health, 1984. DHHS Publication No. (PHS) 84-50205.
- U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Smoking. A Report of the Surgeon General*. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, Center for Health Promotion and Education, Office on Smoking and Health, 1986. DHHS Publication No. (CDC) 87-8398.
- U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Young People. A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1994.
- U.S. Department of Health and Human Services. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics. A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1998.
- U.S. Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health*. Washington: U.S. Government Printing Office, 2000.
- U.S. Department of Health and Human Services. *Women and Smoking. A Report of the Surgeon General*. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General, 2001.
- U.S. Department of Health and Human Services. *The Health Consequences of Smoking: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004.
- U.S. Department of Health, Education, and Welfare. *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*. Washington: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, 1964. PHS Publication No. 1103.
- U.S. Department of Health, Education, and Welfare. *The Health Consequences of Smoking. A Report of the Surgeon General: 1972*. Washington: U.S. Department of Health, Education, and Welfare, Public Health Service, Health Services and Mental Health Administration, 1972. DHEW Publication No. (HSM) 72-7516.
- U.S. Department of Health, Education, and Welfare. *The Health Consequences of Smoking. A Report of the Surgeon General, 1975*. Washington: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, 1975. DHEW Publication No. (CDC) 77-8704.
- U.S. Department of Health, Education, and Welfare. *Smoking and Health. A Report of the Surgeon General*. Washington: U.S. Department of Health, Education, and Welfare, Public Health Service, Office of the Assistant Secretary for Health, Office of Smoking and Health, 1979. DHEW Publication No. (PHS) 79-50066.
- U.S. Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. Washington: U.S. Environmental Protection Agency, Office of Research and Development, Office of Air Radiation, 1992. Report No. EPA/600/6-90/0006F.
- Vandenbroucke JP. Passive smoking and lung cancer: a publication bias? *British Medical Journal (Clinical Research Edition)* 1988;296(6619):391-2.
- Wald NJ, Nanchahal K, Thompson SG, Cuckle HS. Does breathing other people's tobacco smoke cause lung cancer? *British Medical Journal (Clinical Research Edition)* 1986;293(6556):1217-22.
- World Health Organization. *International Consultation on Environmental Tobacco Smoke (ETS) and Child Health. Consultation Report*. Geneva: World Health Organization, 1999.
- Wu AH. Exposure misclassification bias in studies of environmental tobacco smoke and lung cancer. *Environmental Health Perspectives* 1999;107(Suppl 6):873-7.
- Yach D, Bialous SA. Junking science to promote tobacco. *American Journal of Public Health* 2001;91(11):1745-8.

SMOKE-FREE PARKS

National Trends

Trends show that communities throughout the United States are creating tobacco-free outdoor policies. 28 of the 50 states in the U.S. have communities with outdoor tobacco/smoke free air ordinances/regulations/policies at parks, zoos, youth sports, trails, and/or beaches. Following are states with policies:

Alabama	Florida	Michigan	North Dakota
Alaska	Hawaii	Minnesota	Oregon
Arizona	Iowa	Nebraska	Rhode Island
Arkansas	Louisiana	Nevada	Texas
California	Maine	New Jersey	Utah
Colorado	Maryland	New Mexico	Vermont
Delaware	Massachusetts	New York	Washington

Salt Lake Trends and Beliefs (Behavioral Risk Factor Surveillance Survey, Utah Department of Health, 2004)

- 96% believe secondhand smoke is harmful.
- 87% support smoking restrictions in parks.
- 86% support smoking restrictions in rodeos.
- 90% support smoking restrictions at outdoor sports venues.
- 89% support smoking restrictions at zoos and amusement parks.
-

Recent Community Efforts for Smoke-free Outdoor Areas

- **Hyde Park and Smithfield Cities (Cache County)**- city ordinances restricting smoking in all city parks and recreational areas.
- **Logan City (Cache County)**- ordinance restricting smoking in 1 park; resolution declaring opening night of the Cache County Fair "smoke-free"
- **Clinton City**- ordinance restricting smoking "*within 50 feet of areas where playground equipment has been installed for public use by children, playpits, play structures, bleachers, backstops, sports fields, ball diamonds, basketball courts, tennis or volleyball courts, concession stands, skateboard area, bmx area, boweries, pathways for walking, waterfront around fishing and boating areas and other assembly areas.*"
- **Riverton City**- resolution restricting smoking "*within 50 feet of organized sporting event or playground.*"
- **Midvale City**- ordinance restricting smoking in all city parks and other city properties.
- **Sandy City**- resolution requesting no smoking "*within 50 feet of organized sporting events, playgrounds and pavilions.*"
- **South Jordan City**- ordinance prohibiting smoking in city parks, recreation areas, and cemetery.

2006 Report by the U.S. Surgeon General, Richard H. Carmona

"The Surgeon General has concluded that there is no risk-free level of exposure to secondhand smoke. Breathing even a little secondhand smoke can be harmful."

The Health Consequences of Environmental Tobacco Smoke



Secondhand smoke
what it means to
you



Secondhand Smoke

It hurts you.

It doesn't take much.

It doesn't take long.

The 2006 Surgeon General's report has new information about how breathing secondhand smoke hurts your health. You can find more information about this report by going to the Surgeon General's website at www.surgeongeneral.gov.

More information is also available by going to the Centers for Disease Control and Prevention (CDC) website at www.cdc.gov/tobacco.

Secondhand smoke is dangerous.

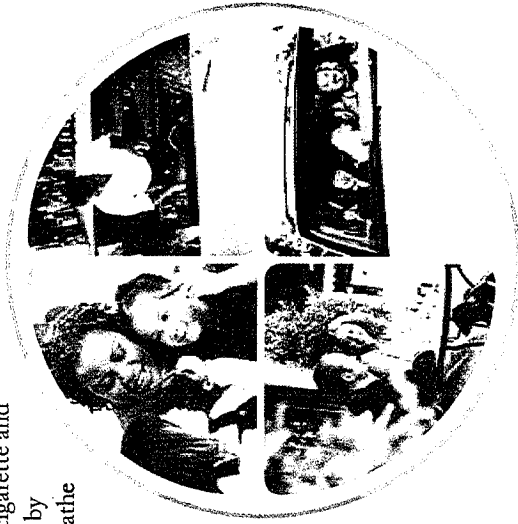
The Surgeon General of the United States, working with a team of leading health experts, studied how breathing secondhand tobacco smoke affects you.

This booklet explains what scientists have learned about the dangers of secondhand smoke. It also tells you how to protect yourself and your family.

What is secondhand smoke?

When a person smokes near you, you breathe secondhand smoke. Secondhand smoke is the combination of smoke from the burning end of the cigarette and the smoke breathed out by smokers. When you breathe secondhand smoke, it is like you are smoking.

Whether you are young or old, healthy or sick, secondhand smoke is dangerous.



What we now know:

- There is no safe amount of secondhand smoke. Breathing even a little secondhand smoke can be dangerous.
- Breathing secondhand smoke is a known cause of sudden infant death syndrome (SIDS). Children are also more likely to have lung problems, ear infections, and severe asthma from being around smoke.
- Secondhand smoke causes heart disease and lung cancer.
- Separate "no smoking" sections **DO NOT** protect you from secondhand smoke. Neither does filtering the air or opening a window.
- Many states and communities have passed laws making workplaces, public places, restaurants, and bars smoke-free. But millions of children and adults still breathe secondhand smoke in their homes, cars, workplaces, and in public places.



No amount of secondhand smoke is safe.

When you are around a person who is smoking, you inhale the same dangerous chemicals as he or she does. Breathing secondhand smoke can make you sick. Some of the diseases that secondhand smoke causes can kill you.

Protect yourself: do not breathe secondhand smoke. But completely avoiding secondhand smoke is very hard to do. Most of us breathe it whether we know it or not. You can breathe secondhand smoke in restaurants, around the doorways of buildings, and at work. When someone smokes inside a home, everyone inside breathes secondhand smoke. Some children even breathe smoke in day care.

There is no safe amount of secondhand smoke. Children, pregnant women, older people, and people with heart or breathing problems should be especially careful. Even being around secondhand smoke for a short time can hurt your health. Some effects are temporary. But others are permanent.



WHAT CAN YOU DO?

Make your environment smoke-free.

- *Make your home and car smoke-free.*
- *Visit smoke-free restaurants and public places.*
- *Ask people not to smoke around you and your children.*

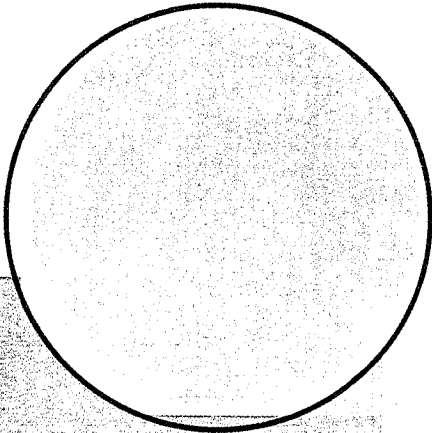
Secondhand smoke contains poisons.

The chemicals found in secondhand smoke hurt your health and many are known to cause cancer. You breathe in thousands of chemicals when you are around someone who is smoking.

WHAT THE SCIENCE SAYS

How do scientists measure exposure to secondhand smoke?

- Resonance ionization spectroscopy
- Hair, urine, or placental smoking
- How many cigarettes they smoke
- Time spent in the room
- Levels of nicotine, cotinine, and
- Levels of nicotine by-products in the body



Secondhand Smoke

IS TOXIC

Cancer Causing Chemicals

All are extremely toxic

Can cause cancer
Can cause death
Can damage the brain and kidneys



Formaldehyde
Used to embalm dead bodies



Chromium
Used to make steel



Benzene
Found in gasoline

Secondhand smoke has more than 4,000 chemicals.

Many of these chemicals are toxic and cause cancer.

You breathe in these chemicals when you are around someone who is smoking.



Polonium-210
Radioactive and very toxic



Vinyl Chloride
Used to make pipes



Arsenic
Used in pesticides



Lead
Once used in paint



Cadmium
Used in making batteries



Carbon Monoxide
Found in car exhaust



Hydrogen Cyanide
Used in chemical weapons



Ammonia
Used in household cleaners



Polyurethane
Found in paint thinners



Butane
Used in lighter fluid

Poison Gases

Can cause death
Can affect heart and respiratory functions
Can burn your throat, lungs, and eyes
Can cause unconsciousness

Secondhand Smoke

causes death and illness in children.

▶ Breathing secondhand smoke is a known cause of sudden infant death syndrome (SIDS).

▶ Children are also more likely to have lung problems, ear infections, and severe asthma.

Babies are hurt by secondhand smoke.

Tobacco smoke harms babies before and after they are born. Unborn babies are hurt when their mothers smoke or if others smoke around their mothers. Babies also may breathe secondhand smoke after they are born. Because their bodies are developing, poisons in smoke hurt babies even more than adults. Babies under a year old are in the most danger.

Secondhand smoke is a known cause of sudden infant death syndrome (SIDS).

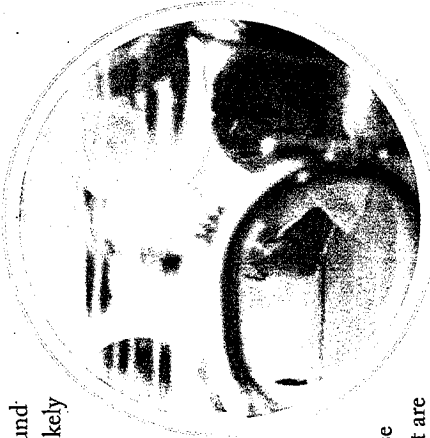
The sudden, unexplained, unexpected death of an infant before age 1 year is known as SIDS. The exact way these deaths happen is still not known. We suspect it may be caused by changes in the brain or lungs that affect how a baby breathes. During pregnancy, many of the compounds in secondhand smoke change the way a baby's brain develops. Mothers who smoke while pregnant are more likely to have their babies die of SIDS.

Babies who are around secondhand smoke—from their mother, their father, or anyone else—after they are born, are also more likely to die of SIDS than children who are not around secondhand smoke.



Secondhand smoke causes low birth weight and lung problems in infants.

Babies whose mothers are around secondhand smoke are more likely to have lower birth weights. These babies can have more health problems because they breathe smoke. For example, they are more likely to have infections than babies who are not around secondhand smoke.



Studies show that babies whose mothers smoke while pregnant are more likely to have lungs that do not develop in a normal way. Babies who breathe secondhand smoke after birth also have weaker lungs. These problems can continue as they grow older and even when they become adults.

WHAT THE SCIENCE SAYS

Secondhand smoke is a leading cause of lung disease and cancer in children. It is also a leading cause of asthma and ear infections in children. Children who breathe secondhand smoke are more likely to have low birth weight and lung problems. For more information, visit www.fda.gov/oc/ohrt/secondhand.html.

Older children are in danger, too.

Studies show that older children whose parents smoke get sick more often. Like babies, their lungs grow less than children who do not breathe secondhand smoke. They get more bronchitis and pneumonia. Wheezing and coughing are also more common in children who breathe secondhand smoke.

Secondhand smoke can trigger an asthma attack in a child. Children with asthma who are around



secondhand smoke have worse asthma attacks and have attacks more often. More than 40 percent of children who go to the emergency room for asthma live with smokers. A severe asthma attack can put a child's life in danger.

Ear infections are painful. Children whose parents smoke around them get more ear infections. They also have fluid in their ears more often and have more operations to put in ear tubes for drainage.



Secondhand smoke is a leading cause of lung disease and cancer in children. It is also a leading cause of asthma and ear infections in children. Children who breathe secondhand smoke are more likely to have low birth weight and lung problems. For more information, visit www.fda.gov/oc/ohrt/secondhand.html.

Protect your children's health.

- Do not allow anyone to smoke near your child.
- Do not smoke or allow others to smoke in your home or car. Opening a window does not protect your children from smoke.
- Use a smoke-free day care center.
- Do not take your child to restaurants or other indoor public places that allow smoking.
- Teach older kids to stay away from secondhand smoke.

Secondhand Smoke

causes heart disease and lung cancer in adults.



Even a short exposure to secondhand smoke can cause immediate health effects.

Over time, secondhand smoke can cause heart disease and lung cancer.

Secondhand smoke hurts adults too.

The longer you are around secondhand smoke, the more likely it is to hurt you.

Nonsmokers who breathe smoke at home or at work are more likely to become sick and die from heart disease and lung cancer. Studies show that secondhand smoke may cause other serious diseases, too.

Secondhand smoke is bad for your heart.

Breathing secondhand smoke makes the platelets in your blood behave like those of a regular smoker. Even a short time in a smoky room causes your blood platelets to stick together. Secondhand smoke also damages the lining of your blood vessels. In your heart, these bad changes can cause a deadly heart attack.

Secondhand smoke changes how your heart, blood, and blood vessels work in many ways. Adults who breathe 5 hours of secondhand smoke daily have higher "bad" cholesterol that clogs arteries.

WHAT CAN YOU DO?

Protect your health.

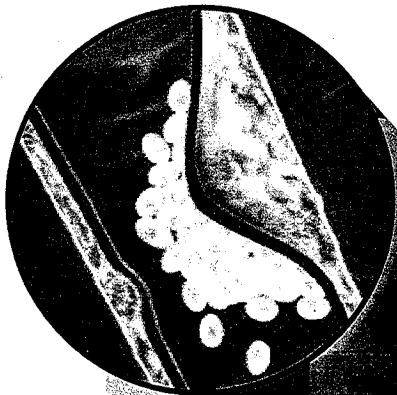
More restaurants and bars are smoke-free than ever. New York City restaurants and bars increased business by 9 percent after becoming smoke-free.

Choose restaurants and bars that are smoke-free. Thank them for being smoke-free.

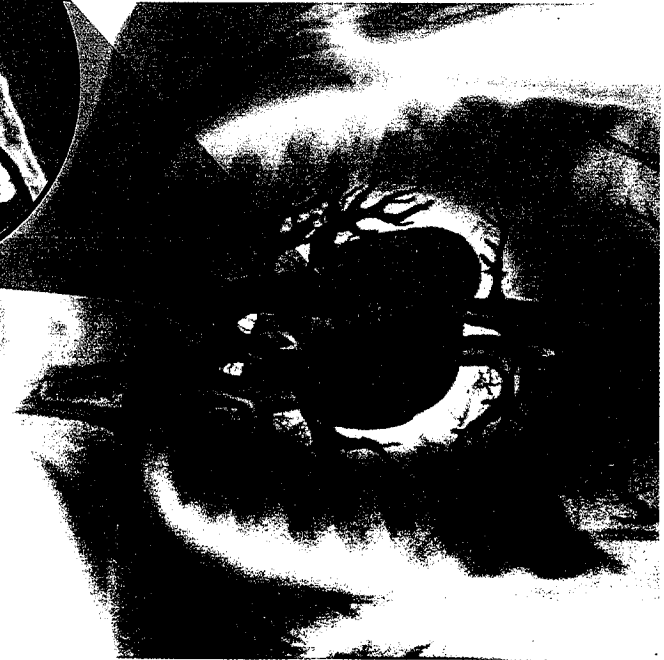
Let owners of businesses that are not smoke-free know that smoke bothers you. Tell them a "no smoking" section is not good enough.

People who have heart disease should be very careful not to go where they will be around secondhand smoke.

The bottom line is that breathing secondhand smoke makes it more likely that you will get heart disease, have a heart attack, and die early.



By passing the smoke to others, you are putting them at risk for heart disease, lung disease, and even death. Don't smoke around others.



Secondhand smoke hurts your lungs.

Secondhand smoke includes many chemicals that are dangerous for your lungs. Secondhand smoke is especially dangerous for young children and adults with heart and lung disease.

Secondhand smoke causes lung cancer.

Secondhand tobacco smoke contains the same cancer-causing chemicals that smokers inhale.

Secondhand smoke causes lung cancer in adults who don't smoke. Breathing in secondhand smoke at home or work increases your chances of getting lung cancer by 20 percent to 30 percent.



WHAT CAN HEALTH CARE EXPERTS DO?

- Ask patients if they smoke and if they are around secondhand smoke.
- Advise patients who smoke to stop, and help them quit.
- Advise patients who smoke not to smoke around others.
- Advise nonsmokers to protect themselves by avoiding all secondhand smoke.
- Remind parents to protect their children from secondhand smoke.
- Discuss the added dangers of secondhand smoke for adults who have heart disease or asthma.
- Offer special warnings to parents when treating children with respiratory infections, asthma, or ear disease.

WHAT CAN EMPLOYERS DO?

Protect your workers.

Secondhand smoke is harmful for all workers. Restaurant and bar workers breathe more secondhand smoke than other workers and have higher rates of lung cancer.

- Make sure your employees do not breathe secondhand smoke at work.
- Make all indoor places smoke-free.
- Don't allow smoking near doorways and entrances.
- Offer programs to help employees quit smoking.

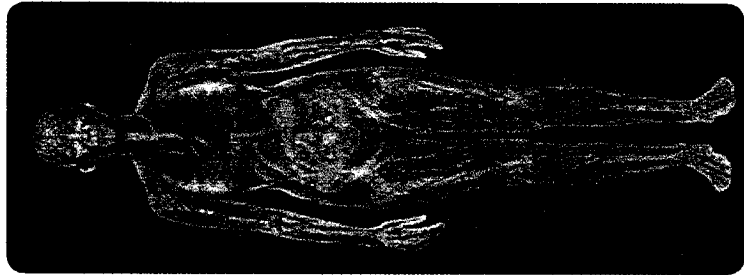
Secondhand smoke causes other breathing problems.

Secondhand smoke affects how well your lungs work, especially if you already have asthma or other breathing problems. Being around smoke makes you more congested and cough more.

Secondhand smoke also irritates your skin, eyes, nose, and throat. If you have allergies or a history of breathing problems, secondhand smoke can make you even sicker.

Secondhand smoke may cause disease in other parts of your body.

We know that smoking causes many forms of cancer. Scientists believe even a little tobacco smoke is dangerous. Scientists also believe secondhand smoke may cause other diseases throughout your body. They are doing studies on possible links to stroke, breast cancer, nasal sinus cancer, and chronic lung problems in children and adults.



Secondhand smoke may cause disease in other parts of your body.

There's no such thing as a

NO SMOKING

section

No amount of secondhand smoke is safe.

Here are some unexpected ways you may breathe secondhand smoke every day:

Sitting in the "no smoking" section, even if it doesn't smell smoky

Riding in a car while someone else is smoking, even if a window is open

Being in a house where people are smoking, even if you're in a another room

Working in any restaurant, warehouse, or building that allows smoking inside, even if there is a filter or ventilation system

Acknowledgments

This public document was prepared by the U.S. Department of Health and Human Services under the direction of the Office of the Surgeon General to make information in *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General* available to everyone.

Richard H. Carmona, M.D., M.P.H., F.A.C.S., Surgeon General, U.S. Public Health Service, Office of the Surgeon General, Office of the Secretary, Washington, D.C.

Kenneth P. Moritsugu, M.D., M.P.H., Deputy Surgeon General, U.S. Public Health Service, Office of the Surgeon General, Office of the Secretary, Washington, D.C.

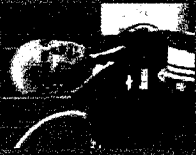
A special thanks to the many people who provided expert advice and suggestions: Dr. Jonathan Samet, Senior Scientific Editor of the 2006 Surgeon General's report and Professor and Chairman, Department of Epidemiology, Bloomberg School of Public Health, Johns Hopkins University; Dr. Karen Near, Senior Science Advisor, Office of the Surgeon General, DHHS; Ellen Field, Deputy Assistant Secretary, DHHS; Dr. Terry Pechacek, Associate Director for Science, Office on Smoking and Health, CDC; Leslie Norman, Managing Editor of the 2006 Surgeon General's report, CDC; Dana Shelton, Associate Director for Policy, Planning and Coordination, Office on Smoking and Health, CDC; Peggy Williams, Writer-Editor, Quantell, Inc.; Gabrielle Robinson, Writer-Editor, Northrop Grumman; the CDC Health Literacy Workgroup; Dr. P. Lynne Stockton, CDC; Victoria Barnard, Teacher, Chamblee High School; Tommy Jones, Reviewer; and the scientific and communications staff of the Office on Smoking and Health, CDC.

Project Leads, Writers, and Editorial Assistance

Sarah Gregory, Health Communications Specialist, CDC
Peter Xiques, Writer, Science Applications International Corporation
Vickie Reddick, Writer, Science Applications International Corporation

Graphic Design

C. Mark Van Hook, Graphic Designer, Science Applications International Corporation

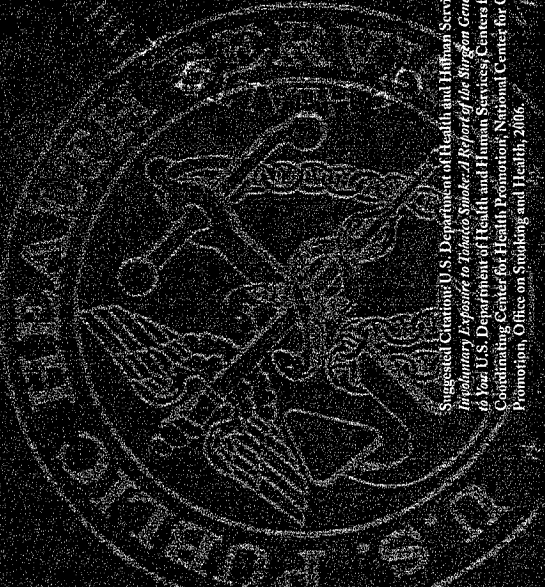


About the Surgeon General's Report

The Surgeon General is the nation's highest-ranking health officer. The President appoints the Surgeon General to help promote and protect the health of all Americans.

The Surgeon General gives Americans the best scientific information available on how to improve their health and reduce their risk of illness and injury.

The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General was prepared by many of the country's leading scientists and public health experts. The full report is more than 600 pages long. It took more than 4 years to complete. It is written for a scientific audience. However, Surgeon General Richard H. Carmona believes the findings are very important to everyone.



Suggested Citation: U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. *Seventeenth Surgeon General. Secondhand Smoke: What It Means to You*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.

Secondhand Smoke

It hurts you.

It doesn't take much.

It doesn't take long.

For more information

For more information on secondhand smoke, talk to your doctor, nurse, pharmacist, or other healthcare professional.

More information about the Surgeon General's report is available on the Surgeon General's website at

www.surgeongeneral.gov

More facts and advice are available from
Centers for Disease Control and Prevention

www.cdc.gov/tobacco

Toll free: **1-800-CDC-INFO** (1-800-232-4636)

In English, en Español

24 hours/day, 7 days/week

Text telephone for hearing impaired: **1-888-232-6348**

Other helpful information is available at www.smokefree.gov.

To access a telephone quitline serving your area, call
1-800-QUIT-NOW (1-800-784-8669).

To download copies of this booklet or the full Surgeon General's report, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*, go to

www.cdc.gov/tobacco.

To order single copies of these documents, call toll free

1-800-CDC-INFO.

June 14, 2006

Abbie Vianes
Salt Lake City Mayor's Coalition on
Alcohol, Tobacco, and Other Drugs
451 South State Street, Rm 306
Salt Lake City, UT 84111

Dear Ms. Vianes,

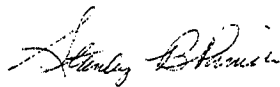
The American Heart Association Utah Office was recently made aware that the group Teen Advocates Against Tobacco (TAAT) has started working with Salt Lake City for tobacco-free venues. I am writing today on behalf of the Utah Board of Directors to commend the Coalition in its endeavors to make Salt Lake City a healthier place to live.

The American Heart Association is a strong supporter of efforts that enhance the overall health and wellbeing in any community. This year has been a success, with anti-tobacco and pro-wellness policies being passed at the State and Local levels in Utah. We hope that Salt Lake City will continue the progressive tobacco-free efforts being taken around the state. By doing so, Salt Lake City will sit with only a handful of other cities in our State in leading the way towards a healthier Utah.

Second-hand smoke is a health risk that is avoidable. In fact, tobacco is the number one preventable cause of heart disease. As the numbers of heart disease and stroke rise in Utah, we should be looking at every avenue to mitigate the problem through obtainable solutions – such as tobacco-free venues.

If there is any way staff from the American Heart Association can provide you or your coalition members with further information, please do not hesitate to contact the Utah office at 801-484-3838.

Sincerely,



Stan Parrish, Chair
American Heart Association
Utah Office

Chair:
Stan Parrish
Mighty Distributing

President:
Ruben A. Zito, M.D., FACC
IHC Health Centers

Chair-Elect:
Laura Houston
Wells Fargo

President-Elect:
Susan Morelli, M.D.
Utah Valley Medical Center

Immediate Past Chair:
Beverly J. May
Campaign For Tobacco-Free Kids

Immediate Past President:
J. Brent Muhlestein, M.D.
LDS Hospital

Jeffrey L. Anderson, M.D.
LDS Hospital

Jeff Barnhard
Praxair Healthcare Services

David Call
DMBA

Crawford Cragun
Franklin Templeton Bank & Trust

Brian E. Dunn
Salt Lake Regional Medical Center

Tom Hanrahan
McKay-Dee Hospital

Craig Hanson
Simmons Media Group

Laurie S. Hart, Esq.
Callister, Nebeker & McCullough

Laura Houston
Wells Fargo Bank

Fred Lampropoulos
Merit Medical

Ted Lewis
Beneficial Financial Group

Doug Smith, M.D.
Central Utah Multi-Specialty Clinic

Rev. Dave Van Massenhove
St. Thomas More Catholic Church

Joan Ware, M.S.P.H., R.N.

Donald Winkler
Stayner & Company, P.C.

Maria Sweeten
Executive Director