ALASKA LEGISLATURE 1600
HOUSE and SENATE FINANCE COMMITTEE FILES, 1997-1998

Alaska Native Tobacco Use

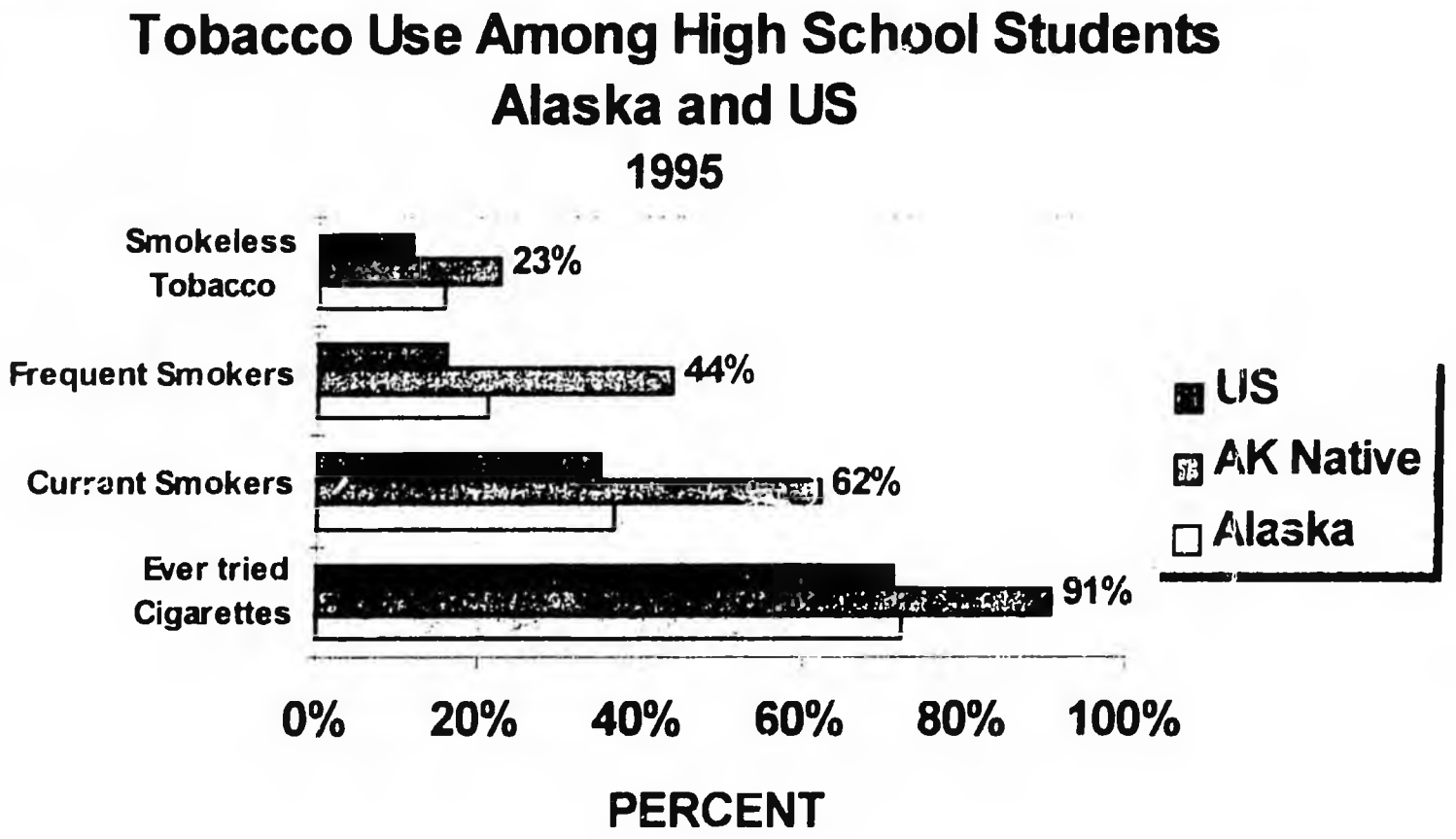
- Today Alaska Natives have some of the highest rates of tobacco use in the world, **47% for men** and **39% for women.**

- Alaska Natives account for **23%** of **smoking related deaths** while they account for **17%** of the **state's population.**

Alaska Native Tobacco Use

- Alaska Natives have the **highest cancer mortality rate** of any Indian Health Service Area.
- The lung cancer death rate among AK Native women is **three times** the national average.
- Tobacco use among Alaska native youth is higher that non-native youth.

Alaska Native Tobacco Use



Alaska Native Tobacco Use

- **41%** of Alaska Native boys and **32%** of Alaska Native girls were using smokeless tobacco weekly.
- Among the boys, **45%** started using tobacco before the **age of 8.**

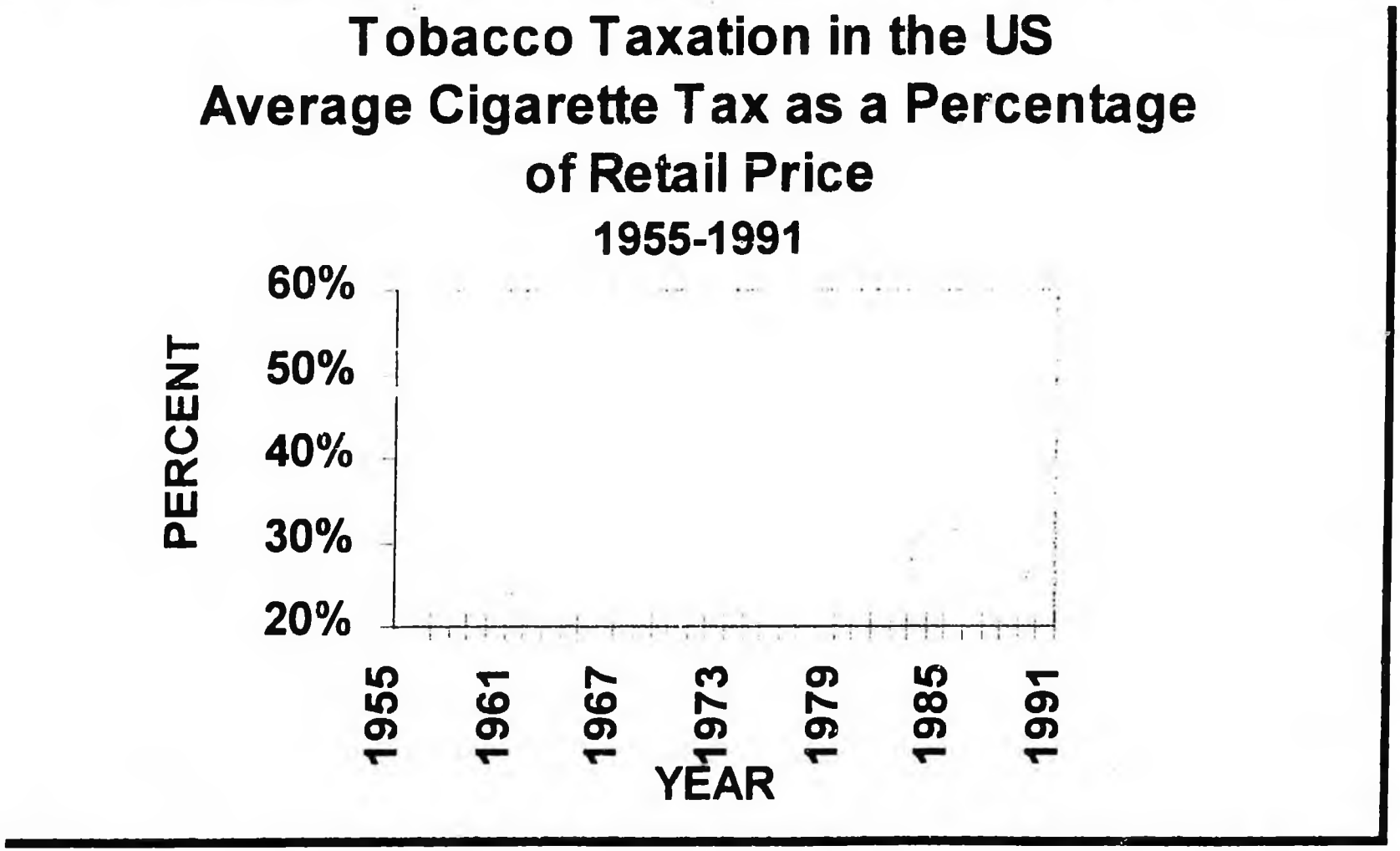
Health Related Costs of Smoking, A Drain on the Economy

- **Total direct medical costs** for smoking related illnesses for Alaskans aged 35 years or older in 1993 was **$96.5 million.**
- **$23 million** of the direct medical care costs for smoking related illness was paid by **Medicaid** in Alaska.
- Meanwhile, the state collected only **$15.6 million** in cigarette tax revenues in 1993 (excludes taxes on smokeless tobacco).

Alaska Tobacco Tax History

- The state of Alaska has taxed tobacco since territorial days, when a 5 cents per pack tax was levied on cigarettes to help fund school construction.
- The current tax level of 29 cents per pack has been in place since 1989.
- In 1989 Alaska ranked **17th** among the **50 states** and District of Columbia on the amount of tobacco tax levied.
- Currently Alaska is ranked **28th among the states** on tobacco taxes levied.

Tobacco Taxes in the US



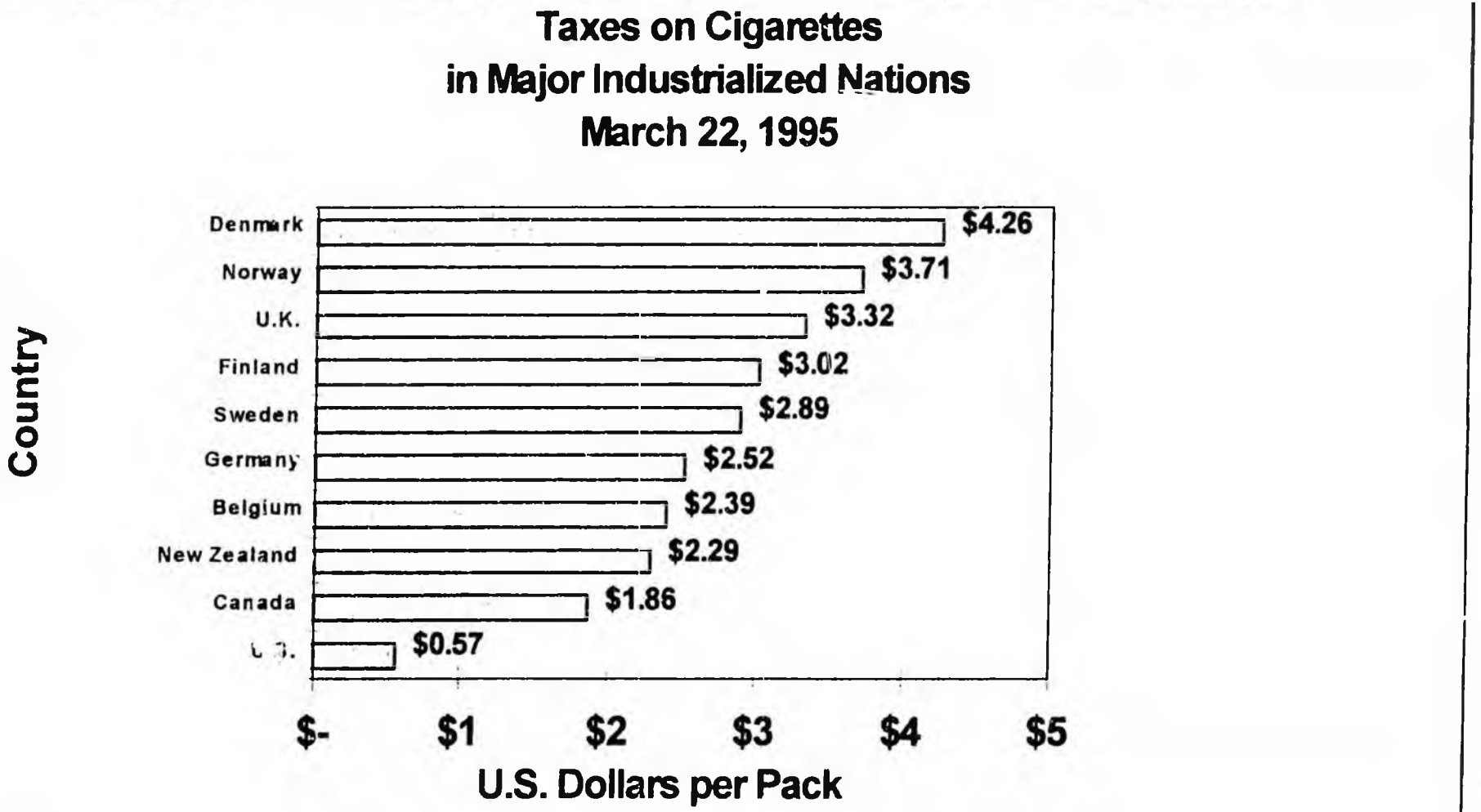
Impact of Tobacco Taxes

- For every 10% increase in tobacco prices, youth tobacco consumption will fall by at least 10%.
- For every 10% increase in tobacco prices, general consumption will fall by 4%.
- At **current adult smoking rates**, approximately **18,000** of Alaskans currently under the age of 18 will die prematurely of a tobacco related illness.

Impact of Tobacco Taxes

- A $1.00 per pack tax increase would reduce youth smoking in Alaska by an estimated **32%**.
- The tobacco tax would prevent **5,700** premature deaths among Alaskans currently under the age of 18.

Tobacco Tax Rate Comparison



The Time is Right

- The groundwork is in place.
- There is broad public support. **75%** of Alaskans surveyed support the $1.00 per pack tax.
- This included: 75% of "conservatives", 75% of "moderates", 73% of "liberals" and **55% of smokers.**

Community Support

- The tax is also supported by: C. Everett Koop, MD., former Surgeon General, 280 individuals and over 50 organizations that make up the **Alaska Tobacco Control Alliance** including: the Alaska Native Health Board, the American Cancer Society, and the American Heart Association.

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AMERICAN SOCIETY FOR CIRCUMPOLAR HEALTH

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ORIGINAL ARTICLES:

About the cover: The Alaska Tobacco Control Alliance bus (part of the Anchorage People Mover system) has been carrying a tobacco-free message since February 1995. The sign on the back of the bus, which currently reads "Tobacco Taxes Save Lives," is changed periodically. The bus was designed by Peter Dunlap-Shohl. Painting was done by Alaska Neon Design. Funding is provided by the Robert Wood Johnson Foundation through a grant to the Alaska Native Health Board. Photos were taken by Chris Arend.

TOBACCO:
Alaska's Most Preventable Health Problem

I wish to thank the Alaska State Medical Association for devoting an entire issue of this journal to tobacco, and for the opportunity to be guest editor. The response of contributors both within and outside of Alaska, the staff at the ASMA office, and others, has been overwhelmingly enthusiastic and prompt.

Tobacco-related death and disease impose an embarrassing black mark on the health record of this century. As the articles in this issue dramatically demonstrate, Alaska's tobacco statistics are among the worst in the nation. This is particularly embarrassing because Alaska has led the nation in other health issues.

Earlier in this century, medical providers were used to PROMOTE the sale of tobacco. (See accompanying samples of cigarette advertisements*). The industry currently expends nearly $6 BILLION to promote tobacco — a product that when used as directed is guaranteed to kill you. Medical providers have been replaced by Joe Camel and others. Nonetheless, we owe it to our patients, friends, and families to do all we can to eliminate this 20th Century scourge. As deeply ingrained as it is in our society, and with the amount of money leveled at its promotion, this is an ambitious task.

In this issue we have tried to provide as much Alaska-specific data as possible, provide some historical perspective on the problem here, discuss the multi-faceted approaches to tobacco control, and bring comments from tobacco control experts and organizations "outside".

As medical providers having been used in the past to promote the product, let's now "take the lead" and join the Trampling Tobacco Project, the Alaska Tobacco Control Alliance, the Citizens to Protect Kids from Tobacco, the volunteer health organizations, and others, and work toward a Tobacco Free Alaska by the year 2000.

Anne P. Lanier, MD, MPH

*Pictures of tobacco advertisements were graciously provided by D.O.C (Doctors Ought to Care) 5615 Kirby Drive, Suite 440, Houston, TX 77005.

Editorial

This issue of *Alaska Medicine* is devoted to tobacco related papers. We present historical and cultural perspectives as well as epidemiological data along with statistical data to illustrate that increasing the cost of tobacco results in decreasing the use rate. A recent poll shows that approximately 3/4 of Alaskans support an increase in the current excise tax on tobacco products. This effort should be regarded as a health measure, not a revenue enhancer. It is hoped that no additional revenue will be collected.

In addition to the usual references to the various smoking related cancers and chronic respiratory diseases, my experience as a state medical examiner prompts me to mention deaths due to house fires, and carbon monoxide deaths from smoldering cigarettes.

All members of the state legislature will be furnished a copy of this issue. We hope they will read it and realize that they have an opportunity to make a highly significant contribution to the health of Alaskans for many years to come. Donald R. Rogers, MD

Funding for the cover photograph and extra pages in this special issue was provided by the Alaska Native Health Board through its SmokeLess States grant from the Robert Wood Johnson Foundation.

Historical Notes on the Introduction of Tobacco into Alaska

Robert Fortuine, MD[1]

THE NORTH PACIFIC REGION

In July 1741, Georg W. Steller, Bering's physician and naturalist, stepped ashore in Alaska, at Kayak Island near the mouth of Prince William Sound. There he left a pound of tobacco and a Chinese pipe at an abandoned Native house site in exchange for a few artifacts he had carried away. A few weeks later, the Russians again offered Chinese pipes and tobacco, this time in person, to some Aleuts who had paddled out to meet their ship in the Shumagin Islands. A sailor even offered one of the Aleuts a lighted pipe, which was said to "displease" him (1). Captain Chirikov, in command of Bering's other vessel, also offered pipes and tobacco to some Aleuts, probably on the island of Adak, but they simply placed the gifts on their baidarkas and paddled away (2).

By 1778, one of Cook's surgeons was able to write that the people of Unalaska "perfectly understood the use of tobacco, which they asked for by that name . . . .(3) Few if any did not smoke, chew, or take snuff. Lieutenant King noted that they preferred tobacco to "all other things;" in fact, some of the Aleut women were willing to bestow sexual favors on members of the crew in exchange for a leaf or two of tobacco (4).

Early Russian fur traders who came to the Aleutians sometimes used tobacco as a gift, a reward, or as an inducement to service, and before long the Aleuts had developed a craving for it (5,6). Since, however, in those early years tobacco was in short supply, the Russians kept it principally for their own enjoyment. The Aleuts seemed to prefer their tobacco in the form of snuff, (7) and there were reports that they would work very hard, often under hazardous conditions, to obtain even a small supply. In the 1820s, the Orthodox missionary Father Veniaminov reported that often more than half of a hunter's income was spent on tobacco, either for chewing or for snuff (8).

Russians also introduced tobacco as an article of trade to the Natives of Kodiak Island perhaps as early as the 1760s (9). Dr. Merck, who visited in the 1780s, found the Koniag eager for snuff, although women less than men (10). By the early 1800s the Kodiak islanders were passionately fond of tobacco and cursing the Russians for having made them so dependent on it. Shortly after 1800 they were using it primarily as snuff placed in the mouth; few sniffed it and no one smoked, according to Davydov (11). Captain Lisianskii around the same time noted that a Koniag would go twenty miles out of his way for a pinch or two of snuff (12). The Russian-American Company also regularly used tobacco as a treat or as an incentive for their Aleut and Koniag hunters stationed at Sitka or at the posts on the Kenai Peninsula. When a new fort was established at Nushagak in 1818, the trader was encouraged to use tobacco among the local Natives to show the good will of the Russians (13).

(1) Biomedical Program, University of Alaska Anchorage. This paper is an abridgment and adaptation of Chapter 16 of my book *Chills and Fever: Health and Disease in the Early History of Alaska.* Fairbanks: University of Alaska Press, 1989.

The people of Cook Inlet and Prince William Sound were presumably introduced to tobacco by the English, Russian, and perhaps Spanish explorers and traders who frequented this region in the 1780s and 1790s. The habit, however, did not seem to catch on at first, for both Meares and Billings reported that the Natives showed no interest in the tobacco they offered in trade. (14,15)

In precontact times, the Indians of Southeastern Alaska were known to have cultivated a tobacco-like plant which they mixed with lime and chewed. Lieutenant Whidbey of Vancouver's expedition observed the plant being grown in Chatham Straits, the only crop the Tlingit were known to cultivate. (16) They dried the leaves of this plant over a fire, then ground them up and pressed them into cakes. It was always chewed, rather than smoked or inhaled. After the 1780s, as intensive trade with European ships began, the native plant fell into disuse in favor of the European product, which the Indians found stronger and easier to obtain. They soon learned to smoke it as well as chew it. Tobacco began to take on a ceremonial value and was sometimes used after a shamanistic ceremony. (17) or given to the relatives and friends of a sick man. The Russians handed it out generally as a reward. (18) Tobacco became increasingly popular in the region, and soon leaf tobacco mixed with pulverized bark was being regularly smoked in short, carved wooden or clay pipes. (19)

NORTHERN ALASKA

Curiously, tobacco first reached northern Alaska not by European ships but over traditional trade routes with the Chukchi of Eastern Siberia. According to Ray, the tobacco originated in Circassia, Poland, or Sweden and became an article of trade in the 1750s. (20) Nikolai Daurkin, a Chukchi who visited the Diomedes in the 1760s, reported that the first request of the Natives was for leaf tobacco, for which they were willing to trade expensive furs. (21) In 1789 a large trading market was established at Anyui on the Kolyma River, where the Alaskans traded their furs for tobacco and other European goods, which then passed through several more Native middlemen before reaching the Seward Peninsula. (22)

This trade continued to flourish throughout the nineteenth century, with the major focus on the north coast of Kotzebue Sound and at Port Clarence on the Seward Peninsula. From there tobacco was distributed to the north coast and into the interior via the major river systems. (23)

In the vicinity of Kuskokwim Bay Captain Cook encountered Eskimos in 1778 who were unfamiliar with the use of tobacco. Likewise, when Billings' ship visited Cape Rodney in 1791 the Eskimos were eager to trade for many European goods, but apparently not tobacco. (24) Yet in 1816 the Eskimos of St. Lawrence Island greeted Otto von Kotzebue with a chorus of pleas for tobacco, which they immediately put into their mouths. Later he saw them smoking small stone pipes, about the size of a thimble. (25) The Russians traded freely with the Siberian Yupik of St. Lawrence Island, who were willing to give up an elaborately decorated gut parka for a few leaves, the amount one might consume in a morning. (26) The Eskimos of Shishmaref Inlet also clamored for tobacco, which they seemed to enjoy chewing as well as smoking. This love of tobacco impressed the captain, who found it remarkable that the weed had penetrated where no European vessel had visited. (27)

When a decade later Captain Beechey landed on St. Lawrence Island and at Cape Prince of Wales, he again found tobacco to be the great object of all trade. On one occasion his sailors bought four hundred pounds of caribou meat for four pounds of tobacco. The differing habits of the Natives of the region are illustrated by Beechey's observation that the northern Eskimos generally smoked a short pipe, while some to the south of Bering Strait chewed tobacco, and the St. Lawrence Islanders took it as snuff. The tobacco was often of poor quality and extended with dried wood.(28)

The first European to reach Barrow, also in 1826, found tobacco well known and readily marketable. Eleven years later Thomas Simpson of the Hudson's Bay Company encountered Eskimos to the east of Barrow who immediately clamored for tobacco, of which they were all —men, women, and children—"inordinately fond." At Barrow he found tobacco to be the "grand article in demand." A single inch of it was equivalent in trade to the most valuable articles they possessed.(29)

Robert F. Spencer has presented interesting information on the role of tobacco in traditional Barrow culture. The small pipes they used were of the Siberian or Russian type and were cleaned before use, with a caribou hair placed in the bowl to prevent tobacco flakes from entering the stem. Men's pipes were small and portable, while those of women had longer stems. Bowls might be made of ivory, metal, or clay. Nearly everyone used tobacco in some form, including the children. Besides smoking, many chewed the leaves.(30)

Further south the Eskimos also used tobacco that they had obtained in trade from Siberia and perhaps later from the Russians in the Aleutians, Kodiak, and Prince William Sound. Khromchenko in 1821 found the Bristol Bay and southern Norton Sound Eskimos to be heavy tobacco users,(31) while Glazunov, who in 1833 was the first European to explore the interior of southwestern Alaska, found the Natives already passionately fond of tobacco, which they smoked and took as snuff.(32)

Nelson offers considerable detail on the tobacco habits of the Eskimos of the Seward Peninsula and

southward. The women did not often smoke tobacco, but rather chewed it or used it as snuff, whereas the men used all three methods. For chewing, the tobacco was cut into shreds on special boards, mixed with ashes from a tree fungus (obtained from interior Indians), then rolled into pellets, or quids, which they held in their cheek pouch. For smoking, the tobacco was cut very fine. A small tuft of fur was placed at the bottom of the pipe bowl, then a wad of tobacco was stuffed in on top. After lighting the pipe with flint and steel, the smoker took two or three deep draws and held the smoke in the lungs as long as possible. When the oily tobacco extract remaining in the pipestem was cleaned out, it was added to the chewing quids for extra flavor and strength. For snuff the tobacco was finely shredded, thoroughly dried, and then ground into powder in a wooden mortar and pestle. The snuff was then sifted to remove the larger particles. Snuff could either be sniffed or placed inside the lip.(33)

On St. Lawrence Island, near the end of the nineteenth century, Bruce described the Eskimos as "complete slaves to tobacco." All of the men and most women smoked, as well as most children over six. Many of the women also chewed, always swallowing the juice. Old chewing quids were dried and smoked, to extract the last hint of flavor. Snuff was made from finely ground tobacco mixed with pulverized charcoal. He concluded: "An Eskimo who is without tobacco is as wretched as a confirmed drunkard without his whiskey, and he will go to as great extremes to secure it as he would to procure food for himself and family."(34)

Most Athabascan Indians of the interior adopted tobacco directly or indirectly from the Russians. For example, the Han Indians of the upper Yukon were in contact with Russian traders as early as the 1840s, and traveled long distances to obtain tobacco and snuff in exchange for furs.(35) Likewise, the Upper Tanana and the Ahtna groups probably received tobacco in trade from the Russians in Prince William Sound, as well as from the Kluane region,(36) while the Upper Kuskokwim Indians probably obtained it from the Tanaina living around Cook Inlet. The tribes bordering the Eskimos, such as the Ingalik, probably first received tobacco in trade from the Eskimos.(37)

Several of the Athabascan groups also smoked the dried leaves of an indigenous plant, probably even before the arrival of Europeans.(38) The Tanaina chewed a mixture of fungus and cottonwood bark (*Populus balsamifera*), (39) and similar combinations of ashes, dried fungus, or local plants were known from other groups. The Eskimos imported from the Indians the fungus they used for mixing with tobacco.(40)

Athabascan men seemed to be very fond of smoking, at least along the Yukon, and often inhaled deeply,(41) using the small Chinese-type pipe also favored by the Eskimos. Women and children, as well as the men, found delight in chewing.(42)

METHODS OF TOBACCO USE

The Alaska Natives used tobacco in ways that were likely to have been harmful to health. Moreover, the tobacco available to the Natives was crude and the result of primitive methods of curing, and the Natives often adulterated it further with questionable substances such as lime, charcoal, moss, and fungi to "extend" it. Most Natives—men, women, and children—used tobacco whenever they could obtain it, presumably over their lifetime. The tobacco was used and re-used in various ways for economy's sake until the last traces of nicotine and other toxins were extracted.

Murdoch reported that at Barrow nursing children of two or three years were often pacified with a quid of tobacco.(43) Along the Kobuk River mothers sometimes took a child from the breast and put a quid of tobacco or a pipe in its mouth.(44) George Adams had an Athabascan child of five ask him for a chew of tobacco and go off with it as pleased as if it were a piece of candy.(45) Others report Eskimo children of four or five smoking a pipe, taking snuff, or chewing a quid.

The Native manner of smoking must have been particularly harmful. Although several descriptions are available, perhaps the most detailed is that of Capt. C. L. Hooper of the Revenue Cutter *Corwin*:

> "The pipe is lighted with flint, steel and tinder, and the native commences to draw vigorously, swallowing the smoke, which he retains in his lungs as long as possible. A fit of coughing follows, which I at first thought would certainly terminate the life of the smoker in several instances. It is not an unusual occurrence for a native, who has been without tobacco for a long time, to retain the smoke in his lungs until he falls over senseless, having the appearance of a person under the influence of opium. This state lasts but a few minutes, however, when the same performance is gone through with again." (46)

Other early accounts speak of "a momentary stupefaction,"(47) "a stage similar to intoxication,"(48) and "a state of unconsciousness or stupor."(49) Adams described how the Athabascans along the Yukon "give two or three whifs, drawing the smoke down into their lungs, and slowly exhaling it, for a minute after exhaling the smoke, they set like on in a stupor. Their heads drop on their breasts and breathe like one with a severe attack of the Athma [sic]. The young ones when learning to smoke cough for some minutes after smoking very violently. . . ."(50) Seemingly, the stronger the tobacco, the more highly it was regarded. When Glazunov distributed some pipe tobacco and snuff, at the conclusion of a

meeting with Indians along the Yukon, "Some were so much dazed by the smoke that they fell unconscious, while others inhaled such a quantity that they could not stop sneezing."(51)

Whatever the hazards of tobacco use, it is clear that the Alaska Natives derived much pleasure from it, and, unfortunately for their health, still do. Adelbert von Chamisso, the German poet and naturalist on the Kotzebue voyage, perhaps described it best:

> "Whoever does not suspect the magic which dwells with [tobacco], let him watch the Eskimo fill his small stone pipe with the precious herb, which he has thriftily mixed half and half with wood shavings, let him see him carefully light it, then eagerly with closed eyes and long, deep puffs breathe the smoke into his lungs and blow it out again into the air. Meanwhile the eyes of all are fixed on him and the one next to him is already stretching out his hand to receive the instrument so that he too may draw a puff of happiness. . . ." (52)

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Historic Ceremonial and Medicinal Use of Tobacco Among American Indians

Donald H. Reece[1]

Tobacco was often used by shamans and in agricultural rites. It was used in the harvesting of crops to bless the harvest. Such a ceremony linked tobacco and the fertility of the land, a strong psychological bond made still stronger by tobacco-induced altered states of consciousness and supernatural visions. The rising smoke of tobacco was regarded as a method by which communication with the gods/creator might be facilitated. The Iroquois believed that smoke carried their petitions to the Great Spirit. The Delaware sacrificed tobacco to ensure success in the hunt. The Crow worshipped the sun, the moon, and tobacco. It was the only thing cultivated to "ensure the continued welfare of the people." Among the Ojibwa/Chippewa, tobacco was placed on a rock to alert the spirit to ward off storms. As stereotypes suggest, tobacco was commonly used to bind agreements between tribes, and it often accompanied invitations to individuals or families. Tobacco was also given as payment to a shaman, obligating him to fulfill the requests of his client.

There was a great deal of ceremony and spirituality involved in the traditional use of tobacco. "In Pawnee ceremonies the pipe was always tamped with an arrow captured from the enemy. It was forbidden to pack it with the fingers, as the gods might think that the man who did so offered himself with the tobacco and take his life." This example illustrates what power tobacco was believed to have had and its overall importance.

In addition to its ceremonial uses, tobacco was traditionally employed medicinally by many different tribes. Accounts from tribes from different areas of the country describe tobacco being used in very similar, if not identical, ceremonies. It served as an analgesic and a treatment for earaches. It was chewed as a remedy for toothaches. Open wounds and the bites of insects or snakes were treated with tobacco because of its presumed antiseptic properties. The Winnebago and the Seminole, along with other tribes, scattered tobacco while repeating prayers to exorcise spirits or ward off the evil influences that caused disease. One Native practice was to blow tobacco smoke into the ear to kill the "Woodland insect" that was believed to cause insanity by drying up the brain. Tobacco was also heralded as a remedy by some for asthma, rheumatism, chills, fevers, intestinal disorders, child birth pains, and headaches.

Study of the calumet, an elaborately decorated clay shaft to which a pipe bowl might be attached, seems to be one of the better ways to assess traditional tobacco use. It was different from other pipes in that the calumet was the source of great ceremonialism and was held to be sacred. The calumet was said to have had the potential to make friends out of mortal enemies and to have provided for peaceful interactions between strangers.

Sources from early periods support the idea that pre-European contact smoking was minimal among American Indians and that they smoked only in moderation for medicinal or spiritual reasons. Pawnee use of tobacco prior to European contact was strictly sacred and ceremonial. Same is said of the Zuni.

An examination of the early smoking practices of some tribes such as the Northern Paiute of the Great Basin reveals than the early Native peoples understood tobacco much better that did the Europeans and later Americans, even after a few hundred years' use. Smoking was practiced only by men; "young boys would not smoke because they were afraid it would impede their ability to pursue game." This suggests that, although tobacco did have spiritual importance in their lives, its powerful physical effects as well as relative scarcity proscribed its use for individual pleasure.

Tobacco continues to play a requisite role in at least two contemporary religious healing ceremonies with deep roots in the past: (1) The Peyote religion (or Native American Church) and (2) the Plains Sun Dance.

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The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Indian Health Service.

Anchorage Clears the Air

How Anchorage Came to Ban Smoking in All Buildings Operated by City Government Including Public Schools

Rodman Wilson, MD[1]

January 1, 1987. That was the great day when the Municipality of Anchorage, Alaska, moved boldly to protect the public and its 3,910 city employees by outlawing smoking in all 123 municipally operated buildings. It even decommissioned all smoking lounges. The ordinance establishing the new workplace rule applied equally to 75 public schools and their grounds beginning July 1, 1987.

How did this come to pass? What led the city of Anchorage to do this?

The story began in 1983 when the health and social services departments, housed together in a separate building, decided to eliminate smoking progressively over a nine-month period. These departments wanted to protect the many children, young women and others who came to the building each day for services, wanted to make the workplace safer for employees, and desired finally to be an example to others in the community. The plan did not reach its initial goal of total abolition of smoking but did succeed in confining it to one room in the basement of the five-storied health department building.

Impelled independently, but noting the health department's action, the Alaska Native Medical Center banned smoking altogether in its hospital in Anchorage on January 1, 1986. This was the first hosptial in Alaska to do so. Soon afterwards, smoking was barred in almost all other Indian Health Service facilities and other hospitals in the nation.

Prior to this, in 1984, a state statute concerning smoking in public places became law in Alaska. Among other features it allows "a person in charge" of a building to prohibit smoking or, alternatively, to designate certain portions as smoking or no-smoking, making, however, "reasonable accommodations for the needs of the smokers and non-smokers."

The Municipality of Anchorage found this law unworkable. There was no way to subdivide buildings salubriously. Smoke refused to be gerrymandered. Obeying natural rather than man's law, it diffused freely under doors, over dividers, and through so-called smoke-eaters to occupy, like a drop of ink in a bowl of water, whatever space is available. It also circulated and recirculated to all floors through heat-ventilation-air conditioning (HVAC) systems.

Accordingly, after listening to a presentation in September, 1986 by Robert Rosner, brought to Anchorage by the American Lung Association of Alaska from the Smoking Policy Institute of Seattle University, Mayor Tony Knowles decided to submit to the Anchorage Assembly an ordinance to prohibit smoking altogether in city operated buildings and schools. The ordinance was endorsed unanimously by the Anchorage School District Board on November 24 and was approved by the Assembly by a vote of 8-3 on December 9 after intense public debate and two spirited public hearings.

Most persuasive of many arguments proffered were those relating to health and public safety. School Board and Assembly members came to realize that breathing someone else's smoke is, indeed, harmful. One week after passage of the ordinance, United States Surgeon General Koop released his forceful report, entitled, "The Health Consequences of Involuntary Smoking." This comprehensive document incriminated sidestream smoke as causing or accelerating numerous childhood and adult disorders including cancer.

Also convincing was the economic argument that it costs an employer several hundred to several thousand dollars more annually to have a smoker on the job than an employee who does not smoke. Costs are in extra time off sick, more permanent disability, early retirement, early death, extra costs for cleaning, shorter life of floor coverings, furniture and precision instruments, increased HVAC costs, and higher premiums for fire, life, and health insurance. Finally, it was realized that morale would improve once divisive wrangling about smoking in the workplace ceased.

How did the new ordinance work? Surprisingly well. Enforcement was not a problem. Obviously, non-smokers were pleased. They constituted at the time 77% of city employees. Among the 23% who smoked, some forsook cigarettes in the fall in anticipation of the new rule. Others made New Year's resolutions to quit. Still others enrolled in one of several smoking-cessation courses offered in town. Spouses signed up too. By prearrangement, tuition was partially underwritten as a

(1) Dr. Wilson was public health director for the Municipality of Anchorage in the mid-1980s. Currently he is acting executive director of ASMA.

benefit of the municipal health insurance plan. Actual numbers of these several cohorts were not amassed. Others, incorrigibly addicted to tobacco, continued to smoke, though not on "company time" except when in the field. And during their breaks, they huddled outside entry doors or around the corner, as they still do, to smoke. Finally, a few workers said that they would quit their jobs, but probably not many did. Jobs were scarce in Anchorage that winter.

Shortly after passage of the ordinance, several businesses and other governmental units followed the city's then radical approach to workplace safety by banning smoking. Among them were several banks, an oil company, a long-distance telephone company, many stores, and the Alaska Court System.

One of the unions representing city employees challenged the new law on the ground that it violated agreed upon conditions of work. The union was represented at arbitration by a prominent Anchorage attorney and brought as its star witness a "scientist" under contract to the Tobacco Institute. His every argument against the ordinance was vigorously countered by the city. The city won. Health and safety superceded convenience of workers.

Dr John Middaugh, State of Alaska Epidemiologist, declared that the move by the Municipality of Anchorage was the greatest step on behalf of public health in Alaska since 1977, when eight percent of school children were turned away from school because their immunizations were not up-to-date. Enforcing compliance with that, then new, requirement put Alaska at the forefront nationally in suppression of childhood infectious diseases. The city's sapient move against smoking, like that of the Alaska Native Medical Center, showed public and private entities across the country the way to heightened workplace safety.

Submitted by: Chairman of Assembly at the request of the Mayor
Prepared by: Department of Law
For Reading: October 28, 1986

AMENDED AND APPROVED
Date: 12-9-86

ANCHORAGE, ALASKA
AO NO. 86-186

AN ORDINANCE AMENDING SECTION CHAPTER 16.90 OF THE ANCHORAGE MUNICIPAL CODE AND PERTAINING TO SMOKING IN MUNICIPAL STRUCTURES.

THE ANCHORAGE ASSEMBLY ORDAINS:

Section 1. Section 16.90.010 of the Anchorage Municipal Code is repealed and reenacted to read as follows:

16.90.010 Smoking in (PUBLIC PLACES) municipal structures.

A. Except as provided in subsection B of this section, it shall be unlawful for a person to smoke a cigarette, cigar or pipe or to offer tobacco for sale in any indoor place of a building, structure or other real property which is owned, leased or otherwise used or operated by the municipality.

B. A structure which is owned, leased or used by the municipality and operated by an independent contractor may contain smoking areas designated in accordance with Alaska Statutes 18.35.300 - .350.

Section 2. This ordinance shall become effective on January 1, 1987/ except that it shall become effective on July 1, 1987 for the Anchorage School District.

PASSED AND APPROVED by the Anchorage Assembly this 9th day of December, 1986.

Chairman

ATTEST:

Municipal Clerk

Smoking Attributable Mortality and Economic Costs in Alaska 1992-94

Catherine Schumacher, MD, MSPH[1]

ABSTRACT

Tobacco is one of the leading preventable cause of death in the United States and Alaska. Alaska has one of the highest smoking prevalences. The Smoking-Attributable Mortality, Morbidity and Economic Cost software developed by the Centers for Disease Control and Prevention was used to estimate the deaths and economic impact due to smoking in Alaska,.

In Alaska during the three year period 1992-94, 1416 deaths were estimated to be attributable to smoking, accounting for 19.8% of the 7159 deaths during that time. Direct medical care costs in 1993 due to smoking related illnesses were estimated at $96.5 million. Additional smoking related costs include indirect mortality costs of $183.2 million and indirect morbidity costs of $15.9 million. The total economic cost attributable to smoking related illness for 1993 is estimated to be $295.6 million. In summary, for the time period 1992-94, smoking was estimated to result in 470 deaths per year and in economic costs of almost $300 million per year.

INTRODUCTION

Tobacco is one of the leading preventable cause of death in the United States (1). The U.S. Centers for Disease Control and Prevention (CDC) estimate that smoking kills approximately 419,000 people in the U.S. each year (2). Deaths that are related to cigarette smoking include a portion of: cardiovascular disease; cancers of the lung, larynx, oral cavity, esophagus, pancreas, bladder, kidney and cervix; chronic bronchitis, emphysema, and other respiratory deaths (2,3). Smoking also results in deaths in the perinatal period because maternal smoking causes a portion of low birth weight infants and preterm deliveries, and has been associated with SIDS.

Alaska has one of the highest smoking prevalence rates in the United States. Alaska's smoking rates (28.1% among men and 25.0% among women) are similar to those found in Nevada and in the tobacco-growing states (4,5). Alaska Natives (46.5% among men and 39.3% among women) have even higher smoking rates (6).

(1) Alaska Division of Public Health, Section of Epidemiology, PO Box 240249, Anchorage, Alaska 99524.

To estimate the deaths and economic impact of smoking in Alaska, we used the Smoking-Attributable Mortality, Morbidity and Economic Cost (SAMMEC) software developed by CDC (3). SAMMEC uses attributable risk formulas to estimate the deaths from neoplastic, cardiovascular, respiratory, and pediatric deaths associated with cigarette smoking. SAMMEC software uses relative risks for current and former smokers for each of the causes of death shown in Table 1.

METHODS

Mortality

SAMMEC was used to estimate the deaths attributable to smoking for Alaska adults (age $\geq$ 35 years) and infants (age < 1 year) using the 1992-94 mortality data for Alaska. Age-specific smoking prevalences for all races were obtained from the 1994 Behavioral Risk Factor Surveillance Survey (7). Alaska Native prevalence rates were obtained from the 1991-93 combined data from the Alaska Behavioral Risk Factor Surveillance Survey (6) (Table 2).

Economic Costs

Direct health care costs are the costs for prevention and treatment of smoking related diseases. CDC has been using a new method to calculate direct medical care costs which has not yet been included in the SAMMEC software (8). CDC used the method to estimate that in 1990, $76 million was spent in Alaska on smoking related illnesses, which represented 6.13% of Alaska's total health care costs for that year (9,10). In order to estimate the 1993 direct health care costs for Alaska, that percentage was applied to the total medical care costs estimated for 1993. Nationally, about 7.1% of health care costs are attributable to smoking (11).

The SAMMEC program was used to calculate the indirect mortality costs, which are the foregone wages and salaries for persons who die prematurely from smoking related causes for 1993. The national 1990 expected lifetime earnings and housekeeping services by age and sex were used. Indirect morbidity costs were also estimated using SAMMEC, which are the lost earnings and productivity for persons disabled by smoking related illnesses.

THE FOLLOWING DOCUMENT(S) HAVE BEEN REFILMED TO ASSURE LEGIBILITY OR PAGINATION

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The SAMMEC program was used to calculate the indirect mortality costs, which are the foregone wages and salaries for persons who die prematurely from smoking related causes for 1993. The national 1990 expected lifetime earnings and housekeeping services by age and sex were used. Indirect morbidity costs were also estimated using SAMMEC, which are the lost earnings and productivity for persons disabled by smoking related illnesses.

Table 1

Relative Risks* for Death Attributable to Smoking for Current and Former Smokers, by Disease Category and Sex Used by SAMMEC Software Program

Disease Category (ICD-9 code)**	Male Relative Risk		Female Relative Risk	
	Current Smokers	Former Smokers	Current Smokers	Former Smokers
Adult Diseases (≥ age 35)				
Neoplasms				
Lip, oral cavity, pharynx (140-149)	27.5	8.8	5.6	2.9
Esophagus (150)	7.6	5.8	10.3	3.2
Pancreas (157)	2.1	1.1	2.3	1.8
Larynx (161)	10.5	5.2	17.8	11.9
Trachea, lung, bronchus (162)	22.4	9.4	11.9	4.7
Cervix uteri (180)	--	--	2.1	1.9
Urinary Bladder (188)	2.9	1.9	2.6	1.9
Kidney, other urinary (189)	3.0	2.0	1.4	1.2
Cardiovascular Diseases				
Hypertension (401-404)	1.9	1.3	1.7	1.2
Ischemic heart disease (410-414)				
Age 35-64:	2.8	1.8	3.0	1.4
Age 65+:	1.6	1.3	1.6	1.3
Other heart disease (390-398, 415-417, 420-429)	1.9	1.3	1.7	1.2
Cerebrovascular Diseases (430-438)				
Age 35-64:	3.7	1.4	4.8	1.4
Age 65+:	1.9	1.3	1.5	1.0
Atherosclerosis (440)	4.1	2.3	3.0	1.3
Aortic aneurysm (441)	4.1	2.3	3.0	1.3
Other arterial disease (442-448)	4.1	2.3	3.0	1.3
Respiratory diseases				
Pneumonia and influenza (480-487)	2.0	1.6	2.2	1.4
Bronchitis and emphysema (491-492)	9.7	8.8	10.5	7.0
Chronic airway obstruction (496)	9.7	8.8	10.5	7.0
Other respiratory diseases (010-012, 493)	2.0	1.6	2.2	1.4
Pediatric Diseases (age < 1 year)				
Short gestation, low birthweight (765)			1.8***	
Respiratory distress syndrome (769)			1.8	
Other respiratory conditions (770)			1.8	
Sudden infant death syndrome (798)			1.5	
Burn deaths			50% of total burn deaths	

* Relative to never smokers.

** International Classification of Diseases, Ninth Revision.

***Relative risk for infants born to a smoking mother versus infants born to a non-smoking mother.

Table 2.

Smoking Prevalences Used in SAMMEC Calculations

	Gender	Age (Years)	Percent Current Smokers	Percent Former Smokers
All Races*	**Men**	35-64	26.7	36.5
		65+	25.6	49.5
	Women	35-64	30.0	30.1
		65+	17.4	36.2
		Child-bearing ages 18-44***	25.0	
Alaska Native**	**Men**	35-64	44.7	34.8
		65+	38.4	36.7
	Women	35-64	39.2	24.8
		65+	13.2	21.1
		Child-bearing ages 18-44***	44.2	

* Alaska Behavioral Risk Factor Surveillance System, 1994
** Alaska Behavioral Risk Factor Surveillance System, 1991-1993
*** Smoking prevalences used to estimate infant deaths due to maternal smoking

Table 3.

Total Number of Deaths and Smoking Related Deaths by Gender and Cause Alaska Residents: 1992-94

	Male		Female		Total	
Cause of Death (ICD-9)*	**Number (%)**	**Total**	**Number (%)**	**Total**	**Number (%)**	**Total**
Cardiovascular (390-448)	374 (30.8%)	1214	159 (20.0%)	796	533 (26.5%)	2010
Cancer (140-208)	358 (38.3%)	933	188 (26.0%)	722	546 (33.0%)	1655
Respiratory (460-519)	138 (52.8%)	261	121 (50.0%)	242	260 (51.7%)	503
Perinatal (740-79, 798.0)	8 (7.8%)	103	6 (6.0%)	101	14 (6.9%)	204
Total (All Causes)	920 (21.0%)	4376	496 (17.8%)	2780	1416 (19.8%)	7159

*International Classification of Diseases, Ninth Revision.

RESULTS

Mortality

An estimated 1416 deaths during the three year period 1992-1994 were attributable to smoking, accounting for 19.8% of the 7159 deaths during that time (Table 3). Smoking accounted for 26.5% of all cardiovascular disease deaths, 33.0% of all cancer deaths, 51.7% of all respiratory deaths, and 6.9% of deaths from perinatal causes.

Of the 1402 deaths attributable to smoking among adults, 912 were men, and 490 were women (Table 3). Among women, smoking accounted for a smaller percentage of total deaths caused by cardiovascular disease and by cancer than did smoking among men. The percentage of respiratory deaths were similar in men and women. Alaska Natives account for 23.2% (329) of the smoking related deaths, although they account for 16.5% of the state's population (12). The distribution of smoking related deaths for Alaska Natives is similar to that seen for all Alaskans (Table 4).

Economic Costs

Direct medical care costs in 1993 due to smoking related illnesses were estimated to be $96.49 million (Table 5). Additional smoking related costs were an indirect mortality cost of $183.2 million and indirect morbidity cost of $15.94 million. The total economic cost attributable to smoking related illness for 1993 is estimated to be $295.63 million.

Table 4.
Total Number of Deaths and Smoking Related Deaths in Alaska Alaska Natives: 1992-94

Cause of Death (ICD-9)*	Number (%)	Total
Cardiovascular (390-448)	105 (27.0%)	388
Cancer (140-208)	115 (35.3%)	326
Respiratory (460-519)	68 (43.6%)	156
Perinatal (790-779,798.0)	7 (10.9%)	64
Total (All causes)	329 (18.0%)	1829

*International Classification of Diseases, Ninth Revisio..

DISCUSSION

During 1992-94, there were an average of 470 smoking related deaths each year in Alaska which resulted in economic costs approaching $300 million. Smoking results in more deaths than AIDS, alcohol, aircraft crashes, falls, fires, firearms and motor vehicle crashes (Figure 1).

In the U.S. in general, men have been smoking longer than women and most smoking deaths are caused by long term use of cigarettes. Because smoking rates are now similar for men and women, women may have higher smoking attributable mortality in the future. Alaska Natives are at even higher risk because of their higher smoking rates.

The majority of Alaska smokers (83.7%) began smoking between 10 and 20 years of age (13). In the U.S., by the 1980's, almost no regular smoking began after the age of 18 (14). Therefore, efforts to decrease tobacco use in the U.S. are being directed towards school-age children and adolescents , including limiting advertising and access to cigarettes (15). Additional tobacco control efforts include developing and enacting strong policies for clean indoor air, increasing excise taxes, and increasing educational efforts.

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Table 5.
Economic Costs of Smoking in Alaska: Estimates for 1993

Smoking related direct costs*	$96,490,000
Smoking related indirect mortality costs**	$183,200,000
Smoking related indirect morbidity costs**	$15,940,000
Total smoking related costs	$295,630,000

* Calculation of direct costs based on 6.13% of total medical care costs for Alaska for 1993 ($1,573,000,000)
** Indirect mortality costs calculated using SAMMEC with a 3% discount rate and 1990 earnings data

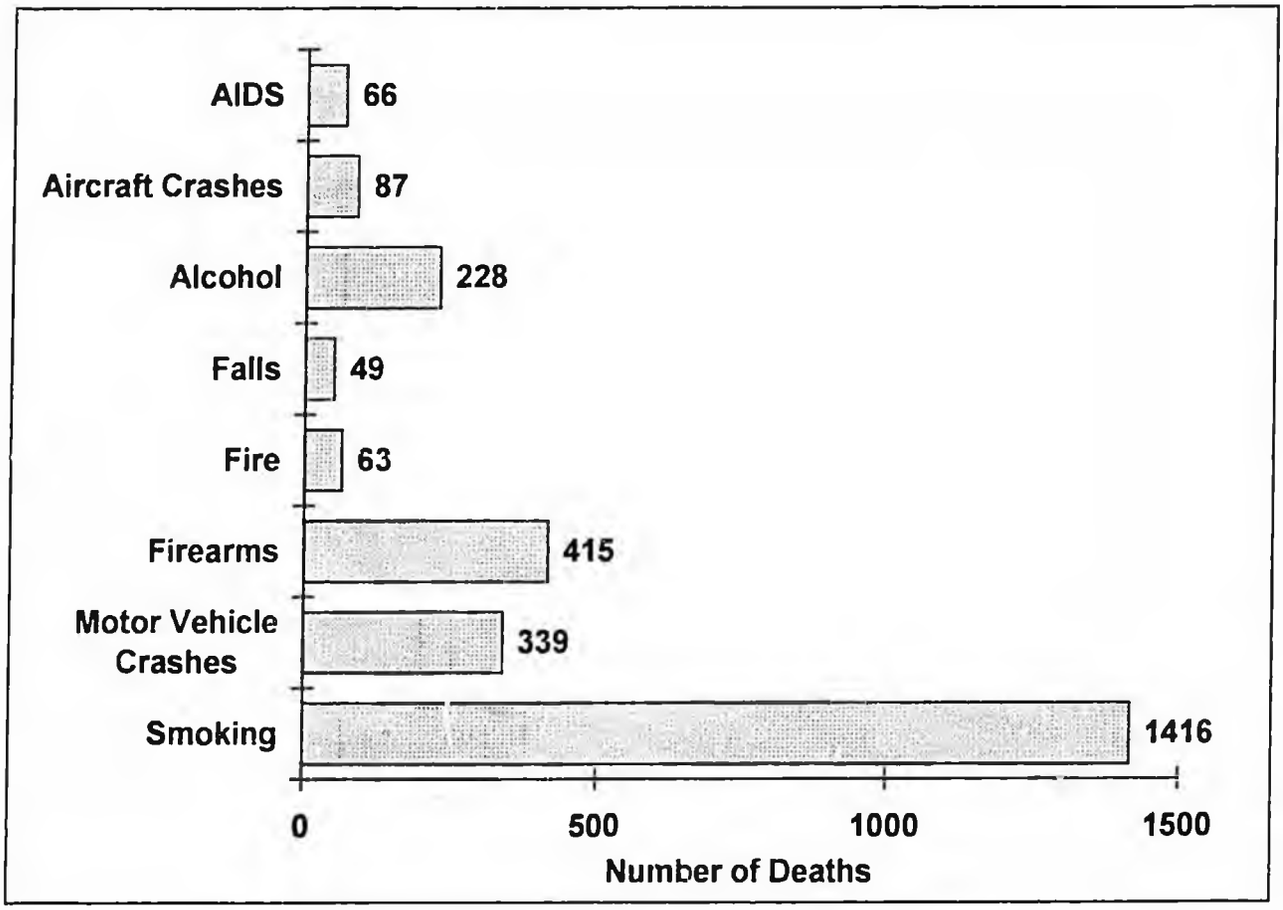

Figure 1: Alaska Resident Deaths by Selected Cause : 1992-94. Mortality Data for Alaska Residents 1992-94, provided by the Bureau of Vital Records, Alaska Division of Public Health. ICD-9 Codes: Aircraft crashes: 840-845; AIDS 42-44 ; Alcohol 291, 303, 305, 357.5, 535.3, 425.5, 790.3, 860, 571.0-571.3; Falls 880-888; Fires 890-899; Firearms 922,955,965,970,985; Motor vehicle crashes 810-825.

Prevention That Works

Peter Nakamura, MD[1]

ABSTRACT

The solution to the problem of tobacco use is complicated when adolescents are faced with numerous risk factors. Alaska has a partnership between federal, state, and private interest groups and individuals who are committed to addressing the problem. This partnership is being expanded through the creation of additional local alliances. Each of the partners has influenced state policies on the control of the use of tobacco products. Because of the difficulty in changing adolescent behavior through education and information there is a need to decrease access to the offending products. A proven way to decrease access and adolescent use of tobacco products is raising the cost of the products through higher excise taxes.

THE PROBLEM

Simply stated, the problem is the increased economic burden to the state and to individuals, decreased quality of life, increased morbidity and early demise associated with tobacco use. It is difficult to imagine anyone who is not at least aware of the basic problem.

Unfortunately, we have a major hiatus between knowledge and practice. I recently had the good fortune to hear Judge Dennis A. Challeen (1) lecture on how people of good sense end up in court. The good judge starts with the explanation that you and most readers of this article are NORPs. A NORP is a normal ordinary responsible person. We take information and process it in a way that leads to the correct choice. Unfortunately, most NORPs undergo NORP WARPS. These are best described as out of character behavior followed by self-correction and return to responsibility. It is during these WARPS that NORPS commit acts that can get them in trouble with the law or other standards set by society. Think of the loyal and faithful husband who was caught in a compromising position the one time he wandered beyond the bounds of holy matrimony. He can be paying for that action for the rest of his life.

This gets us to the underlying cause of THE PROBLEM. Teens are JUNIOR NORPs experiencing a MEGA NORP WARP. This is the time in which they are most vulnerable to high risk experimentation. Nearly 84% of Alaskan adults who smoke started smoking between the ages of 10 and 20. In Alaska, 27% of 12th grade girls and 18% of 12th grade boys reported daily use of cigarettes in a 1989 survey (2).

A SOLUTION

Just imagine if we had no automobiles and roads. The consequence would be that we would have no auto accidents and no traffic violations. The same can be said for tobacco and problems related to its use. However, automobiles, roads, and tobacco will be with us until we come up with a better means of daily transportation and a substance that is equally addictive and as well financed as tobacco.

Tobacco industry advertising has been extremely successful in affecting teenage use of tobacco. (3) Education efforts have not been equally efficient in reversing the trend. Limiting access to tobacco, alcohol, unhealthy practices and high risk behaviors are effective ways to assist our JUNIOR NORPs through the MEGA NORP WARP.

An analysis of countries around the world shows the powerful relationship between price and consumption. (4) The Canadian experience has demonstrated a direct negative correlation between increased tobacco tax and teenage use of cigarettes (Figure 1).

FEDERAL POLICY

The Food and Drug Administration (FDA) Commissioner David Kessler has called smoking addiction among young people " a pediatric disease" and an "epidemic." There has been no progress in reducing teenage smoking rates in the last decade despite continuing progress against adult smoking. The most recent data indicate that smoking among young people actually increased since 1991, with the largest increase among the youngest smokers. There was a 30% increase in smoking among 8th graders between 1991 and 1994. Between 1970 and 1986, the use of snuff increased 15 times and the use of chewing tobacco increased four times among male adolescents ages 17-19. (5)

On August 10, 1995, President Clinton announced proposed rules that will allow the FDA to affect the sale

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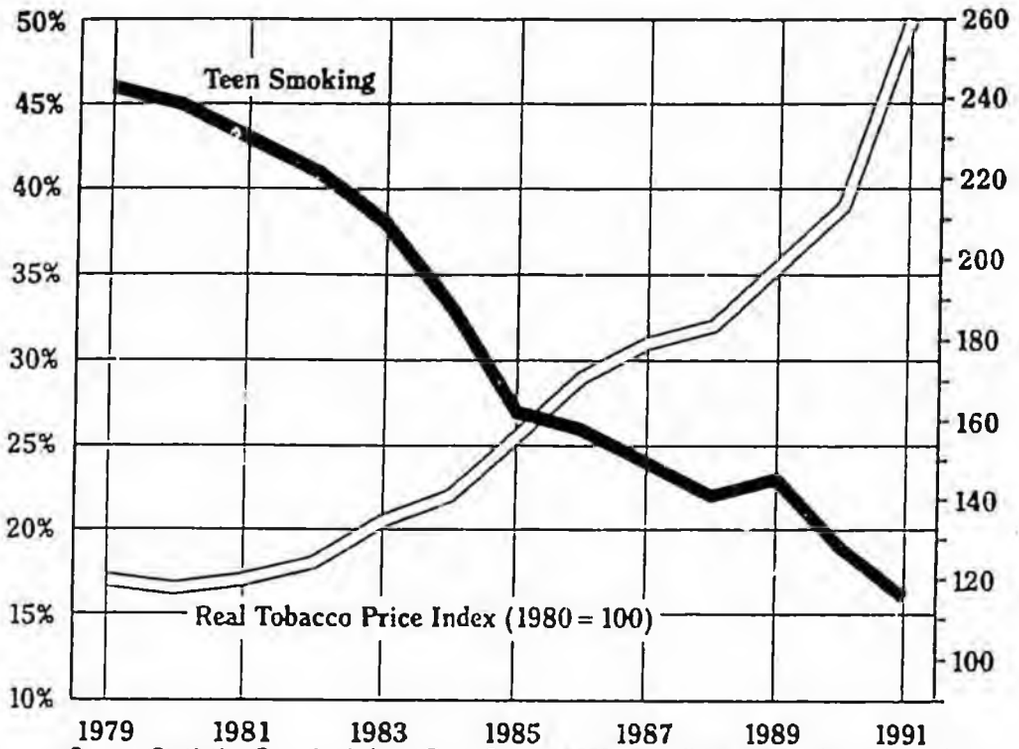
Figure 1: Real cigarette prices and cigarette smoking among Canadians age 15 to 19



Source: Statistics Canada, Labour Force Survey, 1991; Canadians and Smoking: An Update. *Health and Welfare, Canada, 1991.*

and distribution of nicotine-containing cigarettes and smokeless tobacco product to children and adolescents

The regulations would not only reduce children and adolescent access but will also affect the amount of positive imagery that makes these products so appealing to them. Cigarette vending machines, free samples, mail-order sales, and self-service displays would be prohibited. The objective of the proposed rule is to help the nation meet "Healthy People 2000" objectives on the adolescent use of tobacco products.

Federal Law (the Synar amendment) mandates state level enforcement of laws reducing youth access to tobacco products and requires states to reduce adolescent access to tobacco products. Failure to do so will result in the withdrawal of federal alcohol and substance abuse grant funds. (6) Because of the huge tobacco industry war chest, Federal policies leading to the funding of local tobacco control activities has been critical. CDC and other federal agencies have supported local capacity for tobacco prevention and control activities. CDC has funded 5-year grants to states for Initiatives to Mobilize for the Prevention and Control of Tobacco Use (IMPACT). The Federal Environmental Protection Agency (EPA) provided special funding to the Alaska Health Fairs for health displays, to the Cancer Society for staffing of Smokeless Class 2000.

Not everyone agrees with the role of government in setting health policy, but no one can deny that many of the positive changes experienced could not have taken place without such action. It is, however, critical that the public influence the directions taken by government policy. About fifteen years ago in my efforts to initiate a smoke-free environment in the Portland Federal Building, I found the greatest obstacles to be federal regulations, policies, and personal bias. Thanks to the Clean Indoor Air Act and related regulations, we no longer have to endure irritating and harmful smoke in our work environment, can travel in smoke-free planes, and enjoy a meal without the stench or acrimonious pall of tobacco smoke.

STATE POLICY

Governor Knowles has committed this administration to reducing adolescent use of tobacco. Based on the awareness that high cost of tobacco products will reduce the use of tobacco products by children, he has endorsed an increase in the state tobacco tax. Governor Knowles has stated his hopes that the higher tax "doesn't raise a single dollar" because it is successful in reducing tobacco use.

The role of Alaska's Department of Health and

Social Services in the prevention of tobacco use is within statutory obligations for promoting and preserving public health. The state has a responsibility for compiling data and for producing appropriate information to guide the formulation of sound policy. The state should also provide technical support and access to resources needed for constructive statewide and community based interventions.

The Division of Public Health Behavioral Risk Factor Surveillance System (BRFSS) (7) supported by state and federal funds has for several years collected and analyzed risk behavior information. Information from this and the Youth Behavior Risk Survey recently conducted through the joint effort of the Department of Education and Division of Public Health are reported in this issue. Information gained through these sources as well as other data bases such as the Bureau of Vital Statistics, the Alaska Native Cancer Registry maintained for many years by Dr. Anne Lanier, and the Report of Cancers in Alaska Natives (8) will be available to assist in developing sound tobacco policy for our state.

State tobacco control policy is guided by the Alaska Cancer Control Plan (9) and Healthy Alaskans 2000 (10). The focus of the policy is on reducing youth access to tobacco products, limiting tobacco product advertising, clean air, early childhood education, and the support of tobacco control advocacy activities.

The primary state role in tobacco control activities has been one of facilitation and support and often to get out of the way of the many organizations and individuals commited to the elimination of tobacco use. The Division of Public Health has been successful in competing for federal funds which have in turn been used to support community prevention activities and a statewide tobacco control coalition of over 220 organizational and individual members. The Alaska Tobacco Control Alliance (ATCA) advises the Division of Public Health on strategies, goals, and activities important to the reduction of tobacco use. An additional function of the Alliance is to provide a forum for statewide communication, advocacy, and the coordination of state tobacco control and prevention activities. The number one public policy goal of the ATCA is a major increase in tobacco tax rates.

The impressive membership of the ATCA steering committee includes representatives of: Alaskans for Drug Free Youth, Municipality of Anchorage, Bristol Bay Area Health Corporation, Tanana Chief's Conference, State of Alaska Division of Alcoholism and Drug Abuse, Yukon-Kuskokwim Health Corporation, KD Consulting, Nome Community Center, Alaska Native Health Board, Alaska Area Native Health Service, Alaska Health Fair, American Lung Association, Rural CAP Headstart, Alaska Dental Society, State of Alaska Sitka Teen Resource Center, Anchorage School District, Department of Health and Social Services, Division of Public Health, Alaska State Medical Association, Alaska Public Health Association, and the Alaska Council on the Prevention of Alcohol and Drug Abuse.

The Alaska Tobacco Control Program presently funds six local tobacco alliances (Juneau, Sitka, Ketchikan, Unalaska, Bethel, and Nome). The goal for FY97 is to establish a total of 20 tobacco alliances located in communities of 2,500 or more. These 20 alliances will reach 71% of the population in Alaska.

We Alaskans have a clearly defined problem with tobacco use and we can measure the adverse outcomes (see Schumacher in this issue). We have a federal-state-community partnership and a committment to deal with the problem. However no solution can be achieved without addressing the highly seductive and highly addictive nature of tobacco products. Simple guidance and education are not enough to influence them into making the "right" choice.

Reducing access to health risk products is one of the most effective measures available, and raising the cost of tobacco products through a higher excise tax is a proven method.

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The Prevalence of Tobacco Use Among Alaska Adults

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ABSTRACT

The Alaska Division of Public Health monitors the prevalence of smoking and other tobacco use among Alaska adults through the Alaska Behavioral Risk Factor Surveillance System, a telephone survey performed in cooperation with the U.S. Centers for Disease Control and Prevention (CDC). A total of approximately 1530 interviews are completed each year in Alaska by specially trained interviewers.

The prevalence of smoking among Alaska adults in 1994 (28.9%) was second highest in the U.S. Alaska Natives have higher smoking rates (42.9%). Overall, smoking rates have declined in the last three decades nationally. However, in recent years, little change has been found in the prevalence of smoking among adults. Alaska's rate of smokeless tobacco use has also been higher than the national rate of use. The majority of Alaska smokers (83.7%) began smoking between 10 and 20 years of age. In 1994, an estimated 121,000 Alaska adults aged 18 and older were current smokers.

INTRODUCTION

Because tobacco is one of the leading preventable causes of death and disease in the U.S. and in Alaska, the Alaska Division of Public Health monitors the prevalence of smoking and other tobacco use in Alaska through the Alaska Behavioral Risk Factor Surveillance System (BRFSS). The Alaska Division of Public Health implemented the BRFSS in 1990 with a point-in-time survey and has collected data continuously since January 1991. The survey is performed in cooperation with the U.S. Centers for Disease Control and Prevention (CDC) and gathers state based information about health related behaviors of Alaska adults through an ongoing telephone survey.

We report information from the Alaska BRFSS about smoking and other tobacco use among Alaska adults.

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METHODS

Alaska is one of the 50 states or territories participating in the nationwide BRFSS. Specially trained interviewers conduct 128 interviews each month using a standard BRFSS questionnaire. Interviews are conducted over the telephone using randomly selected telephone numbers. Respondents are selected from among the adult members of the household (age 18 years and older). A total of approximately 1530 interviews are completed each year in Alaska. Data are analyzed by the CDC and the Alaska Division of Public Health, and are weighted to adjust the survey sample to represent the state adult population. Alaska uses a stratified sampling design, in which the state is divided into four regions.

The BRFSS does not include persons living in institutions, such as dormitories, barracks or nursing homes. In addition, households without telephones are excluded. Telephone coverage is about 92% in Alaska although coverage varies by region (1).

Current smokers are defined as those who have ever smoked 100 cigarettes and who smoke now. In this report, we use the 1994 BRFSS data unless otherwise stated (2).

RESULTS

1994 Results

The prevalence of smoking among Alaska adults in 1994 (28.9%) was second highest in the U.S.; Nevada had the highest prevalence (29.1%). The national range was 15.0%-29.1%, with a median of 22.6% (3). Men were more likely to be smokers than were women (31.8% of men versus 25.7% of women). The age group with the highest smoking prevalence rates (37.6%) is 18-24 years.

Married persons were less likely to be smokers than persons who were divorced, widowed or never married (Table 1). Education was strongly related to smoking status (Table 2). Only 10% of college graduates reported smoking as compared to 44.5% of those with less than a high school education. Employment is also related to smoking; individuals who reported being out of work were most likely to be smokers (Table 3).

Table 1.
Smoking Prevalence by Marital Status

Marital Status	% Current Smokers
Married	23.4
Divorced	35.6
Widowed	34.8
Never Married	39.7
Unmarried couple	38.2

Table 2.
Smoking Prevalence by Education

Level of Education	% Current Smokers
Some high school or less	44.5
High school graduate or GED	37.3
Some college or technical school	31.1
College graduate	10.2

In Alaska, persons living in the bush area were more likely to be smokers (Figure 1).

Smoking Prevalence among Alaska Natives

Alaska Natives had higher smoking rates than the state rate (42.9% versus 26.6%)(1991-1993 BRFSS). BRFSS data showed that 46.5% of Alaska Native men smoke and 39.3% of Alaska Native women were current smokers.

Table 3.
Smoking Prevalence by Employment Status

Employment	% Current Smokers
Employed	28.1
Out of work	41.1
Homemaker	25.5
Student	28.6
Retired/unable to work	28.5

Table 4.
Alaska Adults Who Have Quit Smoking

Smoking Status	%
Ever smoked 100 cigarettes	55.9
Quit smoking	48.2*
Quit in past year	30.9**
Quit 1-15 years ago	46.6**
Quit over 15 years ago	22.5**

* Among those who ever smoked
**Among those who quit smoking

Trends in Alaska Smoking

In Alaska, smoking rates have declined. In 1982, a point-in-time survey found that 37% of adult Alaskans were current smokers, including 40% of men and 35% of women (4). The decline in smoking in Alaska corresponds to a national decline (5). In recent years, the BRFSS has shown little change in the prevalence

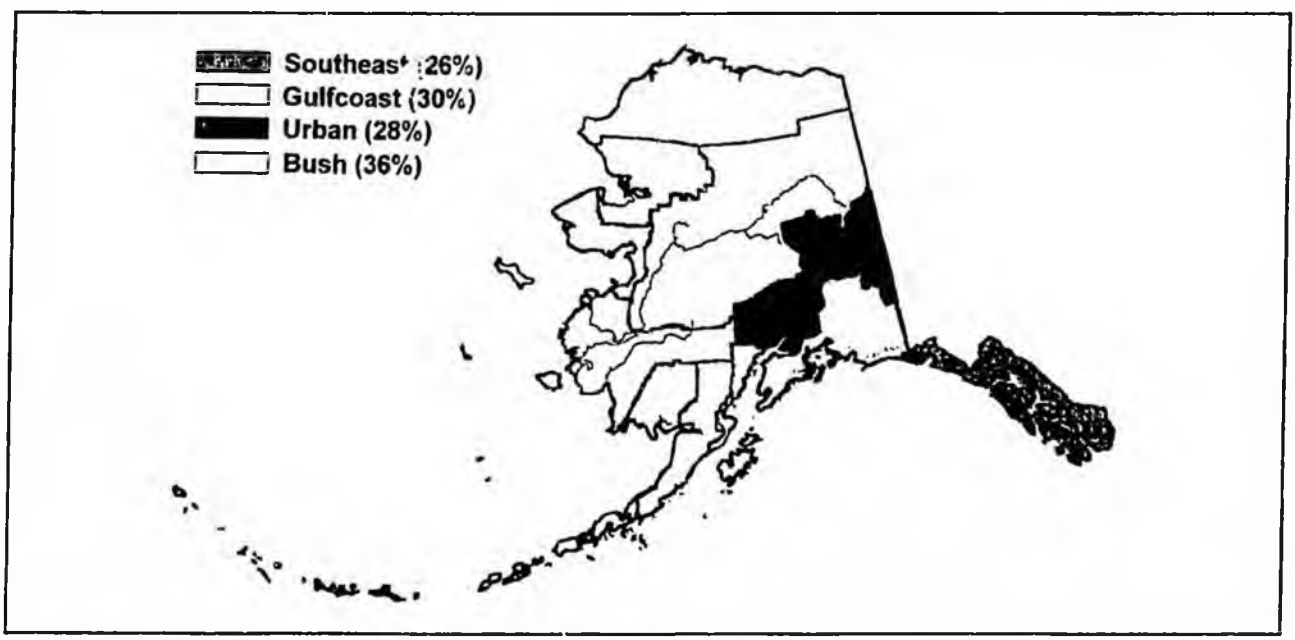

Figure 1: Smoking Prevalence in Alaska by Region: 1994 Behavioral Risk Factor Survey.

of smoking among adults. In 1991, 1992, 1993 and 1994 the prevalence of smoking was 26.0%, 28.0%, 25.8% and 28.9%,[1] respectively.

Smoking Practices

About one-half of Alaskans who have ever smoked have quit (Table 4). Among current smokers, 74.0% reported they would like to stop smoking (1993 BRFSS data). In 1994, half of all Alaska adults who smoked had tried to stop for at least 1 day in the past year.

The majority (83.7%) of Alaska smokers began smoking between 10 and 20 years of age (6). Almost 20% of those who have smoked in the past 30 days smoke more than 1 pack per day (Table 5).

Smokeless Tobacco

Current use of smokeless tobacco (chewing tobacco or snuff) was reported by 9.5% of Alaska men and 1.3% of women. Alaska's rate of smokeless tobacco use was higher than the national rate (5), based on 1991 data (Table 6). Use of smokeless tobacco products was higher among Alaska Natives (11.3%) than among the state as a whole (8.4%; 1991-93 BRFSS). The prevalence of smokeless tobacco use was highest in the Bush area (14.0% of men and 9.5% of women).

Table 5.
Cigarette Consumption by Alaska Smokers

Packs per Day Smoked	Percent*
1/2 or less	29.8
More than 1/2 to 1	51.0
More than 1	18.9

*Among those who have smoked in past 30 days

Table 6.
Current Use of Smokeless Tobacco
Comparison of Alaska and U.S.,1991

	Percent Current Users	
	U.S.*	Alaska**
Men	5.6%	9.5%
Women	0.6%	0.9%

* National Health Interview Survey (5)
**Alaska Behavioral Risk Factor Surveillance System, 1991 data.

DISCUSSION

An important Year 2000 Health Objective for the Nation is to reduce cigarette smoking to a prevalence of no more than 15% of people aged 20 and older (7). In Alaska, 28.6% of adults aged 20 and older are current smokers, almost twice the Year 2000 Objective. Clearly, Alaska has a long way to go.

Alaska has one of the highest smoking prevalence rates in the United States. Alaska's smoking rates are similar to those found in Nevada and in the tobacco-growing states(5). Alaska Natives have even higher smoking rates. An estimated 121,000 Alaska adults aged 18 and older are current smokers.[2]

Smokeless tobacco use (chewing tobacco and snuff) is also higher in Alaska. The consumption of smokeless tobacco has been increasing in the United States, and most new users are adolescent boys (10,11,12). Smokeless tobacco is a major risk factor for oral cancer (13). Additionally, smokeless tobacco products contain nicotine, and their use can support nicotine addiction and may lead to cigarette use.

Almost all Alaska smokers, as well as U.S. smokers, began smoking before 20 years of age. Efforts to decrease tobacco use in the U.S. are being directed towards school-age children and adolescents . including limiting advertising and access to cigarettes (14). Additional tobacco control efforts include developing and enacting strong policies for clean indoor air, increasing excise taxes and increasing educational efforts.

[1] The data for 1994 include people who smoke irregularly (about 1%).
[2] Using 1994 population age 18 and older and smoking prevalence of 28.9%.

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(continued on page 51)

Tobacco Use in Rural Alaska and the Trampling Tobacco Project

Darleen N. Beltz[1]

Unlike in the "lower 48 states," where tobacco was originally grown and has been used ceremoniously by Native Americans since ancient times, tobacco has a relatively recent history among Alaska Natives (see Fortuine and Reece in this issue).

What historians find particularly striking about tobacco use in Alaska Native communities is the use of tobacco by children, some of whom are very young. Tobacco has been used on teething children to alleviate the child's discomfort. Alaska Native people have stated that they did not know that tobacco was unhealthy, and that they wouldn't have used it had they known. Within their communities, tobacco has been so accepted that its use has not been questioned.

A traditional practice of some of the Native cultures is to have a potlatch for a member of the clan who has died. At this potlatch food and other items such as tobacco are be given to the invited guests. Another tradition was the burning as an offering food and other things liked by the individual who had died. By including tobacco, it became accepted and honored.

Reincarnation is a belief of some of the Alaska Native cultures. If a child has been named after a loved one who has died, the child is considered to be the reincarnated individual. The child may be offered foods that the person liked, because they feel the child is asking for it. In the past it might have been a favorite food, such as berries or fish. Tobacco has crept into this part of the culture such that if the deceased individual had used tobacco, it, too, would be offered to the child.

Some time after its introduction, tobacco began to take on a ceremonial value in some Alaska Native groups as a gift at potlatches or other ceremonial events. Today, such ceremonial use continues in some communities.

Despite the fact that tobacco use has long been a cultural norm in most Alaska Native communities, concern about health effects has been growing in recent years. The good news is that more and more Alaska Natives are expressing a desire to quit tobacco, to avoid exposure to second-hand smoke, and to help prevent children from becoming addicted to nicotine.

The Alaska Tobacco Control Alliance (ATCA) is a group of Alaskan people concerned about the use of tobacco in their communities and their state. Members of ATCA come from the Indian Health Services, Alaska Office of Health Promotion, American Lung Association, American Cancer Society, American Heart Association, the Native regional health corporations, tribal organizations, private for-profit organizations, private non-profit organizations, and individuals. It is from this group that the Trampling Tobacco Project developed. The Project is funded by a grant from the Robert Wood Johnson Foundation specifically to reach Alaska's rural people. The Centers for Disease Control also support Northwest Portland Indian Health Board in its proposal to work with Alaska in developing clean indoor air policies in Alaska Native rural communities.

The Alaska Native people, as other indigenous people, have been negatively affected by the infiltration of the beliefs of other cultures and epidemics. This is exemplified by "The Great Death," which refers to the 1900 Alaska influenza epidemic. This epidemic killed up to 60% of Eskimo and Athabascan people. The loss of so many people disrupted Native communities, leading to a generation of people born out of great suffering, confusion, desperation, heartbreak and trauma. The world of Native people had collapsed. Their way of life was in question and their medicine men had not been able to conquer the disease.

This set the stage for modern Natives to develop an attitude which some still hold. For example, not to talk about death or to act as if it had never happened. Today this attitude is the way some deal with disease and death. This new Native questioned his own way of life and embraced the new culture, abandoning his own. They were willing to be a part of the new world and to be lead.

Today, Native people are seeing the value of their past way of life and are bringing back some of the traditions to fit into the world they now live in. They are taking back control of their lives, but some beliefs are still present that will have to be changed.

In May 1995 rural Alaska Natives from around the state met in Anchorage and organized a group called STUN (Stop Tobacco Use Now). They addressed three areas: 1) sharing concerns about tobacco use: how tobacco use is a problem in their community; 2) attitudes, values, customs, and practices that contribute to tobacco use; and 3) what can be done to reduce tobacco use. The strategic plan which was developed addresses six aspects of the tobacco issue: 1) norms and social

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attitudes; 2) psycho-social dynamics; 3) cultural; 4) confrontational issues; 5) tribal leadership and clergy support and 6) education.

At the meeting, STUN members discussed the difficulty of approaching elders on tobacco use. Some stated that they felt guilty in asking people to give up tobacco because there are other substances that the Native people are being asked to give up that are perceived as being even more destructive to the Native way of life than tobacco, such as drugs and alcohol.

The STUN members stated that not only did many of the Native people not realize that tobacco was a health risk, some did not know that tobacco causes cancer. People were not intentionally hurting their children by offering them tobacco. Tobacco had become a part of the community, therefore it was important that action be taken at the community level. The norm would have to be changed by informing people and encouraging all leaders to be positive role models.

Even if leaders used tobacco, they should not use tobacco in the presence of children, and should discourage youth from smoking and chewing, limit sales of tobacco to children and develop clean indoor air policies.

Many of the health providers in the community also use tobacco because it has been socially accepted. The members stated that they need to be able to develop support programs to assist the providers and other community members in quitting.

A STUN member stated that Native people learn by watching, so when the time comes for a child to act, he/she does it correctly the first time. A concern for Native people in dealing with smoking cessation classes is that they should be able to succeed the first time. If they fail, they feel discouraged and are unlikely to try again.

The members stated it was important for them to continue to combat tobacco use in their communities and agreed to continue to stay in contact with each other. The members have been holding monthly teleconferences, brainstorming ideas as to what they could do to reach their community leaders. They agreed to develop a video from each region, and to combine the segments into one and make it available to all. The video will include testimonials of persons suffering from tobacco-related diseases and of persons who have tried to quit, both successfully and unsuccessfully. A resource packet has been developed and has been sent out to 150 communities to assist these and other anti-tobacco advocates in their work against tobacco use. Forty members of STUN have been trained in the "Community Oriented Tobacco Project." This curriculum, developed by rural Alaska Native communities for rural people, involves the school, a community member, and a tobacco coordinator who work together with the community in educating and motivating people to combat tobacco use. The Trampling Tobacco Project also sponsors an Iditarod musher, supports tobacco control PSAs and media events, and provides mini-grants for community tobacco control projects.

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Tobacco Use Among Alaska Youth

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ABSTRACT

The Youth Risk Behavior Survey (YRBS) is a national school-based survey used to monitor health risk behaviors that contribute to the leading causes of mortality, morbidity and social problems among youth and adults in the United States. Tobacco use is one of the behaviors monitored. Both high school and middle school surveys were administered to a representative group of Alaska high school and middle school students for the first time in 1995. Surveys were administered in a confidential and anonymous manner, taking care to assure student privacy. A total of 1,634 high school students and 1,265 middle school students completed surveys.

The survey found that Alaska high school students have smoking rates higher than the national rate and that Alaska Native youth have even higher smoking rates. Furthermore, smoking is not uncommon among Alaska middle school students.

Among high school students, 36.5% were current smokers (had smoked in the past 30 days) and 21.1% had smoked on 20 or more of the previous 30 days. Boys were more likely than girls to report having used chewing tobacco or snuff in the 30 days prior to the survey (23.5% of boys and 6.7% of girls). Smokeless tobacco use increased with grade level so that 29.1% of high school senior boys had used smokeless tobacco products within the previous 30 days. Over 60% of Alaska Native students reported smoking in the previous 30 days, 43.7% reported smoking 20 or more of the previous 30 days and 22.5% reported using chewing tobacco or snuff in the previous 30 days. Over half of middle school students reported having tried smoking at least once; about one-fourth smoked at least one day in the past 30 days and 5.6% smoked on 20 or more of the past 30 days.

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INTRODUCTION

The Youth Risk Behavior Survey (YRBS) was implemented by the Alaska Division of Public Health and the Alaska Department of Education in 1995 in cooperation with the National Centers for Disease Control and Prevention (CDC) (1). The YRBS is a national survey developed by the Division of Adolescent and School Health at CDC in collaboration with 71 state and local departments of education and 19 federal agencies. The survey is a component of a larger national effort to assess priority health risk behaviors that contribute to the leading causes of mortality, morbidity and social problems among youth and adults in the United States. The YRBS survey examines six categories of adolescent behavior: behaviors that result in unintentional and intentional injuries; tobacco use; alcohol and other drug use; sexual behaviors; dietary behaviors, and physical activity. We report information from the Alaska YRBS about smoking and other tobacco use among Alaska youth.

METHODS

The YRBS was administered to a sample of Alaska high school (grade 9-12) and middle school (grades 7-8) students during the spring of 1995. The high school survey consisted of 84 multiple choice questions; the middle school of 54 multiple choice questions. Students filled out the surveys during regular class time.

All public schools in Alaska with students in grades 9-12 for the high school survey and students in grades 7-8 for the middle school survey were eligible to be selected in the sample. Special education and English as a second language classes were excluded at the classroom level. Group home, correspondence and correctional schools were also excluded from the sample. A sufficient number of students were selected to give a ±5% margin of error for each question.

A two-stage sample design was used. In the first stage sampling, schools were selected from all public schools at the high school and middle school level in proportion to their enrollment size. For the second stage

sampling, classes of a required subject or a required school period were randomly selected. All students in the selected classes were eligible to participate in the survey. Students, parents, schools and school districts had the opportunity to decline participation.

Teachers were given a script to read to students which established guidelines for student privacy and anonymity and the importance of the survey. Each student was given an unmarked envelope in which to seal his or her survey before turning it in. These survey envelopes remained sealed until received at a central state collection site.

The state survey was analyzed by the CDC and Westat, Inc, a CDC contractor. Analysis included the scanning of the surveys and performance of extensive edit checks to identify survey inconsistencies. The data were weighted to adjust the survey sample to represent the state youth population. The weighted data make it possible to generalize the results to all Alaska middle and high school students defined by the sample.

At the same time that Alaska implemented the YRBS, a national YRBS was conducted at the high school level. At the time of this report, the 1995 national results are still being analyzed. Therefore, the report provides the 1993 national high school results as a comparison (1). A national YRBS at the middle school level has not been done. Therefore, national comparisons are not available for the middle school results.

RESULTS

Participation

At the high school level, 38 schools were selected. Of the 38 schools, 31 chose to participate in the survey resulting in a school response rate of 82%. Within the schools that participated, the student response rate was 78%, resulting in 1,634 respondents (Table 1). At the middle school level, 40 schools were selected as part of the statewide sample. Of the 40 schools, 32 participated, resulting in a middle school response rate of 80%. At this level, 80% of the sampled students completed the surveys, resulting in 1,265 respondents (Table 2).

High School Results

Alaska high school students were more likely to be current smokers and frequent smokers than were U.S. students (Table 3). Smoking rates were similar for boys and girls. Alaska students who are older and in higher grades were more likely to be frequent smokers (smoking 20 or more days of the previous 30 days) (Table 4). However, almost 20% of ninth graders were frequent smokers.

Of Alaska high school students who had smoked in the past 30 days, the most common ways of obtaining cigarettes were: borrowed from someone else, someone

Table 1.
Demographic Characteristics of High School Respondents: 1995 Alaska Youth Risk Behavior Survey

		Unweighted Number	Weighted Percent
Age(years)*	<=15	597	36.5
	16-17	821	48.1
	>=18	215	15.3
Sex*	Male	821	47.6
	Female	807	52.4
Grade	9th	497	29.8
	10th	383	25.8
	11th	477	23.0
	12th	269	21.0
	Ungraded/other	8	0.4
Race	White-not Hispanic	1147	68.3
	Black-not Hispanic	87	5.2
	Hispanic or Latino	53	3.3
	American Indian or Alaska Native	184	15.0
	Asian or Pacific Islander	75	4.3
	Other	62	3.9

*numbers may not total 1,634 because of missing responses

Table 2.
Demographic Characteristics of Middle School Respondents: 1995 Alaska Youth Risk Behavior Survey*

		Unweighted Number	Weighted Percent
Age (years)	<=12	200	15.8
	13	591	46.8
	>=14	474	37.4
Sex**	Male	651	52.3
	Female	608	47.7
Grade**	7	636	50.6
	8	606	48.0
	Other	15	1.3

*the middle school questionnaire did not include a question on race/ethnicity.
**numbers may not total 1,265 because of missing responses

Table 3.

Cigarette Smoking Among Alaska and U.S. High School Students: 1995 Alaska Youth Risk Behavior Survey and 1993 U.S. Youth Risk Behavior Survey

	Total		Boys		Girls	
	Alaska 1995	U.S. 1993**	Alaska 1995	U.S. 1993**	Alaska 1995	U.S. 1993**
%* ever tried smoking	72.1	69.5	71.4	70.1	72.8	68.7
%* smoked on ≥ 1 of the past 30 days	36.5	30.5	36.4	29.8	36.5	31.2
%* smoked on ≥ 20 of the past 30 days	21.1	13.8	21.4	14.0	20.6	13.5

* Percent of all high school students
**Source: Reference 1

asked to show proof of age.

Boys were more likely than girls to report having used chewing tobacco or snuff in the 30 days prior to the survey (Table 6). Alaska girls were more likely to use smokeless tobacco than were U.S. girls. Smokeless tobacco use increased with grade level, so that 29.1% of high school senior boys had used smokeless tobacco products within the previous 30 days. However, the data suggested that frequent use (use on 20 or more of the previous 30 days) was more common among boys aged 16 and 17 (Table 7).

Alaska Native students reported higher rates of smoking and of smokeless tobacco use than the state rate. Over 60% of Alaska Native students reported smoking in the previous 30 days, 43.7% reported smoking 20 or more of the previous 30 days and 22.5% reported using chewing tobacco or snuff in the previous 30 days (Table 8).

Table 4.
Percent of Alaska High School Students Who are Frequent Smokers* by Age and Grade: 1995 Alaska Youth Risk Behavior Survey

	%** Frequent Smokers
Age 15 or less	16.9
Age 16-17	22.1
Age 18+	27.5
Grade 9	19.7
Grade 10	17.8
Grade 11	23.1
Grade 12	24.7

*Frequent smokers = smoked on 20 or more of the previous 30 days
**Percent of all high school students

else bought the cigarettes, or the student purchased his/her own cigarettes (Table 5). Few used vending machines. Those aged 18 and older were more likely to buy their own cigarettes in stores, whereas younger students were more likely to borrow cigarettes. Even so, almost 12% of students aged 15 or less bought cigarettes in a store. Of students who bought cigarettes in a store in the 30 days prior to the survey, only 31% reported being

Table 5.
Usual Source of Cigarettes for Alaska High School Students: 1995 Alaska Youth Risk Behavior Survey

Usual Source of Cigarettes	%*
Borrowed	28.0
Bought at a store	26.3
Someone else bought	26.1
Some other way	12.6
Stole them	5.1
Vending machine	1.9

* % of students who smoked in past 30 days.

Table 6.
Use of Chewing Tobacco and Snuff among Alaska and U.S. Students: 1995 Alaska Youth Risk Behavior Survey and 1993 U.S. Youth Risk Behavior Survey

	%*
Alaska Boys	23.5
U.S. Boys**	20.4
Alaska Girls	6.7
U.S. Girls**	2.0

*% of all high school students who used chewing tobacco or snuff in the past 30 days
**Source: Reference 1

Table 7.
Use of Chewing Tobacco and Snuff among Alaska High School Boys by Age and Grade: Alaska 1995 Youth Risk Behavior Survey

	%* who are current users**	%* who are frequent users***
Age 15 or less	16.5	5.5
Age 16-17	26.1	8.2
Age 18+	29.8	6.6
Grade 9	19.6	7.0
Grade 10	22.0	6.5
Grade 11	25.3	8.3
Grade 12	29.1	6.2

*Percent of all high school boys
**Current use = used at least once in past 30 days
***Frequent use = used on 20 or more of the previous 30 days

Table 8.
Tobacco Use by Alaska Native High School Students: 1995 Alaska Youth Risk Behavior Survey

	%
%* who ever tried cigarette smoking	90.7
%* who smoked in the past 30 days	61.9
%* who smoked on 20 or more of the past 30 days	43.7
%* who have used chewing tobacco or snuff in the previous 30 days	22.5

*Percent of all Alaska Native high school students

Table 9.
Tobacco Use by Alaska Middle School Students: 1995 Alaska Youth Risk Behavior Survey

	%
%* who ever tried cigarette smoking	58.3
%* who smoked in the past 30 days	24.8
%* who smoked on 20 or more of the past 30 days	5.6
%* who have ever used chewing tobacco or snuff	30.3

*Percent of all Alaska middle school students (Grades 7 and 8)

Middle School Results

Over half of middle school students have tried smoking at least once; about one-fourth smoked at least one day in the past 30 days and 5.6% smoked on 20 or more of the past 30 days (Table 9). The results are similar for boys and girls, with the exception of smokeless tobacco use. Boys are more likely to report ever having used chewing tobacco or snuff than are girls (37.3% versus 22.1%).

The most common way middle school students obtained cigarettes is by borrowing them from someone else (37.2% of smokers): very few middle school smokers reported purchasing cigarettes at a store or vending machine.

DISCUSSION

Alaska adults have one of the highest smoking prevalence rates in the United States, similar to those found in Nevada and in the tobacco-growing states (2). The YRBS results indicate that Alaska high school students also have smoking rates higher than the national rate. Alaska Natives have even higher smoking rates. Furthermore, smoking is not uncommon among Alaska middle school students.

Smokeless tobacco use (chewing tobacco and snuff) is also used commonly by Alaska high school boys. The consumption of smokeless tobacco has been increasing in the United States, and most new users are adolescent boys (3,4,5). Smokeless tobacco is a major risk factor for oral cancer (6). Additionally, smokeless tobacco products contain nicotine, and their use can support nicotine addiction and may lead to cigarette use.

The majority of Alaska smokers (83.7%), began smoking between the ages of 10 and 20 years (7). Tobacco prevention education within schools is one of many interventions that can be effective at preventing tobacco use among youth. A 1994 Alaska School Health Education Profile survey conducted by the Alaska Department of Education found that 83% of secondary school principals reported that health education was a graduation requirement in their school (8). However 61% also reported that students were only required to take one health class from grade 6 through graduation.

Health education theories often are based on the premise that behavior change involves a certain level of knowledge about a behavior, attitudes that are supportive of the desirable behaviors and having the skills necessary to use the desirable behaviors. The School Health Education Profile found that 90% of health teachers teaching tobacco use prevention reported teaching to increase students' knowledge, 87% taught to improve students' attitudes and 76% taught skills to increase healthy behaviors (8).

An important Healthy People 2000 objective is for

no more than 4% of boys age 12-24 years to be current users of smokeless tobacco (9). Although the YRBS only measures youth who are in school, Alaska's estimate of 23% among high school boys indicates that we have a long way to go.

The statewide YRBS provides descriptive data on the *what, who, where* and *when* of tobacco use among Alaska students. The questions of *why* and *how* cannot be answered by this survey. However, the YRBS for the first time provides our state with baseline data that is comparable to the nation.

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Tobacco Erases 30 Years of Progress:

Preliminary analysis of the effect of tobacco smoking on Alaska Native birth weight

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Victorie Heart, RNC, MS[4]
Colleen M. Murphy, MD[1]

ABSTRACT

Objective: Investigate the relationship between tobacco and/or alcohol use and Alaska Native birth weight.

Methods: Data on weight, tobacco smoking and alcohol use among Alaska Natives were abstracted from 1989-91 Indian Health Service natality records based on birth certificates.

Results: Birth certificate data were available for 9,175 live births. Single live births were analyzed for 8,994 Alaska Natives. In women with no tobacco smoking the mean birth weight of their infants was 3,571 g; 1-5 cigarettes/day 3,429 g; 6-10 cigarettes/day 3,332 g ($p < .05$); and > 10 cigarettes/day 3,260 g ($p < .05$). Infants of Alaska Natives who reported no alcohol and no tobacco use had a mean birth weight of 3,579 g; alcohol use but no tobacco use 3,452 g; no alcohol but tobacco use 3,388 g; and both alcohol and tobacco use 3,281 g. ($p < .001$)

Conclusions: The mean birth weight of infants born to Alaska Native women with the highest use of tobacco were reduced by over 300 g compared to non-smoking Alaska Native women. Mean infant birth weight of tobacco smoking Yup'ik women in 1989-91 were reduced by over 400 g, comparable to weights reported in the 1960s.

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INTRODUCTION

In 1960-62 a cohort study in Southwest Alaska revealed a profile of birth weight and infant mortality similar to a third world country with low birth weights, and infant mortality four times greater than that of U.S. whites (1). In 1980, 20 years after the original study, mean birth weight and infant mortality were similar to that of U.S. whites, due in part to improved health care and immunizations (2).

Maternal tobacco smoking during pregnancy has been shown to decrease infant birth weight, both with maternal smoking (3-5) and exposure to environmental tobacco smoke (ETS) (6,7). Birth weight is further decreased with the combined use of tobacco and alcohol (8). As reported in this journal and elsewhere in the literature, tobacco smoking and ETS have been associated with increased pediatric respiratory disease (7, 9) and sudden infant death syndrome (10).

This study reports the relationship of tobacco smoking and alcohol use and Alaska Native birth weight.

METHODS

This review of single Alaska Native live births is based on Indian Health Service natality information. The data set is derived from State of Alaska Bureau of Vital Statistics birth certificate data for 1989, 1990, and 1991.

The Yup'ik Inuit predominantly comprise the population reported for the Yukon Kuskokwim Delta Service Unit; Inupiaq Inuit in Kotzebue, Barrow, and Norton Sound Service Units; Athabascan Indian in Interior Service Unit; Tlingit, Haida, and Tsimshian are included as Southeast Coastal Indians from Mt. Edgecumbe and Annette Island Service Units; and Aleuts are included in the mixture of Alaska Natives at the Alaska Native Medical Center (ANMC). Tobacco smoking and alcohol intake were recorded by the birth attendant from

prenatal records without regard to trimester of use. Smokeless tobacco use was not recorded during the years reported.

Mean weights for each category were compared using a two sided t-test with $p < .05$ for statistical significance.

RESULTS

The total number of Alaska Native births reviewed was 9,175 (3021 for 1989, 3099 for 1990, and 3055 for 1991). Of the 8,994 Alaska Native single live births, there were 4,093 female and 4,195 male births of 20 or more weeks gestation. The overall mean birth weight was 3,501 g. The mean birth weights by race were: Southeast Coastal Indian 3,581 g (n = 1,171, SE 16.7)($p < .05$); Athabascan Indian 3,489 g (n = 902, SE 18.0); Yup'ik Inuit 3,471 g (n = 1,879, SE 13.2); Inupiaq Inuit 3,468 g (n = 1,763, SE 13.5); and ANMC 3,475 g (n = 3,262, SE 9.9).

Tobacco smoking status was reported in 8,435 women. For all Alaska Native births of women who reported no tobacco smoking the mean birth weight was 3,571 g (n = 5,477, SE 7.38); 1-5 cigarettes/day 3,429 g (n = 1,025, SE 16.4); 6-10 cigarettes/day 3,332 g (n = 1,324, SE 15.2, $p < .05$); and > 10 cigarettes/day 3,260 g (n = 609, SE 24.5, $p < .05$) (Figure 1.)

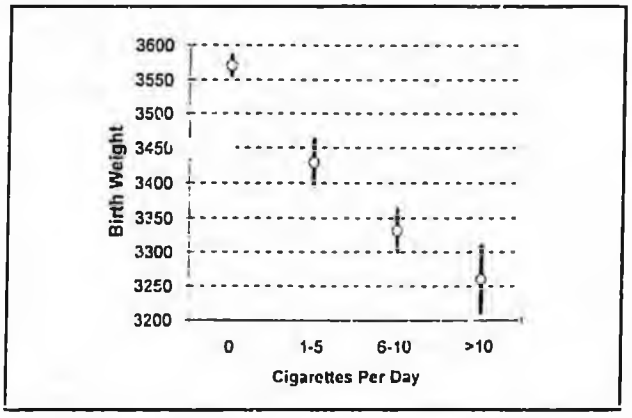

Figure 1. 1989-1991 Alaska Native mean birth weight in grams by number of cigarettes per day (bar indicates 95% confidence interval)

For Yup'ik Inuit who reported no tobacco smoking the mean birth weight was 3,512 g (n = 1,360, SE 14.6); 1-5 cigarettes/day 3,464 g (n = 116, SE 48.5); 6-10 cigarettes/day 3,248 g (n = 86, SE 74.4, $p < .05$); and > 10 cigarettes/day 3,110 (n = 25, SE 132.4, $p < .05$) (Figure 2).

All Alaska Native births were categorized by use of alcohol as well as tobacco. Among Alaska Native women who reported no alcohol and no tobacco use the mean birth weight was 3,579 g (n = 5,632, SE 7.1); alcohol use but no tobacco 3,452 g (n = 4,864, SE 8.9, $p < .001$); noalcohol but tobacco use 3,388 g (n = 5,120, SE 7.5, $p < .001$); and both alcohol and tobacco use 3,281 g (n = 5,376, SE = 7.7, $p < .001$) (Figure 3).

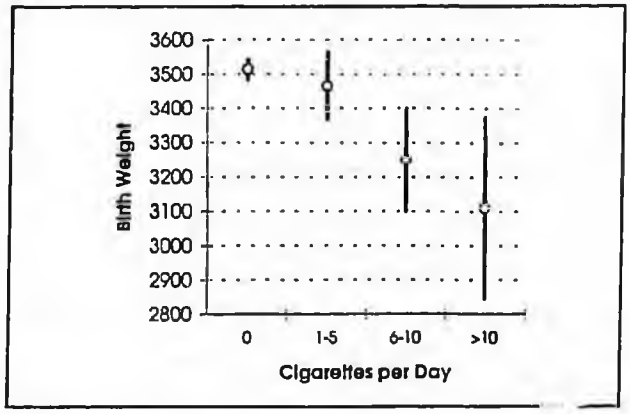

Figure 2. 1989-1991 Yup'ik Inuit mean birth weight in grams by number of cigarettes per day (bar indicates 95% confidence interval)

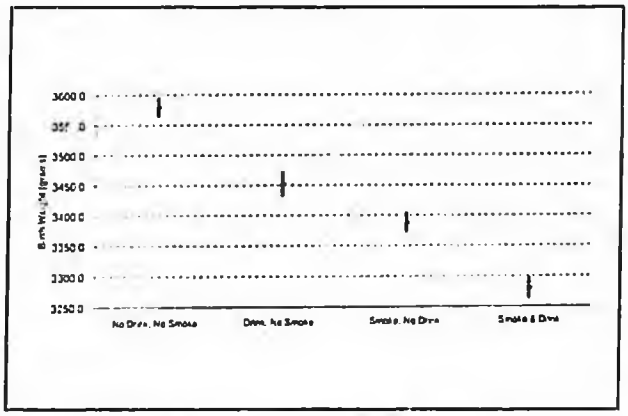

Figure 3. 1989-1991 Alaska Native mean birth weight in grams by tobacco smoking and use of alcohol (bar indicates 95% confidence interval)

DISCUSSION

The mean birth weight of infants born to tobacco smoking Alaska Native women was lower than the mean birth weight of infants born to non-smoking Alaska Native women. Women who reported the highest use of tobacco had infants whose weights were 300 or more grams lower. The mean 1989-91 birth weights of tobacco smoking Yup'ik women were lower than the mean birth weight for non-smoking Yup'ik women by over 400 g. The mean 1989-91 birth weights of tobacco smoking Yup'ik women was similar to the birth weights reported in 1960-62, when the infant mortality in the Yup'ik was 4 times that of U.S whites (1,2).

The observed lower birth weights with maternal tobacco smoking among Alaska Native mirrors that reported in North American Natives (3), as well as other populations (4,5). Decreased birth weight has also been reported with ETS. (6,7) The mean Alaska Native birth weights were also observed to be significantly lower with the combined use of alcohol and tobacco, as previously reported in Denmark (8). As shown in this journal and elsewhere in the literature, maternal smoking and

ETS have been associated with increased pediatric hospitalization for respiratory disease (7, 9) and sudden infant death syndrome (10). These data are more chilling for the future when one considers that Alaska Natives currently have one of the highest rates of smoking in North America (11).

The mechanism of decreased birth weight in maternal tobacco use appears in part to be associated with vascular constriction and decreased uteroplacental blood flow (12-15). Cotinine serum levels have been quantitatively associated with decreased mean fetal birth weight (16). Ultrastructual changes in placental villi and fetal capillaries have been documented in smoking mothers and hypoxia, nicotine and carbon monoxide have been shown to pass the placental barrier (17).

Though both alcohol and tobacco use are preventable causes of decreased birth weight, these data confirm that smoking makes a quantitatively larger contribution (3). Public health measures in Alaska should concentrate on elimination of maternal tobacco and alcohol intake, as well as exposure to passive smoking, during pregnancy.

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Association between Maternal Smoking and Severe Respiratory Syncytial Virus Infections and Sudden Infant Death Syndrome

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RESPIRATORY SYNCYTIAL VIRUS

Studies have clearly demonstrated that maternal smoking is associated with increased risk of lower respiratory illness (LRI) in the first few years of life. Respiratory syncytial virus (RSV) is the most common cause of lower respiratory illness, usually bronchiolitis or pneumonia, in infants and young children. Respiratory syncytial virus-related LRI is responsible for 100,000 hospitalizations and 5,000 deaths in the U.S. annually (1). In Alaska Natives, rates of RSV-associated hospitalization for children less than one year of age are 2 to 50 times the rates reported in other U.S. populations (2).

Passive smoke exposure has been shown to increase airway hyperresponsiveness in young infants and is related to persistent wheezing in grade school asthmatic children. In a case control study by McConnochie and Roghmann, any passive smoking and maternal smoking were statistically significant predictors of bronchiolitis (3). In a case control study by Duff et al, comparing actively wheezing children under two years of age to children without respiratory symptoms, a larger proportion of wheezing patients than controls were exposed to tobacco smoke, and most of the smoke-exposed children had cotinine levels (> 10 ng/ml) suggestive of heavy smoke exposure (4). A threshold level at which passive smoke exposure becomes clinically significant in causing or aggravating airway hyperresponsiveness has not been defined. Higher rates of asthma and increased usage of asthma medications have been documented in children exposed to mothers who smoke at least one-half pack of cigarettes per day. McConnochie and Roghmann found that maternal smoking was a powerful predictor of wheezing even in older children up to age 13 (5).

SUDDEN INFANT DEATH SYNDROME

A population-based study conducted in Sweden assessed risk factors for sudden infant death syndrome (SIDS). All infants surviving the first week of life were included (n = 279,938). The overall rate of SIDS was 0.7 per 1000 first-week survivors; maternal smoking doubled the risk. There was a clear dose-response relationship. It is estimated that in some developed countries smoking may be the single most important preventable risk factor for sudden infant death syndrome (6).

Maternal smoking was established as a risk factor in a U.S. study published in 1993 that compared 485 SIDS cases with 1,800 control infants. Results showed that the risk of succumbing to SIDS was four times higher for babies whose mothers smoked during pregnancy than for those whose mothers did not (7). Infants of mothers who smoked after the baby's birth also had a greater risk of SIDS, as did infants in households where the father or another family member smoked, and the increased risk was dose related (8).

In the 1988 National Maternal and Infant Health Survey, review of a number of demographic, prenatal, and environmental factors showed that, among characteristics generally thought to be risk factors, only maternal smoking during pregnancy was independently associated with SIDS. Data from this nationally representative sample indicate that if women refrained from smoking while pregnant, up to 30% of SIDS might be prevented (9).

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(continued on page 51)

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Smokeless Tobacco and Oral Disease

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The oral effects of smokeless tobacco are numerous. They include: oral and esophageal cancer; gum disease with early tooth loss; tooth decay; and halitosis (1). Women who do not smoke but use snuff chronically, are 50 times more likely to develop oral cancer than non-users (2). Young people are not immune from developing cancer and pre-cancerous lesions at the site of contact with the tobacco. The figure below shows marked leukoplakia in a 13-year-old Alaskan smokeless tobacco user.

Nationally there has been a dramatic increase in the use of moist snuff, especially in young people (3). Among Alaska Natives, there is widespread use of cigarettes and smokeless tobacco by both children and adults which exceeds the national average. Smokeless tobacco use among Alaska Native children has been reported in 13% of kindergarten children, increasing to 30% in high school (4). Results of a more recent study indicate that as many as 68% of children 7-11 years old reported they had used snuff in the past and as high as 52% had used it recently (5). There was no statistically significant difference in use between boys and girls. Use increased with age and positive correlations were found with peer and family use. When these same children were questioned, 96% said they understood that smokeless tobacco products could cause oral cancer!

The Oral Health Survey conducted by the Indian Health Service in 1991 showed that in the Alaska Area the number of observable oral soft tissue changes found in school children which could be attributed to the use of smokeless tobacco was 30% when all forms of oral manifestations were included (6). Three-fourths of these lesions are reversible within a year if the habit is discontinued.

Other studies substantiate the fact that smokeless tobacco use in American Indians and Alaska Native children is considerably higher (30-40%) than the same age group in the general population (5). Rates of occasional use of smokeless tobacco by American Indians and Alaska Natives are high even among the very young—74% of the girls and 90% of the boys reported weekly use of smokeless tobacco began using it before the age of 10.

It is obvious that children are not capable of comprehending the lifelong consequences of using snuff , nor have they developed the refusal skills necessary to avoid this dangerous habit. Use by family members, peers, and community leaders encourages children to model those they look up to. Experimentation generally leads to chemical addiction. Abstinence from smokeless tobacco results in signs and symptoms of nicotine deprivation that are similar to those seen in smokers after they stop smoking. Anecdotal reports of kindergartners placing a pinch of snuff in carbonated beverages and downing it to get a caffeine enhanced nicotine buzz are perfect examples of the type of experimentation and progression to more powerful medications and combinations. This progression has lead investigators to label snuff as a "gateway " substance since it frequently leads to the use of cigarettes, alcohol, and illicit drugs.

Even more alarming is the fact that in the communities where these surveys were conducted, family and community leaders did not consider smokeless tobacco use by children to be a major health concern. Unless the concern of these individuals can be raised; the future of American Indian and Alaska Native will include poor oral health.

Recognizing the above, community oriented prevention strategies are needed. Successful programs include the development of coping and refusal skills, emphasis on recognition of short term health consequences, and the inclusion of influential community role models. As health care providers we cannot allow children to be passive participants in their own distruction. Until they reach the age where they can make informed independent decisions about their own health they must be protected and encouraged by those responsible for their care.

(continued on page 51)

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Nutrition and Smoking Cessation

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The fear of weight gain serves as a barrier for many clients who have a desire to stop smoking. This fear is founded on common knowledge and documented changes. The average weight gain following smoking cessation is about ten pounds and 15 % of women may gain thirty pounds or more (1). The physician's challenge is to help clients manage their expectations and behaviors to keep the weight gain to a minimum.

PHYSIOLOGICAL MECHANISMS

The smoker has a higher total energy expenditure than the non-smoker. The metabolic rate increases under the influence of nicotine. Caffeine also increases this rate, so frequently smokers have two agents acting to increase their caloric expenditure. Nicotine does not seem to have an appetite suppressant effect, nor does transdermal nicotine prevent weight gain. Smokers also have increased levels of lipoprotein lipase, the enzyme which facilitates removal of lipid from the blood and entry through the capillary wall into the adipose cell. This level does not decrease immediately at cessation of smoking and may be a factor in the weight gain that is common after quitting (2).

The use of dexfenfluoramine or fluoxetine did not prevent the weight gain associated with smoking cessation. The serotonergic drugs reduced initial weight gain following smoking cessation, but when they were discontinued, weight increased. Clients had a total weight gain similar to those who had not had drug therapy (3). Helping clients reframe the weight gain as the weight they would be if they had not been a smoker has been suggested (4). It is important to emphasize that the health risks from smoking remain greater than those from additional weight .

Components in cigarette smoke are implicated in free radical mechanisms of protein damage. To compensate for this, the Recommended Dietary Allowance for ascorbic acid (Vitamin C) is forty milligrams more per day for the smoker (5). Functions of other anti-oxidants such as Vitamin E and beta carotene in damage prevention are being studied.

Smoking also influences the olfactory and taste sensations associated with food. Self-reported feelings of hunger increase during cessation even by clients who were treated with nicotine replacement. As most smokers consume more calories, alcohol and sugar but less vitamins than non-smokers, these feelings are often dealt with by eating high sugar, high fat foods.

Nicotine also decreases the lower esophageal sphincter pressure resulting in frequent bouts of heartburn or esophagitis. Tobacco cessation reduces or eliminates these symptoms although they may continue during the withdrawal period. Cutting down on acid foods, fatty foods, and caffeine may help alleviate these problems.

BEHAVIORAL CHANGES

Part of the challenge in stopping smoking is the replacement of the hand to mouth activity. It is important to alert the client about avoiding the substitution of high calorie foods for cigarettes. Clients also need to recognize that often food serves as the trigger for a cigarette. Caffeine consumption parallels cigarettes smoked. Caffeine must also be factored into the total smoking cessation experience, as caffeine withdrawal also produces symptoms.

MANAGING WITHDRAWAL

Food choices during withdrawal can alleviate symptoms or promote greater discomfort. Heartburn may be decreased with a low fat diet and increased fluid intake. Smokers should be encouraged to monitor their food choices using the USDA Food Guide Pyramid just as they monitor their smoking behavior (Figure 1). The first cup of coffee should be accompanied by a nutrient containing food rather than a cigarette. Help the client review activities and times which elicit smoking. Have them list options which can be pursued to change either place, environment, or mental attitude in those situations.

Certainly exercise should be pursued as an alternative for sedentary smokers. Adding movement will keep the energy expenditure at a higher level and promote pulmonary and cardiovascular fitness. It needs to be a component of any healthy lifestyle. Help clients identify those activities they are willing to pursue so that they will be an enjoyable part of their day. Ask questions about exercise patterns on subsequent visits to emphasize their importance. In Alaska, the smoker who plans to quit needs to identify activity options for all seasons.

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Walking is the easiest and least stressful exercise and requires little preparation. Traditional activities from berry picking to skiing should be encouraged.

POST-WITHDRAWAL NUTRITION

Relapse is a reality. Most clients attempt to quit smoking many times before they are successful. Each one of these attempts should be framed as a learning experience, rather than a failure. Certainly this is true of the client who has gained weight in initial attempts. Clients can develop better dietary and exercise patterns. Those changes may play a role in harm reduction from continued smoking.

There are many educational materials available which can be used to help guide a person's food and exercise choices. The American Cancer, Heart, and Lung Associations, the National Cancer Institute, the Cooperative Extension Agency and hospital patient education departments are some sources. Such materials increase clients' awareness of appropriate steps to take in stopping smoking. See the sample patient hand-out on this page.

For clients needing or requesting personalized dietary information connect them with a dietitian in your community. More intensive programs of intervention with group support or one-on-one counseling are also available in many places. Most of these feature healthy lifestyle changes which contain a nutrition component.

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The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Indian Health Service.

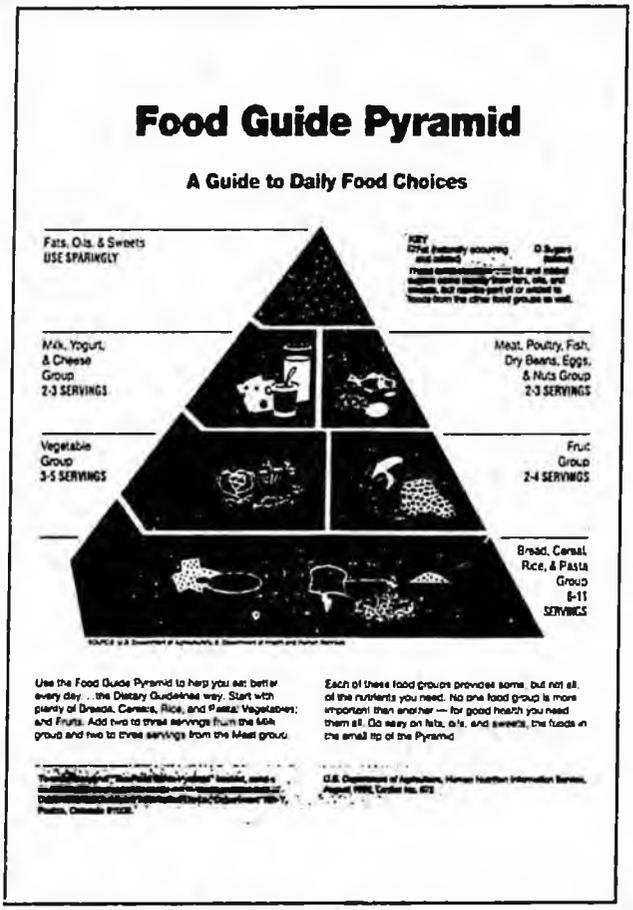

Figure 1. USDA Food Pyramid.

WHY WEIGHT ?

Be aware of when you eat and when you smoke. Does one act trigger the other?

Choose other things to do as you quit-

- Walk
- Hike
- Swim
- Join an athletic club and attend classes
- Learn a new skill

Follow the Food Guide Pyramid

Choose fruits and vegetables as between meal foods

Chew sugarless gum

Drink water daily

Cut down on coffee, tea, soda, and chocolate

Learn to relax

Increase in Lung Cancer in Alaska Natives:

How high will the rates go?

Anne P. Lanier, MD, MPH[1]

Cancer of the lung has risen dramatically among Alaska Natives in recent years. It is now THE leading cause of cancer death in Alaska Native men and women. This is a remarkable fact considering that cancer was reported to occur infrequently in this population as recently as the middle of the century. Lung cancer is now the most frequently diagnosed cancer in Alaska Native men, and ranks second in women. It is also the cancer for which the rates are increasing most rapidly. In1950, *one* cancer death in an Alaska Native was recorded to the Territory's office of vital statistics (1). Lung cancer deaths in Alaska Natives now approach 30 per year (2).

In 1969 (the first complete year of data in the Alaska Native Tumor Registry), six patients were diagnosed with lung cancer. In 1995 there were 45, yet the population increase from 1970 to 1990 was less than double (51,000 to 86,000).

Several early physicians were impressed by the low occurrence of lung cancer in the Alaska Native population and reported their findings. In the late 1950s and early 1960s, E. Fuller Torrey found only four cases of lung cancer among 170 cancer patients seen at the Indian Health Hospitals in Anchorage and Mt. Edgecumbe from 1956-1961 (3). Regarding the findings for lung cancer, he stated that "the low incidence is striking".

M. Walter Johnson reviewed cases at the Alaska Native Medical Center and found only nine patients with lung cancer diagnosed during the seven year period, 1969-73. There were five men (all heavy smokers), four women (one of whom was a smoker)(4). All four cancers in women were adenocarcinoma. Robert Fortuine reviewed cancer data for the Bethel region for the years 1957-67. Among 85 patients diagnosed with cancer at the Bethel hospital during those years, five had lung cancer, four of the five patients were men (5).

Figure 1 compares incidence rates for lung cancer in Alaska Natives for the last 25 years with those of the US. Rates for AN are from the Alaska Native Tumor Registry. US data are for the White population and are taken from the National Cancer Institute's SEER (Statistics, Epidemiology and End Results) program; a nationwide system of population-based tumor registries in the US (6). The SEER program has been in existence since

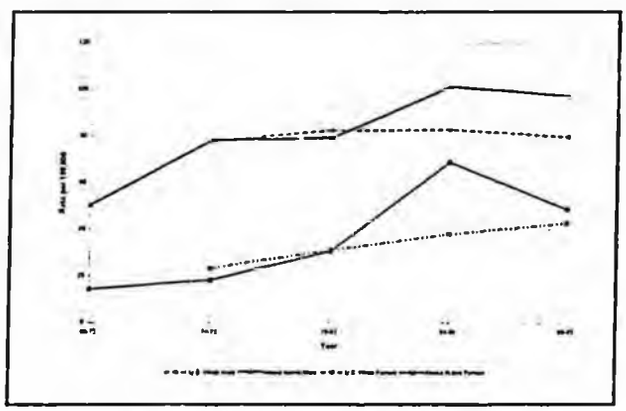

Figure 1. Incidence rates of lung cancer for men and women, Alaska Native vs. US Whites (rates age-adjusted to the US 1970 population.

1973. Cancer incidence data are not available for the non-Native population of Alaska. The figure indicates that Alaska Native rates for lung cancer were below the US in the sixties, caught up in the seventies, and now *exceed* US rates for both men and women.

Rates of deaths from lung cancer are available for a longer period of time. Figure 2 compares death rates from lung cancer for Alaska Natives and US whites for most of the 20th century. The curves for lung cancer in Alaska Natives parallel those of US whites. However, the curves are shifted to the right indicating that, compared to the US in general, the increase in lung cancer death rate began about 20 years later in Alaska Native men, and about 10 years later in women. Although there is little information about past tobacco use patterns in Alaska, reported delay of frequent regular use of to-

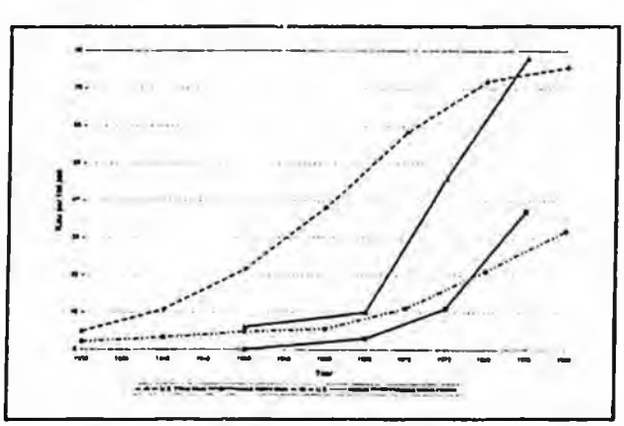

Figure 2. Death rates for lung cancer for men and women, Alaska Native vs. US (rates age-adjusted to the US 1970 population)

(1) Alaska Area Native Health Service, Indian Health Service, 250 Gambell Street, Anchorage, Alaska 99501.

bacco in rural Alaska until after World War II (in contrast to after World War I in the "lower 48") would explain the delayed rise in lung cancer death. As other articles in this issue document, the prevalence of current smokers in Alaska Natives is nearly double that of the national average. In addition a large number of adults (nearly 30%) are ex-smokers. It is impossible to predict exactly when the lung cancer epidemic will peak or how high it will go, but tobacco related deaths now exceed the national average. This is particularly regretable since lung cancer and other tobacco-related deaths are PREVENTABLE.

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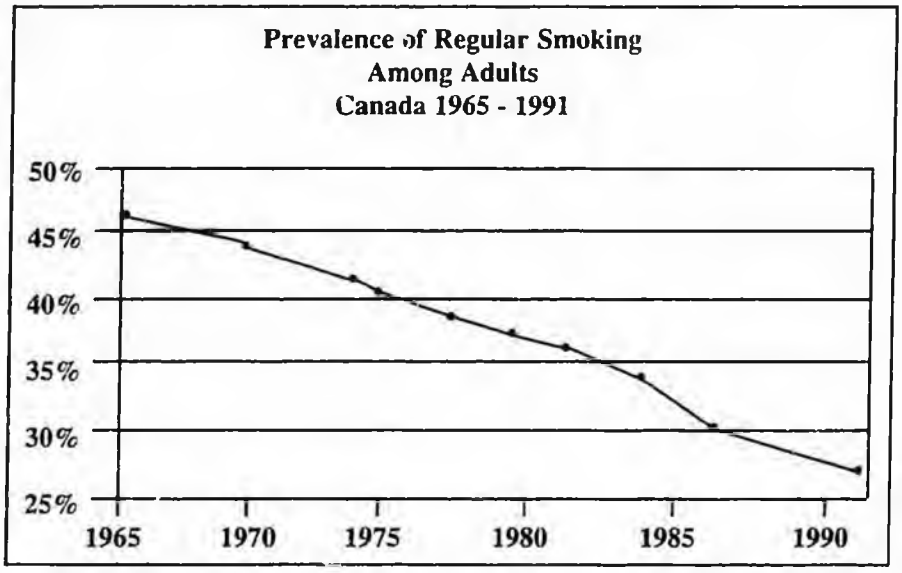
Tobacco Taxes: The Canadian Experience

David T. Sweanor[1]

Tobacco control efforts in Canada are now generally considered to be among the most effective in the world. During the past decade, not only were taxes increased to among the highest in the world, but tobacco advertising was banned, prominent warnings were placed on packages, and legislated protection from environmental tobacco smoke has been implemented for a great many areas. As a result of all these measures, Canada has seen a reduction in tobacco consumption that is greater than any other major country has ever accomplished in any ten year period. There has also been an accelerating pace to this decline (see graph).



This report concentrates on taxation policy. That is not to say that other factors have not been an important part of Canada's reduction in tobacco use over the past 10 years. But the evidence suggests that, of all elements, the single most effective policy has been increasing taxes.

It is generally recognized in economic theory, as well as in every day life, that purchasing decisions are influenced by changes in the price of goods. Economists talk about the degree of responsiveness of demand to changes in price as a product's "price elasticity of demand." American research has suggested that tobacco products show a price elasticity of about -0.4 among adults. The research also indicated that young people were particularly price-sensitive. In fact, the most comprehensive look at teenagers in the United States indicated a price elasticity of -1.4. What these figures mean is that every 10% increase in the "real" (i.e., inflation adjusted) price of tobacco would reduce adult consumption by about 4% and youth consumption by about 14%. Canadian experience with raising taxes during the past decade has lead to estimates of price elasticity that are very much in line with the earlier American research.

Prevalence declines in Canada have been very significant over time, and particularly steep during the time of rising prices. An analysis of major prevalence surveys from the Canadian government shows a clear trend. Prevalence of regular smoking has fallen much more quickly as prices rose in the past 10 years. Prevalence of regular smoking among adults in Canada decreased from 46% in 1965 to 26% in 1991. The average annual decline in regular smoking up until 1981 was approximately 1.5%. Between 1981 and 1991, when taxes increased significantly, the average annual decline increased to approximately 3.2%.

The research on the effects of tobacco price increases indicated that young people were more price-sensitive than adults. The Canadian experience confirms this view. The most telling indication of price-sensitivity is shown when we juxtapose teenage smoking trends and the real price of cigarettes (see Nakamura this issue).

The relationship between price and demand is such that the tobacco tax increases, while reducing consumption, led to massive increases in tobacco tax revenue. From the standpoint of any government, the revenue gains are enhanced by the fact that taxes make up only a portion of the final selling price. Therefore an increase in the tax represents a proportionately smaller increase

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in overall price. This means that a government with a tobacco tax that currently represents 20% of the retail price of cigarettes could double its tax per pack while total sales would be expected to decline by only about 8%. The net revenue gain would be in the range of 84%.

The Canadian experience has been replicated elsewhere. This report is intended as a case study in using tax policy as a key element in a comprehensive tobacco prevention and control strategy. The industry knows every bit as well as the health lobby that increases in tobacco tax are the single most potent of all currently used measures to reduce tobacco consumption.

Due to cigarette smuggling caused by low U.S. tobacco taxes, the Canadian government announced a rollback in its federal tax on February 8, 1994. The rollback reduced the federal excise tax by between 50 cents and $1.00 (CD) per pack. Quebec, Ontario, New Brunswick, Nova Scotia and Prince Edward Island also reduced provincial taxes in this range.

The tax rollback was a response to growth in cigarette smuggling resulting from the tax discrepancy between Canada and the U.S. Canadian manufacturers shipped large quantities of tobacco products free of Canadian taxes to the northern United States, from where smugglers would bring them back into Canada. The fact that Canadian cigarettes are a different blend from American, and that there is very little demand in Canada for the American style means that virtually all cigarettes smuggled into Canada originated from Canada. Smuggled cigarettes represented between 20 and 30 percent of the total Canadian market, and a higher percentage in Quebec, Ontario and New Brunswick.

The tobacco industry warns that the U.S. will face a smuggling problem similar to Canada's if the U.S. raises tobacco taxes. In fact, a higher U.S. federal tax would eliminate smuggling along the Canadian border. By balancing out price discrepancies, such a tax increase would substantially reduce the small amount of bootlegging that occurs between states, between Native American reservations and states, and between military bases and states.

Alaska should not encounter a smuggling problem like Canada's if a tax increase is enacted. Alaska's population is not close to a low tax jurisdiction since the big tax reductions happened in Eastern Canada. The Western provinces refused to lower taxes and have avoided any significant smuggling problems.

This article is a synopsis of the following report:

Sweanor DT, Martial LR, Dossetor JB. The Canadian tax experience: A case study. The Non-Smokers' Rights Association (Canada) and The Smoking and Health Action Foundation (Canada). August, 1993.

Alaskans Voice Strong Support for Tobacco Tax Increase

Anne Marie Holen[1]

Almost three-quarters of Alaskans 18 and over support a major increase in state tobacco tax rates, according to a recent survey conducted by Mathematica Policy Research of Princeton, New Jersey. The survey was funded by the Robert Wood Johnson Foundation which supports tobacco control activities in Alaska through a SmokeLess States grant to the Alaska Native Health Board.

The survey was conducted to assess public support for a $1 per pack increase in the state cigarette tax. Such an increase has been specified in several bills introduced in the Alaska Legislature this session, and was included in the recommendations of the Long Range Financial Planning Commission as a way to raise new revenue and reduce future health care costs in the state by discouraging tobacco consumption.

Because initial publicity in Alaska about the tobacco tax proposal was largely in the context of addressing the state's fiscal gap, the survey included questions about that issue. Responses revealed that 74% of Alaskans have heard about the fiscal gap and that 72% believe that the fiscal gap can be closed only with a mix of spending cuts and new revenue sources.

The survey also provided side-by-side comparisons of public support for various measures to reduce the fiscal gap. From the responses, it is clear that alcohol and tobacco taxes are by far the most popular sources for new revenue. When asked to choose between alcohol and tobacco taxes, 31% indicated a preference for a tobacco tax, 29% for an alcohol tax, and 40% had no preference. When compared to other measures such as a motor fuels tax, state income tax, and state sales tax, preference for a tobacco tax increase ranged from 68% to 76%.

Other questions and answers include the following:

Now, I would like to turn to tobacco taxes. The current Alaska state tax is 29 cents per pack of cigarettes. In general, do you favor or oppose increasing Alaska's tobacco taxes by one dollar per pack to help close the state's fiscal gap?

	Tobacco Use			Political View			
	Non-users	Users	Both		Liberals	Moderates	Conservatives
Strongly Favor	26%	49%	60%	Strongly Favor	53%	52%	45%
Somewhat Favor	29%	25%	24%	Somewhat Favor	20%	23%	30%
Somewhat Oppose	9%	5%	4%	Somewhat Oppose	1%	8%	5%
Strongly Oppose	30%	16%	9%	Strongly Oppose	17%	15%	16%

If it was proven that a large cigarette price increase prevents or reduces smoking among children and teenagers, would you favor or oppose raising the state tax by one dollar per pack?

	Tobacco Use			Political View			
	Non-users	Users	Both		Liberals	Moderates	Conservatives
Strongly Favor	81%	53%	72%	Strongly Favor	74%	73%	72%
Somewhat Favor	12%	19%	14%	Somewhat Favor	10%	15%	14%
Somewhat Oppose	1%	7%	3%	Somewhat Oppose	2%	3%	2%
Strongly Oppose	6%	17%	9%	Strongly Oppose	8%	9%	10%

Do you generally favor taxing other tobacco products, such as chewing tobacco, snuff, and cigars, at a higher rate than cigarettes, about the same rate as cigarettes, or at a lower rate than cigarettes?

	Tobacco Use			Political View			
	Non-users	Users	Both		Liberals	Moderates	Conservatives
Higher Rate	8%	8%	8%	Higher Rate	5%	8%	5%
Same Rate	84%	79%	83%	Same Rate	81%	79%	89%
Lower Rate	4%	9%	6%	Lower Rate	9%	8%	4%

[After reading pro- and anti-tax arguments] *Now that you've heard this information, I want to get your final opinion, even if it is different from the opinions you expressed earlier. All things considered, do you favor or oppose increasing Alaska's tobacco taxes by one dollar per pack?*

	Tobacco Use			Political View			
	Non-users	Users	Both		Liberals	Moderates	Conservatives
Strongly Favor	70%	31%	58%	Strongly Favor	55%	60%	59%
Somewhat Favor	13%	20%	15%	Somewhat Favor	18%	15%	15%
Somewhat Oppose	5%	9%	7%	Somewhat Oppose	6%	6%	6%
Strongly Oppose	9%	37%	18%	Strongly Oppose	20%	17%	17%

CONCLUSION

The results of the Mathematica survey are consistent with data from other states which show strong public support for major increases in tobacco taxes. The Coalition on Smoking OR Health, comprised of the American Cancer Society, American Lung Association, and American Heart Association at the national level, has recommended an increase in federal cigarette excise taxes of $2 per pack, with an additional minimum $1 per pack cigarette tax imposed in each state. Currently, although Alaska has one of the highest rates of smoking and smoking related deaths in the country, the state cigarette tax is below the national average. If the tobacco tax legislation being considered by the Alaska Legislature is enacted into law, Alaska will become the first state to break the $1 per pack barrier for state cigarette taxes.

(1) Alaska Native Health Board Trampling Tobacco Project, 1345 Rudokof Circle, Anchorage, AK 99508.

Criminal Deception

Ronald M. Davis, MD[1]

On November 10-12, 1995, the Northeastern University School of Law in Boston sponsored a conference entitled "Attorneys General Conference on Tobacco, Youth and the Public Health: Opportunities for Action." The purpose of the conference was to bring together Attorneys General (or their representatives) to discuss state lawsuits against tobacco companies seeking reimbursement for state costs from smoking-attributable disease (principally health care costs in the Medicaid program). At the time the states of Florida, Minnesota, Mississippi and West Virginia had launched such suits. Since then Massachusetts has joined the fray, and several other states are considering similar action. The conference was attended by Attorneys General or their representatives from the states involved in this litigation, as well those from a few dozen other states that were contemplating filing their own suits, or simply interested in gathering information.

I was asked to speak to the group on evidence that the tobacco industry markets its products to kids. Given the limited time available to address this broad topic, I decided to focus on evidence from the industry's marketing, advertising, and promotional activities. I did not review the internal industry documents that indicate the industry's interest in marketing their products to kids nor the scientific studies that demonstrate the impact of their promotions on youth. My presentation was organized along 17 different lines of evidence pointing in the direction of tobacco industry targeting of kids (see box).

CASH

At the outset it's important to consider the sheer volume of tobacco industry spending on cigarette marketing. In 1993 cigarette companies spent $6.03 billion to advertise and promote cigarettes, a twelve-fold increase over the $0.49 billion spent in 1979. When expenditures are adjusted for inflation, they still increased by 450% during this time period (1).

The expenditures in 1993 are equivalent to $190 *per second.* Imagine if that sum of money were made available to health advocates to sell health, instead of to the tobacco industry to sell death and disease.

This level of spending does not, by itself, speak to the issue of industry targeting of youth. But it is likely to have a huge impact on youth, by contributing to the ubiquity of cigarette advertising and promotion (see below).

Tobacco Industry Targets Youth

- **C**ash
- p**R**omotion
- ub **I**quity
  - **M**arlboro miles . . .
  - **I** magery
  - **N**Iche marketing
  - **A**thletics
  - **L**anguage
- pro**D**uct placement
- v**E**nding machines
- **C**opyright infringement
- c**E**lebrities
- **P**roduct giveaways
- **T**oys
- **I**nstructions
- vi**O**lations of TV ad ban
- i**N**ternational

PROMOTIONS

Cigarette companies are shifting their marketing dollars from traditional forms of print advertising (on billboards, in magazines and newspapers, and at the point of sale) to promotional activities such as distribution of coupons and free samples, and sponsorship of sporting, cultural, and entertainment events. The proportion of the cigarette industry's expenditures on advertising and promotion that have been devoted to promotional activities has increased from 30% in 1980 to 84% in 1993 (1). Many of these promotions, such as free sample distribution and sponsorship of sporting events, reach children and teenagers (2-5), a fact that cannot be unknown to the industry.

UBIQUITY

As mentioned above, the cigarette industry spends a huge amount on advertising and promotion. With this largess cigarette companies are able to blanket our environment with images and messages that glamorize

(1) Director, Center for Health Promotion and Disease Prevention, Henry Ford Health System, One Ford Place, 3C, Detroit, MI 48202-3450; and editor of the journal *Tobacco Control.*

smoking. Tobacco billboards along our highways and in our communities are impossible for people — young and old — to ignore. Tobacco signs in stores (doors, clocks, change dishes, and so on), on grocery baskets, in trains and buses, at car races and tennis tournaments, in movies, on clothing, at video arcades, and on toys, are only a small portion of the pro-smoking cues to which we are regularly exposed.

The 1989 Surgeon General's report on smoking and health pointed out that "the ubiquity and familiarity of tobacco advertising and promotion may contribute to an environment in which tobacco use is perceived by users to be socially acceptable, or at least less socially objectionable and less hazardous than it is in fact."(6) Common sense dictates that this effect would apply to potential users (including children) as well as to current users.

MARLBORO MILES

A particularly pernicious type of promotion that has proliferated in recent years are cigarette continuity programs (or "frequent smoker" programs). These are promotional campaigns that provide free or discounted products (usually bearing tobacco brand names) to consumers for proof-of-purchase coupons or equivalent "currency" such as Marlboro Miles and Camel Cash. Recent evidence confirms the popularity of these campaigns among children and teenagers (7-10).

IMAGERY

The imagery in cigarette advertising makes it obvious that youth are a key target. Joe Camel describes smooth dating moves. The Marlboro man epitomizes the rugged individualism to which many young people aspire. An ad for Kool cigarettes shows a young, smug-looking couple — wearing jeans, tank tops, and high-top tennis shoes — standing next to a motorcycle, sending an unspoken message about rejecting authority (Figure 1). Sexual themes and imagery in cigarette ads heighten the raging hormones of our kids. Virginia Slims, Super Slims, Silva Thins, Capri, and other women's brands tout the thinness of the cigarette, a thinly veiled message to young girls and women about the weight-losing effect of smoking.

NICHE MARKETING

Tobacco companies use specific media to target niches in the marketplace, including youth. In the late 1960s the industry offered to voluntarily pull its advertising from television and radio because of its "substantial audience of young people" (11). Nevertheless, it advertises heavily in *Glamour*, one fourth of whose readers are girls under age 18, and in *Sports Illustrated*, one third of whose readers are boys under age 18. For a number of years R.J. Reynolds was the exclusive advertiser in a magazine called *Moviegoer*, which was distributed free in hundreds of movie theaters around the country; one half of those who attend movie theaters are less than 21 years of age (3).

ATHLETICS

The cigarette industry's voluntary advertising code includes a provision stating that "Cigarette advertising shall not ... show any smoker participating in, or obviously just having participated in, a physical activity requiring stamina or athletic conditioning beyond that of normal recreation" (12). However, a Kent ad shows a male tennis player, presumably having just finished his match, with a cigarette (Figure 2). A Vantage ad show a female ballet dancer, who appears to have just completed a vigorous workout, with a cigarette (Figure 3). Cigarettes are heavily advertised in newspaper sports sections, and at times the separation between editorial and advertising content becomes blurred (e.g., a Marlboro Sports Calendar, showing game schedules under a Marlboro banner). Sports associations lend their good name to cigarette promotions (e.g., Winston NBA sweepstakes, and NFL lighters provided free with the purchase of Winston cigarettes). Teenage sports enthusiasts are no doubt affected by these promotions.

LANGUAGE

Cigarette advertisers speak to youth in their own language. A simple two-letter word — YO — takes up one half of a full-page ad for Merit cigarettes. A tough-looking blond in a skin-tight suit, holding a cigarette, is "Totally Kool." Parliament ads promote the cigarette's "Perfect Recess." What do children think of, when they hear the word "recess"?

PRODUCT PLACEMENT

For years cigarette companies paid hefty sums of money for cigarettes and their brand names to be shown in movies. Perhaps the most well known example — and the most egregious — is the $40,000 spent by Philip Morris to place the Marlboro name throughout the kids' movie "Superman II" (13).

The manufacturer of Lark cigarettes reportedly paid $300,000 to place Lark images in the James Bond movie "License to Kill." After this arrangement became known and was criticized, the movie producer added a Surgeon General's health warning to the movie — shown at the end of the movie, after the credits.

Other examples, including several movies popular

among kids, have been catalogued by Stop Teenage Addiction to Tobacco (STAT) (Springfield, MA).

VENDING MACHINES

Vending machines are another way in which children are encouraged to smoke. If we, as a society, were serious about enforcing the laws that exist in all 50 states prohibiting the sale of tobacco to minors, would we allow cigarette sales through vending machines? Would we ever consider the sale of alcoholic beverages through vending machines? If the tobacco industry were truly not interested in recruiting kids, wouldn't they support a ban on cigarette vending machines? Instead, we have a situation where most cigarette vending machines are unsupervised, uninspected, and unregulated. Some vending machines even sell cigarettes and candy out of the same machine!

The rules proposed by the Food and Drug Administration to curb minors' access to tobacco and their exposure to tobacco promotions would ban cigarette vending machines (14). The rules have been challenged in court by many tobacco and advertising interests.

COPYRIGHT INFRINGEMENT

Cigarette brand names are used on products targeted to kids. The best example is candy cigarettes, which come in several varieties (e.g., bubble gum, chocolate, or a hard sugary candy) (15). Candy cigarettes are often sold with brand names that are identical to those of real cigarettes, and with packaging and logos that are strikingly similar to those of their tobacco counterparts. In other cases, minor changes are made to the brand names (e.g., Cool instead of Kool, Lucky Spike instead of Lucky Strike, Pell Mell instead of Pall Mall, L&N instead of L&M). Research indicates that candy cigarettes may encourage smoking initiation among youth (16).

When the matter of candy cigarettes is raised, cigarette companies are always quick to point out that they don't manufacture these products. That may be true, but if these companies were not interested in kids, wouldn't they take action against this obvious copyright infringement?

Egregious examples are also seen in other countries with respect to American cigarettes. In Thailand, for instance, Winston kites and Marlboro school notebooks (Figures 4 and 5) have been distributed. In these cases, R.J. Reynolds and Philip Morris are guilty of one of two sins: 1) direct pandering to children, or 2) impotent action to prevent offensive copyright infringement.

CELEBRITIES

In their voluntary advertising code, the cigarette companies agreed to avoid the use of testimonials from athletes or other celebrities perceived to appeal to the young (5). But double standards abound. In Japan, the famous actor James Colburn appears in youth-oriented television commercials for Lark cigarettes. Closer to home, smokeless tobacco companies, which are not bound to the cigarette code, show no restraint in using athletes and other celebrities to hawk their products. Many famous athletes have been featured prominently in smokeless tobacco promotions, including Walt Garrison (football/Dallas Cowboys), Terry Bradshaw (football/Pittsburgh Steelers), George Brett (baseball/Kansas City Royals), Sparky Lyle (baseball/Texas Rangers), and Tom Seaver (baseball/Cincinnati Reds). In one ad, musician Charlie Daniels says, "When our band's cookin', the music smokes. But not me. Because like a lot of my friends I use smokeless tobacco." (17)

PRODUCT GIVEAWAYS

Non-tobacco products are often given away with the purchase of cigarettes. Many of these products have special appeal to children and adolescents, including sun glasses, cassette tapes, caps, a long cylindrical tube for cans of beer or soft drinks (with a shoulder strap for ease of carrying), and lighters with a picture of the helmet of the local professional football team (and the official logo of the National Football League).

From 1980 to 1993, cigarette industry expenditures for "specialty item distribution" increased from $69 million to $756 million. The proportion of total cigarette advertising and promotional expenditures devoted to these product giveaways increased during this period from 5.6% to 12.5% (1).

TOYS

Tobacco product brand names appear on toys and games. Philip Morris has distributed Marlboro frisbees at the gift shop at its Richmond, Virginia headquarters (Figure 6). Toy race cars emblazoned with the names of cigarettes (e.g., Marlboro) and smokeless tobacco products (e.g., Skoal, Copenhagen, Chattanooga Chew) have been sold in toy stores throughout the United State (Figure 7). Newport basketball games are seen in video arcades (18).

Overseas examples are evident too. In Buenos Aires, Argentina, on the occasion of the Eighth World Conference on Tobacco and Health in 1992, I picked up a toy Camel car (a photograph of which was published in Tobacco Control (19)). Three years later, at the next World Conference on Tobacco and Health, in Paris, I purchased a similar product. Also in Paris, I came across a Formula One children's ride, in which different "kiddie cars" bore stickers for Marlboro, Winston, and Camel (20).

Figure 1. A Kool ad -- targeting senior citizens?

Figure 2. Kent tennis player — is this "normal recreation"?

Figure 3. Vanage ballet dancer — is this "normal recreation"?

Figure 4. A Winston kite from Thailand

In some cases these promotions occur by direct action of the cigarette company (e.g., the Marlboro frisbee). In other cases cigarette company involvement may be more indirect, but again, these companies could prevent the use of their brand names in children's products through licensing arrangements or legal action, if they were truly interested in avoiding the youth market.

INSTRUCTIONS

Some smokeless tobacco advertising provides instructions on how to use the product. This clearly indicates that at least some advertising is aimed at recruiting new users, contradicting the "party-line" statements by tobacco and advertising industry spokespersons that the only effects of tobacco advertising are to promote brand loyalty and brand switching.

Former Dallas Cowboys star Walt Garrison, for example, "answers your questions about smokeless tobacco" in *Parade* magazine (June 8, 1980) and in other publications (21). One answer to a question states, "At first you could feel a slight irritation on the gum, and the tobacco may move around your mouth more than it should, and you might work up too much saliva. But learning is part of the fun, and these things pass with practice. Two weeks should make you a 'pro.'"

Similarly, a brochure distributed at the point of sale, with the headline "It's as easy as 1-2-3", gave instructions on how to use Skoal Bandits (21).

VIOLATIONS OF TV AD BAN

Cigarette advertising on television and radio was banned in 1971. Smokeless tobacco advertising in the broadcast media was banned in 1986. Nevertheless, these products continue to be promoted on television in a variety of ways. Tobacco sponsorship of athletic events, such as Marlboro car races or Virginia Slims tennis tournaments, leads to repeated mentions of the

Figure 5. A Marlboro school notebook from Thailand.

Figure 6. A Marlboro frisbee sold by Philip Morris.

Figure 7. Skoal Bandit toy car "For ages 10 to adult."

Figure 8. Salem sponsors a breakdance contest in Malaysia.

brand name by announcers and graphic displays of the brand name on the television screen throughout the broadcast. Signs and billboards at the events are captured by television cameras, and, in fact, these signs are often placed at strategic locations to maximize the likelihood that they will be picked up by cameras. Patches bearing the brand name appear on athletes' clothing, which often find their way onto television during the athletic competition and post-competition interviews. On February 23, 1995, the ABC program "Day One" aired a segment showing how sponsors of NASCAR car races train their racers (and presumably others who wear their emblems, such as pit crews) to slip the sponsor's name into a sound bite, and their emblems into camera shots, during media interviews (22). In one 94-minute broadcast of the 1989 Marlboro Grand Prix, the Marlboro name was seen or mentioned 5,933 times, and the name was seen for a total of 46.2 minutes, or 49% of the total broadcast time (4). How can the tobacco industry do this and at the same time profess to have volunteered to withdraw cigarette advertising from television and radio because of its "substantial audience of young people" (11)?

Last year the Justice Department, after two and a half decades of ignoring violations of the ban on broadcast cigarette advertising, began to take action against Philip Morris for placing cigarette signs near scoreboards and in other locations where they were likely to be captured by television cameras. However, this action does not extend to some sports (e.g., car racing) where tobacco sponsorship is dominant, and does not yet involve other cigarette companies.

INTERNATIONAL

Examples are given above where U.S. tobacco companies market their products overseas so as to appeal to, and lure in, very young customers. Other examples

include advertisements promoting free tickets to a rock concert in Taiwan for returning five empty packs of Winston, Salem sponsorship of a break dance contest in Malaysia (Figure 8), and Salem sponsorship of television concerts in Hong Kong by U.S. pop stars Madonna and Paula Abdul (23).

CONCLUSION

The evidence that tobacco companies are targeting kids — presented only in abbreviated form here — is abundant. The industry's advertising and promotional campaigns demonstrate a callous, reckless, immoral disregard for the health and welfare of our children. When one considers evidence beyond marketing practices — from internal industry documents, patent applications, testimonials from researchers formerly employed by the industry, and so on (14) — a pattern emerges that can be summed up by two words: criminal deception.

The manufacture, promotion, sale, and use of tobacco products need to be regulated and controlled in a manner proportionate to the enormity of the damage they wreak on public health, the economy, the environment, and society. And the manufacturers and their co-conspirators — and the individuals who run those companies — must be held liable for the harm they cause.

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Tobacco Control and the American Medical Association

Thomas P. Houston, MD[1]

More than 400,000 Americans die prematurely each year from the combined effects of active smoking and exposure to environmental tobacco smoke (ETS). Smoking is the major cause of lung cancer, of deaths from emphysema and chronic bronchitis, and is a principal cause of heart disease and stroke. About one-half of smokers die from a tobacco-related illness or condition - almost 25% of the total deaths in the U.S. (1).

The decision to assume the enormous risks of smoking is not usually one made by informed adults. Nearly 90% of new smokers are under the legal age for purchase of tobacco products. Three thousand children begin regular smoking daily. Children discount the regular risks of smoking, overestimate their ability to quit, and believe that smoking is much more the norm among adults and their peers than is really the case.

Since 1847, the mission of the American Medical Association (AMA) has been "to promote the science and art of medicine and the betterment of public health." Former Surgeon General Dr. C. Everett Koop has described tobacco use as "the nation's number one public health problem." In the context of public health, tobacco use prevention and control has become an increasingly important part of the AMA's strategy.

The first mention of tobacco in the "Digest of Official Actions of the AMA House of Delegates" comes in a 1960 resolution for the AMA to "clarify its position regarding the harmful effects of tobacco ... and take a lead position in an educational campaign aimed at the youth of the United States." In the early 1980's, the volume of resolutions increased markedly. The actions called for were much more pointed and action oriented. Since then, the AMA has begun to act in ways that promote tobacco control principles, such as supporting a $2 increase in the federal excise tax on cigarettes. Prevention and control of tobacco use is one of the key issues in the American Medical Association's 1994-1996 strategic corporate plan.

In general, four key areas exist for policy development in tobacco control: curbing youth access to tobacco, protecting the public from the hazards imposed by ETS, restricting tobacco industry advertising and promotion, and encouraging higher excise taxes on tobacco products.

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YOUTH ACCESS

The National Cancer Institute estimates that at current teen smoking rates, five million American children will die prematurely from having begun to smoke. In many states communities have enacted laws that would keep children from purchasing tobacco. The key tobacco industry strategy is to introduce weak legislation at the state level which expressly preempts communities from passing their own effective laws or ordinances. Specifically the industry opposes effective legal barriers such as licensing tobacco vendors and giving local authorities enforcement power.

The industry prefers: legislation which provides fines only for those who "knowingly" sell tobacco to children; outlawing public health research and investigative reporting about illegal sales; holding the child purchaser not the merchant-seller responsible for the illegal sale. Lobby and state testimony by medical society members should be focused on meaningful legislation that will actually prevent tobacco sales to children.

ENVIRONMENTAL TOBACCO SMOKE

In 1993 environmental tobacco smoke (ETS) was officially classified as a Class A carcinogen by the Environmental Protection Agency. ETS causes 50,000 premature deaths annually. The serious public health threat of ETS demands attention from the health community as well as government agencies. Since laws that restrict smoking in business and public places reduce consumption, the tobacco industry will fight them to increase its profits. Health providers and medical societies should actively support clean indoor air regulations and legislation.

PROMOTION

The tobacco industry spends over $5 BILLION yearly to promote its products! Recently much of this has been directed at youth. Overall, 85% of youth purchases are focused on the most highly advertised brands in the US — Marlboro, Camel, Newport. Promotion of the race car circuit, clothing and trinkets with brand logos, and distribution of free samples have increased dramatically in recent years. Monitoring youth activities targeted by the industry and countering them with pro-health

messages can be useful strategies for organized medicine.

TAXATION

Since the landmark Surgeon General's report in 1964, taxes on tobacco, adjusted for inflation, have *dropped* about 28%. The percentage of the retail price of tobacco attributed to taxes has dropped from 50% to 25%. Since 1964, tobacco industry profits have risen considerably because of frequent, substantial raises in the wholesale prices of cigarettes. In recent years, tobacco price increases have risen at about three to four times the rate of inflation, or about 12% per year.

Tobacco pricing makes a difference in consumption and can be a potent force in saving lives, particularly among young people. A 10% increase in price leads to about a 4% drop in smoking (2). The AMA and other voluntary health agencies estimate that a $1 increase in the federal excise tax on tobacco would eventually save one million lives. The AMA strongly advocates increased taxes on tobacco products as a way to reduce the number of teen smokers.

The AMA recognizes that success in tobacco control is more likely to occur at the state and local level, especially considering the powerful influence of the tobacco industry in Washington, DC. The AMA's House of Delegates not only accepts policy recommendations from state medical societies, but has passed several statements calling for action on their part. One such recommendation encourages state societies to "attempt to raise the state excise tax on tobacco products (490, 948)."

In some states, such as North Carolina and Texas, medical societies have created tobacco control subcommittees as an official part of the society structure to propose policy and develop action plans designed to impact tobacco use (3). In coordination with the lobbying and educational activities traditionally taken on by most state medical societies, such efforts can be very productive in targeting tobacco control issues such as tobacco pricing.

Involvement with other groups such as the local chapters of the American Cancer Society, American Heart Association, American Lung Association, Hospital Association, Dental Society, and state chapters of medical specialty societies is also very effective. Alaska has a very active statewide tobacco control coalition, Alaska Tobacco Control Alliance (ATCA). Active participation of the medical society at both state and local levels is needed.

Finally, a word about action and activism. For too long, organized medicine has been accused of armchair activism — of only being involved in traditional activities that are safe, comfortable, and avoid risk. It is too little, too late to be content with generic smoking cessation advice to our patients or sponsoring a health booth at the county fair. We must take our message outside the walls of the office and hospital, to confront the industry and its apologists directly (4,5). Testimony from the health community at city council hearings on the benefits of a tobacco tax increase can refute the propaganda and scare tactics of the tobacco industry. Medical societies can make a tobacco tax increase a special priority, and shepherd an ordinance through the system. The media is a very useful way to reach the public - most newspapers welcome editorials and letters on tobacco control issues from physicians and medical societies. The potential to make a difference is present if we take the time to get involved. Together, the AMA and its partners in the states have an opportunity to make a difference, working to ease the human and economic toll taken by tobacco.

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FEATURES

About the cover: Kasatochi Island. Aleutian Islands. Kasatochi is the summit of a volcano whose crater is water filled. Since the surface of the water is approximately 130 feet above sea level (satellite observations), the water is almost certainly fresh. Kasatochi is located just north of the west end of Atka. Photo courtesy of Donald R. Rogers, M.D., Anchorage, Alaska.

Smoking Cessation Products and Programs

Harry A. Lando, Ph.D.[1]

Smoking cessation programs have improved significantly over the past 30 years. Hundreds of studies have examined formal approaches to smoking cessation. More detailed reviews of these studies are available elsewhere (1,2). Several types of options are available. There are face-to-face programs which have been offered primarily in small groups and which are most commonly based upon behavioral principles. There are smoking cessation aids and products of which nicotine replacement is currently the only category recognized by the Food and Drug Administration as effective. Other popular approaches have included hypnosis and acupuncture. Programs offered by the voluntary health organizations and by commercial providers have tended to emphasize behavioral techniques.

BEHAVIORAL TREATMENT TECHNIQUES

Smoking and other tobacco use was seen for many years as essentially a learned activity. More recently smoking has become recognized as a physical addiction (3). Behavioral aspects of smoking are still seen as critical, however. One behavioral treatment approach involves aversion. Positive results have been obtained with rapid smoking (e.g., requiring smokers to take a puff every 6 seconds for as long as they can tolerate the procedure) (4,5). Concerns have been expressed about the potential risks of rapid smoking and about its high level of unpleasantness, however. Reduced aversion techniques have shown promise including "focused smoking" in which the patient smokes at a regulated but slower rate and smoke holding in which patients hold cigarettes in the mouth and throat while breathing through the nose (6,7).

Additional behavioral techniques have included contingency contracting in which participants typically self-administer rewards or punishments depending upon abstinence. Most current behavioral approaches emphasize coping techniques as part of multicomponent intervention (8,9). Participants develop a repertoire of behavioral and cognitive activities to counter smoking in high-risk situations.

Nicotine fading has been used as a nonaversive preparation technique for cessation. Gradual reduction in numbers of cigarettes does not appear to work very well beyond a common "stuck point," often 10 to 12 cigarettes per day (10). An alternative is to switch brands over several weeks or to use commercially available nicotine reduction filters to progressively lower rated tar and nicotine levels (11,12). Results for nicotine fading have been mixed, with some studies showing no effect.

The most successful behavioral programs have incorporated multiple interventions. Emphasis has been placed both upon initial preparation for quitting and longer-term maintenance. Long-term abstinence rates for these multicomponent treatments have approached 50 percent (8, 7), although more recent outcomes have tended to be less favorable (13).

A focus of many comprehensive behavioral programs is upon relapse prevention following the quit date (14). Slips are viewed as a natural part of the learning process in quitting. Results for relapse prevention have been mixed, but the overall findings generally do not reveal significant treatment effects. Lando et al. (15) achieved positive results in relapsed smokers using two brief supportive telephone calls. Self-reported 6-month abstinence rates were 13% for those who received telephone support and only 6% for those who did not receive support. Differences between telephone support and control conditions were no longer significant at 18 months, however. In a subsequent study, more intensive telephone support also was found to significantly increase recycling among relapsers. Two years following the initial intervention, 26% of those who had relapsed in the telephone support condition were abstinent, as compared to 18% of relapsers who did not receive telephone support.

HYPNOSIS AND ACUPUNCTURE

There are numerous approaches to smoking cessation that are not primarily behavioral. Two commonly advertised methods include hypnosis and acupuncture.

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Unfortunately, there are few good studies of either of these methods and overall results tend to be disappointing. These methods appear to pose little risk, however, and some patients may benefit from expectations of successful outcome.

PHARMACOLOGIC APPROACHES

By far the most intensively studied pharmacologic methods have involved nicotine replacement. The largest number of studies have been done on nicotine gum, followed by nicotine patch. Recent work has been done with other forms of nicotine replacement including nicotine nasal spray and nicotine inhalers. Although these newer products appear promising, few published studies are available. Both nicotine gum and nicotine patch improve treatment outcomes. The patch may be preferable for most patients partly because the results of patch studies have tended to be somewhat more positive than those for gum, and partly because compliance tends to be better for patch (16). Meta-analyses have indicated that nicotine gum increases abstinence by about 60% on the average compared to placebo controlled trials. Meta-analyses of nicotine patch studies show an approximate doubling of success rates. However, to date no study has directly compared the effectiveness of nicotine gum and patch. Currently nicotine replacement products are available only by prescription, but the Food and Drug Administration has approved 2 mg gum for over-the-counter use.

Some evidence suggests that clonidine may be effective in facilitating smoking cessation, especially among women, but the findings have not been consistent. Several studies have shown no effect for clonidine in either women or men. Clonidine is not approved by the FDA for smoking cessation. It does appear to diminish cravings, but its value is limited by unpleasant and sometimes severe side effects including dry mouth, fatigue, and dizziness. Some anxiolytics have been demonstrated to reduce withdrawal and may be useful especially for depressed smokers. However, data are very limited and the FDA does not recognize these drugs for smoking cessation.

VOLUNTARY HEALTH ORGANIZATIONS AND COMMERCIAL PROGRAMS

Voluntary Health Organizations

Major nonprofit organizations offering smoking cessation programs include the American Cancer Society, the American Lung Association, and the Seventh-Day Adventist Church. The American Cancer Society FreshStart program consists of four, one-hour group sessions. Content of this program has been recently revised. The American Lung Association program consists of seven 90-minute to 2-hour group sessions in addition to an initial orientation over a seven-week period. Both programs include considerable behavioral content.

Lando et al. (17) compared these two methods. Abstinence rates at 12-month follow-up were 19% and 12% for the American Lung Association and American Cancer Society programs, respectively. It should be noted, however, that the American Cancer Society groups are considerably less intensive and therefore presumably less costly to run. The absence of a specific target date for quitting in the American Cancer Society method may detract from effectiveness.

The Seventh-Day Adventist Church has sponsored Five-Day-Plans which are the oldest of the nonprofit programs (18). These programs do not emphasize cognitive-behavioral strategies but instead focus on psychological and physical components of nicotine dependence. An estimated 14 million smokers in more than 150 countries have attended Five-Day-Plans. The program is held on consecutive days and includes five 90-minute to 2-hour lectures. Recently the Five-Day-Plan has been revised to 8 sessions over a 3-week period. This program (now called the "Breathe-Free Plan to Stop Smoking") also offers supportive telephone calls 1 week, 3, 6 and 12 months after completion of the program.

Schwartz (2) reported summary outcome data based on 14 evaluations of the Five-Day-Plan. These data indicated a median 1-year abstinence rate of 26%. Results might be less favorable for the current population which appears to consist of a greater proportion of harder core smokers. Outcome data for the revised program currently are not available.

Commercial Programs and Products

A number of commercial programs are available, usually concentrated in larger metropolitan areas. Most programs tend not to be highly profitable and therefore do not remain active. Smokenders, Schick Smoking centers, Smokeless, and Smoke Stoppers are among the best known national programs. In evaluating commercial methods, it again appears that the most successful are those that include multicomponent cognitive-behavioral techniques. Some commercial treatments claim extremely high rates of success. Few external evaluations of proprietary methods are available, however. There is no clear evidence that commercial clinics are more effective than those offered by other organizations. Because commercial programs cost more they may attract more committed smokers. Furthermore, a sizable clinic fee may represent an additional motivation for quitting. New products are continually being introduced as aids to smoking cessation. Currently, none of these products are recognized as effective.

SELF - HELP

Self-help interventions for smoking cessation can consist of anything from purely self-help to rather intense, but s ill self-administered methods. The exact definition of self-help can be somewhat ambiguous. Self-help interventions most often consist of written materials. A major emphasis of these materials is usually on coping strategies, especially in high risk situations. Self-help materials also are available in other formats including audio and video tapes. Some promising results have been obtained with computerized programs that attempt to tailor cessation messages to the individual smoker. Overall, self-help methods in isolation have had limited impact in improving abstinence outcome. Outcomes have been improved, however, when self-help approaches have been supplemented with additional intervention, most notably nicotine replacement and supportive telephone calls.

EVALUATION STANDARDS

It is increasingly important that health professionals be well informed about smoking cessation services and products. They should be skeptical in evaluating claims of effectiveness. Program and product evaluations should be based on a minimum of 6-month and preferably 12-month follow-up. Providers may not deliberately misreport their abstinence data (although this does sometimes occur), but they may present very misleading figures. Thus some programs report end-of-treatment success, based on outcomes only a few days after a target quit date. End-of-treatment abstinence figures of 60% abstinence can translate into 1-year outcomes as low as 5-10%.

Participant attrition also must be considered (19). Programs can dramatically manipulate their outcomes by failing to count nonrespondents to follow-up. Assume, for example, that a program attracts 100 individuals of whom 50 complete the treatment. 30 respond to the follow-up, and 20 report abstinence. Claimed abstinence based on these results could be as high as 67%, whereas 20% abstinence would be a more valid outcome figure.

Resources for additional information are available both locally and nationally. Local resources are listed elsewhere in this issue and include the American Cancer Society, the American Lung Association, and the state health department. The National Cancer Institute provides a toll-free information line (1-800-4CANCER). Information and materials also are available through the U.S. Office On Smoking and Health (1-770-488-5705), the American Medical Association (1-312-464-5000), and the American Society of Addiction Medicine (1-301-656-3920).

SUMMARY AND CONCLUSIONS

Behavioral treatment techniques have facilitated smoking cessation, with intensive multicomponent interventions sometimes producing long-term abstinence rates approaching 50%. There is little evidence that either hypnosis or acupuncture are effective. Both nicotine gum and nicotine patch significantly improve treatment outcomes, although patch is easier for patients to use correctly. Self-help programs may be of benefit, however, smoking cessation products other than nicotine replacement show little evidence of effectiveness. Health professionals should be informed consumers and should be skeptical in evaluating claims for commercial programs or products. Additional information and materials are available from a number of sources including the National Cancer Institute, the U.S. Office on Smoking and Health, and the voluntary health organizations.

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(continued from page 58 - Paralytic Shellfish Poisoning)

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Alaska State Legislature

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(907) 283-7095
(907) 283-3075 (fax)
(907) 262-7574 (h)

Session:
State Capitol
Juneau, Alaska 99801
(907) 465-2693
(fax) (907) 465-3835

Representative Gary L. Davis

MEMORANDUM

TO: Members of the 20th Alaska Legislature

FROM: Representative Gary Davis

DATE: February 25, 1997

RE: Tobacco Tax

I'm in the middle of running a survey in my district on the tobacco tax. It is important for me to know where my constituents stand on the issue.

Rather than a mail-out, I took out an ad in the local paper and so far, the ad has run 2 times. It will be coming out again the beginning of March in a different publication that I hope will reach another sector of the voting public.

I have tallied up the responses to date and included the results. For your information, I have attached a copy of the ad.

One letter that I was particularly impressed by argues against the tax. The author makes some good points worth noting. Another letter, supporting the tax, addresses the concerns of those opposing the tax.

As with any "survey" there are several views on how they can be phrased, interpreted, and tallied. I have made little effort to "professionalize" this survey, I just thought it may be informative. I am not implying that you should interpret it in any particular fashion.

Any follow-up or future responses will be available from my office.

Representative Gary Davis wants to know...

"What are your views on the proposed $1 additional tax on a pack of cigarettes?"

- The intent of this tax is to reduce teen smoking.
- It is estimated to generate $40 million/year in new revenues.

Tell me what YOU think.

Do you support the tax? _____YES_____NO

Your name_____

Address_____

City_____

Please cut & mail or fax your response to:
Representative Gary Davis
State Capitol, Room 513
Juneau, AK 99801
Or call me at (800) 463-2693
Or Fax to 1-907-465-3835
representative_gary_davis@legis.state.ak.us

THANK YOU FOR PARTICIPATING

AGAINST TAX
284

PREVALENT ARGUMENTS
No new taxes
What will be taxed next?
Crime and Black Market will rise.
It's a prejudiced tax
Legislature dictating morals.
Deal with issue from a health perspective and not through money.
$1 won't make a difference to kids that have disposable incomes.
Enforce current laws, already illegal for people under 19 to possess tobacco.
Will not work out to the original intent of the bill.

**Many of the No responses were non-smokers
**Several noted they would consider the tax is the money was spent on education on the harm of tobacco, alcohol, drugs, etc.

FOR TAX
126

PREVALENT ARGUMENTS
Crime if not always a result of taxes.
Bad habits don't make people criminals, not all will steal.
Tax is worth it even if it only saves a few lives. Every life counts.
Will make children think twice, and it may turn some around.
Smoking affects others so to implement tax would help all.
Will help defray medical costs or services to smokers.
Tax will make tobacco cost prohibitive.
Less access of cigarettes to teens.

**Several for the tax were teenagers tired of being around smoke all the time when being with friends. Any little bit will help in decreasing the amount of teens who smoke.
**Quite a few of the respondents for the tax were people working in some way in the medical profession.
**Many others have had family/friends die of smoking related disease and would like to see some help in curbing smoking.

Comments from one 16 year old who called in, he supported the tax and took offense to adults saying he would just steal for cigarettes. He is not a thief and if he did not have the extra dollar, he simply would not buy a pack of cigarettes. He admits smoking is a bad habit and he is addicted but he wants to stress he is honest and would not resort to crime to feed his habit. He thinks the extra dollar is a deterrent and will help.

The Hidden Cost of the Tobacco Tax

Good intentions do not make good public policy. Instead of achieving their desired purpose, laws imposed without regard to their social and economic implications often have unanticipated consequences far worse than the original problem. Take for example, the "sin tax" a tax placed on items such as alcohol and cigarettes to both deter their use and raise revenue. America has attempted to regulate social behavior through the imposition of economic penalties since the Puritans, with abysmal results. Often, as in the case with Prohibition from 1919-1933, these penalties have increased consumption of the "vice" in question rather than lowering its use, while spawning opportunities for the lawless to profit. The tobacco tax raises two types of questions: first, is a tax on tobacco an effective economic tool to both raise revenue and discourage behavior? and second, should we empower the government to regulate personal morality when society as a whole is not endangered by the behavior?

Past history shows that sin taxes do not provide effective vehicles for revenue production or behavior deterrence. Increase in a tax ($1.00 a pack in the case of tobacco) for an item in high demand will not result in an immediate cessation of demand. Instead, high taxes, and thus higher prices, encourage consumers to create underground markets to avoid the financial penalties imposed by the tax. The cases of Canada and Michigan illustrate this point. Canada, after raising its tobacco taxes, saw an increased problem with smuggling and violence along its borders. With smugglers able to make a profit of $800 from a case of cigarettes, the temptation to engage in contraband trade proved too difficult to resist. In three months at the end of 1993 and the beginning of 1994, over 120 people were arrested for possession of bootleg cigarettes (Chicago Tribune, Feb. 4 1994). Eventually, the Canadian government capitulated and cut the tax in half. Michigan school finance reforms in 1994 resulted in the tripling of the cigarette tax from $.25 to $.75 a pack. From March of 1994 to March of 1996, it is estimated that Michigan lost around $144 million in revenue due to smuggling operations. This loss prompted the introduction of a bill in 1996 to stamp all cigarettes brought into the state to provide a way of identifying smuggled tobacco.

As a deterrent, the tax will most likely have a negligible effect on one population group (teenagers) while damaging another group (the poor). The bulk of a teenager's money is

discretionary. With no mortgage payments or other loans, and with parents to provide for their basic necessities, teenagers have the luxury of spending money only on things they want instead of things they need to survive. Thus, they are less likely to abstain from purchasing tobacco merely because the price has gone up than other population groups. The poor, on the other hand, need the bulk of their income to provide for their basic needs. Thus, the impoverished who are nicotine addicts will be faced with the unpleasant choice of buying food or satisfying their addictions. Thus, the tax will have a small effect on those who can most afford it (teenagers and the wealthy) while harming disproportionately those who can least afford it (the poor).

The tobacco tax harms society in another, less obvious way. If the tax discourages the purchase of the product through "legal" venues, and presumably increases bootleg traffic of the commodity, the merchant selling the product will lose revenue. This lost revenue will force him to cut back on all other areas of his business, including inventory and wages. Ultimately, a diversion of the consumption from traditional channels to illegal ones could result in lost jobs and investment.

Finally, the tax presents a dilemma for lawmakers. The tobacco tax proceeds in Alaska will be used for education and children's health, important budgetary items. This puts policy makers in a difficult position. While attempting to regulate behavior by decreasing consumption, they are still relying on this consumption to generate revenue. Thus, they are caught between the public health goal of decreasing tobacco consumption, and the fiscal goal of funding programs. Their incentive is to increase the very behavior they are claiming to decrease.

Allowing the government to levy a punitive tax on tobacco sets a dangerous precedent. Heart disease kills more than lung cancer, so should the government tax the intake of fat? What about alcohol, sugar, or painkillers? Providing the government with the license to determine standards of personal morality when the regulated behavior places no danger on society removes responsibility from our basic social units and places it with the state. Questions of personal morality should be dealt with in the family, in the church, in the club, or in any other educational or cultural institution. Government should only address those questions that smaller units of society are incapable of addressing. Ceding the power of moral persuasion to a central state can only weaken personal freedoms. A government espousing morality may not always espouse traditional morality. Because of its powerful position, governments can impose whatever version

of "morality" they see fit, whether or not these judgments happens to correspond with popular standards of morality.

Although cessation of smoking is an admirable public health goal, imposing a tobacco tax will provide only a cursory solution, while eliciting unintended social, moral, and political consequences. This does not mean that society should stop the campaign against smoking, merely, that governments at any level are not the proper or the effective institutions to wage a moral war against a personal vice.

Rebecca L. Hultberg
907.283.3335 (daytime)
907.283.6275 (evening)

Rep. Gary Davis
State Capitol, Room 513
Juneau, AK 99801

February 13, 1997

My view on the proposed tax is that it is not nearly high enough to even begin to address the drain on the economy and society that cigarette smoking causes.

There is a lot of rhetoric being flung around by the opponents of the tax, but very little substantive information. Just for your edification, I would like to address several points that have come up lately with facts rather than opinion and lies.

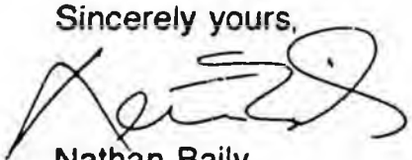
1. "The tax won't work"-This is basic tobacco industry prevarication. Their own research indicates that the basic law of supply and demand works for cigarettes too; in fact, that is why they so oppose the tax: it will cost them.
2. "They will be smuggled in."-Another red herring. Obviously, not from Canada. Indian sales? The Native community is very much in favor of the tax. It's simply not an issue except in the minds of very desperate, greedy, predatory marketers.
3. "It's social engineering"-So what it if is? The tobacco industry has "had its way" with society for nearly a hundred years, it's about time to turn the tables on them. Addiction is the worst form of social engineering. Legislators are in the business of social engineering. To deny so is just hypocritical.
4. "It hurts poor people."-Yeah, we all know how much the tobacco industry cares about the poor. Poor people get sick from smoking and we all end up paying for their health care. Smoking hurts everyone.
5. "It's a personal choice."-This is the one that really makes me want to gag. There is little, if any, choice in the smoking addiction. If 90% of smokers want to quit but cannot, where's the choice?

Alaskan legislators can take a stand and make a difference. Legislators in several states have watched what is going on here and are introducing bills to raise their taxes substantially too. The facts are clear: A large boost in the tax will save lives.

The tobacco industry made the decision to keep pushing drugs back in the sixties when their own research as well as the Surgeon General's report spelled out the truth about smoking. To my way of thinking, the moral thing to do would have been to have declared an end to this dreadful business of addiction. Instead, they continued to lie for thirty years while devising more and more insidious ways to entice young people into a lifetime of smoking. The U.S. Congress has been complicit in this very offensive campaign, please do not let yourself or your cohorts add to the travesty by watering down this proposal.

Pass HB 1, undiluted, and put the proceeds into anti-smoking campaigns.

Sincerely yours,



Nathan Baily
P.O. Box 3337
Kenai, AK 99611
(907) 283-3984

Representative Mark Hanley

Alaska State Legislature

MEMORANDUM

DATE: February 25, 1997

TO: All House Finance Committee Members

FROM: Representative Mark Hanley MH

RE: Information from Jan's Distributing, Inc.

My office received a request from Jan's Distributing, Inc. to distribute copies of a fax to all Finance members (please see the attached cover letter). As of 1 p.m., Tuesday, February 25, 1997, we have received approximately 150 pages of signatures. These signatures will be kept on file in my office for you or your staff to review at your convenience.

Interim: 716 West 4th Avenue, #300, Anchorage, AK 99501; (907) 258-8192 *Session: State Capitol, Juneau, AK 99801-1182; (907) 465-4939*

JAN'S DISTRIBUTING, INC.
Box 140856
Anchorage, Alaska 99514
243-JANS
Fax 243-5744
1-800-478-9898

TO ALL REPRESENTATIVES ON THE FINANCE COMMITTEE:

Following this letter are a few signatures of people who are opposed to the tobacco tax. We receive these petitions on a daily basis. these are coming from our concerned customers who we service weekly. They are very concerned about theft and violence at their retail locations across the state. If none of these names are in your district, please be patient because I know that in time we will receive some that are, because we service about 500 customers across the state.

If you have any questions, please call me at 1(800) 478-9898.

Sincerely,

Bobby Scott
Sales Supervisor
Jan's Distributing

NEA-ALASKA

Affiliated with the National Education Association

NEA-ALASKA

POSITION STATEMENT - HB 1

NEA-Alaska supports passage of HB 1 increasing the tax on cigarettes and tobacco products.

Passage of the measure will address two positive goals.

*First, the increase in the cost of tobacco products will serve as a deterrent to use by students.

*Second, proceeds from the tax will be used to maintain our schools and school facilities.

The NEA-Alaska Board of Directors voted to support this tax initiative. We recommend its passage and appreciate the sponsors who have introduced the measure.

2-25-97

ANCHORAGE REGIONAL OFFICE • 1840 S. Bragaw Street, Suite 103 • Anchorage, Alaska 99508 • (907) 274-0536 • FAX: (907) 274-0551
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THE TOBACCO INSTITUTE
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DANIEL M. HOWELL
Vice President
916/444-0484

The Tobacco Institute, on behalf of its member companies, respectfully submits the following statement in opposition to House Bill 431.

THE ECONOMIC EFFECTS OF INCREASING THE ALASKA CIGARETTE TAX BY $1.00 PER PACK

Alaska is considering a tax proposal that would raise the current cigarette tax by $1.00/pack, or to $1.29c/pack. That tax is compounded in Anchorage, Fairbanks and Juneau, by local excise taxes. In Anchorage, where over 40% of the Alaska population resides, the local cigarette tax is 26 cents/pack. An Anchorage smoker would thus pay $1.55/pack, or $15.55 per carton, in cigarette taxes. To put things in perspective, the Alaska cigarette tax would be nearly 5 times larger than the average state cigarette tax (32 cents/pack) and nearly double the current top cigarette tax.

When cigarette taxes reach such a stupendous level, many of the familiar problems associated with excise taxes become sharpened. Tax evasion is a prime example. This proposal provides powerful incentives for smuggling. Smugglers bringing in cigarettes from lower tax states could make over $10 per carton in profits. A small container-load would have a profit potential in excess of $50,000. Alaska already has a well documented tax evasion problem with military bases. There are over 50,000 military personnel, including retirees and dependents, buying cigarettes free of state taxes at these bases. A 1996 study by Peat Marwick found that an astounding 45 million packs of cigarettes are sold through military bases in Alaska. This represents an incredible 84% of taxable reported sales in Alaska (53.6 million packs).

With tax saving opportunities such as these, Alaska would become like Canada. In 1993, the Canadian government estimated that smuggling accounted for almost 50% of all cigarette sales. In 1994, their cigarette tax was reduced in the major provinces by over $2.00/pack in order to break this smuggling epidemic. In announcing the cuts, the Canadian Prime Minister Jean Chretain said: "Smuggling is threatening the safety of our communities and the livelihood of law-abiding merchants. It is a threat to the very fabric of Canadian society."

By encouraging a massive underground market, Alaska would also make it more difficult to keep cigarettes out of the hands of youth. Black marketers do not respect youth access laws any more than they do tax laws. The surest way to control youth sales is by working with legitimate retailers, not smugglers. By creating an illegal market, Alaska would simply be making those efforts more difficult.

Another casualty would be Alaska's legitimate retailers. According to the Peat Marwick study, retailers could eventually lose 52% of their sales. In Canada, retailers had lost so much that they protested by selling smuggled smokes to hordes of delighted smokers at cut-rate prices. The huge drop in Alaska sales will also mean substantially lower revenues for the government than forecasted by Alaska's Long Range Financial Planning Commission. Peat Marwick found that the Commission overestimated revenues by 129%.

The enormous tax increase would unfairly punish a minority population for goods and services designed to benefit all of Alaskan society. An average smoker would pay over $800 per year in state cigarette taxes. For the 30% of Alaskan households making $30,000 or less, this is an incredible burden to bare. What other demographic group in Alaska pays this much in total taxes?

SMOKING AND TAXES

There exists an incorrect assumption that high state cigarette taxes discourage cigarette consumption.

On close examination, that assumption is without foundation. Smoking rates within a given state are a function of a variety of demographic and cultural factors. Price is not considered to be one of them. In fact, economists have proven statistically that cigarette consumption is insensitive to price and taxes. As economists put it, taxes have a very inelastic, or unresponsive effect on cigarette demand. Clearly there are more powerful forces in play.

Utah, for example contradicts the assumption of low taxes equaling higher consumption. Utah has the lowest adult smoking rate in the country. It also has a cigarette excise tax that is lower than the national average. When one takes into account the presence and cultural influence of the Mormon population - a group that vigorously opposes cigarette smoking - the contradiction is easy to understand.

Opponents of tobacco products point to the apparent connection between low tax states and high rates of tobacco consumption. They fail to mention that many of the low tax states also grow tobacco. The strong tobacco heritage of these states and the relative social acceptability of tobacco there easily account for the marginally higher consumption rates.

In fact, the smoking rates of the 10 states with the lowest cigarette taxes are not as significant as one is led to believe. On average, about 25% of adults smoke in the ten low tax states, compared to the national average of 22%. This is not a large difference, and is most likely explained by the heritage of tobacco growing, not taxes.

State taxable cigarette sales are a good indicator of patterns across states. Consider per capita sales in Massachusetts (77 packs/per year) versus per capita sales in New Hampshire (158 packs/ per year). Since cigarette taxes are significantly higher in MA (51 cents/pack) than in New Hampshire (25 cents/pack and no sales tax) this pattern would seem to buttress the assumption that higher taxes equal lower consumption. But is it reasonable to believe the NH residents really smoke double the amount of cigarettes compared to smokers in MA? The answer is clearly no. What is the reason for this discrepancy? Tax evasion.

New Hampshire is a will known consumer's mecca - a place for consumers from high tax states to stretch the family budget. A 1995 study by Price Waterhouse found that nearly 40% of New Hampshire's cigarette sales were sold to consumers from another state- mostly people from Massachusetts. In fact, along the MA-NH border the number of people employed (per 1000 of population) in tobacco, alcohol beverage, and gas retailing is about 2 times greater in New Hampshire compared to Massachusetts. When adjustments are made for such tax evading sales, adult smoking rates are practically the same in both states.

In Washington State, the same tax evasion dynamic is at work. Even though the Washington cigarette tax is very high, data shows that adult smoking rates are actually higher in Washington compared to low tax Oregon and Idaho. However, using taxable sales as an indicator, we see that Washington's per capita cigarette sales of 65 packs is much lower than in Oregon (95 packs) and Idaho (78 packs).

The reason?

Washington's residents have known for 20 years or more that the way to beat sales and excise taxes is to head for the Indian reservations, military bases, and bordering states. A recent study by Washington's Department of Revenue estimates that a staggering 27% of Washington cigarette sales represent such tax evading sales. When these tax evading sales are factored in, actual Washington cigarette consumption rises to over 85 packs per capita - close to the average per capita consumption for the Northwest.

The basic lesson is that when cigarette taxes are raised by a large amount, consumers take advantage of our fiscal federalism and shop in a state or tax free zone where they can save money. When the dust settles few people have