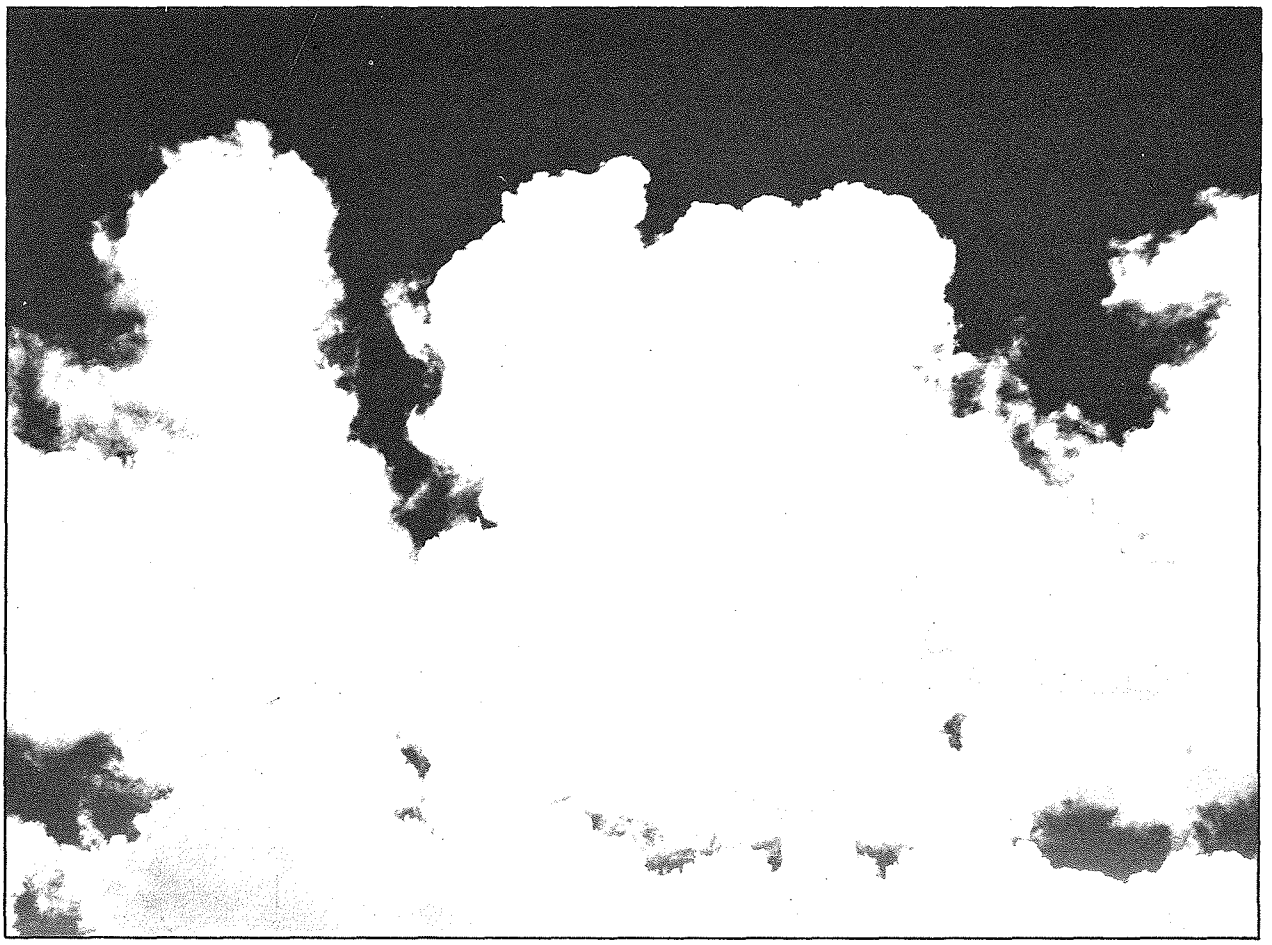
The Minnesota Nonsmoking Initiative



June, 1985 - December, 1986

A Report to the 1987 Legislature

Minnesota Department of Health
Center for Nonsmoking and Health

Pursuant to Mn Stat 144.392

The Minnesota Nonsmoking Initiative

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SAMMEC

Introduction

This report to the Minnesota Legislature has been prepared to provide background and current status information about Minnesota's Nonsmoking Initiative. This is the first in a series of biennial reports to the Legislature. In preparing this report, the Center for Nonsmoking and Health of the state Health Department has attempted to provide the most concise summaries of information of value to the Legislature.

The tobacco-use prevention activities of the Department of Education are included in this report. The tobacco-use prevention specialist at the Department of Education works closely with staff of the Health Department to coordinate efforts.

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Executive Summary

Minnesota is in the forefront of national smoking and tobacco-use prevention efforts. Our landmark 1985 legislation has fostered a multitude of nonsmoking projects in the state. These projects represent an effort to market a tobacco-free lifestyle to Minnesotans. Together they are called the Minnesota Nonsmoking Initiative. This initiative was designed to run at least five years, since the state Health Department expects that it will take at least that long for measurable outcomes to occur. While the nonsmoking initiative is still in its early stages, much has been accomplished. Only 18 months into the project, the following update on smoking rates, related disease trends, and tobacco consumption patterns outlines the problem which the nonsmoking initiative addresses and points toward the impact the initiative is expected to have. This executive summary concludes with recommendations for future direction, based on the experiences of the last year and a half of implementation.

Summary of Accomplishments and Activities

Eighteen months into the Minnesota Nonsmoking Initiative, the following has been accomplished:

- By November of 1985, eight special project grants had been awarded across the state for nonsmoking projects. Together, they represent multiple interventions aimed at a variety of target groups. In September, 1986, the state Health Department was awarded a three-year, $670,000 grant by the National Cancer Institute to further evaluate these grant projects.

- A statewide survey on the smoking habits of ninth graders was completed in the spring of 1986, and the Health Department is collaborating with the University of Minnesota and Wisconsin's Departments of Public Instruction and of Health and Social Services on a $1.055 million, five-year National Cancer Institute grant to evaluate school activities in Minnesota in relation to Wisconsin over the next five years.

- In a pioneering effort, an innovative nonsmoking media/market research campaign was conducted in May and June of 1986. This campaign resulted in the extensive dissemination of a persuasive nonsmoking message targeted for 8-18 year olds and the creation of a valuable database with information from nearly 40,000 young people across the state.

- The Health Department is beginning the first in a series of annual statewide telephone surveys to assess changes in prevalence, attitudes, and awareness as a result of the Minnesota Nonsmoking Initiative.

- During the 1985-86 school year, 75% of the 433 school districts in Minnesota applied for and received funds allocated by the Legislature to develop tobacco-use prevention programs. For the 1986-87 school year, that percentage was 91.

- The state Health Department has been a model for other public and private agencies on developing smoke-free worksite policies and on implementing the Clean Indoor Air Act in worksites.

- Health Department staff have given presentations on the nonsmoking initiative throughout the state and the nation, including the Centers for Disease Control, the New York City Health Department, the Colorado Department of Health, as well as at many local conferences and workshops.

- The Minnesota Nonsmoking Initiative has been written about in publications ranging from the New York State Journal of Medicine to Minnesota Medicine, which is a publication of the Minnesota Medical Association. The initiative has received state, national, and international attention, and continues to generate requests for information.

- The Attorney General's Office, in cooperation with the state Health Department and other organizations, was instrumental in researching and passing legislation in 1986 prohibiting the free distribution of smokeless tobacco products in the state and requiring distributors to request a picture ID showing proof of legal age before giving anyone a free sample of cigarettes.

Update on Smoking as a Major Public Health Problem

Smoking and diseases that result from smoking are still a major public health concern in Minnesota and around the nation. Cigarette smoking is recognized as the single most preventable cause of death in our society. In 1984, the last year for which there is available data, 4,500 Minnesotans lost their lives to diseases directly attributable to smoking. (Figure 1-1) Medical costs and lost income as a result of these deaths totalled more than half a billion dollars.

Besides the well-known effects of smoking on the health of the smoker, recent reports from the National Academy of Science and the Surgeon General link exposure to environmental tobacco smoke with increased risk of disease in nonsmokers. Infants and young children are especially vulnerable to passive smoke; many studies have shown that children with at least one parent who smokes are at increased risk of respiratory disease and diminished lung function. Nonsmoking wives of husbands who smoke have also been shown to be at increased risk of lung cancer.

In addition to the effects of cigarette smoking on the smoker and the nonsmoker, use of smokeless tobacco (chewing tobacco and snuff) is a growing public health concern. Use of these tobacco products has been linked with oral cancer, cancer of the cheek and gums, and precancerous lesions of the mouth. Smokeless tobacco was widely used in the U.S. until the early part of the 20th century, but its use declined rapidly with the rising popularity of the cigarette. However, recent national data indicate that smokeless tobacco is again gaining in popularity; an estimated 12 million persons used smokeless tobacco in 1985. The highest rates of use

are among adolescent and young males. Based on the adolescent survey conducted by the Minnesota Department of Health in the spring of 1986, 15% or 5,700 of Minnesota ninth grade males use smokeless tobacco on a weekly basis. (Figure 1-2)

Trends in smoking rates in Minnesota have been similar to those in the rest of the country, although Minnesota rates have generally been lower than nationwide rates. Both U.S. and Minnesota smoking rates have been declining since the mid-1960s, and the most significant decline occurred for males. According to a 1959 Minnesota Poll, 53% of adult men were smokers. In 1981, this figure had declined to 32%. Among males, the decrease in smoking rates is paralleled by an increase in the percent of former smokers, and in the percent of those who have never smoked.

Smoking rates for women have never reached those of males. Rates for Minnesota women were relatively constant between 1959 and 1981, varying between 28% (1981) and 36% (1973). While the national estimate of the percent of female former smokers has risen, the percent of "never smokers" has remained about the same, indicating that women take up smoking at a fairly consistent rate. Consequently, male and female smoking rates that were once quite disparate are now virtually identical for persons born after 1940. Additionally, in Minnesota, young women ages 18-24 now have slightly higher smoking rates than young men. (Figure 1-3)

National smoking rates for high school seniors have declined since the late '70s. In 1984, 19% of surveyed high school seniors reported smoking daily, while 29% reported doing so in 1977. In Minnesota, data from the state Health Department's 1986 spring survey indicated that 64% of public school ninth graders had tried smoking at least once, and that 18% or 13,500 ninth graders had smoked during the previous week. Among ninth graders, male and female weekly smoking rates are similar: 19% and 17% respectively. (Figure 1-4) The ninth grade was chosen for the survey because it is a critical period for making decisions about smoking.

Since The Minnesota Plan for Nonsmoking and Health was published in 1984, more recent smoking rates have become available in Minnesota. Data from the 1984 and 1985 Behavioral Risk Factor Surveys reveal that smoking rates seem to have stabilized. In 1981, 29.5% of the population were current smokers; in 1984 and 1985 the smoking rates were 28.3% and 29.0%, respectively.

These smoking trends since the 1950s are reflected in current lung cancer mortality rates. Nationwide, since 1953, lung cancer rates have increased 172% among men, and 256% among women. Breast cancer has been the leading cause of cancer deaths for women in the U.S. since the 1950s; in 1986, lung cancer was expected to take the lead. While the mortality rates for breast cancer had been quite consistent since the '50s, lung cancer mortality rates for women began rising in the mid-1960s. In Minnesota, the female mortality rate for lung cancer rose 26% between 1981 and 1984, while the breast cancer death rate over the same period increased only 3%. The male lung cancer mortality rate increased 4% during this same period.

Tobacco Consumption Patterns Since the 1985 Tax Increase

In 1985, the Minnesota Legislature enacted a 5-cent per pack increase on the state cigarette excise tax. To assess the impact of this tax increase on cigarette consumption, revenues from the cigarette tax were examined for two different 12-month periods. During the period from August, 1985 through July, 1986, immediately after the tax increase went into effect, 426,914,000 packs of cigarettes were sold in Minnesota, compared to 469,641,000 packs sold during this same period in 1984-85. This represents a 9% decline in cigarette consumption from the previous year, coinciding with the 5-cent tax increase. For comparison, 456,681,000 packs were sold during the calender year 1981, as reported in The Minnesota Plan for Nonsmoking and Health. At this point, based on preliminary analysis and limited data, it is not clear whether the decline in consumption simply reflects the downward trend in smoking prevalence that was already occuring, or a decrease in consumption as a result of the tax increase. However, other studies have indicated a lowering of cigarette consumption with a corresponding tax increase, especially among teenage boys who are particularly vulunerable to price increases.

The 1985 Legislature also increased the tax on non-cigarette tobacco sales from 20% to 25% of wholesale sales. During the period August, 1984 through July, 1985, total wholesale non-cigarette tobacco sales were $15,790,000. In contrast to declining cigarette sales, sales of these other tobacco products increased slightly to $15,975,196 in 1985-1986.

Recommendations for Minnesota Nonsmoking Initiative Activities

- Continue to coordinate the varied programs and approaches of the nonsmoking initiative as part of an overall strategy to market a tobacco-free lifestyle to Minnesotans.

- Increase emphasis on smokeless tobacco-use prevention in the classroom, community, and mass media as trends indicate increasing prevalence and incidence of smokeless tobacco use among adolescent males.

- Continue and increase emphasis on multifaceted educational and mass media efforts toward prevention and cessation of smoking among young women as this target group continues to pay the price of continued high rates of smoking as indicated by the alarming increase of lung cancer death rates.

- Continue to address major efforts targeted toward adolescents since crucial decisions about lifetime smoking and smokeless tobacco use are made between 12 and 21 years of age. Ninety-five percent of all lifetime smokers began before 21 years of age.

- Continue innovative educational efforts using mass media, especially television, through which it is possible to reach large numbers of young persons to promote the idea of a positive nonsmoking lifestyle.

- Continue to evaluate these innovative mass media efforts, both to develop messages that reach the target groups effectively and, ultimately, to assess message effect.

- Continue the successful use of a multidisciplinary team approach to this difficult public health problem to further refine and build on the success that the Minnesota Nonsmoking Initiative has shown in the past 18 months.

- Refine and strengthen the special nonsmoking project grants, tying them more closely to mass media and school efforts and building upon the outcomes of the first two-year cycle of grants.

- Extend all tobacco-use prevention projects through outreach to other appropriate agencies, particularly nonprofit health agencies, by involving them more directly in mass media efforts and by encouraging Community Health Services agencies to avail themselves of the expertise and services of nonprofit agencies that offer assistance with tobacco-use prevention.

- Continue to build coalitions and to form public/private partnerships with other groups interested in tobacco-use prevention.

- Continue to pursue federal funding for nonsmoking initiatives that will supplement state resources and efforts.

- Consider raising the tax on tobacco products as one strategy in the promotion of a tobacco-free adolescent population.

FIGURE 1–1. SMOKING–RELATED DEATHS

BY CAUSE, MINNESOTA, 1984

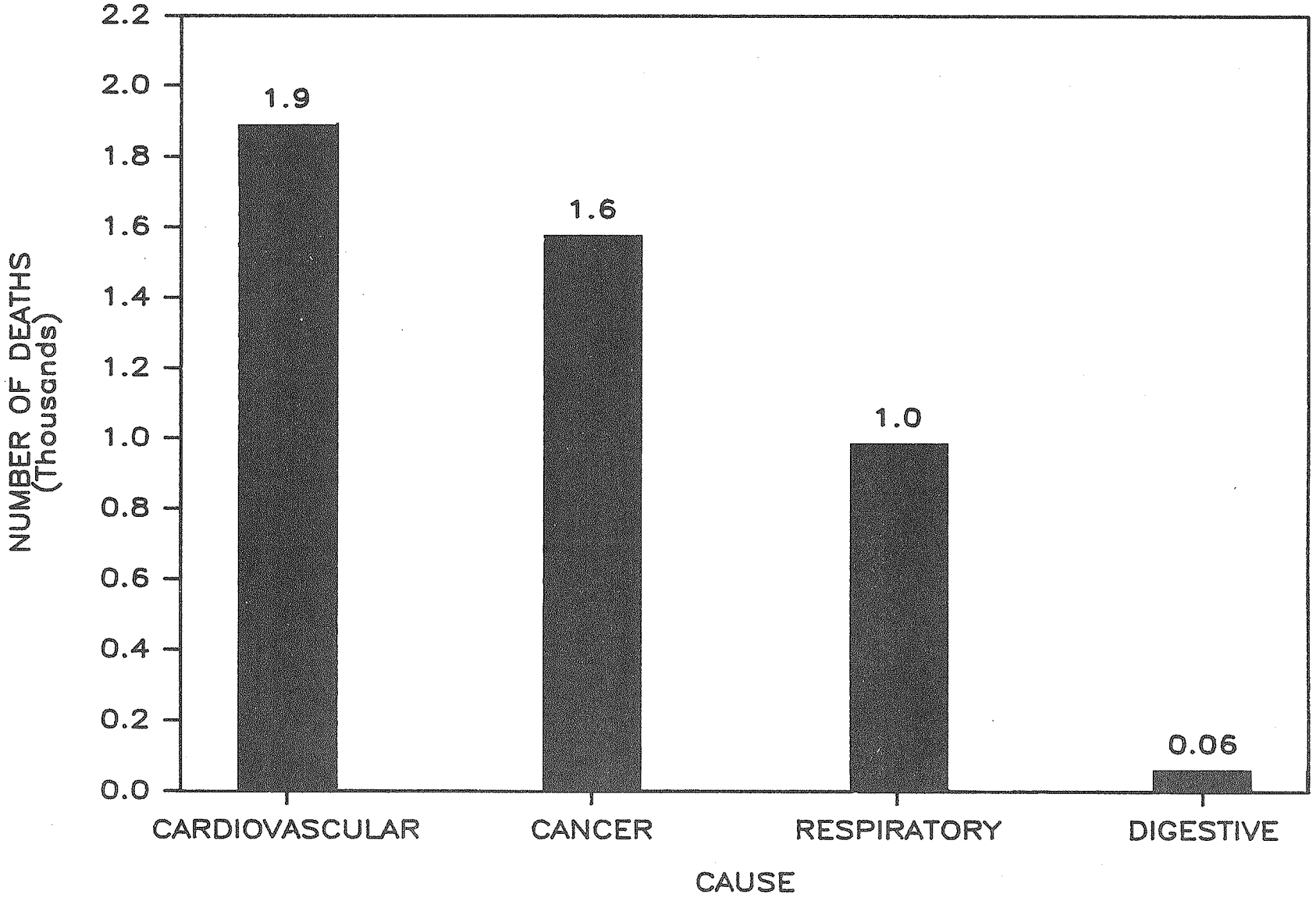


FIGURE 1–2.
SMOKELESS TOBACCO USE BY GENDER

MDH NINTH GRADE SURVEY, 1986

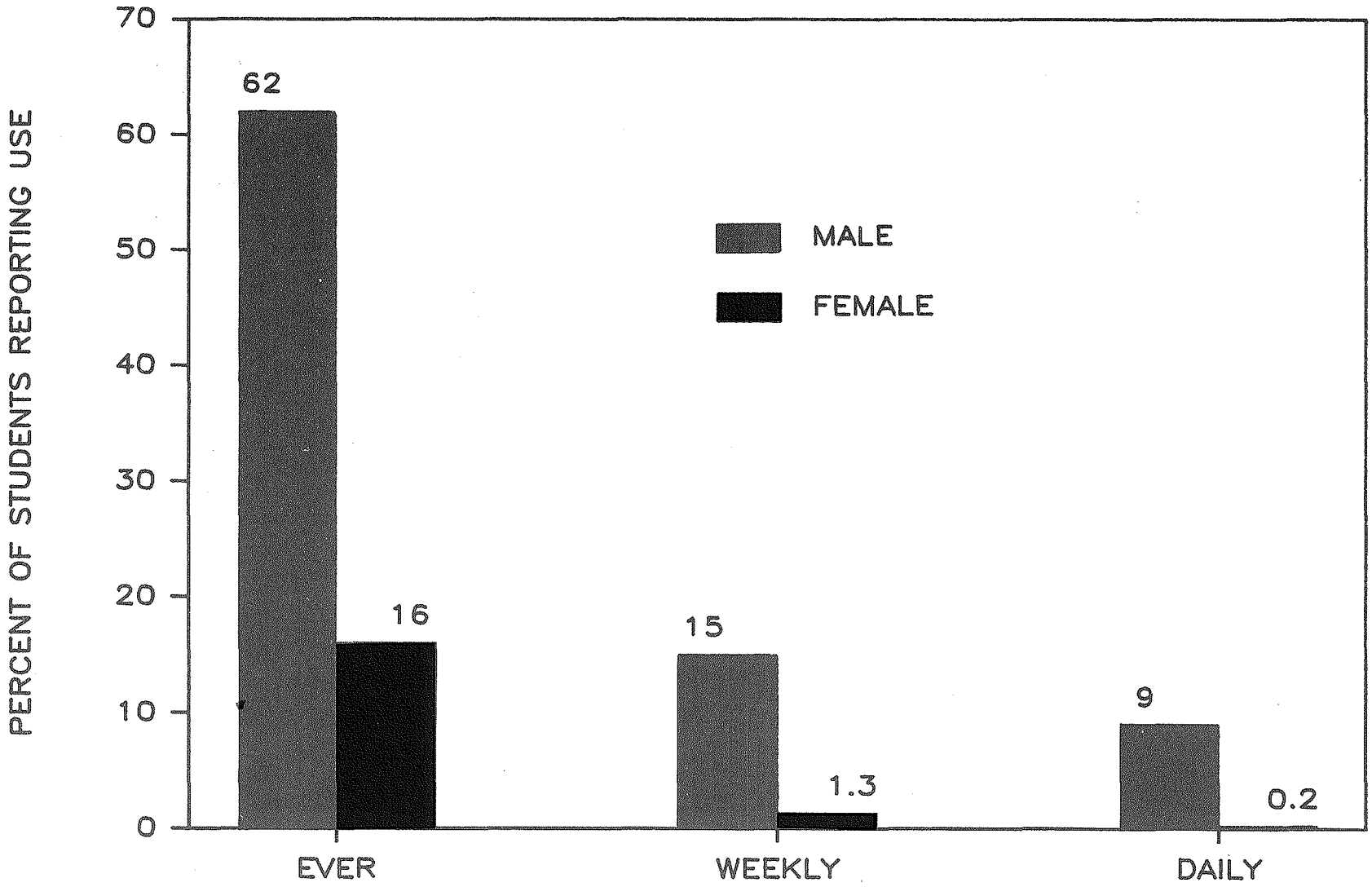


FIGURE 1–3. ADULT SMOKERS BY GENDER

BEHAVIORAL RISK FACTOR SURVEY, MN 1985

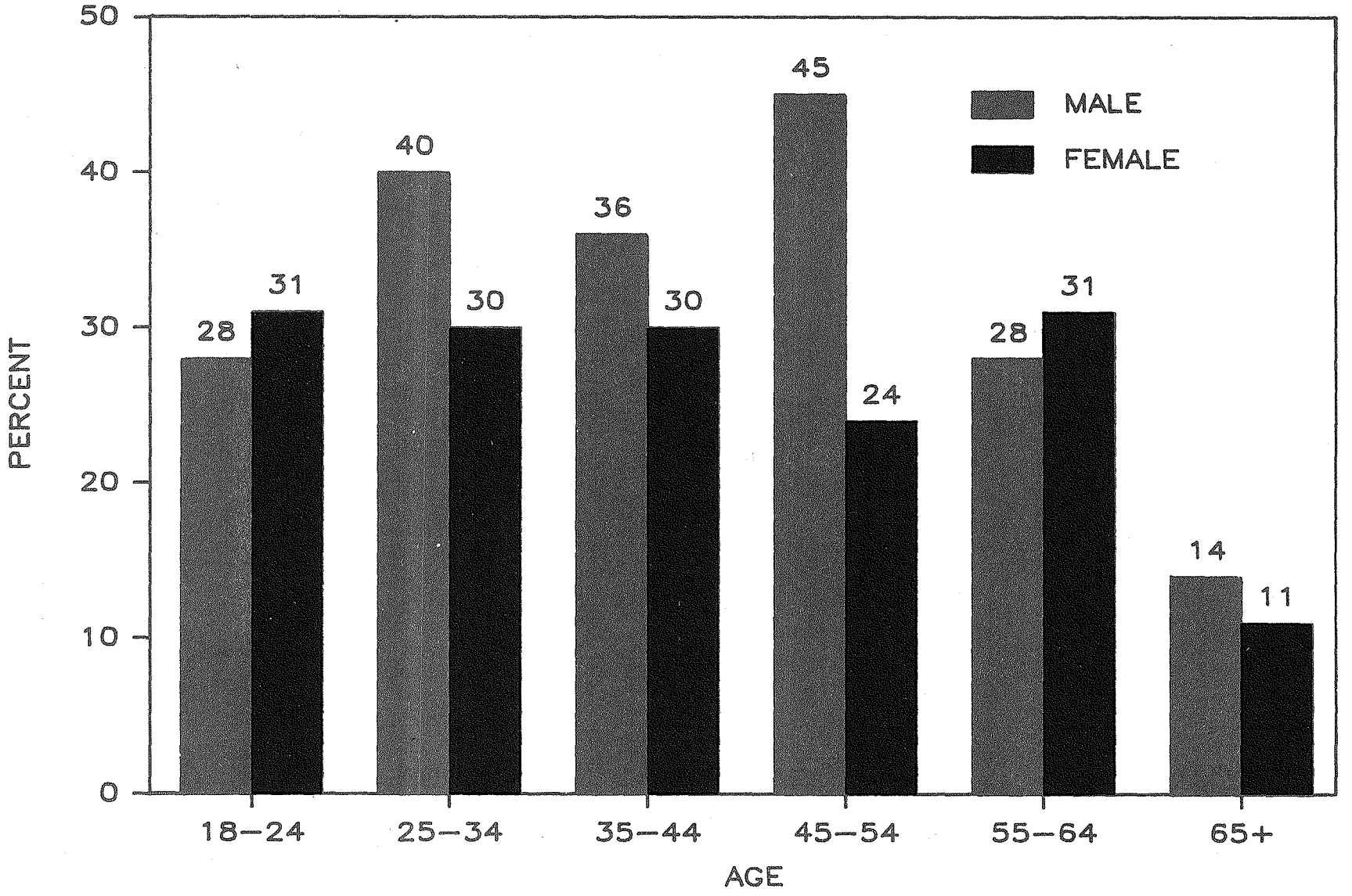
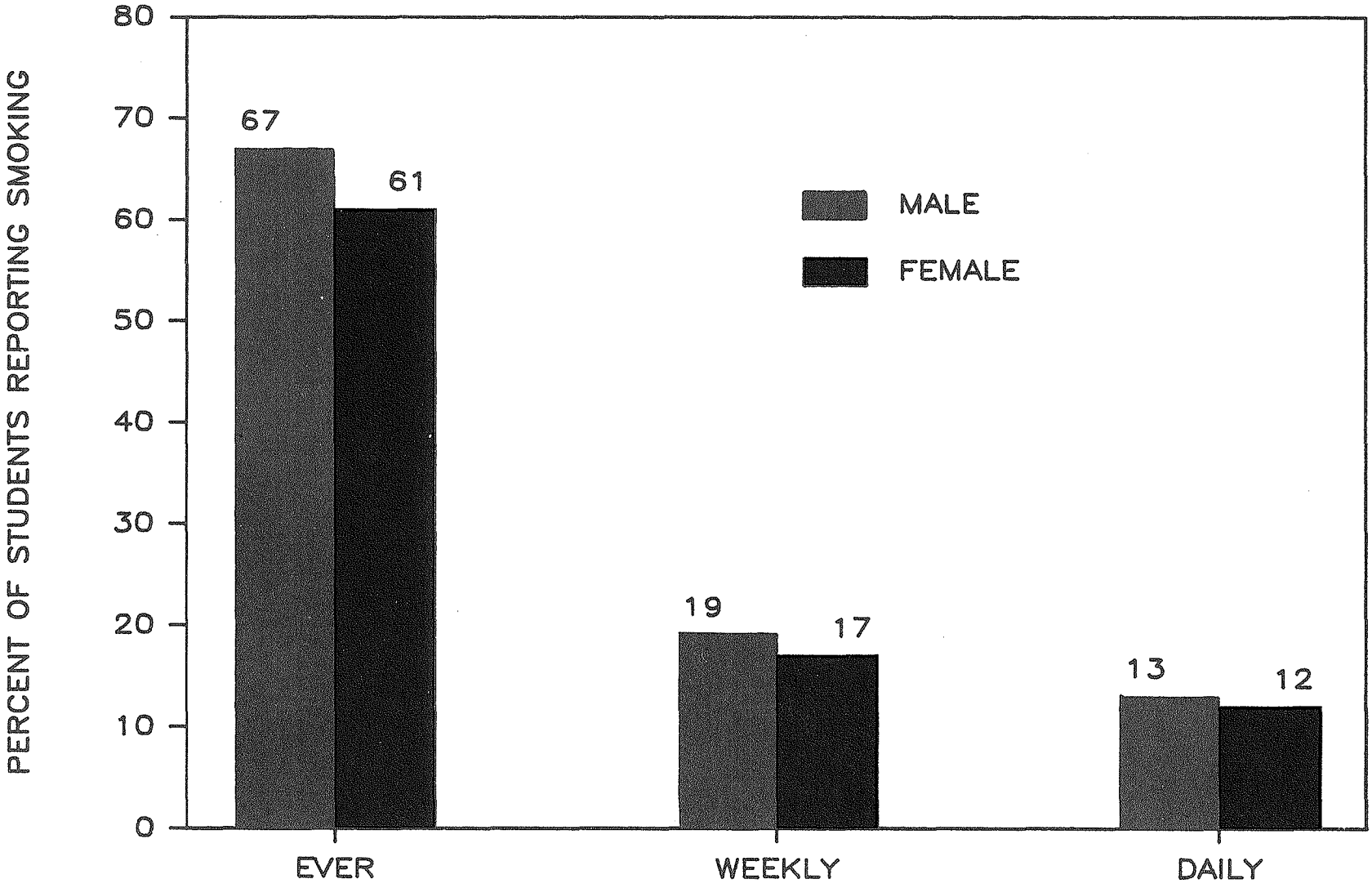


FIGURE 1—4. SMOKING BY GENDER

MDH NINTH GRADE SURVEY, 1986



Background and Summary of the 1985 Tobacco-Use Prevention Legislation

In 1985, the Minnesota Legislature passed a landmark tobacco-use prevention bill which further established this state's role as an innovator in promoting nonsmoking. In 1975, Minnesota received national attention for passing one of the first clean indoor air acts in the nation. The 1985 legislation marked the beginning of a comprehensive, multifaceted approach to tobacco-use prevention--an approach built on scientific research and extensive input from experts in many fields.

HISTORY

Early in 1983, the commissioner of health convened a staff committee to coordinate preparation of a plan for the state Health Department's role in health promotion activities. In recognition of the fact that smoking accounts for 85% of lung cancer deaths, a major proportion of heart attacks, and 11% of all illness, death, and medical costs in Minnesota, the committee recommended that the Health Department undertake a planning initiative in the area of nonsmoking. In order to accomplish this task, the committee also recommended the formation of an organizational unit in the Health Department whose primary purpose would be to plan a nonsmoking initiative.

Following this recommendation, the commissioner established the Minnesota Center for Nonsmoking and Health (CNSH) in 1983. This new center was staffed by two half-time research scientists--one in psychology and the other in epidemiology--and a health educator/administrator, all working under the direction of the state epidemiologist.

During its first six months, the CNSH staff described the epidemiology and economics of smoking in Minnesota, reviewed the literature on smoking control programs, and selected and organized the Minnesota Technical Advisory Committee on Nonsmoking and Health. This technical advisory committee developed strategies to accomplish three goals: to prevent nonsmokers from becoming smokers, to increase the numbers of current smokers who quit, and to protect nonsmokers from the health effects of passive smoking.

Members of the technical advisory committee were chosen on the basis of interviews by staff of the MDH Center for Nonsmoking and Health and recommendations from a variety of sources. They represented many areas of expertise: wholesale/retail sales; labor; medicine; hotels, resorts, and restaurants; law; large and small business; education; insurance; the legislature; nursing; smoking cessation and prevention; smoking research; smoking epidemiology; economics; advertising; local government; and community action. Professonal and trade associations proved to be a source of committee members; several participants were presidents of such organizations.

The committee included several former smokers, although experts who currently smoked were, understandably, reluctant to serve. Opinions on the desirability of influencing public behavior ranged from strong advocacy to vocal opposition.

The committe was asked to produce a statewide plan to promote nonsmoking through 1) public communication and education, 2) school and youth education, 3) public and private regulatory measures, 4) economic incentives and disincentives, and 5) information needs. These five areas formed the basis for subcommittee assignments, and the work of these subcommittees comprised chapters in the committee's final report. The final set of the committee's 39 recommendations was combined with background research to produce a 198-page document, The Minnesota Plan for Nonsmoking and Health. This document was presented to the commissioner of health and released to the public in September, 1984.

The conceptual framework and planning methods described in The Minnesota Plan have not only provided a plan for the future, but the planning process also mobilized resources and provided focus for a number of groups outside of state government. Many other organizations have used the research results of The Minnesota Plan. For example, in 1984, the Minnesota Coalition for a Smoke-Free Society by the Year 2000 was formed. Members of the coalition were instrumental in supporting and providing information during the legislative process in 1985. A major goal of this coalition is implementation of The Minnesota Plan, particularly in the health care sector. Nearly 30 organizations, both public and private, are members of the coalition, including the Minnesota Medical Association, the Minnesota Department of Health, the Minnesota Public Health Association, other health professional organizations, major health insurance companies, health maintenance organizations, and the Minnesota chapters of the American Heart Association, the American Lung Association, and the American Cancer Society.

During the development of The Minnesota Plan, several principles evolved which may be helpful in understanding the approach to risk factor control envisioned by the MDH Center for Nonsmoking and Health and represented in the 1985 legislation. These principles include:

- Epidemiologic and economic estimates of disease impact should be the basis for program planning and can be useful in crystallizing public and legislative opinion.

- Use of regulatory and economic measures can be important methods of influencing public behavior. For example, the Minnesota Clean Indoor Air Act has been influencing behavior in Minnesota since its passage in 1975. It also helped set the stage for the more comprehensive 1985 legislation.

- Promotion of nonsmoking is a more effective approach than focusing on smoking behaviors and consequences.

- Public health expertise alone is not sufficient to design measures that change societal behavior patterns. The process of reducing smoking

rates requires consensus building and the expertise of specialists in many disciplines.

- Multidimensional approaches to reduce smoking prevalence will be more effective than one-dimensional approaches. Health education research indicates that combining two or more approches or methods is more effective than using any single method by itself.

SUMMARY OF THE 1985 LEGISLATION

In March 1985, smoking-control legislation was introduced to the Minnesota Legislature which was based on seven of the recomendations of The Minnesota Plan. The legislation received bipartisan support as well as the support of the governor. U.S. Surgeon General C. Everett Koop testified in support of the proposed nonsmoking legislation before the Minnesota House of Representatives. The legislation was passed and ratified in June, 1985.

The 1985 tobacco-use prevention legislation provided for an increase of 5 cents in the state cigarette excise tax, beginning on July 1, 1985, making Minnesota's tax rate 23 cents per pack. One cent of the tax increase was earmarked for a public health fund, one-quarter of which was to be set aside for tobacco-use prevention. This legislation authorized the commissioner of health to launch a major statewide initiative to promote nonsmoking and established state aid for comprehensive tobacco-use prevention programs in schools.

Responsibilities of the Department of Health

The legislation authorized the commissioner of health to do the following:

1. Provide assistance to workplaces to develop policies that promote nonsmoking and are consistent with the Minnesota Clean Indoor Air Act.

2. Provide technical assistance, including design and evaluation methods, materials, and training to local health departments, communities, and other organizations that undertake community programs for the promotion of nonsmoking.

3. Collect and disseminate information and materials for smoking prevention.

4. Evaluate new and existing nonsmoking programs on a statewide and regional basis using scientific evaluation methods.

5. Conduct surveys in school-based populations regarding the epidemiology of smoking behavior, knowledge, and attitudes related to smoking, and the penetration of statewide smoking control programs.

6. Report to the Legislature each biennium on activities undertaken, smoking rates in the population and subgroups of the total population, evaluation activities and results of those activities, and

recommendations for further action.

7. Conduct a long-term coordinated public information program that includes public service announcements, public education forums, mass media, and written materials. The program must promote nonsmoking and include background survey research and evaluation. The program must be designed to run over at least five years, subject to the availability of money.

8. Award special grants to local boards of health to conduct community-wide pilot programs for the promotion of nonsmoking or to local boards of health or nonprofit corporations to conduct statewide programs for the promotion of nonsmoking.

Staffing of Program at Department of Health

A major principle behind the staffing pattern for the Health Department's Center for Nonsmoking and Health is the creation of a multidisciplinary team with professionals from various backgrounds who can work together to develop a multifaceted program that is realistic and well rounded. Health Department staff work closely with the tobacco-use prevention specialist at the Department of Education. (See organization chart.)

Responsibilities of the Department of Education

The 1985 legislation authorized the commissioner of education, with the consultation and assistance of the commissioner of health, to do the following:

1. Provide technical assistance to school districts for the development, implementation, and evaluation of tobacco-use prevention curricula and programs.

2. Provide to school districts information about evaluation results of various curricula as reported in the scientific literature and elsewhere.

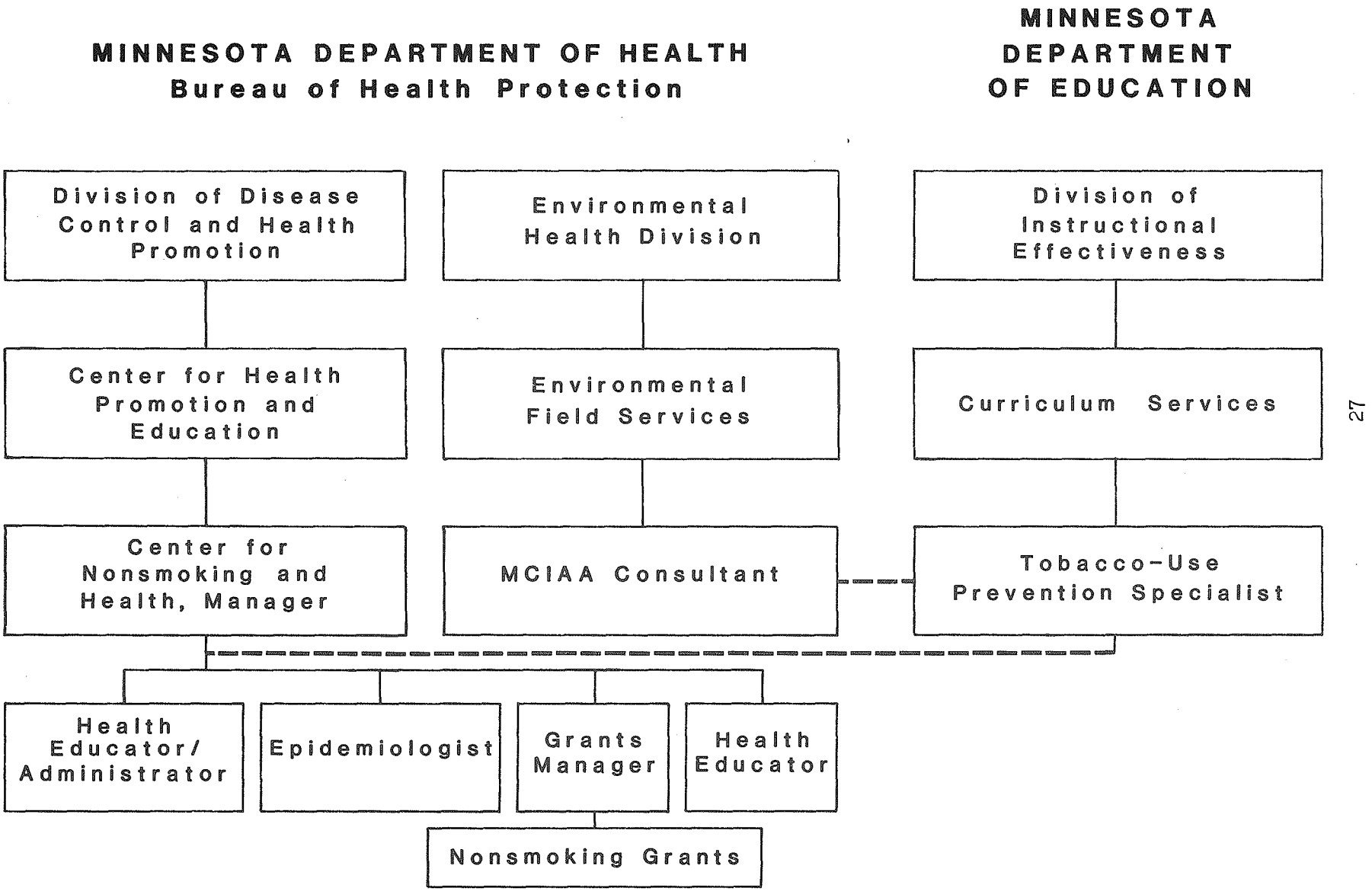
3. Collect information from school districts about prevention programs and evaluation results.

School Aid Funds

The 1985 legislation made funds available for tobacco-use prevention programs in schools at the rate of $.52 per student in average daily membership during the 1985-86 school year, and at the rate of $.54 per student in the 1986-87 school year. School districts could use these funds for the following purposes:

1. In-service training for public and non-public school staff.
2. Tobacco-use prevention curricula, including materials.

Organization Charts – Minnesota Nonsmoking Initiative



3. Community and parent awareness programs.
4. Evaluation of curriculum and programs for tobacco-use prevention.

The legislation stipulated that each tobacco-use prevention curriculum must include at least the following components:

1. In-service training of teachers and staff.
2. Evaluation of programs and curriculum results.
3. A kindergarten through grade 12 continuum of educational intervention related to tobacco use.
4. Targeted intervention on tobacco-use onset for students who are 12 to 14 years old, based on evaluated curricula that have been shown to reduce tobacco-use onset rates.
5. Prohibition of smoking cigarettes and the use of other tobacco products on school premises by minors.

Public Communications and Education

Background

The 1984 Minnesota Plan included recommendations concerning the role of public information in the promotion of nonsmoking. These recommendations were reflected in the 1985 legislation. The report had recommended the "promotion of nonsmoking through a public information campaign, based on sound marketing principles and coordinated with other regulatory, economic and informational efforts." The report also acknowledged that "for years cigarettes have been sold to the public through well-planned, long-term marketing campaigns, employing consistent themes over periods of several years" and recognized that "a concerted public information campaign, education and communication effort is needed to counteract these compelling advertising images."

Marketing and public information efforts are an essential element of the Minnesota Nonsmoking Initiative. Indeed, a coordinated effort to market a tobacco-free lifestyle to Minnesotans is the mission of the initiative. Teens, pre-teens, and young women are the primary target groups for this effort, and they will be the primary targets for market research and mass media campaigns.

Research indicates that ads for cigarettes and other drugs may be responsible for more adolescent exposure to drug use than are entertainment and news programming combined. Therefore, ads may also reasonably be expected to motivate young people toward nonsmoking.

By spring, 1986, the state Health Department had decided that the time had come to add market research and mass media messages to its promotion of nonsmoking among Minnesota youth. Numerous projects which specifically targeted Minnesota teens and pre-teens were already in place. Eight community and statewide nonsmoking grants had been awarded, some of which targeted young people. The majority of Minnesota schools were about to complete their first year of using state-aid money to fund tobacco-use prevention programs from kindergarten to 12th grade. And the state Health Department had initiated an extensive baseline survey to measure tobacco use among Minnesota adolescents.

Health Department staff had reviewed state and national media messages that targeted teens. They also reviewed the literature which indicated that: 1) television is the preeminent mass medium among adolescents in that a typical American child spends more time watching TV than any other single activity including school and interacting with friends; 2) that the mass media are seen by adolescents as a trusted and influential source of information about drug use by users and non-users alike; and 3) that commercials aimed at children affect children.

Using these reviews and The Minnesota Plan as a starting point, department staff conceptualized a basic framework for conducting market research and producing their own media messages for youth. Fortuitously, a Minnesota organization called A Smoke-Free Generation had developed several PSAs in 1984 which fit the criteria that the Health Department had outlined. When

the Health Department looked into the possibility of using these PSAs, they received a positive response. They then sought the services of an outside agency capable of editing the preexisting video footage, purchasing television airtime for the spots, and training Health Department staff to do media buying.

Synopsis of Smoke-Free Campaign

With the help of the outside agency, and with the permission to use already available film footage to produce TV commercials, the Health Department conducted an extensive six-week campaign in May and June of 1986, using television advertisements both to promote nonsmoking among adolescents and to gather market research data on the television viewing habits of young Minnesotans. The ads contained an offer for a free smoke-free generation T-shirt as a mechanism for measuring the response to the ads and as another way to spread the nonsmoking message.

As a result of this campaign, the Health Department generated a large database of information on the Minnesota youngsters who responded to the ads and provided specific information on their television viewing habits as well as on their age, sex, tobacco use, and location in the state. This information was used during the campaign, and will be used again in the future, to target the adolescent population for televised nonsmoking messages.

The goal of the smoke-free campaign was to reach as many young Minnesotans as possible with a message that would influence them not to smoke. This campaign surpassed all expectations for success as measured by:

- The overwhelming response it generated (the Health Department received an estimated 661,200 calls during the six-week run of the ads).
- The creation of a database with information collected from nearly 40,000 youngsters who called in response to the ads.
- The distribution of nearly 40,000 smoke-free generation T-shirts which will continue to convey the nonsmoking message of the ads as the youngsters wear them.
- The clear evidence that purchasing television advertising time and judicious placement of ads, as opposed to placing public service announcements, is a highly effective means of reaching a target group. This strategy resulted in regional populations of responders closely paralleling the actual population distribution of 8 to 18 year olds in the state. (Figures 2-1 and 2-2)
- The training and experience Health Department staff gained as a result of the campaign.

A major factor in the overwhelming response to the campaign was the

Figure 2-1

POPULATION DISTRIBUTION OF AGES 8–18

BY REGION, MN 1980

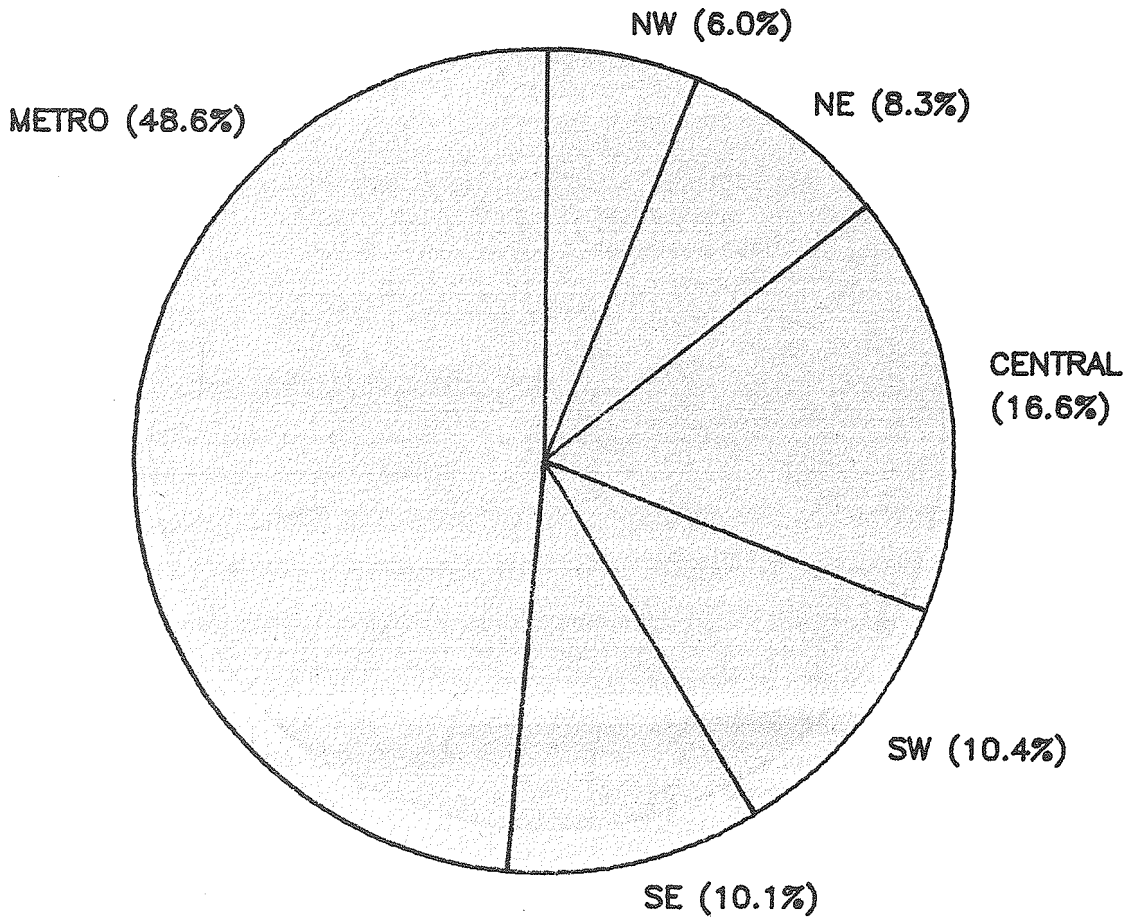
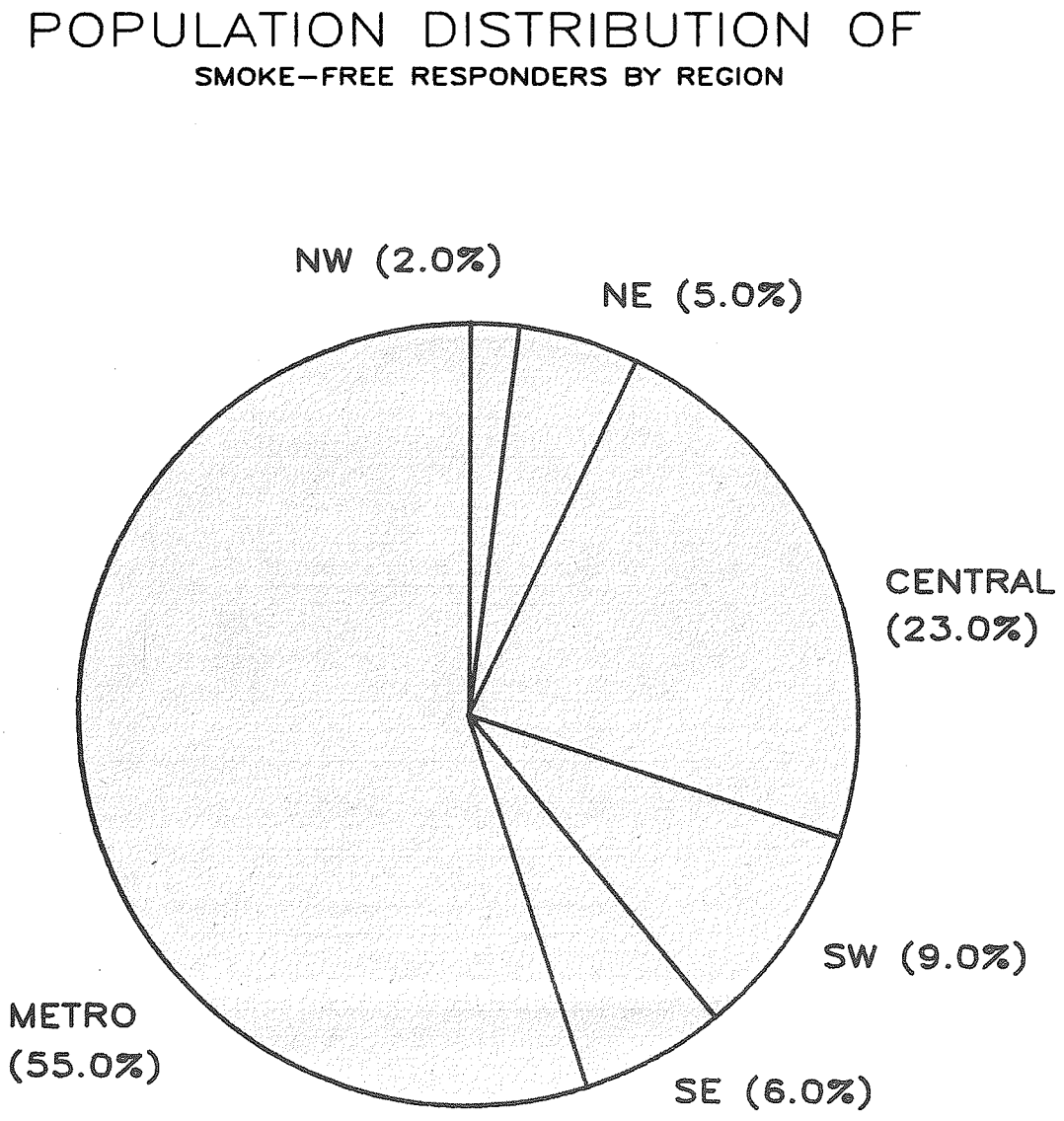


Figure 2-2


POPULATION DISTRIBUTION OF
SMOKE-FREE RESPONDERS BY REGION
NW (2.0%)
NE (5.0%)
CENTRAL
(23.0%)
SW (9.0%)
SE (6.0%)
METRO
(55.0%)

cooperative spirit in which governmental agencies, nonprofit organizations, private industry, and television media all came together.

Discussion of Campaign Design

With an overall goal of preventing nonsmoking youngsters in Minnesota from trial use of tobacco, the Health Department outlined the following parameters as a starting point for the campaign:

- Scope--the media messages should reach all parts of the state.
- Target group--the primary target for the campaign should be Minnesota youth, particularly those in the 9-14 year age group who are apt to be making choices about smoking.
- Approach--the media messages should fit the guidelines the Health Department had conceptualized and they should be aired according to a carefully developed placement strategy rather than as public service announcements.
- Outcome--the campaign should pilot concepts and approaches which may be used in future health education efforts, and therefore the results of the campaign should be as measurable as possible.
- Training--the Health Department wanted this campaign to provide them with information and training in the area of buying media time for health education messages.

After numerous planning sessions, a campaign design began to emerge based on these parameters.

Target and Scope of the Campaign

According to a 1983 Minnesota study conducted by the Search Institute, 8.9% of males age 13 to 14 smoke and 14.1% of females age 13 to 14 smoke. Of adolescents age 15 to 16, 17% of males smoke and 23% of females smoke. By age 18, 23% of males and 29% of females smoke. Among adults who smoke, 95% began between the ages of 12 and 21. And children younger than 12 are gathering experiences which will influence their decision whether or not to smoke.

Since the decision to smoke or not to smoke is typically made between the ages of 9 and 14, this was to be the primary target for the smoke-free campaign; however, since the ratings services which provide important information for buying media time divide children into two age groups--6 to 11 and 12 to 17--the target group for the campaign was broadened.

Television was chosen as the primary medium for the campaign because, of all the media options for reaching adolescents, it is the most powerful. On a given day, the average American teenager will watch over five hours of

television, spending over 30 hours weekly in front of the TV set.

For purposes of achieving statewide coverage in this campaign, the state was divided into six coverage regions, five of which had approximately the same population size in the age group 8-18. These coverage areas also roughly paralleled the areas served by the Health Department's district offices. (Maps 2-1 through 2-6)

Approach

While the idea of using the mass media to promote health is not new, this campaign's use of marketing principles and the purchase of media time, rather than placing spots as PSAs, were innovations in the health field. The marketing concepts described in The Minnesota Plan formed the basis for the campaign as follows.

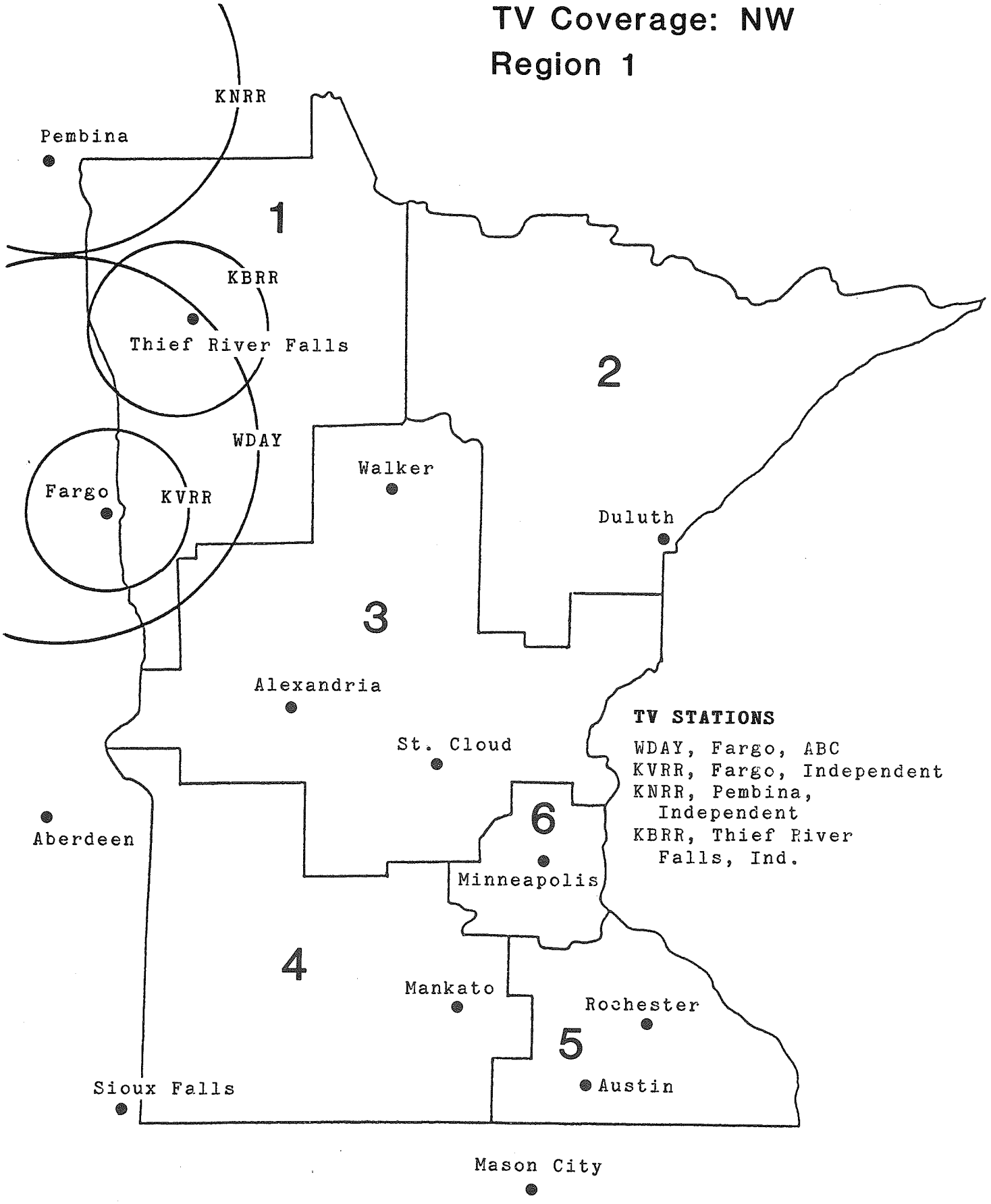
The campaign's messages were positive, promoting nonsmoking rather than being anti-smoking or putting down smokers. The approach was intended to market nonsmoking as a solution to certain teen problems--notably their need to belong and to feel accepted. Cigarettes and smoking were not depicted in the ads, reflecting a conscious desire not to promote the product of the "opposition." Finally, to be accepted by young people, the messages were purposefully designed not to create the impression of being delivered by an authority figure, such as a health department.

These concepts of message development represent a departure from more common approaches to health-related television messages. Over the years the vast majority of these messages, particularly those associated with tobacco use, either have been factually-oriented, presenting information about the consequences of a specific health behavior, or have used fear arousal techniques to make their point. These two approaches have been used so frequently since the 1950s that researchers have compiled a significant collection of data regarding their relative effectiveness in altering health behavior or motivating change.

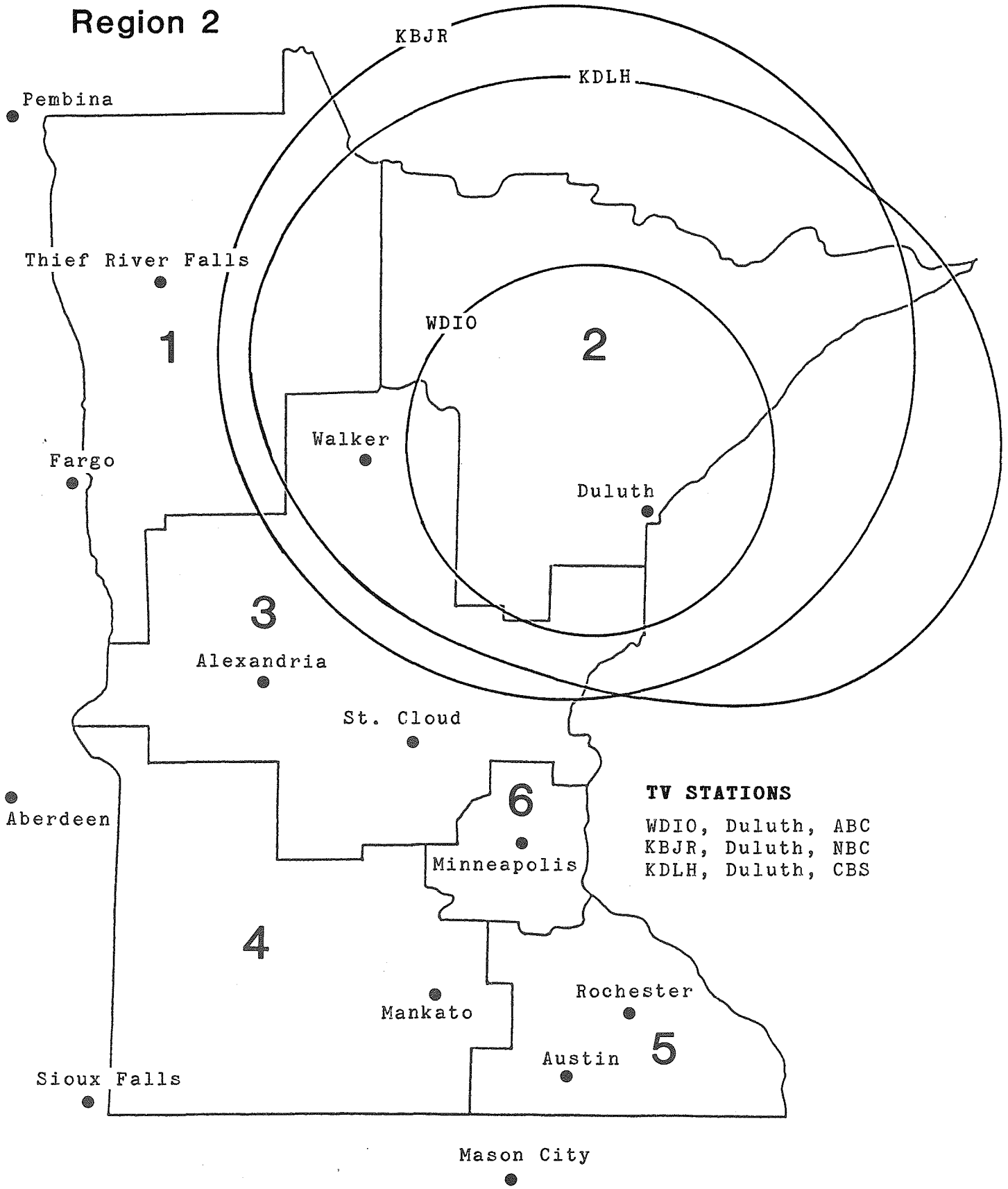
The research indicates that facts alone are not sufficient to impact on behavior. For example, 25 years after the first Surgeon General's report alerted the American public to the health risks of smoking, roughly one-third of Americans still smoke. Although using fear of health consequences can be effective in changing behavior--particularly when people are fully aware that they are at risk and believe they can do something to avoid painful consequences--fear arousal techniques can backfire, causing people to deny that they are at risk and to shun any suggestions for change.

These limitations of the factually-oriented and the fear arousal techniques are particularly pertinent when it comes to reaching youngsters with anti-smoking messages. Research indicates that teens and pre-teens consider themselves to be invulnerable to adult health risks such as cancer caused by smoking. Such consequences are too far off into the future to seem real and personal to a young person. Therefore, attempts to prevent teens from smoking by appealing to fear of long-term health consequences are apt to fail. As for a factual approach, information is important but is hardly

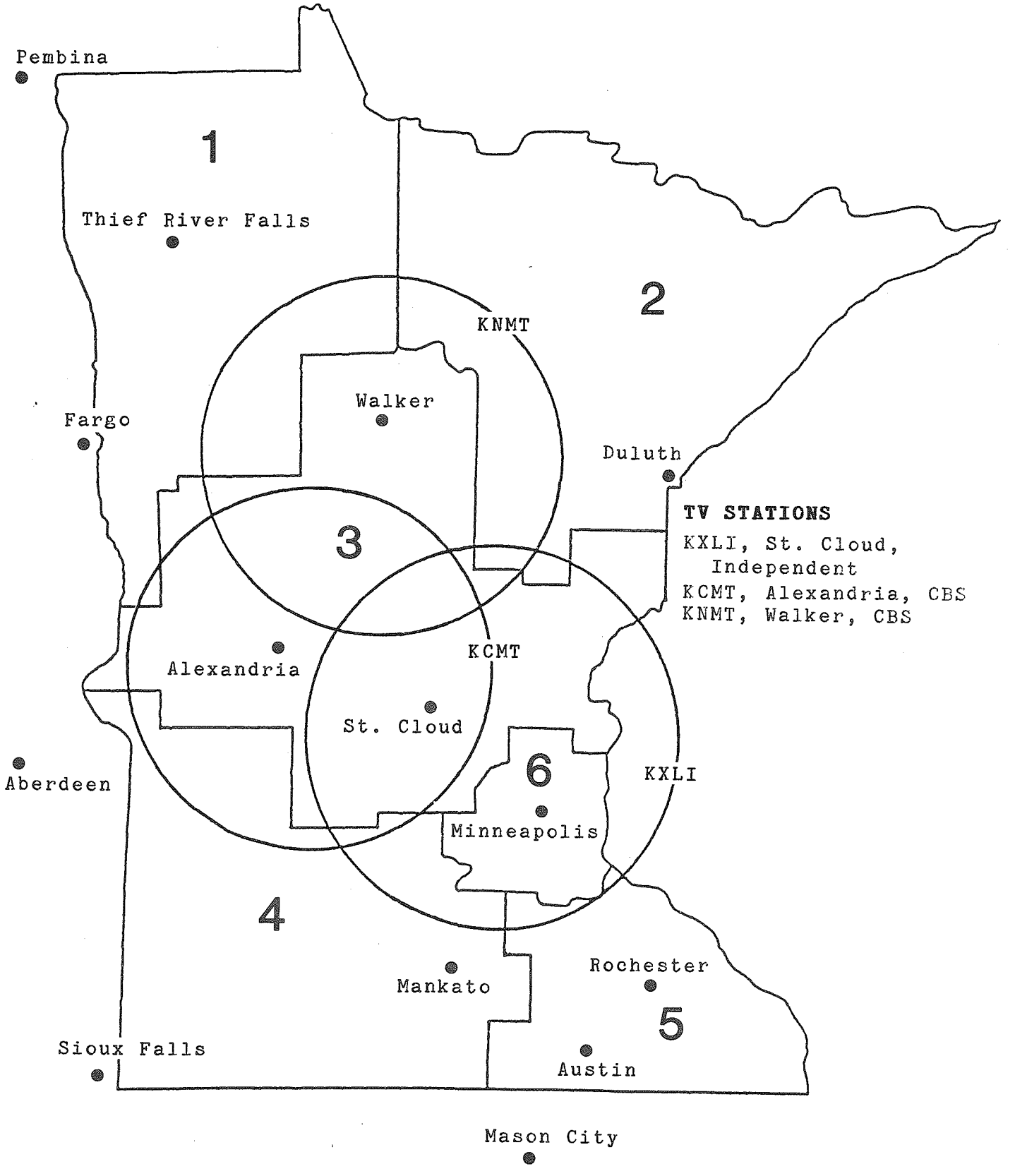
Map 2-1
TV Coverage: NW
Region 1

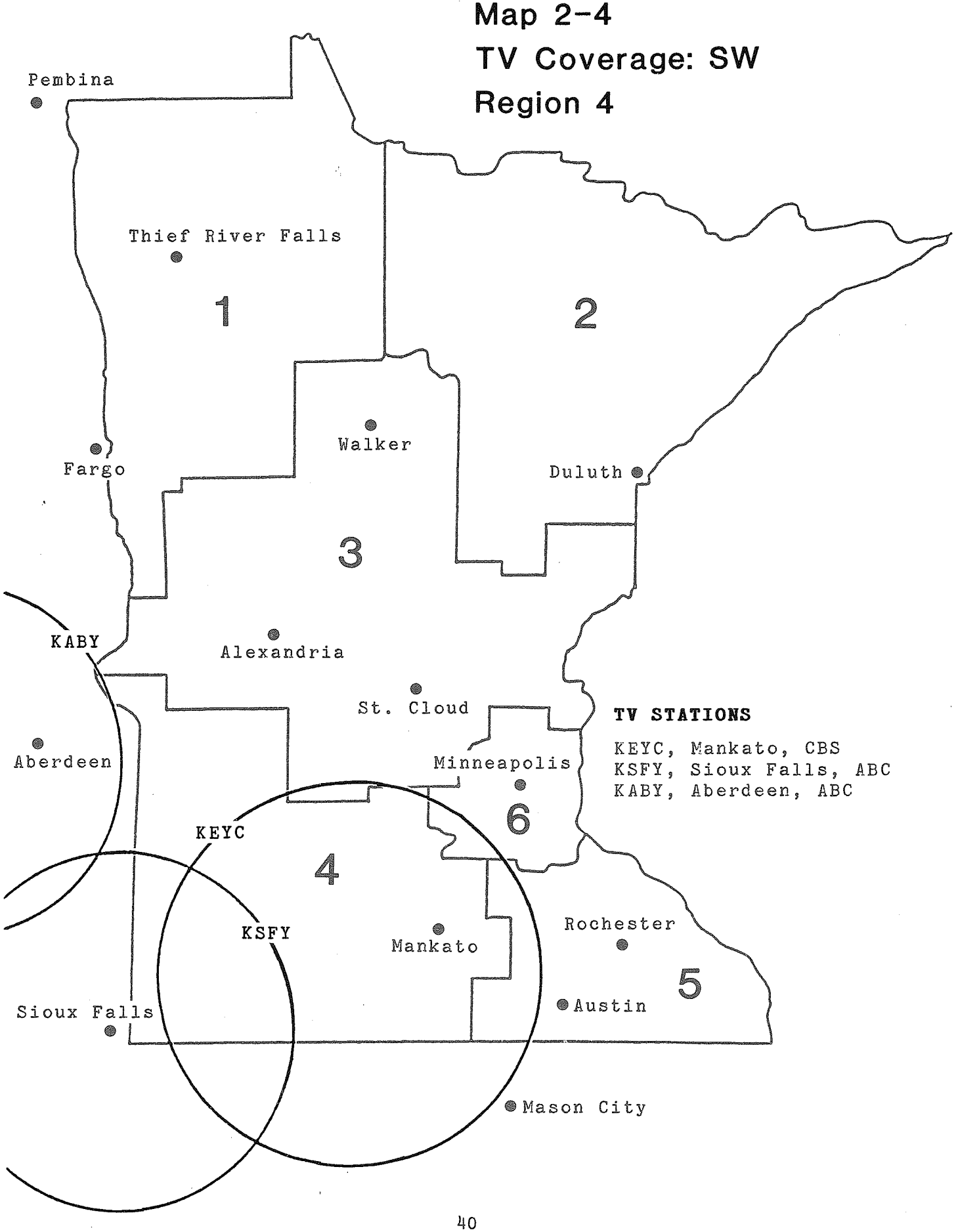


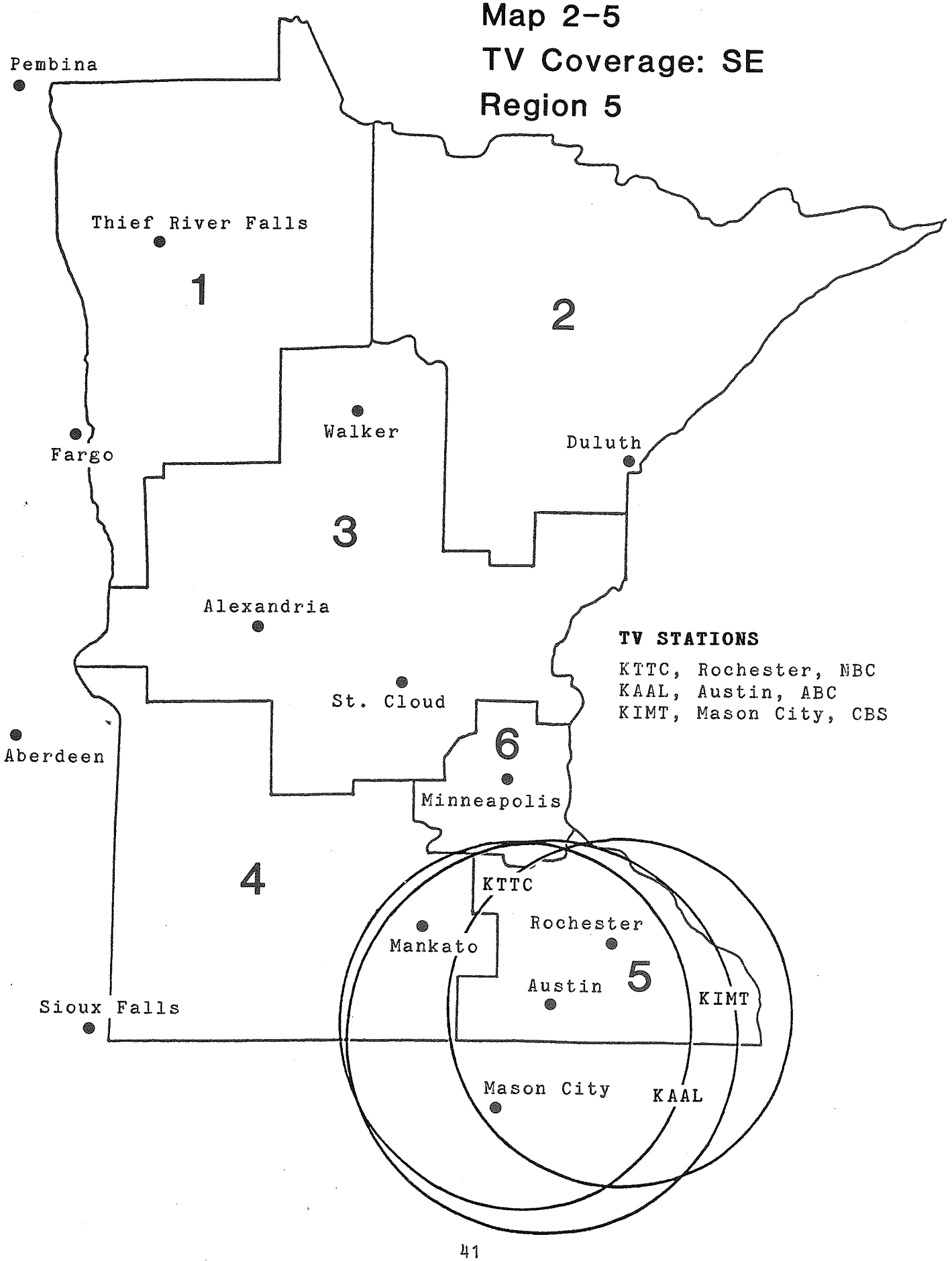
Map 2-2
TV Coverage: NE
Region 2



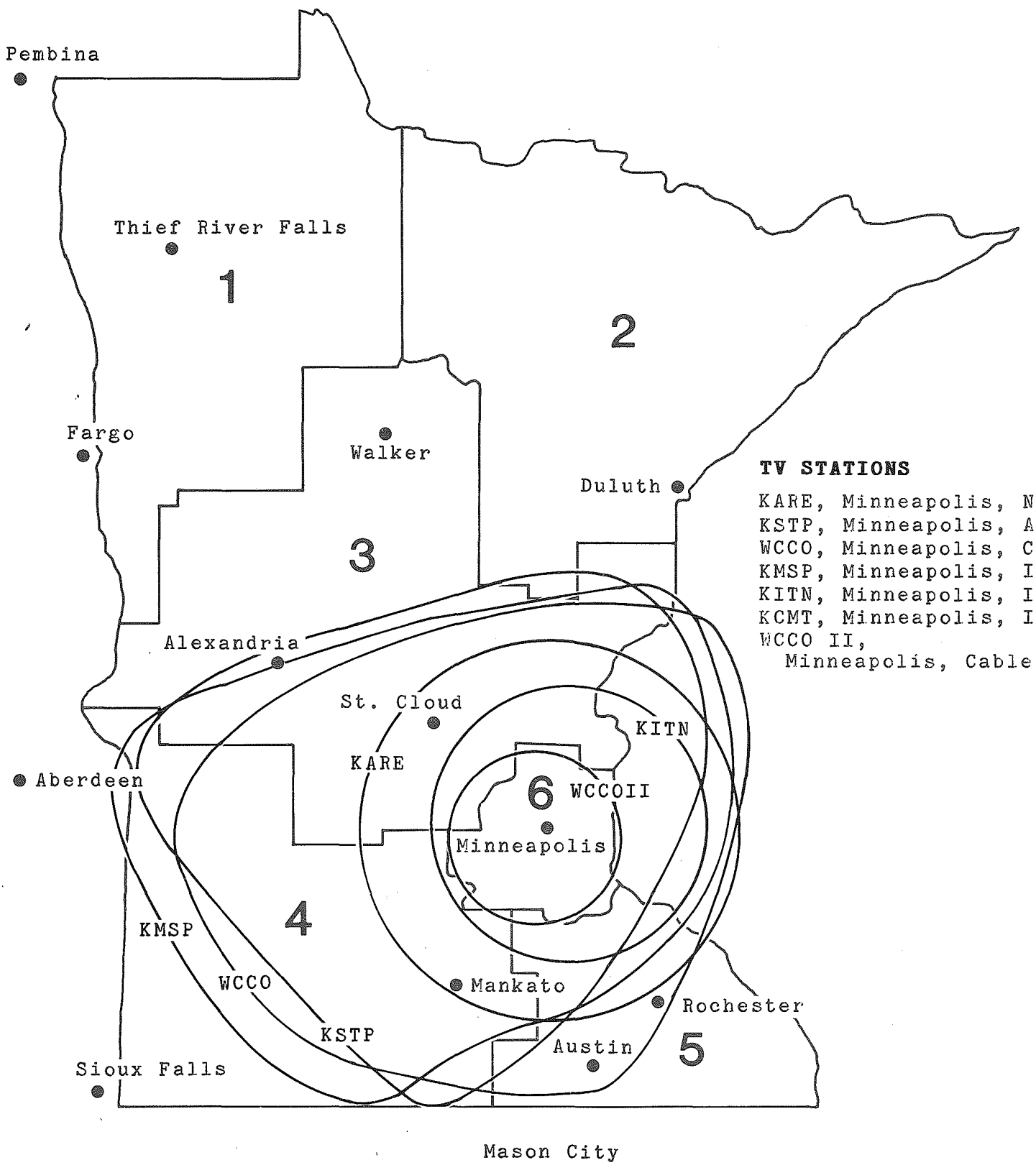
Map 2-3
TV Coverage: CTRL
Region 3




Map 2-4
TV Coverage: SW
Region 4
Pembina
Thief River Falls
1
2
Walker
Fargo
Duluth
3
KABY
Alexandria
St. Cloud
TV STATIONS
KEYC, Mankato, CBS
KSFY, Sioux Falls, ABC
KABY, Aberdeen, ABC
Aberdeen
Minneapolis
6
KEYC
4
KSFY
Mankato
Rochester
5
Austin
Sioux Falls
Mason City


Map 2-5
TV Coverage: SE
Region 5
Pembina
Thief River Falls
1
2
Walker
Fargo
Duluth
3
Alexandria
TV STATIONS
KTTC, Rochester, NBC
KAAL, Austin, ABC
KIMT, Mason City, CBS
St. Cloud
6
Aberdeen
Minneapolis
4
KTTC
Rochester
Mankato
Austin
5
KIMT
Sioux Falls
Mason City
KAAL

Map 2-6
TV Coverage: METRO
Region 6



TV STATIONS

KARE, Minneapolis, NBC
KSTP, Minneapolis, ABC
WCCO, Minneapolis, CBS
KMSP, Minneapolis, Ind.
KITN, Minneapolis, Ind.
KCMT, Minneapolis, Ind.
WCCO II,
Minneapolis, Cable

enough to combat the powerful influences toward smoking that young people are subject to--from role models on TV and in the movies who smoke, to parents and friends who smoke, to the extensive advertising campaigns of the cigarette industry.

To go beyond these techniques, the Health Department looked to research which indicated that in order to be effective, messages had to be directed toward meeting the following criteria:

1. Messages must create an appropriate cognitive structure, which is to say they must acknowledge what the audience knows and understands, and must speak in a style of language understood by the audience.

2. Messages must create a proper motivational structure. The request in the message must be realistic and must appeal to what the audience is already inclined to do and to what they know and like.

3. Messages must create an appropriate action structure, clearly stating what is expected from the audience.

As a part of the initial planning, the Health Department and the agency helping them with this project conducted a focus group to create a better understanding of the target audience, to facilitate decisions about which role models and which TV spots to use, and to evaluate the conceptual framework of the campaign. Focus group members included professionals from nonsmoking programs, schools, advertising, and the television industry. The discussion was designed to be a general evaluation of adolescent behavior as it pertains to both smoking and television viewing: characteristics of adolescent smokers, the image smoking projects among this age group, possible reasons why some adolescents become smokers, and adolescent viewing habits and role models.

Summary of Focus Group Discussion

The majority of adolescents who smoke seem to share similar characteristics: they come from blue collar homes, tend to get lower grades in school, participate less in extra-curricular functions, have less ambition to pursue a college degree, and have lower self-esteem. Conversely, nonsmoking adolescents appear to be more active in extra-curricular functions, possess greater social competence and higher self-esteem, tend to get higher grades in school, and have a greater interest in college and career goals.

Among the majority of adolescents, smoking projects a negative image. Adolescent smokers may be viewed as tough and bordering on anti-social by their peers. Participation in sports and other extra-curricular activities is perceived favorably by teens today; therefore smoking, which decreases athletic performance, is looked down upon.

Although smoking may project a negative image to most teens, there is still a substantial number in this age group who smoke. There are several theories to explain this behavior. First, children whose parents smoke are

more likely to smoke than children with nonsmoking parents. These children follow their parent's example and view smoking as a rite of passage to adulthood. On the other hand, children with nonsmoking parents may use smoking as a form of rebellion against their parents.

Another theory as to why adolescents smoke, particularly among females, is for weight control. Many teenage girls, as well as adult females, substitute smoking for snacking, believing that a cigarette will suppress their appetite.

Perhaps the most substantiated theory explaining adolescent smoking focuses on social pressure--the desire of the teenager to be accepted, to be part of his or her peer group, and to identify with and adjust behavior patterns to those of friends and other role models. During the adolescent years, children are very concerned about being accepted by their peers. This desire to be a part of a group will many times override parental authority and individual values. Even though the teenager may feel smoking is wrong, he or she will smoke if it is deemed "acceptable behavior" by the peer group. Children and teenagers have been found to overestimate the number of their peers who do smoke.

The same is true with role models. Teenagers want to identify with role models. As a result, they may very well adjust their lifestyles to mirror the role model's behavior. If the role model smokes, smoking is an acceptable practice. The most popular current teenage role models fall into three categories: athletes, TV/movie stars, and musicians.

A final theory is that adolescents are curious about the adult world and are eager to enter into it. Smoking is considered an adult activity, so the teen may be inclined to experiment with smoking as a springboard to adulthood.

Adolescents are elusive television viewers. Parents control the television set during the prime viewing hours, making children harder to target at that time. The child usually has control over the television set from 3:00 p.m. to 7:00 p.m., and the parent takes control after that time. The source of control may not be relevant in homes with two or more televisions.

Teenagers watch television in a random fashion, choosing programs that capture their interest. This implies that adolescents do not develop loyalty to many television programs, meaning they do not necessarily tune in to a particular program every time it is run. Their involvement level in television is low, so programs must be consistently interesting to retain the adolescent audience.

Message Design

Results of the focus group supported the idea of using messages that would appeal on an emotional level instead of using traditional factual information or fear arousal approaches to motivate change. The messages that were adapted for the campaign pictured a realistic world for kids,

showing young people in their natural habitat, wearing clothes they "always wear," saying things they "always say." There was no authority figure telling them what to do. Rather, popular role models were used to encourage behavior change. The messages featured popular role models such as Malcolm-Jamal Warner from the NBC Cosby Show, a popular rock band called the Jets, and well-known professional wrestler, Jesse "The Body" Ventura. The spots also featured average "neighborhood kids" delivering a smoke-free message. These messages were simple, direct, and extremely motivational.

Breaking with more traditional anti-smoking messages, cigarettes were not depicted. Instead, joining the "in crowd"--the smoke-free generation--was encouraged. The motivation was positive: to be a part of the new in-crowd, rather than being a negative appeal showing a destructive behavior pattern in a bad light. The style of the commercials was upbeat, making use of popular music, strong graphics, and fast-paced editing.

To enhance their effectiveness, the messages were designed to compete with the highest quality commercials on television. Since the campaign used prime time commercial slots for messages, rather than the late night, low-viewer times designated for PSAs, the messages were broadcast next to major advertisers such as McDonald's and Coca Cola. Therefore, they had to reflect similar high quality production values if they were to be effective.

Using components of the existing PSAs from A Smoke-Free Generation and some additional footage, a total of seven new television commercials (five 30-second spots and two 15-second spots) were created. Each spot was edited to make the content more dynamic and the motivational appeal more enticing.

The Importance of Message Reception

While development of the commercial messages was essential, the smoke-free campaign focused on testing the hypothesis that media-based health education efforts could be vastly improved if equal priority was assigned to ensuring message reception as is assigned to message content and style. What point was there in creating new, more effective messages if they would never be received by the target group?

To guarantee a significant statewide audience of Minnesota youth, funds were budgeted for the purchase of commercial television airtime. This decision to emphasize message reception by buying television time strategically was a clear departure from the PSA approach of most health-related mass media efforts.

Unfortunatly, most public service announcements are shown only when television stations have excess or unsold airtime (usually very late at night or in other unpopular time slots). PSAs are difficult to track because there is little or no predictability as to when messages will run and poor verification after they do air. The result is that even well-produced, educationally innovative messages, when released as PSAs, are never seen by the vast majority of viewers.

Broadcasting in the United States is conducted principally as a profit-making business. Television networks and stations alike are run by corporate leaders with a sales and marketing orientation and an eye on the bottom line. Yet most health promotion agencies seem to ignore this fact and use their media budgets almost exclusively for the creation of new commercials which they release as public service announcements in the hope that they will eventually end up on the air.

The Health Department recognized the importance of message reception for the nonsmoking campaign and concluded that with a well-planned media buy and the proper response mechanism, they could make a significant contribution to the literature concerning the use of televison in health education campaigns and could gather significant market research data on the viewing habits of young people.

While the television ratings services provided viewer numbers and geographic breakdowns, the information they provided for the campaign's target group was limited. Thus, part of the purpose of the campaign was to build a new database of information on the use of television by young Minnesota smokers and nonsmokers. Collecting audience information played a critical role in meeting this objective for the campaign.

Response Mechanism

To facilitate data collection and evaluate penetration of the target group, it was determined that a response vehicle was necessry--some mechanism whereby teens' response to the ads could be recorded. Each television commercial would ask viewers to respond in some fashion. When they responded, questions would be asked and data collected. In order to maximize viewer response, the call-to-action needed to be extremely appealing.

A variety of "give-away" items were considered (buttons, stickers, posters, photographs, toys, records, etc.). Finally, a smoke-free T-shirt was selected as the most appropriate choice. Through informal surveys in schools and teen-oriented clothing stores, it was determined that a free T-shirt could be expected to be extremely motivational. A T-shirt would have an immediately perceived value and would be an item kids would go out of their way to obtain. Another significant advantage of a T-shirt was that, when worn, the shirt would act as a walking billboard. In effect, the youth wearing the shirt would declare that he/she had chosen to be smoke-free. The T-shirt message would continue to be communicated long after the television campaign had ended. Not only would the T-shirt advance the educational and motivational objectives of the campaign, but also it allowed the Health Department to collect audience data. Kids who saw the ads would be likely to want to order a T-shirt.

After researching several methods for handling requests for T-shirts, an automated phone answering system was chosen as the most efficient and cost effective solution. However, within three days of the start of the campaign, it was clear that the answering machine would not be able to handle the influx of calls generated by the campaign.

Based on information provided by the television ratings services, by individual TV stations, and by direct mail marketing firms, it was estimated that approximately 20,000-25,000 responses could be expected during the six-week promotional effort. This proved to be a conservative estimate. Calls coming into the six smoke-free campaign lines were logged at 4,000 calls per hour. This number includes calls that attempted to get through, but received a busy signal instead. By the end of the first week of the campaign, the phone answering system had to be switched from the machine to live operators. By the last two weeks of the campaign, audience response had far exceeded expectations. As a result, the end tag of the commercials, which contained the T-shirt offer, was removed. Despite this, the calls kept coming in throughout the final two weeks of the campaign. On average, the operators were able to answer 1,500 calls per day. The length of each phone call with the live operators was one and a half to two minutes.

Operators conducted a mini-survey of the callers, the results of which were a valuable tool in the evaluation of the campaign. By asking callers what program they were watching when they saw the spot, the popularity of programs and "dayparts" for television viewing were tracked. This information will be useful for future television campaigns. The data collected from the survey also provided information as to what ages the offer appealed to most.

Despite technical difficulties with the phone system and its limited capacity to take calls, the T-shirt response mechanism proved to be successsful in achieving the objective of building a sizable database and furthering the motivational effect of the campaign.

Media Placement Strategy

The objective for the placement of the spots on television was to achieve 100% coverage across the state of Minnesota during a six-week period. To maintain flexibility in the placement process, purchases were made in three two-week intervals. The first placement was based primarily on statistical data from the television ratings services. The last two placements were based, additionally, on the pattern of actual viewer responses collected from the phone orders for T-shirts. Because responders were asked what they were watching when they saw the ads, effective placement of subsequent ads could be even more precisely accomplished.

Television airtime was purchased from 23 stations. In order to achieve coverage across the entire state, it was necessary to place the smoke-free spots on three stations located in adjacent states. (Maps 2-1 through 2-6)

Along with reaching the maximum number of people across the state, a prime objective for the media placement was purchasing time efficiently--reaching the largest number of people for the least amount of money. For example, there are several prime time shows that reach a large population, but the price is so high that the cost per thousand viewers is unrealistic.

To assist in the placement process, a computer program was designed which created a database of the offerings of all television stations. The program allowed comparison of televison stations overall or by region. In addition to readily available information on thousands of people reached and cost per thousand, a new calculation was introduced that combined these two figures and weighted them according to importance. Thousands of people reached was weighted slightly heavier than cost efficiency for the campaign. This "combo" figure proved very valuable. It balanced the "reach" of the programs chosen against their cost efficiency and made the selection process more clear.

In keeping with the location of the target population of the campaign, television stations in the Twin Cities metropolitan area received just over half of the total media buy for the campaign. The metro stations also have much larger coverage areas than outstate stations and overlap outstate stations in some areas. All stations were required to confirm in writing the exact time each spot ran, or, if a spot did not run at a purchased time, they were to provide an explanation and a comparable time in which to run the spot.

Summary of Smoke-Free Campaign

The Smoke-Free campaign proved beyond a doubt what health agencies, researchers, and health educators have believed for years: that a strategically targeted media campaign using good production values and purchased air time can be highly successful in reaching its audience and motivating them to respond to the message. Audience information collected during the campaign provides clear evidence that the campaign's strategy for ensuring message reception was effective. The careful placement of ads statewide resulted in regional populations of responders that closely parallelled the actual population distribution of 8 to 18 year olds in the state. (Figures 2-1 and 2-2) This indicates that the effort to achieve true statewide coverage was a success. Additionally, smoke-free ads placed during prime time (7:00-10:00 p.m.) and "early fringe" (3:00-6:30 p.m.) received the biggest response. The majority of the budget for placing the smoke-free ads was spent on these time slots because youngsters watch programs most often during these time periods. Since television stations reserve these high viewership hours almost exclusively for paid advertisements, as opposed to PSAs, it would have been impossible for the smoke-free campaign to achieve as high a degree of message reception as it did if it had relied on PSAs.

Implications for Future Media Efforts

Mass communications research indicates that media messages can affect people who receive them; they can result in a change in knowledge and a change in awareness. What is not known, in the field of tobacco-use prevention, is what other changes can occur if there are sufficient resources available to: 1) conduct market research in order to segment a target population using psychographics and demographics; 2) develop a targeted message for a particular audience segment; and 3) purchase airtime

to make sure the message reaches the intended audience.

The Health Department will conduct further innovative campaigns and market research in order broaden this research base. The focus will be on marketing a tobacco-free lifestyle to Minnesotans in order to prevent young people from using tobacco products and to convince young women, in particular, to stop smoking. Media messages and campaigns will be designed to work in conjunction with the overall marketing strategy of the nonsmoking initiative, i.e., with regulatory, econominc, and informational efforts.

Note: See the Overall Evaluation section of this report for more information on evaluation of mass media efforts.

Community and Statewide Nonsmoking Project Grants

Introduction

The Minnesota Department of Health designated $500,000 to be made available for the 1986-87 biennium for competitive project grants promoting nonsmoking and health. The idea of instituting a competitive grant process had been included in the recommendations of the 1984 report entitled The Minnesota Plan for Nonsmoking and Health, and the 1985 legislation mandated allocation of funds for these grants.

The Health Department stipulated that grant applicants could be either community-wide or statewide in scope. Local boards of health were eligible to apply for both community-wide and statewide projects. Nonprofit agencies could apply for statewide project grants, but were required to work through local health boards if they wished to apply for a grant for a community-based project.

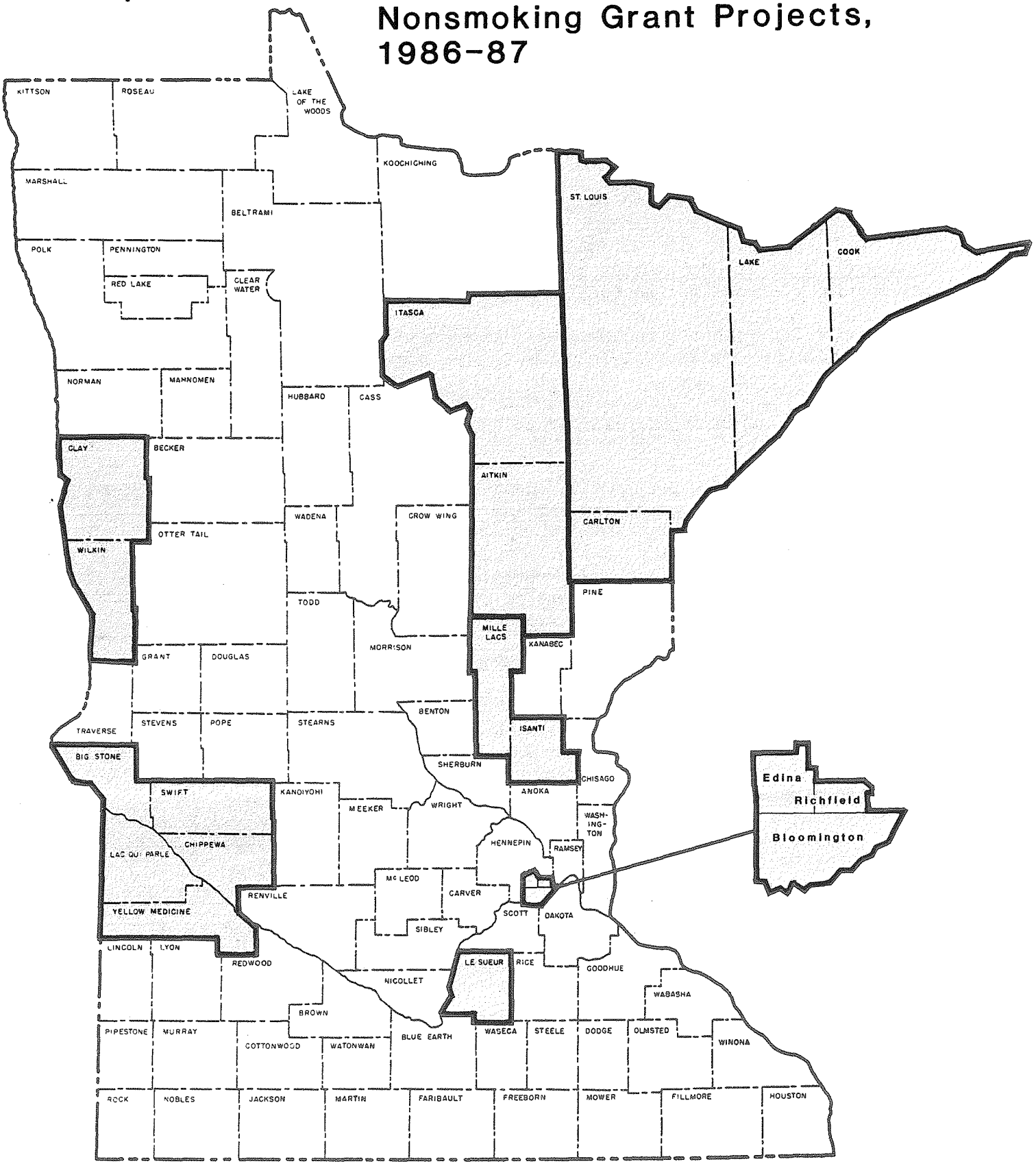
The Health Department prepared a request for proposal for the grants, which then went through the usual posting and bidding procedures. Of the 21 proposals submitted for consideration, the MDH grants review committee selected eight for funding. Seven of the eight projects selected were community-wide in scope and were submitted by local health agencies, and one was a statewide proposal submitted by a nonprofit agency. Projects selected for funding represent a wide geographical distribution and are located throughout Minnesota. (See Map 3-1 for location of community grants and Map 3-2 for the statewide grant.)

The nonsmoking grant projects share the goal of the Minnesota Nonsmoking Initiative: reducing the prevalence of smoking in Minnesota. Together, these grant projects are one of the key elements of the nonsmoking initiative. This initiative is based on research which indicates that combined strategies are more likely to be successful in changing health behaviors than any one strategy alone. When combined with school programs, mass media messages, and a variety of other methods, the nonsmoking grant projects form the multifaceted approach stipulated by the 1985 legislation.

Since smoking rates vary with the characteristics of the population, and the characteristics of the population vary across the state, community-based nonsmoking promotion is uniquely suited to address the specific population in each community. The projects are targeting specific populations or environments in their communities for nonsmoking intervention. Specific target groups include participants in the Women, Infants and Children (WIC) program; other young women; blue collar workers; unemployed persons; Indians; and adolescents. In some instances the whole community may be the target of the nonsmoking activities and promotion.

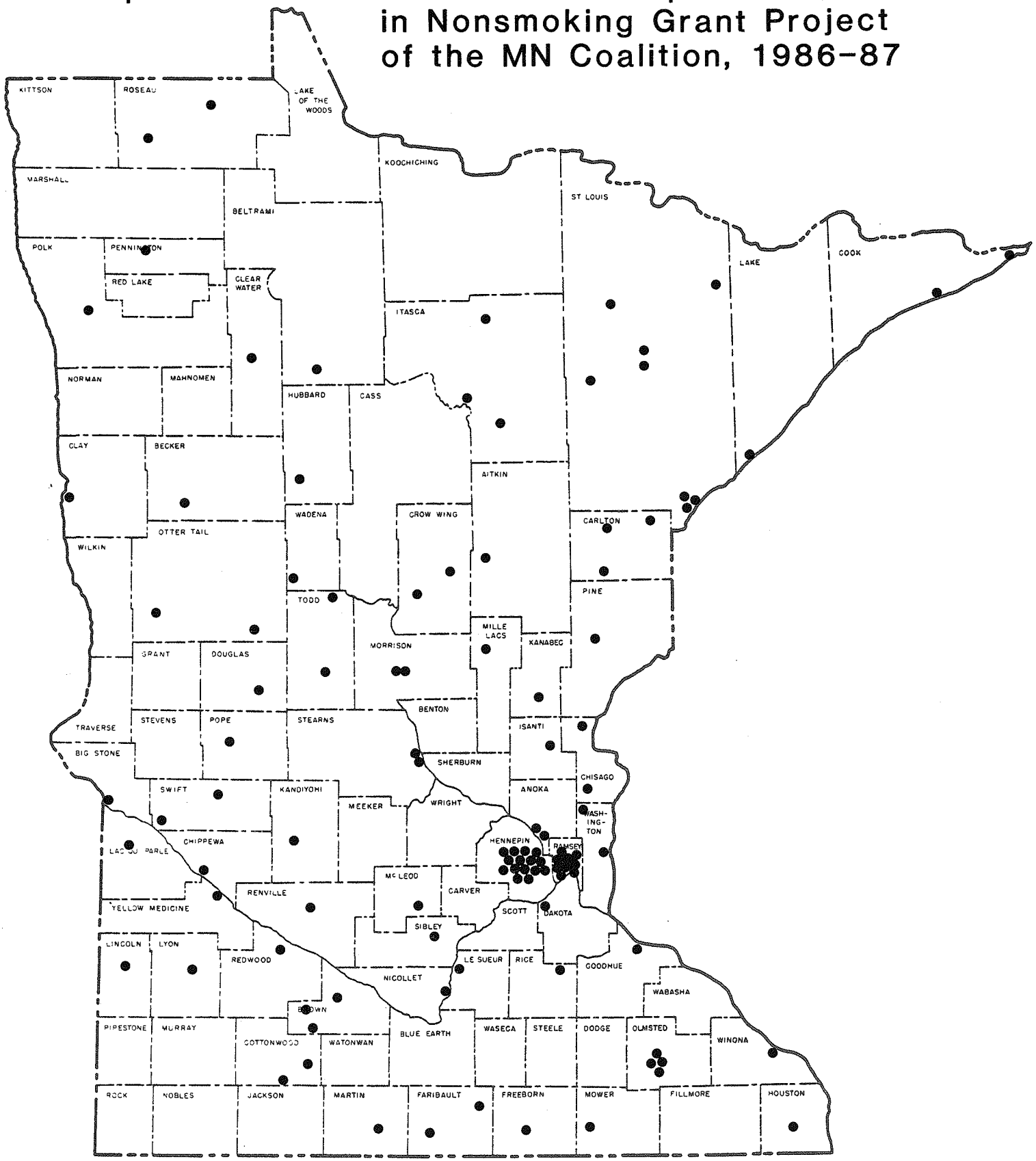
Map 3-1

Target Areas of Community Nonsmoking Grant Projects, 1986-87



Map 3-2

Location of Hospitals Included in Nonsmoking Grant Project of the MN Coalition, 1986-87



Some projects are focusing on increasing the skill levels of health professionals who are already providing nonsmoking services and advice. Another approach is to target environments by promoting a change in smoking policies or restrictions in those environments. Reducing the number of environments where smoking is allowed is expected to impact on the overall smoking rate by encouraging smokers to quit, and, in the case of schools, by providing nonsmoking role models for adolescents during the period when they are at increased risk of smoking initiation. Other targeted environments include hospitals, a college campus, restaurants, and worksites.

Research has shown that community-wide interventions that focus on behavior change can effectively reduce smoking rates, and that the community can become involved in the long-term pursuit of health promotion goals. The majority of nonsmoking projects have a nonsmoking task force, which is a vehicle for involving the community and for sustaining the nonsmoking efforts after the grant period.

While the grant proposals cover a two-year period, funding is awarded on a calendar-year basis. Second year funding depends upon completion of first year contractual obligations. The Health Department expects that all eight projects will be funded for a second year.

Measurement of overall smoking prevalence rates in Minnesota is basic to the grants process; therefore, the Health Department has allocated $50,000 of the $500,000 grants budget for the biennium to payment for the statewide telephone survey. In addition, the grant projects are conducting evaluations of their efforts. All grantees supply the Health Department with quarterly reports. These reports provide statistics detailing their quarterly activities and narratives which chronicle progress toward their project goals. A more detailed description of the evaluation of these grants can be found in the Overall Evaluation section of this report.

Table 3-1 summarizes the projects selected for calendar years 1986 and 1987, the amounts awarded, the target groups to be reached, and the variety of methods being used.

Table 3-1. Special Nonsmoking Project Grants, 1986-87

Grant Recipient	Amount	Primary Target Groups	Approaches
Minnesota Coalition for a Smoke-Free 2000	$50,000	MN hospitals	Surveys Influential community leaders Worksite manual Workshops
Aitkin-Itasca-Koochiching CHS	$37,000	Unemployed Young women Pregnant women	Community task forces Cessation clinics Speakers bureau Mass media Training
Bloomington, City of	$40,000	Worksites (4,000 employees)	Personal interviews Surveys Health promotion
Carlton-Cook-Lake-St. Louis CHS Agency	$32,000	Am. Indians Women Worksites U of M Duluth Health facil. Blue collar Unemployed	Nonsmoking council Workshops Training Media materials Health fair Surveys Cessation classes
Clay-Wilkin CHS	$32,000	Worksites Adolescents Women	Worksite manuals Workshops Surveys Cessation classes WIC program Community task force School programs
Countryside CHS	$13,000	Women (WIC participants)	Health risk assessment Nonsmoking materials Cessation videos Mailings
Isanti-Mille Lacs CHS Agency	$13,000	Worksites 7th graders	Surveys Curriculum development Mass media Business assistance Community task force
LeSueur-Waseca CHS	$8,000	Worksites Restaurants Health professionals Schools	Community task force Training Newsletter Cessation classes School survey

Special Nonsmoking Project Grants - 1986-87

Grant Recipient: Minnesota Coalition for a Smoke-Free 2000

Amount: $50,000

Geographic Region: State of Minnesota

The Coalition's project has one objective: to facilitate the establishment of smoke-free hospitals in Minnesota to protect the health and safety of patients, staff, visitors, and community members by providing an environment free from tobacco smoke. This project includes 110 of Minnesota's 188 primary care hospitals. (Map 3-2 and Table 3-2)

As its name implies, the goal of the Coalition is to achieve a smoke-free society by the year 2000. In keeping with that goal, the Coalition chose health organizations as a logical starting place for its efforts. Hospitals were given first priority because they are in a key position to influence smoking behavior and consequent health of a broad spectrum of the population of Minnesota. Because they serve a wide audience, hospitals can exert a great deal of influence to discourage smoking among hospital patients, visitors, staff, and the community. The public looks to hospitals for guidance in health issues like smoking.

The Coalition's project is being implemented primarily by volunteers known as prime movers--community leaders recruited from various segments of the community, such as health organizations, churches, government, and schools. Thus far, the Coalition has recruited 275 prime movers. Each prime mover has selected a Minnesota hospital upon which to direct their efforts and where they feel they will have some influence. Any one hospital may have more than one prime mover focusing on it.

For study purposes, the Coalition has randomly assigned the hospitals into two groups, 52 in a control group and 58 in an intervention group. The prime movers are charged with encouraging hospitals in both groups to develop smoke-free policies; however, methods used by prime movers in the intervention and control groups differ. Prime movers working with both groups provided hospitals with copies of a worksite policy development manual developed by the University of Minnesota. In addition, prime movers in the intervention group have been trained in techniques to promote smoke-free hospitals. No training is provided to prime movers assigned to hospitals in the control group.

Table 3-2. Hospitals Included in MN Coalition Nonsmoking Project, 1986-87

Abbott-Northwestern Hospital
Minneapolis, MN

Aitkin Community Hospital
Aitkin, MN

Anoka-Metro Regional Center
Anoka, MN

Appleton Municipal Hospital
Appleton, MN

Arlington Hospital
Arlington, MN

Bethesda Lutheran Medical Center
St. Paul, MN

Caledonia Health Care Center
Caledonia, MN

Cambridge Memorial Hospital
Cambridge, MN

Central Mesabi Medical Center
Hibbing, MN

Children's Hospital of St. Paul
St. Paul, MN

Chippewa County-Montevideo
Montevideo, MN

Chisago Lakes Hospital
Chisago City, MN

Clearwater County Memorial Hospital
Bagley, MN

Cloquet Community Memorial Hospital
Cloquet, MN

Comfrey Hospital
Comfrey, MN

Community Hospital & Health Care Ctr.
St. Peter, MN

Community Memorial-Deer River
Deer River, MN

Community Mercy Hospital
Onamia, MN

Cook Community Hospital
Cook, MN

Cook County North Shore Hospital
Grand Marais, MN

Cuyuna Range Dist. Hospital & Home
Crosby, MN

District Memorial Hospital
Forest Lake, MN

Divine Providence Hospital
Ivanhoe, MN

Douglas County Hospital
Alexandria, MN

Ely Community Hospital
Ely, MN

Eveleth Fitzgerald Community Hospital
Eveleth, MN

Fairmont Community Hospital
Fairmont, MN

Fairview Hospital
Minneapolis, MN

Fairview Ridges Hospital
Burnsville, MN

Fairview Southdale Hospital
Edina, MN

Fond du Lac Health Center
Fond du Lac, MN

Gillette Children's Hospital
St. Paul, MN

Glencoe Area Health Center
Glencoe, MN

Golden Valley Health Center
Golden Valley, MN

Grand Portage Indian Health Center
Grand Portage, MN

Granite Falls Municipal Hospital
Granite Falls, MN

Greenbush Community Hospital
Greenbush, MN

Hennepin County Medical Center
Minneapolis, MN

Itasca Memorial Hospital
Grand Rapids, MN

Kanabec Hospital
Mora, MN

Lake Region Hospital
Fergus Falls, MN

Lakeview Memorial Hospital
Stillwater, MN

Lakeview Memorial Hospital
Two Harbors, MN

Long Prairie Memorial Hospital
Long Prairie, MN

Madison County Hospital
Madison, MN

Mayo Clinic
Rochester, MN

Mercy Hospital
Moose Lake, MN

Mercy Medical Center
Coon Rapids, MN

Methodist Hospital
St. Louis Park, MN

Metropolitan Medical Center
Minneapolis, MN

Midway Hospital
St. Paul, MN

Miller-Dwan Hospital
Duluth, MN

Mpls. Children's Medical Center
Minneapolis, MN

Minnesota Valley Memorial
Le Sueur, MN

Minnewaska District Hospital
Starbuck, MN

Mounds Park Hospital
St. Paul, MN

Mt. Lake Community Hospital
Mt. Lake, MN

Mt. Sinai Hospital
Minneapolis, MN

Naeve Hospital
Albert Lea, MN

North Memorial Medical Center
Robbinsdale, MN

Northern Itasca Hospital
Big Fork, MN

Northwestern Medical Center
Thief River Falls, MN

Olmsted Community Hospital
Rochester, MN

Ortonville Area Health Services
Ortonville, MN

Parkers Prairie District Hospital
Parkers Prairie, MN

Redwood Falls Hospital
Redwood Falls, MN

Renville County Hospital
Olivia, MN

Rice Hospital
Willmar, MN

Riverview Hospital
Crookston, MN

Rochester Methodist Hospital
Rochester, MN

Roseau Area Hospital
Roseau, MN

Rush City Hospital
Rush City, MN

St. Ansgar Hospital
Moorhead, MN

St. Cloud Hospital
St. Cloud, MN

St. Cloud VA Medical Center
St. Cloud, MN

St. Gabriel's Hospital
Little Falls, MN

St. John's Hospital
Red Wing, MN

St. John's Hospital
St. Paul & Maplewood, MN

St. Joseph's Hospital
Park Rapids, MN

St. Joseph's Hospital
St. Paul, MN

St. Joseph's Medical Center
Brainerd, MN

St. Luke's Hospital
Duluth, MN

St. Mary's Hospital
Duluth, MN

St. Mary's Hospital
Minneapolis, MN

St. Mary's Hospital
Rochester, MN

St. Mary's Hospital & Nursing Home
Detroit Lakes, MN

St. Olaf Hospital
Austin, MN

St. Otto's Home
Little Falls, MN

St. Paul-Ramsey Medical Center
St. Paul, MN

Sandstone Hospital
Sandstone, MN

Shriners Hospital
Minneapolis, MN

Sleepy Eye Municipal Hospital
Sleepy Eye, MN

Springfield Community Hospital
Springfield, MN

Swift County Benson Hospital
Benson, MN

Tri County Hospital
Wadena, MN

United District Hospital
Staples, MN

United Hospital
Blue Earth, MN

United Hospitals
St. Paul, MN

University of Minnesota Hospitals
Minneapolis, MN

Veterans Administration Hospital
Minneapolis, MN

Virginia Regional Medical Center
Virginia, MN

Wells Municipal Hospital
Wells, MN

Wiener Memorial Medical Center
Marshall, MN

Windom Area Hospital
Windom, MN

Winona Community Memorial
Winona, MN

The Coalition has also conducted a telephone survey of hospital administrators in both the control and the intervention groups to collect baseline data on current hospital smoking policies. A follow-up survey is currently being conducted among the same hospitals.

Through the efforts of the Coalition, two hospitals have become smoke-free during 1986 and 15 more are planning to become smoke-free during 1987 and in 1988. (See Table 3-3 for a list of these hospitals.) The project will evaluate progress toward a smoke-free environment in the hospitals in the two groups by comparing results from the hospital administrator surveys conducted before and after intervention. Hospitals will be required to document progress toward a smoke-free environment, i.e., minutes from smoking policy task force meetings, public statements of support from the hospital medical staff and administrator, or the hospital smoking policy.

From these data, the Coalition can assess whether providing materials alone or combining materials with workshops and technical assistance is a more effective strategy in developing a smoke-free hospital policy. This information can then be used to develop smoke-free policies with all the hospitals in the state, and perhaps with other medical settings such as physicians' offices, clinics, and health maintenance organizations.

See Figure 3-1 for the first year timetable from planning to analysis.

Grant Recipient: Aitkin-Itasca-Koochiching (AIK) Community Health Services Board

Amount: $37,000

Geographic Region: Aitkin and Itasca Counties

AIK's goals are to establish a community-wide campaign for the promotion of nonsmoking in Aitkin and Itasca Counties, to reduce the prevalence of smoking in these counties, and to increase public awareness and information about the benefits of nonsmoking and the risks of smoking.

AIK's project has five objectives to accomplish in the communities involved. The first objective of this project is to recruit task force members to assist project directors with implementation and coordination of all nonsmoking activities in both Itasca and Aitkin counties. The Aitkin task force consists of 19 community members, while the task force in Itasca County has 12 members. Both task forces consist of members who represent different segments of the community.

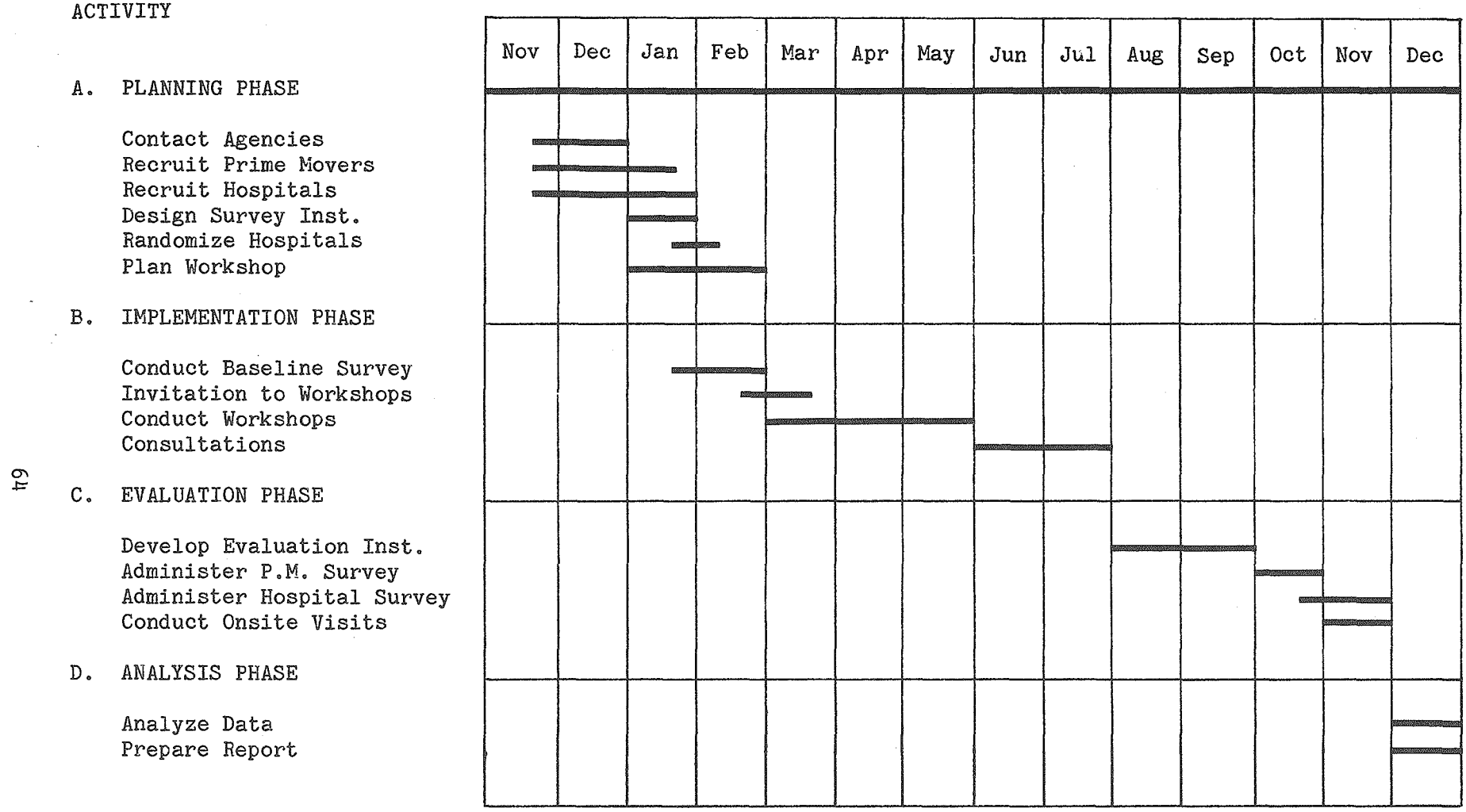
AIK's second objective is to provide outreach and recruitment services for cessation clinics. Itasca County is recruiting people to attend already existing clinics and Aitkin County is establishing new smoking cessation clinics. Outreach efforts for these clinics are directed to unemployed individuals and young women who are pregnant or at risk of becoming pregnant.

Table 3-3. Smoke-Free Target Dates for Minnesota Hospitals

Listed below are Minnesota hospitals that have already set target dates for becoming smoke-free. (Note: most, but not all of these hospitals are a part of the grant project of the Minnesota Coalition.)

Hospital	Target Date
Mercy Hospital, Moose Lake, MN	May, 1986
Swift County Benson Hospital, Benson, MN	September, 1986
Community Mercy Hospital, Onamia, MN	January, 1987
Northfield City Hospital, Northfield, MN	January, 1987
United Hospital, Blue Earth, MN	January, 1987
North Memorial Medical Center, Robbinsdale, MN	May, 1987
St. Mary's Hospital and Home, Winsted, MN	October, 1987
St. John's Hospital, Red Wing, MN	1987
Rochester Methodist Hospital, Rochester, MN	1987
St. Mary's Hospital, Rochester, MN	1987
Minneapolis Children's Medical Center, Minneapolis, MN	June, 1987
Itasca Memorial Hospital, Grand Rapids, MN	July, 1987
Veterans Administration Hospital, Minneapolis, MN	August, 1987
Emmanual St. Joseph Hospital, Mankato, MN	January, 1988
St. Gabriel's Hospital, Little Falls, MN	June, 1988
St. Otto's Home, Little Falls, MN	June, 1988
St. Luke's Hospital, Duluth, MN	August, 1988

Figure 3-1. Timetable for MN Coalition Nonsmoking Grant Project, 1986



To reach the unemployed target group, promotional materials are being distributed through employment centers, training centers, county social service departments, work programs, and employment counselors. Young women are being reached through prenatal/postnatal home nursing visits and local WIC clinics. To further encourage participation in nonsmoking clinics, the project will subsidize cessation programs for 100 low income individuals.

AIK's third objective is to increase public awareness of the benefits of nonsmoking, the risks associated with smoking, and the availability of smoking cessation programs. The two counties are distributing information on nonsmoking and on cessation programs through local print and electronic media, voluntary organizations and clubs, and business and industry. The project is reaching parents by sending educational materials home with their school-age children.

This spring, volunteers made 1,500 buttons with the slogan "I Love Clean Air in Aitkin County" to promote nonsmoking among young people. The buttons were distributed to students in grades seven to 12 and sold to interested adults.

This project has also developed a marketing plan to promote nonsmoking and is seeking funding from local foundations to implement it.

AIK's fourth objective is to establish a county-wide network of volunteers who will participate in a speakers bureau. Local civic and voluntary organizations are the primary source of volunteers for the speakers bureau. Task force and project personnel organize speaking engagements with the goal of recruiting people for smoking cessation classes and raising the level of public awareness. Thus far, Aitkin County has recruited four volunteers who have given two presentations. The project plans to increase the activities of the speakers bureau during 1987.

AIK's fifth objective is to develop an education program for local health professionals on effective ways to counsel patients about nonsmoking behavior. Health professionals in both Aitkin and Itasca counties are being contacted and provided with educational materials on how to counsel individuals about their smoking behaviors. A workshop entitled "The Role of the Health Care Professional in Promoting a Smoke-Free Lifestyle" was held in December, 1986 at Itasca Community College.

Several mechanisms will be used to measure the impact of this nonsmoking project grant including surveys of courthouse and school district employees and of WIC participants in Itasca County.

Grant Recipient: City of Bloomington
Division of Public Health

Amount: $40,000

Geographic Region: Bloomington, Richfield, Edina

The goal of the Bloomington nonsmoking project grant is to develop worksite-based nonsmoking programs at selected worksites in the three communities. These programs will increase employee smoking cessation rates, increase the number and level of worksite nonsmoking policies, and increase employee awareness of and compliance with nonsmoking policies. Under this grant, Bloomington recruited 18 businesses with more than 4,000 employees to participate in this project.

Bloomington is using two evaluation tools to determine smoking behaviors of employees and smoking policies of employers at each worksite. One tool is a "nonsmoking barometer" that uses personal interviews to determine attitudes of management toward nonsmoking policies in each participating worksite. The other tool is a survey of all employees, to be completed at the beginning and end of the project to determine change in smoking rates.

The Bloomington project is designed to follow a sophisticated research design. First, employees completed a baseline questionnaire to assess smoking prevalence, level of awareness, and compliance with the worksite nonsmoking policy. Second, worksites were grouped for study purposes according to type of work force. Each was labeled as having predominantly blue collar, white collar, or mixed work force. Third, the worksites were randomly assigned to one of three groups so that each of the three groups would have equal numbers of the three types of companies. Two of the groups were to receive programs, and one was to be a control group. (Figure 3-2)

Figure 3-2. Bloomington Study Design

Group 1 (control)	Group 2 (experimental)	Group 3 (experimental)
Questionnaire Only (pre & post)	Nonsmoking Focus & Questionnaire (pre & post)	Nonsmoking & Heart Health Focus & Questionnaire (pre & post)

As illustrated in Figure 3-2, Group 1 acts as a control group, receiving only a questionnaire before and after the intervention. Both Group 2 and Group 3 are experimental; however, each will receive a different program.

The Group 2 program will focus directly and solely on smoking behavior and nonsmoking policy development. The Group 3 program will include all Group 2 activities in addition to a health fair, health presentations, and health promotion classes.

As of September, 1986, the participating companies had been randomly assigned to groups. The nonsmoking policy barometer had been completed for approximately three-fourths of the companies. Program interventions will be implemented and the policy barometer completed during the fourth quarter of 1986. Initial survey data will also be compiled.

According to the two-year timeline (Figure 3-3), the implementation process began in August of 1986 and will last for one year.

The Bloomington worksite project makes it possible to assess the relative efficacy of two approaches to promoting nonsmoking in the worksite: an approach that addresses nonsmoking alone, and one that incorporates nonsmoking as part of an overall heart health or health promotion approach. In addition, this project may be able to identify company characteristics that are related to increased smoking cessation among employees and the development of a stricter smoking policy. Because companies with different types of workforces are involved in this project, results from the project survey may be useful in promoting smoking cessation and developing worksite smoking policies in other companies of similar size and workforce type in the state.

Grant Recipient: Carlton-Cook-Lake-St. Louis (CCLSL) Community Health Services Board

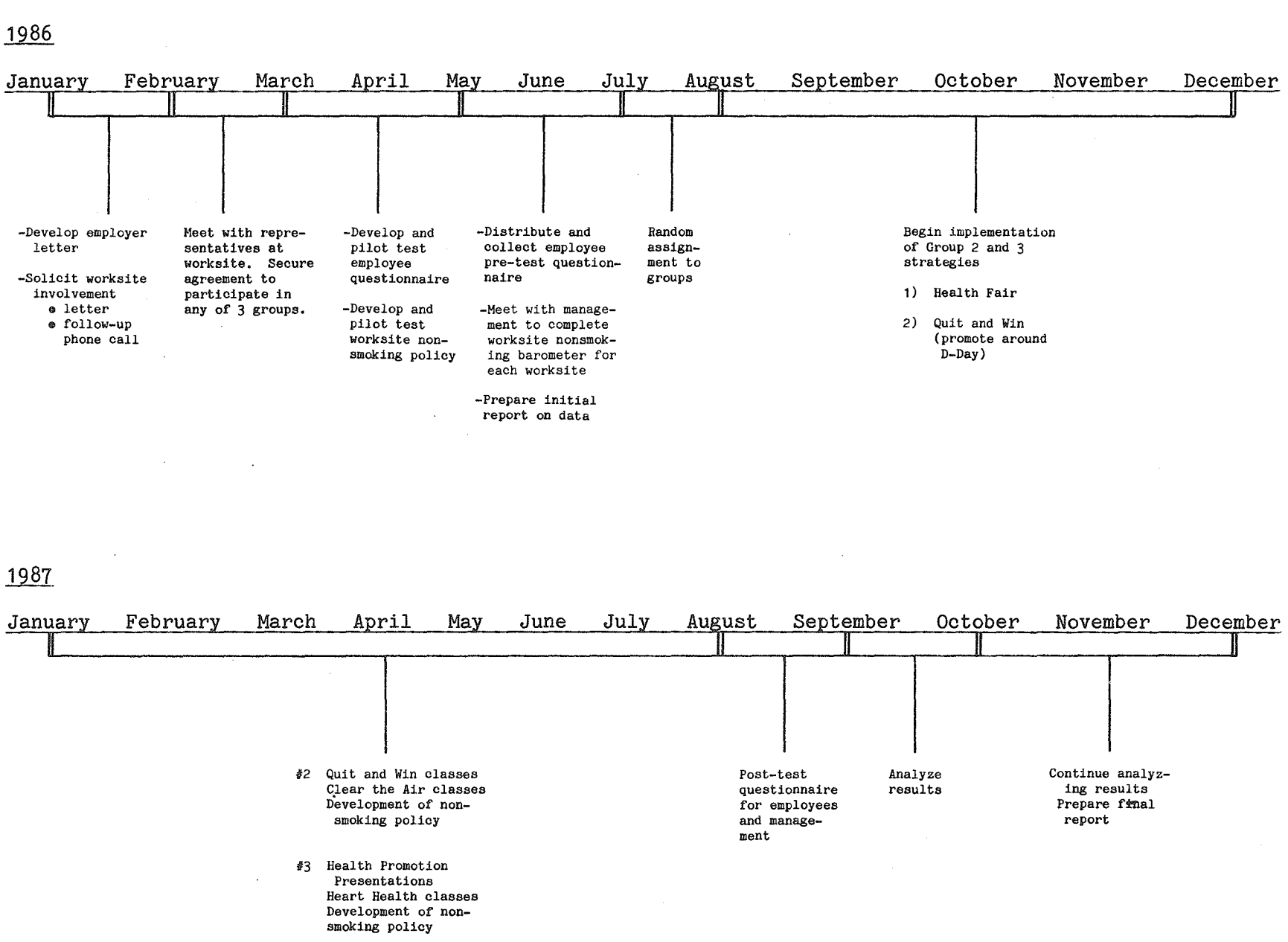
Amount: $32,000

Geographic Region: Carlton, Cook, Lake, and St. Louis Counties

CCLSL's first objective is to create and staff a Nonsmoking and Health Council to impact on smoking behavior in the four-county area. The council includes 25 community members from the health, legal, business/industry, government, and advertising professions, and has met four times during the first three quarters of 1986. The council has developed six task-oriented subcommittees to plan specific activities for target groups. The council's subcommittees include: women, health care facilities, Indians, worksites, baseline survey, and conference. A total of 40 subcommittee meetings have been held by these six groups.

CCLSL's second objective is to increase education and service to specific target groups. To reduce smoking in young and pregnant women, the project is coordinating with other public health programs such as Women, Infants and Children (WIC) and public health nursing. A video to promote nonsmoking is being produced to be used at WIC clinics. To impact on worksite smoking, the project staff and a subcommittee of the task force are working to increase the number of smoking-restricted or smoke-free worksites. Culture-specific needs of the Indian community with regard to

Figure 3-3. Timeline for Study Implementation, Bloomington Nonsmoking Grant Project



tobacco use are being assessed and the project is working to develop or to modify a smoking cessation program and materials that meet these needs.

The project will develop and conduct at least two workshops to train physicians and public health and hospital personnel in each county and reservation to encourage smokers to quit. In line with this objective, the Nonsmoking and Health Council held a conference entitled "Smoke Signals" in Duluth in September to "explore the...implications of smoking for women, employers, schools, and the Indian community." More than 100 people attended. Leland M. Fairbanks, M.D., a national expert on the promotion of nonsmoking, gave the keynote address at this conference.

CCLSL's third objective is to develop media materials targeted to the community in this geographic area to inform people about the health effects of smoking and the activities of the Nonsmoking Council. Materials developed will include: a quarterly newsletter about council activities, posters and exhibit materials, and upbeat media messages about nonsmoking targeted to high school students. The media specialist employed by the project has developed a logo to be used for all council activities and a brochure and compendium of conference materials for the Smoke Signals Conference.

CCLSL's fourth objective is to conduct a baseline and follow-up survey to determine tobacco-use patterns and to identify the problems associated with altering this behavior. The survey has been designed to be compatible with the adult telephone survey to be conducted statewide by the the state Health Department so that comparisons can be made. The baseline survey of 2,000 was completed in September, 1986, and included the general adult population in the four-county area, Indians living on the Fond Du Lac and Grand Portage Reservations, and high school students. A follow-up survey will be completed at the end of the project.

CCLSL's fifth objective is to work with the Health Service at the University of Minnesota at Duluth (UMD) to conduct a demonstration project which could be duplicated in other colleges and universities. Students and faculty at UMD are the targets for the demonstration project.

A "media blitz" has been conducted at the University, using the campus radio station and newspapers to publicize smoking issues, smoking policies, and the Minnesota Clean Indoor Air Act. A campus health fair was held in February and 200 students visited the tobacco-use booth and took materials. In May, 220 students visited the tobacco-use booth during Chemical Awareness Week. A nurse practitioner lectured on the positive benefits of nonsmoking in psychology and women's issues classes. An inservice session was held for UMD Health Services staff. In the Health Service Center, nonsmoking pamphlets were distributed in patient waiting rooms, and printed reminders to UMD staff to give nonsmoking messages were placed in the examining rooms. Students were encouraged to explore the Mini-Apple, an open health forum with computer smoking assessments, literature, and posters. A smoking cessation program was held each quarter.

The activities of this four-county project will provide useful information for both the state Health Department and the CCLSL Community Health Services agency. CCLSL's four-county community survey will provide

baseline data on smoking rates, which can be compared with the state rates. This data will assess the magnitude of the smoking problem in this geographic region, and interventions can be more aptly targeted to those groups with highest smoking rates in this area of the state. A follow-up survey at the end of the project will assess changes in attitudes about quitting and awareness of community nonsmoking activities. Results of the demonstration project at UMD can be used to assess the various approaches for promoting nonsmoking in a population of college students. A culture-specific approach to smoking cessation among Indians could be exported to projects with significant Indian populations in other parts of the state.

Grant Recipient: Clay-Wilkin Community Health Services Agency

Amount: $32,000

Geographic Region: Clay and Wilkin Counties

Clay-Wilkin's first objective is to develop workplace environments which are supportive of smoking cessation and which meet the requirements of the Minnesota Clean Indoor Air Act. Project staff have surveyed 33 worksites in both counties to identify chief executive officers, company sizes, and predispositions toward implementing worksite nonsmoking policies. They are using a manual published by the University of Minnesota entitled "Clean Air Health Care: A Guide to Establish Smoke-Free Health Facilities" as a model for working with worksite nonsmoking programs.

A formal research design will be used to evaluate this objective. Companies were randomly assigned to intervention or control groups. Those companies in the intervention group attended a workshop on worksite smoking policies and were eligible for technical consultation from the project health educator. Control companies received no special assistance in developing smoking policies. Progress towards development of a nonsmoking policy will be compared in the two groups of companies.

Clay-Wilkin's second objective is to provide technical assistance to all school districts in both counties on developing school-based adolescent smoking prevention programs targeted to seventh graders. The project has encouraged school officials to select an adolescent smoking prevention curriculum for the 1986-87 school year. Two workshops were held for instructors who will be using the curricula. Project staff will compare the proportion of school districts implementing curricula in the Clay-Wilkin area and a two-county comparison area without a nonsmoking grant.

Clay-Wilkin's third objective is to increase the number of smoking cessation classes offered in order to involve 100 individuals in Clay and Wilkin counties. Strategies are being developed to reach individuals in remote rural areas of the counties. Project staff surveyed current cessation programs to determine underserved areas, and they are planning to hold cessation classes in those areas. Staff will also launch promotional efforts to motivate individuals to take smoking cessation classes.

Clay-Wilkin's fourth objective is to increase the number of individuals participating in smoking cessation classes--particularly women in their childbearing years. Targets for this effort are WIC clinics and prenatal classes in both counties. Individuals in the targeted groups are provided with nonsmoking information and are offered smoking cessation classes. Inservice training in smoking cessation and motivational techniques is being provided for the staff in both the WIC and prenatal clinics.

The project conducted a baseline survey of WIC participants in Clay-Wilkin and a four-county comparison area in June, 1986. A follow-up survey will be conducted in the same two populations at the end of the project to evaluate change in smoking behavior and attitudes about quitting.

The fifth objective is to develop a Clay-Wilkin nonsmoking task force to promote smoking cessation activities in the two-county area. This group consists of 15 members and meets quarterly. Membership includes individuals from local organizations who work to coordinate the efforts of groups that promote nonsmoking.

Data from Clay-Wilkin's WIC survey in both intervention and control counties will yield information about the effectiveness of counseling WIC clients about smoking. Intervention techniques found to be successful could then be used in WIC clinics in other counties. Clay-Wilkin's worksite survey will assess the effectiveness of technical assistance as a means of facilitating smoking policy development in businesses with at least 50 employees. Their school district survey will assess the effectiveness of promoting new nonsmoking curricula. This nonsmoking project grant is trying to develop strategies that will promote smoking cessation clinics and programs in the rural areas of the two-county area. These strategies may prove useful in other areas of the state.

Grant Recipient: Countryside Community Health Services

Amount: $13,000

Geographic Region: Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine Counties

Countryside's first objective is to promote nonsmoking behaviors among participants in the Women, Infants, and Children (WIC) program in each of the counties involved. Project staff attend local WIC clinics each month and interview WIC clients who are identified as smokers by their certification or recertification forms. Individuals who are identified as smokers are asked by WIC staff to complete a health risk questionnaire, which is designed to educate about potential health risks such as cigarette smoking and stress. Smokers also receive three packets of nonsmoking educational materials over a three-month period and view a video that details the health risks to the fetus of a smoking mother. Individuals who leave the WIC program for whatever reason receive all three packets of materials in the mail.

When WIC clients are recertified after the birth of their child, they fill out another questionnaire which asks about changes in smoking behavior during pregnancy and about the helpfulness of the smoking information provided. With these data, the project will evaluate the impact of their program on the smoking behavior of WIC clients.

Countryside's second objective is to provide videotaped smoking cessation programs to smokers in these counties. The project is currently researching available videotaped programs to find one appropriate for individual use. Copies will then be made available for loan at area public libraries and at each Community Health Services office.

In the WIC component of this project, changes in the smoking behavior of individuals who are given packets of materials which promote nonsmoking are assessed at the time of WIC recertification. The project also plans a one-year follow-up assessment. They will also examine the effectiveness of using the existing WIC system to locate pregnant women who smoke and of using materials geared to pregnant women to motivate them to quit smoking.

Grant Recipient: Isanti-Mille Lacs Board of Health

Amount: $13,000

Geographic Region: Isanti and Mille Lacs Counties

The Isanti-Mille Lacs project is working toward three major goals: promoting nonsmoking environments in local businesses, reducing or preventing smoking among seventh grade students, and expanding local D-Day efforts. In order to promote nonsmoking environments in businesses located in Cambridge and Princeton, the project surveyed 200 businesses identified by the Chambers of Commerce to determine present smoking policy and interest in a smoke-free workplace. They are recruiting Cambridge businesses to participate in a smoke-free promotion project and providing technical assistance to the businesses, including on-site presentations, educational materials, and cessation programs. All companies will be resurveyed at the end of the project to determine changes in smoking policies.

Isanti-Mille Lacs' second objective is to work with curriculum developers in the middle schools in School District 911. The project health educator will help them choose a smoking prevention curriculum to be used in the seventh grade in one of the two middle schools. Seventh graders from the other middle school will use the existing curriculum and will serve as the control group. Project staff have provided the seventh grade curriculum writing teams with information on proven smoking prevention methods which stress positive approaches and avoid fear arousal techniques. Questionnaires to assess smoking behavior, attitudes, and knowledge were administered to 275 seventh grade students in the fall of 1986. These students will be resurveyed at the end of the 1986-87 school year. These data will be used to evaluate the effectiveness of the curriculum in changing behavior, attitudes, and knowledge about smoking.

Isanti-Mille Lacs' third objective is to establish a technical advisory committee consisting of representatives from the local business community. Committee members are charged with promoting D-Day activities by utilizing local media and with encouraging the development of smoking cessation programs. The committee consists of 14 members who attend monthly meetings.

The Isanti-Mille Lacs grant project is contributing to the statewide nonsmoking initiative by evaluating the effectiveness of technical assistance in facilitating smoke-free environments for small and medium size businesses. The project is also assessing the impact of a new nonsmoking curriculum on smoking rates and on awareness, knowledge, and attitudes among seventh graders.

Grant Recipient: LeSueur-Waseca Board of Health

Amount: $8,000

Geographic Region: LeSueur County

The goals of the LeSueur-Waseca grant project are to increase the number and duration of attempts by smokers to quit smoking and to increase the number of businesses with documented policies to encourage nonsmoking in the workplace.

The main objective of this project is to establish a task force on nonsmoking in the workplace. This task force, which consists of eight business leaders from the community, has identified key industries and institutions in LeSueur County to target for nonsmoking promotion. Project staff has begun contacting the management of each industry and institution to discuss their current smoking policies, and to promote the idea of a smoke-free workplace. The task force is also working to develop environmental strategies for influencing smoking behavior, e.g., going completely smoke-free, training workers in nonsmoking promotion, and promoting smoking cessation programs among employees.

The project has also developed a newsletter and a brochure about smoking in the workplace, both of which have been sent to more than 250 organizations and individuals.

In September, 1986, the project held a training session on patient smoking intervention techniques for 19 physicians and health professionals. A local physician is working with the project as a consultant to businesses on the health aspects of smoking. Project staff are also working with restaurants to increase nonsmoking areas, and with school districts to survey faculty and staff about smoking policies and to coordinate projects that will supplement the smoking prevention programs offered in local schools. LeSueur elementary schools participated in a project to decorate grocery bags with a nonsmoking poster and message to be used in grocery stores on D-Day.

LeSueur-Waseca's contribution to the statewide nonsmoking initiative lies in its assessment of the effectiveness of using two community leaders, a physician and a local businessman, to promote nonsmoking in the workplace.

NOTE: See the Overall Evaluation section of this report for more information on the special nonsmoking project grants and how they will be evaluated.

School Programs

As a result of the 1985 legislation, state aid funds were available to public school districts and non-public schools for tobacco-use prevention programs at the rate of 52 cents per student in average daily membership during the 1985-86 school year, and at the rate of 54 cents per student in the 1986-87 school year.

In order to receive state aid for tobacco-use prevention, the legislation requires school districts and non-public schools to identify how they will meet five eligibility requirements:

1. In-service training of teachers and staff.
2. Evaluation of programs and curriculum results.
3. A K-12 continuum of educational interventions related to tobacco-use prevention.
4. An effective program targeted toward the 12-14 age group.
5. Prohibition of tobacco use on school premises by minors.

Table 4-1 summarizes school response to the first and second years of this program. Note that non-public schools participate in the program through the public school districts; therefore they can participate only if the local public schools participate. Table 4-2 summarizes the most common uses for state aid money in the first year of the program. While participating public school districts are required by the 1985 legislation to provide information on how they use tobacco-use prevention funds, participating non-public schools provide information on their tobacco-use prevention programs on a voluntary basis.

Activities of the Minnesota Department of Education

Since August, 1985 the Minnesota Department of Education (MDE) has been involved in a tobacco-use prevention program with the goal of assisting local school districts throughout the state to plan, implement, and evaluate effective tobacco-use prevention programs for students in grades K-12. Objectives for this program include:

1. Identifying the most effective educational programs, methods, and materials for reducing tobacco use by young people.

2. Developing and/or disseminating curriculum materials based on current research and practice.

3. Training classroom teachers and other school staff to implement effective tobacco-use prevention programs.

4. Asssisting school administrators, board members, and staff to adopt or to enforce school policies that encourage non-use of tobacco.

5. Assessing needs for program improvement.

Table 4-1 Recipients of State Aid for Tobacco-Use Prevention Programs, FY '86 and '87

	FY '86	FY '87 (as of 1/1/87)
Public School Districts	323 (75%)	392 (91%)
Public School Students	592,147 (85%)	635,569 (91%)
Non-Public Schools	175 (28%)	175 (28%)
Non-Public Students	45,000 (49%)	40,883 (44%)

(The total number of: public school districts = 433
public school students (estimated) = 699,215
non-public schools = 631
non-public students (estimated) = 92,822)

Table 4-2 Use of Tobacco-Use Prevention Funds by School Districts and Non-Public Schools in FY '86*

Uses for Tobacco Funds	Percent Using Funds for this Purpose	
	Public Districts	Non-Public Schools
Teacher/Staff Training	60%	22%
Purchase of Curricula/Materials	55%	23%
Curriculum Planning/Writing	39%	9%
Evaluation of Curricula/Programs	24%	6%
Community Awareness Efforts	21%	11%
Tobacco-Use Policy Development	20%	5%
Other	10%	5%

*This data was collected in May, 1986 as part of a Department of Education survey of participating districts and non-public schools. Two hundred forty-one public school districts (75%) and 65 non-public schools (37%) responded.

Since January, 1986, a tobacco-use prevention specialist has been on staff to administer this program and to provide technical assistance to school districts concerning effective approaches to tobacco-use prevention. The tobacco-use prevention specialist reviews applications for funding and submits the names of districts with approved programs to the Aids and Levies unit for distribution of funds to the local districts.

PROFESSIONAL DEVELOPMENT

A major objective of the Department of Education tobacco-use prevention program is to train teachers and other school staff to implement effective programs. Table 4-3 summarizes teacher training programs sponsored by the Department of Education from January to December, 1986.

Conferences provide another forum for professional development activities. The Department of Education tobacco-use specialist has been asked to speak at numerous conferences during the past calendar year. (Table 4-4)

DEVELOPMENT AND DISTRIBUTION OF CURRICULA

Another objective of Department of Education programs is to develop and disseminate tobacco-use prevention curricula and materials based on current research and practice. The following materials have been developed from January through December, 1986:

- "Guidelines for Tobacco-Use Prevention Programs in Minnesota Schools" -- Includes recommendations for a comprehensive school-based approach to tobacco-use prevention. This document has been distributed to all school districts receiving tobacco-use prevention funds and to all participants in Department of Education workshops on tobacco-use prevention.

- "Tobacco-Free Schools in Minnesota: Guidelines for Policy Development" -- This document was developed in conjunction with the American Lung Association of Minnesota. It is designed to encourage and assist school districts to adopt tobacco-free policies for students, staff, and community members. The Department of Education and the American Lung Association will conduct a series of six workshops (February-April, 1987) for districts interested in adopting tobacco-free policies. As of November, 1986, 10 Minnesota school districts have adopted tobacco-free policies.

- "Be a Winner! D-Day Activities for Schools" -- These materials, developed in conjunction with the American Cancer Society and the American Lung Association, provide ideas for classroom and school-wide activities that can be done in conjunction with the statewide D-Day event held on November 20.

- "Smokeless Tobacco Unit" -- A curriculum guide for smokeless tobacco educational activities in grades 5-12.

Table 4-3. Professional Development Workshops for School Staff Sponsored by the Minnesota Department of Education January-December 1986

Workshop	Date	Location	Number of Participants
1. Tobacco-Use Prevention Programs: An Overview Audience: elementary and secondary teachers, administrators, counselors, school nurses Purpose: to provide an overview of effective programs, methods and materials for tobacco-use prevention	1/86	Mankato	70
	1/86	St. Cloud	85
	3/86	Twin Cities	50
	4/86	Minneapolis Schools	35
	10/86	Fergus Falls	50
	10/86	Marshall	50
	10/86	Rochester	40
	10/86	Grand Rapids	40
	10/86	Twin Cities	100
		TOTAL:	520
2. The Minnesota Smoking Prevention Program Audience: junior high teachers Purpose: to train junior high teachers to use an effective peer-led tobacco-use prevention program developed and evaluated by the University of Minnesota	4/86	Alexandria	25
	4/86	Thief River Falls	10
	4/86	Marshall	25
	5/86	Duluth	20
	5/86	Rochester	20
	5/86	Twin Cities	11
	8/86	Twin Cities	20

Table 4-3: CONTINUED

Date	Location	Number of Participants
9/86	Detroit Lakes	20
11/86	Twin Cities	15
11/86	Marshall	25
11/86	Albert Lea	12
12/86	Twin Cities	25
	TOTAL:	228

Table 4-4: Conference Presentations by MDE Tobacco-Use Prevention Specialist January-December 1986

Event	Sponsor	Topic	Date	Location	Number of Participants
Minnesota Health Education Conference	Minnesota Department of Education	Guidelines for Tobacco-Use Prevention Programs	2/86	Twin Cities	100
Minnesota State Student Council Convention	Minnesota Association of Student Councils	Student Role in Preventing Tobacco Use	4/86	Rochester	300
School Health Conference	Minnesota Department of Education	1. Smokeless Tobacco 2. Use of School Aid Funds for Tobacco-Use Prevention	6/86	Brainerd	60
Smoke Signals	Northeastern Minnesota Nonsmoking and Health Council	School Tobacco Policy	9/86	Duluth	60
Rural Education Association Conference	Minnesota Rural Education Association	School Tobacco Policy	10/86	Brainerd	20
Dental Public Health Conference	Minnesota Department of Health	Smokeless Tobacco	11/86	Twin Cities	50
Tobacco, Marijuana or Health Conference	American Lung Association of Minnesota	School Tobacco Policy	11/86	Twin Cities	25
Drug Education Program Sharing Workshop	Minnesota Department of Education	1. Guidelines for Effective Tobacco-Use Prevention Programs 2. Smokeless Tobacco 3. School Tobacco Policy	11/86	St. Cloud	120
				TOTAL:	735

TECHNICAL ASSISTANCE

The Department of Education staff provides technical assistance to local school districts in planning, implementing, and evaluating effective tobacco-use prevention programs. Table 4-5 summarizes assistance provided by phone, mail, and site visits from January through November, 1986.

Table 4-5 Consultation Provided to Local School Districts by MDE Tobacco-Use Prevention Specialist, January-November, 1986

Consultation Provided	Number of Contacts
Telephone	1,205
Mail	8,457
Site Visits	338

Collaborative Efforts

Department of Education efforts in tobacco-use prevention are collaborative in nature, both within the Department of Education and with outside agencies. Within the Department of Education, the tobacco-use prevention specialist works cooperatively with other staff including the drug education and health specialists in planning and presenting the following conferences:

- o School Health Conference--February, 1986 and 1987
- o Cragun's School Health Conference--June, 1986 and 1987
- o Program Sharing Drug Education Workshop--November, 1986

The tobacco-use prevention specialist works closely with the Minnesota Department of Health. Staff from the MDH Center for Nonsmoking and Health participated on the tobacco-use prevention advisory group organized by the Department of Education. Department of Education staff cooperated and assisted with the Health Department survey of ninth grade students conducted in May of 1986. Health Department staff have presented information on adolescent tobacco use at several workshops sponsored by the Department of Education. In addition, the MDE tobacco-use prevention specialist participates regularly in Center for Nonsmoking and Health staff meetings.

The MDE tobacco-use prevention specialist also works closely with the University of Minnesota. Together they have co-sponsored 14 teacher training workshops on tobacco-use prevention. Further, U of M Division of Epidemiology staff participated in the tobacco-use prevention advisory group organized by the Department of Education. The MDE tobacco-use prevention specialist is a member of the executive committee and the intervention committee of the Two-State Tobacco Project funded by the National Cancer Institute. U of M Division of Epidemiology faculty involved with smoking prevention research regularly provide consultation on effective approaches to school-based tobacco-use prevention programs.

The MDE tobacco-use prevention specialist is a member of the Youth and Education Committee (1986) and the Project Identification Committee of the Minnesota Coalition for a Smoke-Free 2000.

The Department of Education and voluntary health agencies have worked cooperatively on the following projects:

- The Tobacco-Free Schools Project (co-sponsored with the American Lung Association of Minnesota).
- D-Day School Packet (with the American Cancer Society and the American Lung Association of Minnesota).
- Co-sponsorship of eight regional conferences on tobacco-use prevention with the American Lung Association and the American Cancer Society.
- Program planning for the Northeastern Minnesota Smoking or Health Conference along with area Community Health Services agencies and the American Lung Association.
- Tobacco, Marijuana or Health Conference, co-sponsored with the American Lung Association in November, 1986.

Evaluation of School Programs

The Department of Education collaborated with the Department of Health and the University of Minnesota in developing and conducting a statewide survey of adolescent tobacco use in the spring of 1986. Currently, Department of Education staff work closely with the University of Minnesota and the Department of Health on the Two-State Tobacco Project, serving on the project's steering committee and the intervention committee. (See the Overall Evaluation section of this report for more information about this evaluation project.)

SCHOOL ACTIVITIES SURVEY

In May of 1986, after the first year of the statewide tobacco-use prevention program, the Department of Education sent a survey to all

participating school districts and non-public schools. This survey will be conducted annually to monitor changes in tobacco-use prevention efforts in schools. The purpose of the survey is fourfold:

1. To evaluate the current involvement of participating school districts in tobacco-use prevention activities.

2. To monitor the use of school aid funds.

3. To collect information on current school policies related to tobacco use.

4. To assess schools' needs for technical assistance and in-service training by the Department of Education.

Two hundred and forty-one public school districts responded to the first survey (75% of participating school districts), and 65 non-public schools responded (37% of participating schools). (Table 4-2) Highlights of the survey results are outlined below. Note that direct comparison of public and non-public schools is difficult due to the much lower percentage of non-public schools returning the survey.

- **A two-thirds majority of public school districts report having programs in place that address both smoking and chewing tobacco as part of K-12 curriculum. The majority of non-public schools do not have such a curriculum.**

The 1986 survey confirmed that tobacco-use prevention education is most typically taught as part of the health curriculum in Minnesota schools. Sixty-seven percent of public school districts and 31% of non-public schools returning the survey report that they currently have a K-12 health curriculum that includes education on both smoking and chewing tobacco. Twenty-eight percent of public school districts and 25% of non-public schools report that such a curriculum is currently in the planning or development stages.

Dramatically fewer schools have programs in place to help students who want to quit smoking. Nineteen percent of public school districts and 8% of non-public schools report having such a program. Thirty-five percent of public school districts report having such a program in the planning stages.

- **Only a small percentage (10%) of school districts are using peer-led education which has been shown to be a highly effective method for tobacco-use prevention.**

Smoking prevention research reports that many of the most effective smoking prevention programs involve peer-led classroom education. An attempt was made to assess to what extent Minnesota schools are using peer-led instruction. Ten percent of public school districts and 8% of non-public schools report extensive use of peer-led programs in the classroom. Nine percent of public school districts and 8% of non-public schools report that student-led organizations are extensively involved in promoting tobacco

education activities such as D-Day and quit contests.

- **Approximately two-thirds of public school districts are providing some type of education about smokeless tobacco in grades 6-10. Most non-public schools do not address smokeless tobacco.**

Smokeless tobacco (chewing tobacco and snuff) is of growing concern because of the apparently increasing prevalence of use by young people and the growing body of research documenting the negative health effects. Table 4-6 gives an indication of the extent of smokeless tobacco education currently provided in Minnesota schools. It is not possible to identify from this survey either the extent of the education provided or the methods used. Note also that, due to the low response rate of non-public schools, figures in this table may not be representative.

- **Only a small percentage (15%) of school districts are currently using the "Minnesota Smoking Prevention Program" in the seventh grade. This is the only smoking program available for the 12-14 year old age group that has been extensively evaluated. It has been shown to reduce onset of smoking by 50-75%.**

Smoking prevention research indicates that seventh grade is a particularly effective time to implement intensive tobacco-use prevention programs. For this reason, in order to be eligible for state aid funds, schools must have an effective program planned or in place for the 12-14 year old age group. Table 4-7 indicates which of the available tobacco-use prevention programs and educational materials schools are currently using in the seventh grade.

- **A majority of school districts (60%) report that their policies and disciplinary efforts regarding student tobacco use are not highly successful in discouraging student tobacco use in school buildings. Only a small number of districts (11) currently have a tobacco policy that prohibits tobacco use by everyone in school buildings.**

Although a large majority of school districts have school policies that prohibit student tobacco use, it appears that these policies frequently do not prevent or deter student tobacco use in school. Eighty-eight percent of survey respondents reported that students are not allowed to use tobacco in any school building or on school grounds. Five percent reported that students are allowed to use tobacco outside of some buildings. Only one district reported that students are allowed to use tobacco inside of some school buildings.

School districts report a wide range of disciplinary actions for tobacco policy violations ranging from nothing for a first offense (two districts) to expulsion for a third violation (22 districts). Forty percent of districts report that their disciplinary actions are extremely successful in stopping students from using tobacco in school. Twenty-nine percent report moderate success, 12% report some success, and 3% report that their discipline policies are not successful. Eleven school districts (3.6%) reported that all schools in the district prohibit smoking by staff members as well as students.

Table 4-6. Smokeless Tobacco Educational Efforts in Minnesota Schools 1985-86

Percent Answering Yes

	Grade 6		Grade 7		Grade 8		Grade 9		Grade 10	
	P*	NP*	P	NP	P	NP	P	NP	P	NP
Was chewing tobacco/snuff discussed at this grade level during this school year?	66%	51%	60%	35%	69%	32%	50%	11%	72%	6%
Was information on chewing tobacco/snuff presented to athletic teams during this school year?	16%	12%	63%	11%	63%	11%	68%	9%	71%	9%

*P = Public District

*NP = Non-Public School

Table 4-7 Tobacco-Use Prevention Programs and Materials Used in Seventh Grade, 1985-86

Tobacco-Use Prevention Programs and Materials	Percent Currently Using Program/Materials in 7th Grade	
	Public	Non-Public
A Smoke-Free Generation	45%	29%
Textbooks	43%	23%
D-Day Materials	37%	14%
Computer Programs	19%	8%
Minnesota Smoking Prevention Program	15%	2%
Teenage Health Teaching Modules	15%	3%
Biomeasurement Project	8%	3%

Implications for Future Department of Education Efforts

The 1986 Department of Education survey provides excellent baseline data for program planning and for monitoring change as a result of the 1985 legislation. It is clear from the survey that most public school districts have a health curriculum that includes a tobacco-use prevention component; however, the programs and methods showing the most promise are not the most frequently used. There is a clearly identified need to continue training teachers to use programs that are based on psycho-social skill development and that have been well evaluated and shown to reduce the onset of tobacco use. As Table 4-8 summarizes, school staff have indicated their interest in and desire for additional training in a variety of topics related to tobacco-use prevention programs in schools.

Although many public schools report providing educational programs on smokeless tobacco, it is necessary to identify more clearly what type of methods and materials are being used. Few materials exist that use well-tested methods. There is a need to identify, develop, and disseminate educational materials that are consistent with the research on effective tobacco-use prevention programs.

Many schools are clearly not satisfied with students' compliance with

current tobacco policies. Schools need assistance with identifying and implementing methods for increasing student compliance with tobacco policy. A promising approach involves establishing smoke-free school policies that prohibit tobacco use by everyone using a school facility. Finally, there is a well identified need to assist non-public schools to increase and improve tobacco-use prevention efforts with their students.

Table 4-8 Assistance Desired by Minnesota School Districts for Tobacco-Use Prevention Topics

Type of Assistance	Percent Answering Yes
Information about resources	60%
Workshops on junior high prevention programs	55%
Workshops on general tobacco-use prevention programs	53%
Smokeless tobacco resources	51%
Planning K-12 tobacco-use prevention programs	50%
Program evaluation	29%
Workshops on tobacco policy for students/staff	26%

Overall Evaluation of the Minnesota Nonsmoking Initiative

The 1985 legislation charges the commissioner of health with evaluating new and existing nonsmoking programs on a statewide and regional basis using scientific evaluation methods. It also mandates surveys of school-based populations regarding the epidemiology of smoking behavior as well as knowledge and attitudes related to smoking, and the penetration of statewide smoking control programs. In short, the Health Department is to evaluate the entire Minnesota Nonsmoking Initiative and to gather data on smoking behavior.

The Health Department's efforts to evaluate the nonsmoking initiative fall into four major categories:

1. Adults--studies of adults' use of and attitudes toward tobacco.

2. Community Nonsmoking Projects--evaluation of state-funded grant projects across the state.

3. Adolescents--school-based studies related to adolescent tobacco use and programs to prevent it.

4. Mass media--market research to target media messages and evaluation strategies to measure their effect.

These four evaluation areas overlap to some extent. Existing data sources will be used wherever possible and coordinated with new data to expand the Health Department's evaluation potential. See Table 5-1 for a summary of the major evaluation mechanisms being initiated under the Minnesota Nonsmoking Initiative.

1. Adults

The Minnesota Department of Health has conducted statewide telephone surveys of adults in 1981, 1984, 1985, and in 1986 to gather information on behavioral health risks, including smoking. The 1984-86 surveys were conducted as part of the nationwide Behavioral Risk Factor Survey from the federal Centers for Disease Control. See Table 5-2 for gender-specific smoking rates from 1981-85. These surveys have provided data on smoking prevalence by age, gender, race, marital status, employment status, education, and occupational group, as well as information on dose (amount smoked).

The risk factor surveys show overall smoking rates to be similar for men and women between 1981 and 1985 with men smoking at a slightly higher rate than women. Smoking patterns, however, differ by age. In 1981, 1984, and 1985, females between 18 and 25 had a higher smoking rate than males 18 to 25. In 1985, 31% of females 18 to 25 were current smokers compared to 28%

Table 5-1. Major Evaluation Strategies of the Minnesota Nonsmoking Initiative

Strategy	Lead Agency	Target	Focus	Evaluation Period
Statewide Telephone Survey on Tobacco Use	MDH	MN Adults	Tobacco-use patterns, awareness of initiative	1987+
MDH-funded Special Non-Smoking Project Grants (individual evaluation mechanisms: surveys, quarterly reports, etc.)	Grant projects	Varies	Effect of nonsmoking project grants	1986-87
NCI-funded Community Nonsmoking Project Grants Evaluation	MDH	Special Nonsmoking Project Grants	Improving state's capacity for cancer control	1986-89
Ninth Grade Tobacco-Use Survey	MDH	MN 9th graders	Tobacco use, knowledge of school policies and programs	Spring, 1986
NCI-funded Two-State Tobacco Project: (compares MN and WI)	U of M			
-Ninth Grade Survey		MN & WI 9th graders	Effect of school programs on smoking rates	Fall, 1986-1990
-Intervention Study With 7th Graders		One group of MN 7th graders over time	Effect of curricula on smoking rates	Spring, 1987 1990
MN Department of Education Survey of School Activities/ Policies	MDE	MN school districts receiving state funds for tobacco programs	Level of programs, curricula, policies	Spring, 1986 Spring, 1987
Phone survey in response to televised nonsmoking message/T-shirt offer	MDH	MN teens	Market research on viewing patterns	Spring, 1986

of the males in that age group. Data on former smokers and nonsmokers in this age group suggest that more young women than young men are taking up the smoking habit, rather than the alternative explanation that men and women are becoming smokers at the same rate; but also that more young men than young women are quitting the habit. The 1985 survey also suggests a difference in quit attempts between males and females. Forty-four percent of the male smokers and 38% of the female smokers reported that they had quit smoking for at least a week sometime during the past year.

Table 5-2. Adult Smoking Rates: Percent Reporting Current Smoking in Minnesota and United States, Behavioral Risk Factor Survey

	Minnesota			U.S.
	1981	1984	1985	1983
Males	31	28	29	34
Females	28	29	26	29

While this risk factor data on smoking is useful, it does not offer the kind of comprehensive data needed to fully evaluate the effect of the statewide nonsmoking initiative. Similarly, national data on tobacco use is available; however, national data cannot be used to measure behavioral changes over time in Minnesota. Minnesota smoking rates are generally lower than national smoking rates.

STATEWIDE TELEPHONE SURVEY ON TOBACCO USE

As described above, ongoing risk factor surveys in Minnesota have provided a limited amount of data on smoking prevalence and on dose. In order to fully evaluate the statewide nonsmoking initiative, we need more comprehensive data on all forms of tobacco use and on knowledge and attitudes related to it. Therefore, starting in early 1987, the Health Department will begin conducting a series of statewide telephone surveys to gather data on tobacco use. This survey will cover all forms of tobacco use, including cigarettes, pipes, cigars, and smokeless tobacco.

Once the first in this series of surveys has been conducted, it will provide baseline data which will allow monitoring of changes over time in smoking prevalence and behaviors, in attitudes about smoking issues, and in awareness of public information and community nonsmoking efforts. The

baseline data will also allow us to identify factors associated with quitting and trying to quit, as well as the factors related to being a "hard-core" smoker. Demographic information gathered will allow us to target public information campaigns to those subgroups with the highest smoking rates and to develop educational materials geared to these specific groups.

In designing this telephone survey, the Health Department made use of the knowledge gained during its five years of conducting behavioral risk factor surveys in Minnesota. The same questions that were used to determine smoking prevalence in the 1984-86 Risk Factor Surveys are being used in the statewide nonsmoking telephone survey. In effect, this has expanded the sample size to provide a more accurate estimate of smoking prevalence, which will serve as a baseline for the evaluation of the Minnesota Nonsmoking Initiative. Use of the same questions will also allow comparisons with the smoking prevalence among Minnesota adults as measured in the two years prior to the nonsmoking initiative. As much as possible, the tobacco-use survey is designed to correspond with other state and national surveys to maximize comparability with reported smoking prevalence from other areas.

Telephone survey procedures include choosing a sample of households throughout the state through random digit dialing. This sample is selected to be representative of the state population. Surveyors ascertain the number of age-eligible residents of each household and select one at random for the interview. Each survey round will include 2,000 completed interviews with Minnesota adults. The phone survey will be conducted by trained interviewers from the MDH Center for Health Statistics.

2. Community Nonsmoking Projects

In 1985, the Health Department awarded eight special nonsmoking project grants to Community Health Services (CHS) and private nonprofit agencies across the state. (See the section of this report entitled Community and Statewide Grants for a summary of these grant projects.) These projects are being evaluated in a variety of ways with data collected by the projects themselves, and data collected by the Health Department.

From the beginning, the MDH Center for Nonsmoking and Health (CNSH) has put considerable effort into assuring that the statewide special nonsmoking project grants are well evaluated. CNSH held a day-long forum for prospective grant applicants a month before the grant proposal deadline to instruct project personnel in evaluation design and to emphasize the importance of incorporating rigorous evaluation plans into proposed projects.

After the grants were awarded, CNSH held two meetings for project personnel during the first year of project implementation. These meetings allowed for an interchange of ideas and for problem-solving various approaches to implementation. At the first grants meeting, personnel from CNSH made presentations on community health promotion, evaluation, the statewide

nonsmoking initiative, and budgetary requirements for the grants. The second meeting was held at the Community Health Conference in Alexandria and included a roundtable discussion on project evaluation and an update of the nonsmoking initiative. A third meeting was held in December of 1986.

In addition to formal meetings and workshops, informal meetings and consultations have occurred throughout the year between CNSH and project staff. Project personnel also consult with the tobacco-use specialist from the state Department of Education and with the Health Department's specialist on the Minnesota Clean Indoor Air Act.

With the assistance of CNSH, each of the funded community grants has developed its own evaluation component. The complexity of each evaluation component depends upon resources available to the project, including the level of funding made available through the nonsmoking grant. Projects are collecting statistics relevant to their specific interventions. CNSH has devised a standard reporting form to simplify data collection and reporting, and each grant recipient is providing CNSH with process statistics specific to their intervention effort. This process data will be measured against the stated objectives of the projects to determine progress in attaining stated goals. In addition, CNSH will compare the statistics of all projects that intervene in the same type of target population to assess the relative effectiveness of different interventions and approaches.

CNSH staff have consulted individually with each grantee on developing data collection instruments, evaluation tools, sampling frames, and randomization schemes, and on survey implementation. Projects are using survey results and process statistics for internal evaluation, and will include this data on the quarterly and final reports they submit to the Health Department to be used as part of the overall evaluation of the grants. (For a summary of current evaluation data on each grant, see the Community and Statewide Grants section of this report.)

HIGHLIGHTS OF COMMUNITY EVALUATION TO DATE

Community Surveys

Some of the nonsmoking grant projects are collecting baseline and follow-up surveys, while others have focused on conducting needs assessments. Here are some highlights of these evaluations:

- Two nonsmoking project grants have conducted surveys of representatives of large and small businesses about their smoking policies, while three others have surveyed the employees of worksites, including county courthouses and schools.

- The Women, Infants and Children (WIC) population has been surveyed by two projects.

- A statewide project to promote smoke-free hospitals has surveyed hospital administration personnel about hospital smoking policies.

They have also surveyed health professionals and community members who are interested in facilitating the development of smoke-free policies.

- One project planned and conducted a community survey on tobacco use in the four-county area served by their Community Health Services agency.

- One project has surveyed health care providers (physicians, dentists, and chiropractors) about patient counseling for smoking and smoking policies in their offices and clinics; another project plans a similar survey.

Smoke-Free Hospitals

Hospitals are in a key position to influence smoking behavior and consequent health of a broad spectrum of the population of Minnesota. Because they serve a wide audience, hospitals can exert a great deal of influence to discourage smoking among hospital patients, visitors, staff, and the community.

The Minnesota Coalition for a Smoke-Free Society 2000 received a statewide grant to promote smoke-free environments in Minnesota's hospitals. At the end of the project, the Health Department will do a retrospective study to determine factors associated with the development of smoke-free hospitals. Factors examined will include hospital size, location and other characteristics, support of key hospital and community personnel in developing a smoke-free policy, and input from outside agencies in policy development. The Health Department will use data collected by the project, as well as data collected on all hospitals in the state by the MDH Health Resources Division for this analysis.

Women and Smoking

Young women are an important target group for the nonsmoking initiative because they have a high smoking rate and because their smoking can impact on their children in several ways. Not only does smoking pose health risks for the woman herself, but her unborn baby is at increased risk of respiratory distress, sudden infant death syndrome, and low birth weight, which places the infant at increased risk of death in the first few months of life. In addition, infants and young children with at least one smoking parent are at greater risk of respiratory disease. Also, adolescents are more likely to begin smoking if one or both of their parents smoke.

Four of the nonsmoking project grants have chosen young women who are WIC participants as a target group for their programs. As mentioned above, two of these projects are using surveys to assess the effectiveness of their efforts with this target group. One of these projects is collecting data to assess any changes in WIC smoking status as a result of their program.

The other project did a baseline survey of the smoking behavior of the WIC population in the two counties served by a nonsmoking project grant, and of two comparison counties without a grant in another area of the state. A

similar survey conducted at the end of the project will reveal if the project had any impact on the smoking status of WIC participants over time.

Worksites

Worksite smoking policies and programs can play a vital role in decreasing smoking prevalence, and have been targeted by several nonsmoking project grants. The workplace is important for several reasons. First, individuals spend more time at their job than in any other public place. Secondly, the social environment, including the existing support network, enhances the potential for effective long-term behavior change. Third, there is a well-established interaction between exposure to tobacco smoke and exposure to other substances at the workplace, which results in an increased risk of disease.

Under the Minnesota Clean Indoor Air Act (MCIAA), worksites are considered public places, and therefore must restrict smoking to designated areas only. Many businesses, however, are unclear about how the MCIAA applies to their place of work, and whether they are in compliance with the law. Two of the funded nonsmoking projects are working with businesses to help them come into compliance with the MCIAA and, if possible, to adopt even more comprehensive smoking policies than the law requires. These projects, as mentioned above, are conducting surveys among managers to determine the impact of their technical assistance. A third project is attempting to evaluate the effect of a nonsmoking approach alone, and of including nonsmoking as one part of an overall heart health approach to reduce smoking among employees of suburban Minneapolis businesses. Evaluation is being effected by measuring smoking rates with employee surveys before and after these two interventions. Several nonsmoking project grants, as mentioned above, have conducted employee surveys or offered other technical consultation to specialized worksites such as school districts, county courthouses, or hospitals.

NCI-FUNDED COMMUNITY EVALUATION PROJECT

In addition to the internal mechanisms designed to evaluate the community special nonsmoking project grants, the Health Department was awarded a $670,000 grant from the National Cancer Institute (NCI) which will allow more complete evaluation of the community grants over the next three years.

The focus of the NCI grant is to improve the state's technical capacity for cancer control. Since smoking is a major risk factor for cancer, results from a rigorous evaluation of the nonsmoking project grants will be used to develop a model plan for application to other areas of cancer control such as nutrition and breast cancer detection.

Although some of the MDH-funded nonsmoking grants are reasonably broad in scope, none is at a level that a significant, community-wide decrease in smoking would be readily detected, as a result of the activities of the individual projects, in the next two to three years. Therefore, the focus of the NCI-funded evaluation effort will be on the process of

implementation itself and the impact on the specific target populations within the communities addressed by the interventions.

While each nonsmoking project is expected to include an evaluation component, the resources and sophistication of local agencies to evaluate their activities is limited. As part of the NCI Technical Capacity-Building Grant, the Health Department will undertake several activities to extend these local efforts to ensure adequate evaluation in the short and long term. These activities include:

1. Workshops for local agencies on process and outcome evaluation.

2. Face-to-face interviews with all members of the task forces from each of the seven projects and the key personnel involved in implementation.

3. Interviews (formal and informal) with key community leaders for their assessment of the project's impact in the community.

4. Technical assistance and standardization of items for the development of follow-up questionnaires across the seven projects. Technical assistance may include phone and face-to-face interviews to assist local projects where their own data collection resources are insufficient.

5. Development of a formal evaluation process to be utilized by local agencies in conjunction with the state in all future grant awards and renewals based on 1 through 4 above.

6. Development of additional and refined requirements to be met by local agencies in future grant applications that will help to overcome anticipated barriers and assure effective use of available resources based on 1 through 5 above.

A second major component in the Health Department's use of the NCI Technical Capacity-Building Grant will be the development of a community analysis/needs assessment model. This model will be intended for use by state and local agencies to foster the devlopment of coordinated local programs that address the major behavioral risk factors for cancer, i.e., smoking and nutrition. The model will be established as a resource for community councils throughout the state and will be tested on at least one of the present intervention communities and one community where no state funds have yet been awarded. Ideally, the latter community will be one where both nonsmoking and nutrition programs at the community level are anticipated.

3. Adolescents

Recent national studies suggest that the prevalence of cigarette smoking among adolescents remains high and that use of smokeless tobacco is spreading rapidly. Since both products pose clear health hazards, it is important to monitor their use and to try to understand the factors that

encourage adolescents to experiment with them.

Prior to the Minnesota Nonsmoking Initiative, the most recent statewide data on adolescent smoking was from the Search Institute's 1983 survey on drug use among Minnesota high school students. (Table 5-3) Only a few of the questions in this survey dealt with smoking, and none of the questions addressed the use of chewing tobacco and snuff, which has become common with male adolescents.

Table 5-3. Adolescent Smoking Rates: Percent Reporting Daily Smoking Minnesota, 1983, Search Institute

AGE	MALE(%)	FEMALE(%)
13-14	9	14
15-16	17	23
17-18	23	30

Studies of adolescent tobacco use in the Twin Cities area have been conducted by the University of Minnesota Division of Epidemiology over the last several years. These data are not generalizable to the whole state, however, since adolescents from the Twin Cities are not representative of all Minnesota adolescents.

NINTH GRADE TOBACCO-USE SURVEY

Because of the lack of comprehensive data on adolescents' use of cigarettes and smokeless tobacco, the Health Department conducted a survey in the spring of 1986 to gather these data. The Health Department contracted with the Department of Epidemiology at the University of Minnesota and collaborated with the state Department of Education to conduct this statewide survey of ninth graders in Minnesota classrooms. The ninth grade was chosen because it is a crucial period for making decisions about smoking, and because tobacco-use prevention programs in schools focus on grades seven through nine. Conducting a similar survey in several grades would be prohibitively expensive.

The survey sampling scheme was designed so that each ninth grader attending public school in the state of Minnesota had an equal chance of being selected for the survey. A total of 2,600 students from 44 schools participated in the study. Forty-one of 42 (98%) of the randomly selected school districts agreed to participate in the survey. (See Map 5-1 for the location of school districts participating in the survey.)

The purpose of this survey was to gather baseline data on how many students use tobacco, how much and how often they use it, how many of their family and friends use it, and what they know about school tobacco-use regulations and community and school-based programs to discourage tobacco use.

To complete the survey, students were asked to fill out a questionnaire during one classroom period. A team of two survey interviewers gave directions and conducted the survey. One survey-interviewer was available to interpret survey items while the other conducted individual breath analysis tests for carbon monoxide content. Carbon monoxide was measured in expired breath samples to validate the students' self-reported smoking status.

Results from this survey indicate that 18% of Minnesota ninth graders report smoking during the past week, whereas 8% of Minnesota ninth graders (primarily boys) report using smokeless tobacco during the past week.

The Health Department had planned to repeat this ninth grade survey. However, in the summer of 1986, the University's Division of Epidemiology was awarded a major grant from the National Cancer Institute (NCI) to evaluate Minnesota's tobacco-use prevention efforts on an even broader scale, using the ninth grade survey as a focal point. Among other things, these funds will be used to survey ninth graders over the next several years.

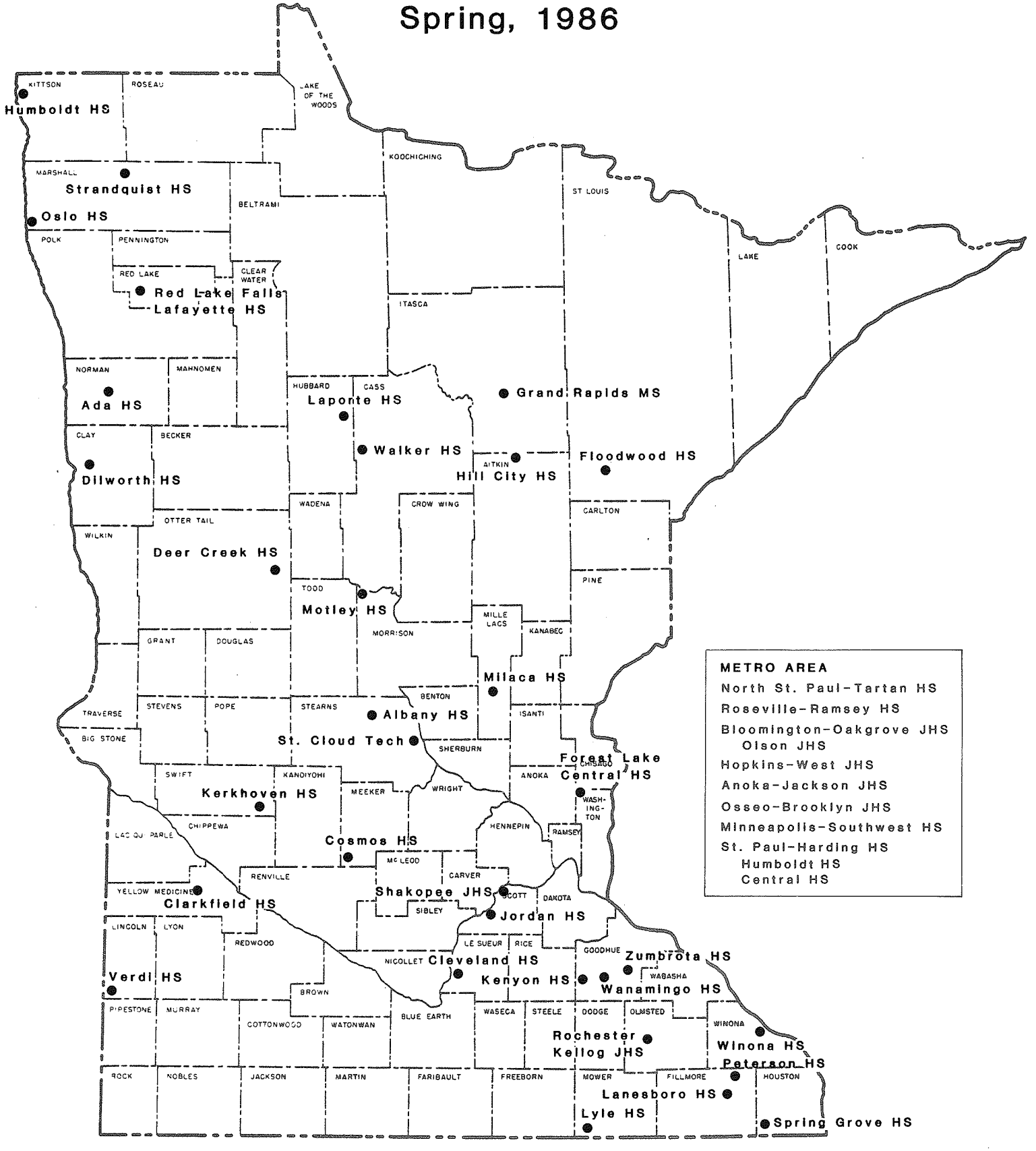
NCI-FUNDED, TWO-STATE TOBACCO PROJECT

In July of 1986, the Division of Epidemiology at the University of Minnesota, in cooperation with the Minnesota Department of Health and the Minnesota Department of Education, was awarded a five-year, $1.1 million grant from the National Cancer Institute. The grant will fund the Two-State Tobacco Project (TSTP) which is a collaborative effort with the Wisconsin Department of Public Instruction and the Wisconsin Department of Health and Social Services. Collaboration of this kind between the school systems of two states is highly unusual and promises to provide data that will be extremely useful in developing more effective prevention programs.

The major function of this project is to evaluate the effect of the extensive, school-based, tobacco-use prevention programs now in place in Minnesota schools as a result of school-aid funds earmarked by 1985 legislation. These programs cover kindergarten through 12th grade, and focus on reducing tobacco-use onset in the seventh and eighth grades. (For information on school programs, see the section of this report entitled School Programs.)

Through the TSTP project we will monitor adolescent tobacco use in the two states over the next five years to assess local trends and to identify factors which encourage adolescents to experiment with tobacco products. Concurrent surveys of Wisconsin ninth graders as a comparison group will allow evaluation of the impact of the Minnesota Nonsmoking Initiative on adolescent tobacco-use rates in Minnesota. The data will also identify subgroups of adolescents at high risk of smoking and smokeless tobacco

Map 5-1 Ninth Grade Survey Sites Spring, 1986



initiation. Prevention programs can then be more aptly targeted.

The Two-State Tobacco Project has two phases: an annual ninth grade survey and an intervention study.

TSTP Annual Survey of Ninth Graders

The first phase of the Two-State Tobacco Project is the annual ninth grade survey. Beginning in the fall of 1986, and for the next four years, approximately 8,000 students from 106 schools in Minnesota and Wisconsin will be surveyed every year. The same questionnaire will be used for all surveys. To get a representative sample of each state's ninth graders, a new random sample will be selected each year to estimate the smoking prevalence. (See Map 5-2 for Minnesota school districts included in the survey, fall '86.)

The survey protocol will be identical to that used in the ninth grade survey conducted by the Health Department in the spring of 1986. Staff from the University of Minnesota will visit each participating school and will be responsible for conducting the survey in the classroom. The survey itself will require only 30-40 minutes of class time per student. Students' participation in the survey will be voluntary, and parents will be notified in advance. All data will be collected anonymously and will be strictly confidential.

This study design allows the comparison of changes over time in Minnesota and Wisconsin smoking prevalence, with Wisconsin as a control state. In addition, changes in smoking prevalence will be compared in Minnesota schools with and without smoking prevention curricula, and in Minnesota communities with and without state-funded nonsmoking projects. The level of prevention activity in the two states can be related to smoking prevalence to determine if a dose-response relationship exists.

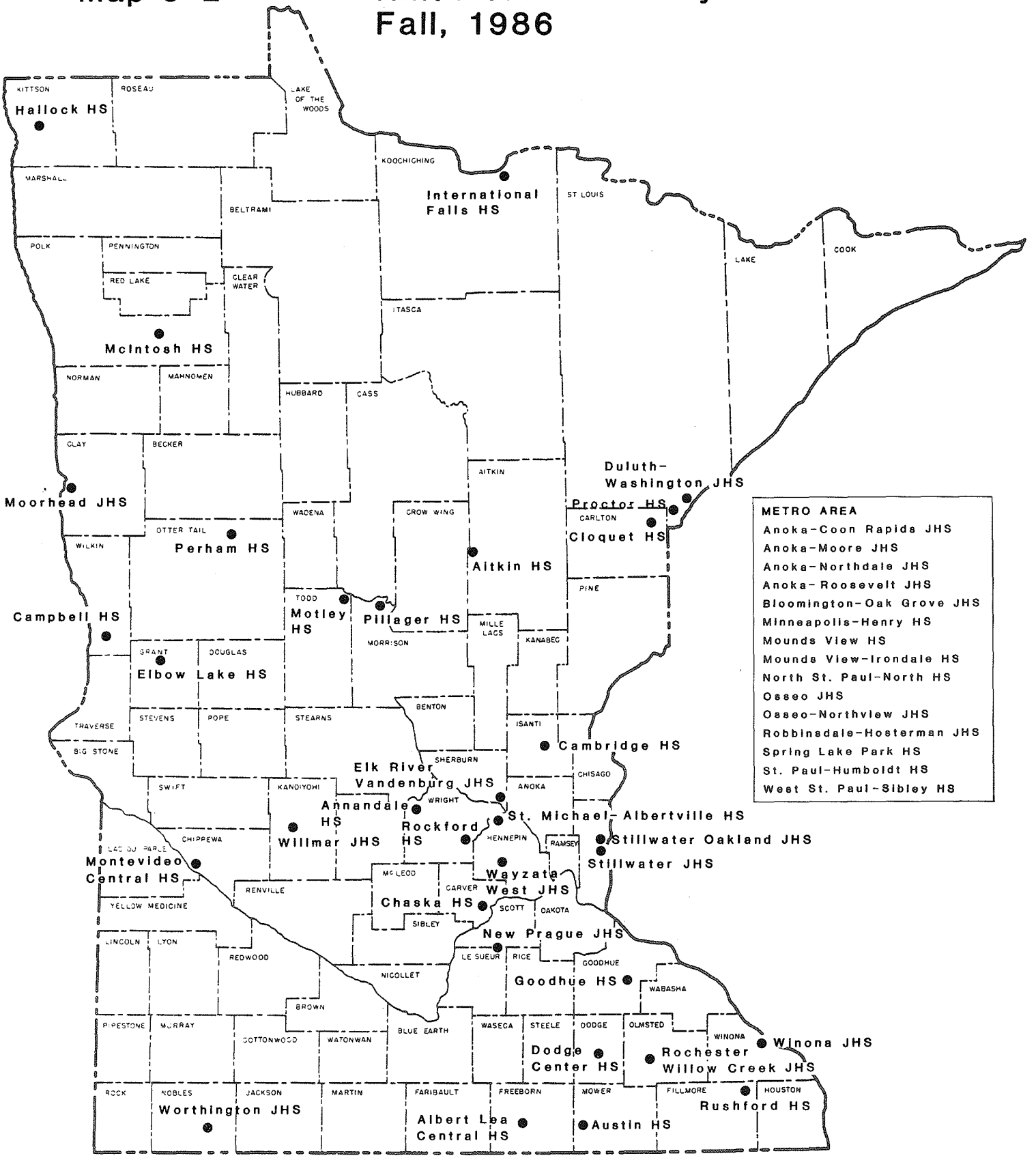
TSTP Intervention Study With Seventh Graders

The second phase of the TSTP study will begin in the spring of 1987. This phase will be a formal evaluation of three promising smoking prevention curricula, or interventions. These curricula have been identified as the three most likely to be used in school districts in Minnesota.

This intervention evaluation will have a formal research design, and will be conducted among 4,000 seventh grade students in 70 school districts in Minnesota. The seventh grade was chosen because it is the focus of school-based prevention efforts.

School districts will be assigned at random to one of four groups. After the initial survey in the spring of 1987, each of the three intervention groups will use a different curriculum, while the control group will devise their own prevention curriculum. Each spring for the next three years, when these students are seventh, eighth, and ninth graders, they will be surveyed with the same questionnaire and survey procedures. Their responses in each of these succeeding surveys will be compared to the

Map 5-2 Ninth Grade Survey Sites Fall, 1986



METRO AREA

- Anoka-Coon Rapids JHS
- Anoka-Moore JHS
- Anoka-Northdale JHS
- Anoka-Roosevelt JHS
- Bloomington-Oak Grove JHS
- Minneapolis-Henry HS
- Mounds View HS
- Mounds View-Irondale HS
- North St. Paul-North HS
- Osseo JHS
- Osseo-Northview JHS
- Robbinsdale-Hosterman JHS
- Spring Lake Park HS
- St. Paul-Humboldt HS
- West St. Paul-Sibley HS

initial survey to detect changes in smoking status.

With this formal research design, the effects of these prevention curricula on adolescent smoking rates will be evaluated. Results from the intervention study will allow us to determine the effectiveness of different types of smoking prevention curricula. Curricula that are judged to be effective can be promoted in all the school districts of the state.

The same survey procedures and questionnaire will be used in both the intervention study and in the ninth grade survey. Use of the same questionnaire will also allow comparison of smoking rates between seventh and ninth graders over the next four years.

MINNESOTA DEPARTMENT OF EDUCATION SURVEY

During the 1985-86 school year, 75% of the 433 school districts in Minnesota applied for and received funds allocated by the state legislature to develop tobacco-use prevention programs. In the spring of 1986, the Department of Education conducted a survey of school districts receiving these funds to determine the level of existing and proposed tobacco-use programs and curricula, and district smoking policies for students and staff. Results from this survey are discussed in the School Programs section of this report.

Respondents to this survey will be resurveyed in the spring of 1987, allowing assessment of increases in the use of prevention curricula in each school district. Changes in smoking policies for staff and students will also be assessed.

The Health Department will compare data on adolescent perceptions from its baseline ninth grade survey with information on school district smoking curricula and smoking policies from the Department of Education survey. Responses from students and from school personnel responsible for smoking programs in a given district will be compared for similar items. The Health Department will also attempt to evaluate whether district smoking rates are affected by student knowledge of school policies and penalties for tobacco use.

SCHOOL-TARGETED COMMUNITY NONSMOKING PROJECTS

Two of the MDH-funded community nonsmoking project grants are working to encourage use of prevention curriculum in their local school districts. These efforts will be evaluated by the projects themselves, and they will also be evaluated by the Health Department.

One of these community projects is working with a school district that has two middle schools. In one of the schools, a new smoking prevention curriculum will be implemented in the seventh grade. The other school will use the same curriculum that was used last year. A survey will be conducted among both groups of seventh graders in the fall and again in the spring to detect changes in smoking rates, and in the knowledge and awareness of smoking related issues.

As part of the external evaluation conducted by the state, the Two-State Tobacco Project, at the request of the Health Department, will survey seventh graders in school districts served by the other community project that has targeted schools for intervention. School districts in two control counties will also be surveyed. These seventh graders will complete the same questionnaire and undergo the same expired-air carbon monoxide analysis as the seventh and ninth graders in the statewide adolescent surveys. The Health Department will conduct a follow-up survey of these same students toward the end of the two-year grants period (fall, 1987). These surveys will provide data with which to assess the impact of tobacco-use prevention efforts by a community nonsmoking project on smoking prevalence among seventh graders.

A number of the community nonsmoking projects are also working to promote the development of comprehensive smoking policies in local school districts. The Health Department will evaluate the impact of the community nonsmoking projects in fostering development of these policies in their local districts by comparing them with rest of the state.

OTHER BASELINE DATA ON ADOLESCENTS IN MINNESOTA

Adolescent Health Survey

Starting in the fall of 1986, an adolescent health survey was conducted in Minnesota schools among seventh to 12th graders. A few of the questions on this survey deal with cigarette smoking and smokeless tobacco use.

The adolescent health survey is a collaborative venture between the Maternal and Child Health Division of the Health Department and the Adolescent Health Program at the University of Minnesota. A random sample of 5,000 students per grade was chosen and asked to complete a comprehensive survey of health behaviors. All the data from this survey, along with vital statistics pertaining to the adolescent years, will become the Adolescent Health Database and will be accessible to public health agencies for planning purposes through the Datanet system at the Minnesota State Planning Agency.

Access to these survey results will provide baseline rates of cigarette and smokeless tobacco use for seventh through 12th graders in Minnesota. Future surveys of high school and junior high students could keep us apprised of trends in tobacco use in these grades. The adolescent health survey will be conducted before major implementation of smoking prevention curricula takes place in the schools and before the major thrust of the media campaign of the Minnesota Nonsmoking Initiative, targeted to adolescents, gets underway; therefore, it will provide valuable information against which to measure change in tobacco-use rates for all grades.

4. Mass Media

The 1985 legislation mandated the Health Department to develop a long-

term, coordinated public information campaign to promote the benefits of nonsmoking. In addition to market research and the use of focus groups to help shape mass media messages, several strategies are planned to evaluate the effect of these public information efforts on different groups.

Adults

Several questions from the statewide telephone survey to be conducted among the adult population in 1987 will be used to evaluate public information efforts. Some of the questions seek information about the level of awareness of nonsmoking messages in general, while others focus on specific components of the campaign. The levels of awareness and knowledge and the effectiveness of these messages will be monitored over the next several years to determine change.

Adolescents: Evaluation of the Smoke-Free Campaign

In May and June of 1986, the Health Department placed paid ads with television stations around the state. These ads were directed at the 8-18 year old market, and were used on a variety of television programs favored by this age group. The ads promoted a smoke-free lifestyle for adolescents and pre-adolescents and provided a telephone number to call for a free smoke-free generation T-shirt. Callers were asked some demographic and smoking behavior questions, the name of the TV program on which the ad appeared, and their name and address. As a result, a database of nearly 40,000 responders was created which will provide valuable marketing data for use in targeting future media messages to youth. (See the Public Communications and Information section of this report for more information on this campaign.)

To evaluate the impact of the smoke-free campaign around the state, a series of questions was included in the ninth grade TSTP survey which was conducted approximately six months after the campaign. These questions ascertained the level of awareness and involvement of the state's ninth graders in this campaign, as well as the number of hours spent watching TV and listening to the radio. The TSTP survey questionnaire is designed to accomodate the addition of a few questions to the standard form at each survey round. In future surveys, different items can be added as optional items to evaluate a current media campaign or other activities of the nonsmoking initiative that are directed at adolescents.

Questions were included in both ninth grade surveys (TSTP and MDH) and will be included in the seventh grade survey to assess the level of awareness of media messages that promote and oppose tobacco use. Changes in level of awareness in seventh and ninth graders will be monitored over the next five years in Minnesota, a state with a public information campaign, and among ninth graders in Wisconsin, a state without a public information campaign.

Summary of Evaluation Strategies

In summary, many different strategies will be used to evaluate the Minnesota Nonsmoking Initiative. Adults and high school students throughout the state will be surveyed to monitor changes in knowledge, awareness, and attitudes about smoking and about the activites of the initiative, and to assess the impact of the inititive on smoking rates. Adults will be surveyed by phone, while high school students will be surveyed in the classroom setting. In a related project, a formal research design will be used to evaluate three promising smoking prevention curricula beginning in 1987. Results from this evaluation will enable the Health Department to make recommendations about suitable and effective smoking prevention curricula to be used in Minnesota school districts. Statewide changes in use of nonsmoking curricula and student and faculty smoking policies will be assessed with a Department of Education survey of school districts.

The community nonsmoking grants, which are focusing their activities on a variety of target populations and sites, will be evaluated on a number of levels. The grantees file quarterly reports with project statistics which will allow the Health Department to compare effectiveness across projects and to evaluate the progress of each grant project toward its stated goals. Many of the projects are conducting surveys among target groups to evaluate the effectiveness and impact of their programs. The Health Department has consulted with the nonsmoking projects to help them develop data collection instruments, evaluation tools, and survey implementation plans. In addition, outside funding from the National Cancer Institute will allow the Health Department to provide in-depth workshops for the grantees on process and outcome evaluation, to incorporate standardized items on all questionnaires that will be used with the same target groups, and to develop a formal evaluation and grant review process to be used for future grant applicants. The Health Department will also conduct personal interviews with project personnel, task force members, and community leaders to determine the impact of the project on the community. Data from the community nonsmoking projects will enable the Health Department to make recommendations about the effectiveness of various approaches for the promotion of nonsmoking in the community for future nonsmoking grants. Evaluation of the whole grant process, as typified by these nonsmoking grants, can be applied to similar MDH-funded community grants.

Applications for Federal Grants

Over the past two years, the Minnesota Department of Health has applied for, or cooperated in applying for, several federal grants to support various tobacco-related projects. These grant applications and their outcomes are described below.

FEDERAL GRANTS THAT HAVE BEEN FUNDED

1. **Title:** A Statewide Approach to Adolescent Tobacco-Use Prevention (Also called Two-State Tobacco Project)

   Applicant(s): Division of Epidemiology of the University of Minnesota School of Public Health in consultation with the Minnesota Department of Health and the Wisconsin Departments of Public Instruction and of Health and Social Services, the American Lung Association, and A Smoke-Free Generation

   Granting Agency: National Cancer Institute (NCI)

   Date Submitted: October, 1985

   Amount Requested: $1.172 million

   Scope: Five-year statewide project with the state of Wisconsin acting as the control

   Purpose: To monitor adolescent tobacco-use prevention activities in Minnesota and Wisconsin to determine whether the Minnesota Nonsmoking Initiative, and particularly its school and youth nonsmoking component, increases tobacco-use prevention activities in Minnesota schools and decreases prevalence of tobacco use among Minnesota adolescents.

   Status: Funded for $1.055 million in July, 1986. Initial survey data collected. For more information on this grant, see Overall Evaluation section of this report under "Two-State Tobacco Project" (TSTP).

2. **Title:** Technical Capacity-Building in Cancer Control

   Applicant(s): The Minnesota Department of Health in consultation with University of Minnesota Division of Epidemiology

   Granting Agency: National Cancer Institute (NCI)

   Date Submitted: January, 1986

   Amount Requested: $220,044 (first year); $670,246 (total cost: three years)

Scope: Three-year, statewide project estimated to affect 4,000,000 persons.

Purpose: To increase the Health Department's technical capacity to make management decisions concerning funding allocations for cancer control efforts, first in the area of smoking and ultimately in other cancer control areas.

Status: Funded for $188,949 (first year); next two years' amounts pending. Project start-up date was September 1, 1986. For more information, see Overall Evaluation section of this report.

GRANTS NOT FUNDED

1. **Title:** Minnesota Community Hearts Program: Community-Based Cardiovascular Disease Prevention Program Proposal

   Applicant(s): Minnesota Department of Health

   Granting Agency: Centers for Disease Control

   Date Submitted: August, 1986

   Amount Requested: $426,128 (first year); $2,262,792 (total cost: five years)

   Scope: Five-year project estimated to affect 66,000 persons in the St. Cloud, Minnesota Metro area, and Eau Claire, Wisconsin.

   Purpose: To implement a community-based cardiovascular disease (CVD) prevention program which will reduce CVD and which will be readily transferable to other communities in Minnesota and the nation.

   Status: Proposal was given extremely high marks but, due to limited federal dollars, was not funded.

GRANT AWARDS NOT YET ANNOUNCED

1. **Title:** Minnesota School-Based Smokeless Tobacco Project

   Applicant(s): The State Health Department in consultation with the University of Minnesota Division of Epidemiology

   Granting Agency: National Cancer Institute (NCI)

   Date Submitted: October, 1986

   Amount Requested: $273,428 (first year); $1,493,393 (total cost: five years)

Scope: Five-year statewide project estimated to affect 14,540 persons.

Purpose: To develop and evaluate a school-based program to reduce the incidence and prevalence of smokeless tobacco use among the young.

Status: Grants to be awarded in July, 1987.

2. **Title:** Physician's Cancer Prevention Project: Community Clinical Oncology Program Proposal

Applicant(s): Minnesota Department of Health

Granting Agency: National Cancer Institute

Date Submitted: October, 1986

Amount Requested: $306,578 (first year); $1,109,744 (total cost: three years)

Scope: Three-year, statewide project estimated to benefit 1,500 persons.

Purpose: To develop, implement, and evaluate physician-based interventions for smoking cessation and nutrition among adult patients 18 to 65 years of age in the primary care setting.

Status: Grants to be awarded in July, 1987.

The Minnesota Clean Indoor Air Act (MCIAA)

In 1985, the Minnesota Legislature approved funding for one position at the Minnesota Department of Health (MDH) to provide technical assistance and consultation for implementation of the MCIAA. This marked the first time since passage of the MCIAA in 1975 that such a position was established. At the time the MCIAA was passed, no funds were provided for enforcement of the new law; however, the state commissioner of health was charged with developing rules to implement the law.

From 1975 to 1985, the Health Department spent approximately $4,000 per year on enforcement of the clean indoor air law. This expenditure was absorbed by the budget of an existing Health Department program within the Environmental Health Division. The FY 1986 budget for enforcing the law was $30,000. The MCIAA consultant is housed within the Environmental Health Division and works closely with staff of the MDH Center for Nonsmoking and Health.

The primary function of the MCIAA staff person at the state Health Department is to serve as a consultant to Minnesota businesses who want to comply with the MCIAA, as well as to individuals who have questions about the MCIAA. A second function is to process complaints which allege violations of the MCIAA or of the Health Department's rules related to it. A third function is to offer education and information to those who request it. In order to accomplish these tasks, the MCIAA consultant offers presentations, site visits, telephone consultations, informational materials, and training seminars, and also processes complaints.

MCIAA Presentations

MCIAA presentations are tailored to individual groups and cover the general provisions of the MCIAA and its rules as well as offering an in-depth review of the portion of the rules which specifically addresses the type of facility in question. These presentations also cover the process of developing a nonsmoking/smoking policy. As part of the presentation, question and answer periods allow participants to obtain information relevant to their individual situations. Participants have evaluated the presentations as effective and helpful. Requests for presentations on the MCIAA are expected to increase significantly during FY 1987 as evidenced by the pattern of requests during FY 1986.

Site Visits

An increasing number of Minnesota businesses are requesting site visits from the MCIAA consultant. During FY 1986, approximately 42 site visits took place. The purpose of the visit is usually one of the following:

a. to tour the facility to assure compliance with the MCIAA and its rules;

b. to talk with management personnel about developing a nonsmoking/smoking policy;

c. to respond to an employee complaint; or

d. to talk with a company task force or employee group about their new smoking policy.

During site visits the MCIAA consultant answers specific questions about applying the MCIAA to a facility and answers questions of employers and employees. As a result of these visits, employers report feeling reassured in knowing that the Health Department has looked at their facility to assure compliance with the MCIAA--particularly when a complaint is involved. Site visits allow the Health Department to more accurately assess a particular situation, to determine compliance with the MCIAA, and to make recommendatons based on first-hand information.

Telephone Consultations

One of the most time consuming functions of the MCIAA consultant is responding to telephone calls. During FY 1986, there were approximately 1,828 calls recorded, with a monthly average of 152. Figure 6-1 shows the number of calls received each quarter. Variations from one quarter to the next may be due, in part, to media attention given to the subject during a given time. The number of calls has risen dramatically each quarter. This trend reflects the increasing interest of Minnesotans in the topic of clean indoor air.

The majority of calls come from employers who are interested in developing a smoking policy and from employees seeking information about their rights under the MCIAA. Often employers and employees have questions regarding the MCIAA rules and how they apply to a specific situation. Callers also have questions about the applicability of the MCIAA to restaurants, retail stores, and other public places.

MCIAA Complaint Procedures

Minnesota's years of experience in implementing the MCIAA have been, by and large, positive and peaceful. Like other laws, the MCIAA depends on the cooperation of the general public. When violations of the law occur, individuals may file a complaint with the Health Department's MCIAA consultant. Complaints include allegations against restaurants, workplaces, retail stores, and other public places.

Figure 6-2 illustrates the percentage of complaints received for the various types of public places during FY 1986. Workplaces constitute 32.4% of the total number of complaints, and approximately 4% of these involved industrial worksites. The "other" category includes, but is not limited to, such places as movie theaters, ice arenas, convention centers, and hotels.

FIGURE 6—1. TELEPHONE INQUIRIES

MCIAA, FISCAL YEAR 1986

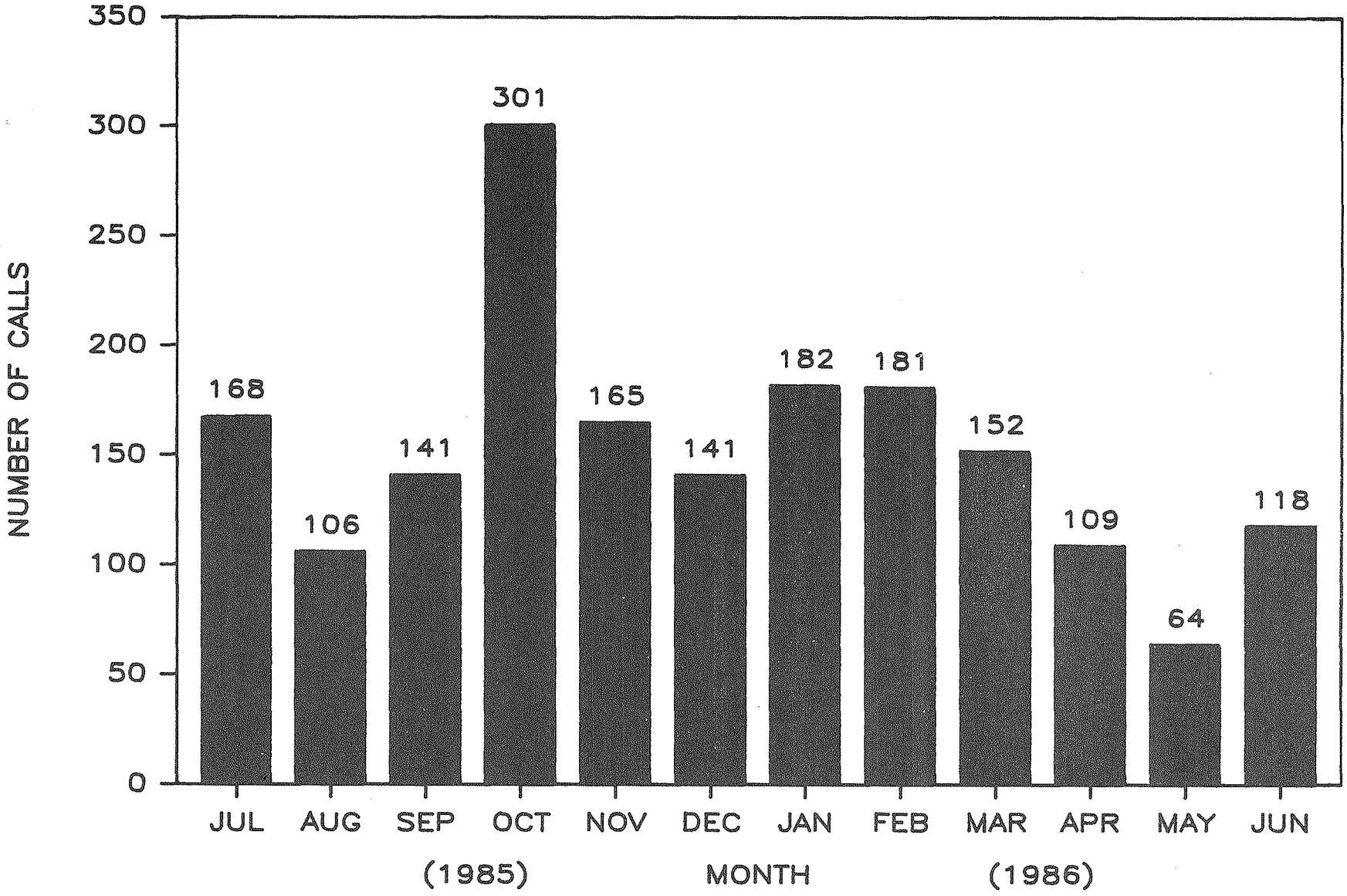
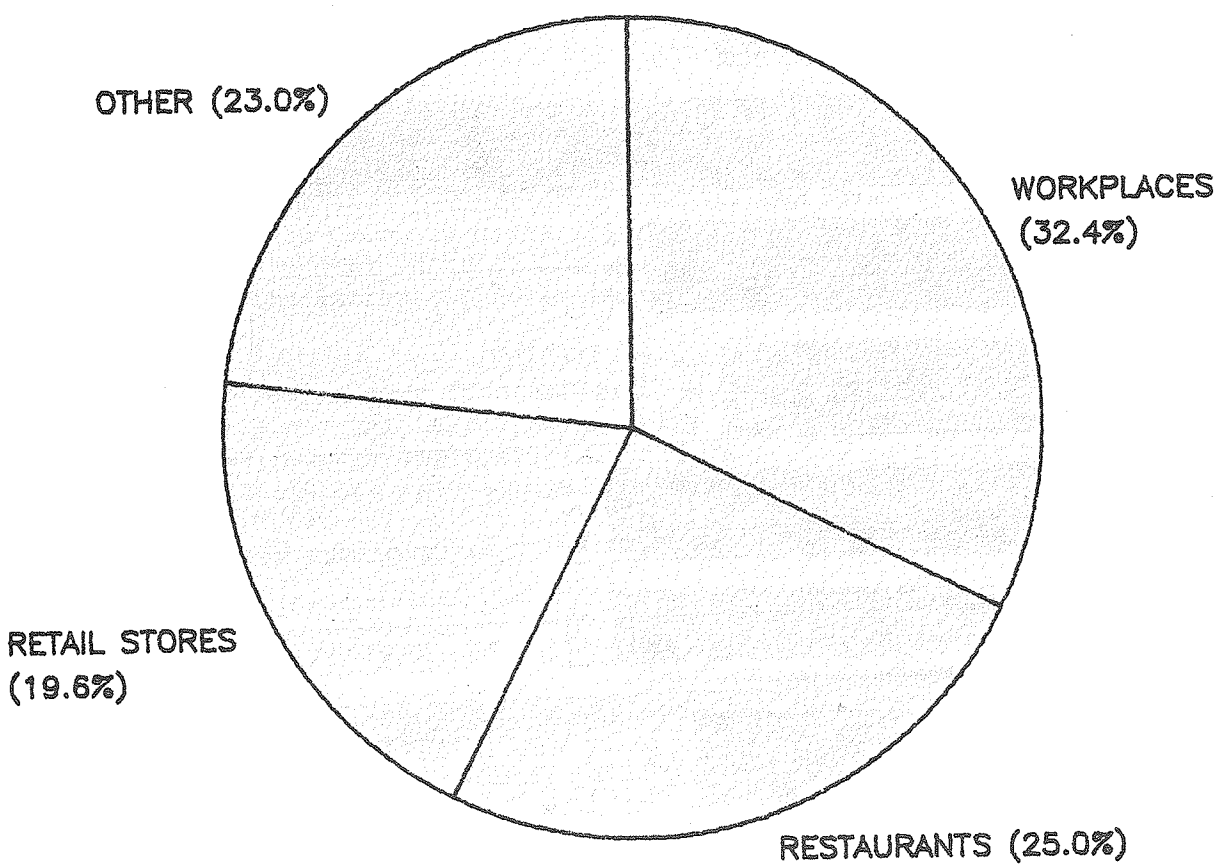


Figure 6-2

SMOKING COMPLAINTS BY TYPE OF FACILITY

FISCAL YEAR 1986



The usual complaint procedure involves taking information from a complainant over the telephone or via written correspondence. The MCIAA consultant then contacts the person in charge of the establishment in question to let them know that the Health Department has received a complaint which alleges noncompliance with the MCIAA. The consultant outlines what a particular establishment's responsibilities are under the MCIAA and its rules, and explains how compliance may be achieved. Normally, this results in a call or letter from the establishment, asking for more information or for a site visit.

Restaurant complaints related to the MCIAA are handled by local or state sanitarians who license and inspect these establishments; however, it is the responsibility of the MCIAA consultant to notify restaurants that are licensed directly by the state Health Department about any MCIAA complaints against them, and to provide information on corrective measures.

Training of Local Health Staff

Because local sanitarians and other health agency staff members are often asked about the MCIAA and about developing smoking policies, the MCIAA consultant has also offered information and training to this group. In May of 1986, for example, a half-day training session offered at the Health Department was attended by approximately 40 representatives from local health agencies across the state. The session covered rules of the MCIAA, enforcement issues, and how to assist businesses in developing smoking policies and in choosing appropriate smoking cessation programs for their employees.

Cooperative Work With ANSR

The MCIAA consultant works cooperatively with several organizations concerned with smoking issues and nonsmokers' rights to assure consistent and uniform interpretation of the MCIAA and its rules. Among these organizations, the Association for Nonsmokers (ANSR) is particularly important in that it focuses on assisting in the enforcement of the MCIAA.

ANSR dedicates all of its resources to the needs of nonsmokers. On behalf of complainants, ANSR attempts to resolve complaints of violations of the MCIAA--particularly in workplaces--by working with employers to achieve compliance. If ANSR is unable to resolve a complaint, they forward it to the Health Department which is responsible for enforcing the law. Working together, the Health Department and ANSR are able to provide uniform interpretation of the MCIAA and its rules.

Informational Materials on the MCIAA

Businesses find written materials to be of great value when developing and implementing new smoking policies for their companies. To meet this need, the Health Department distributes a variety of materials including copies of the MCIAA and its rules, examples of employee surveys and of smoking

policies, and order forms for "no smoking" signs.

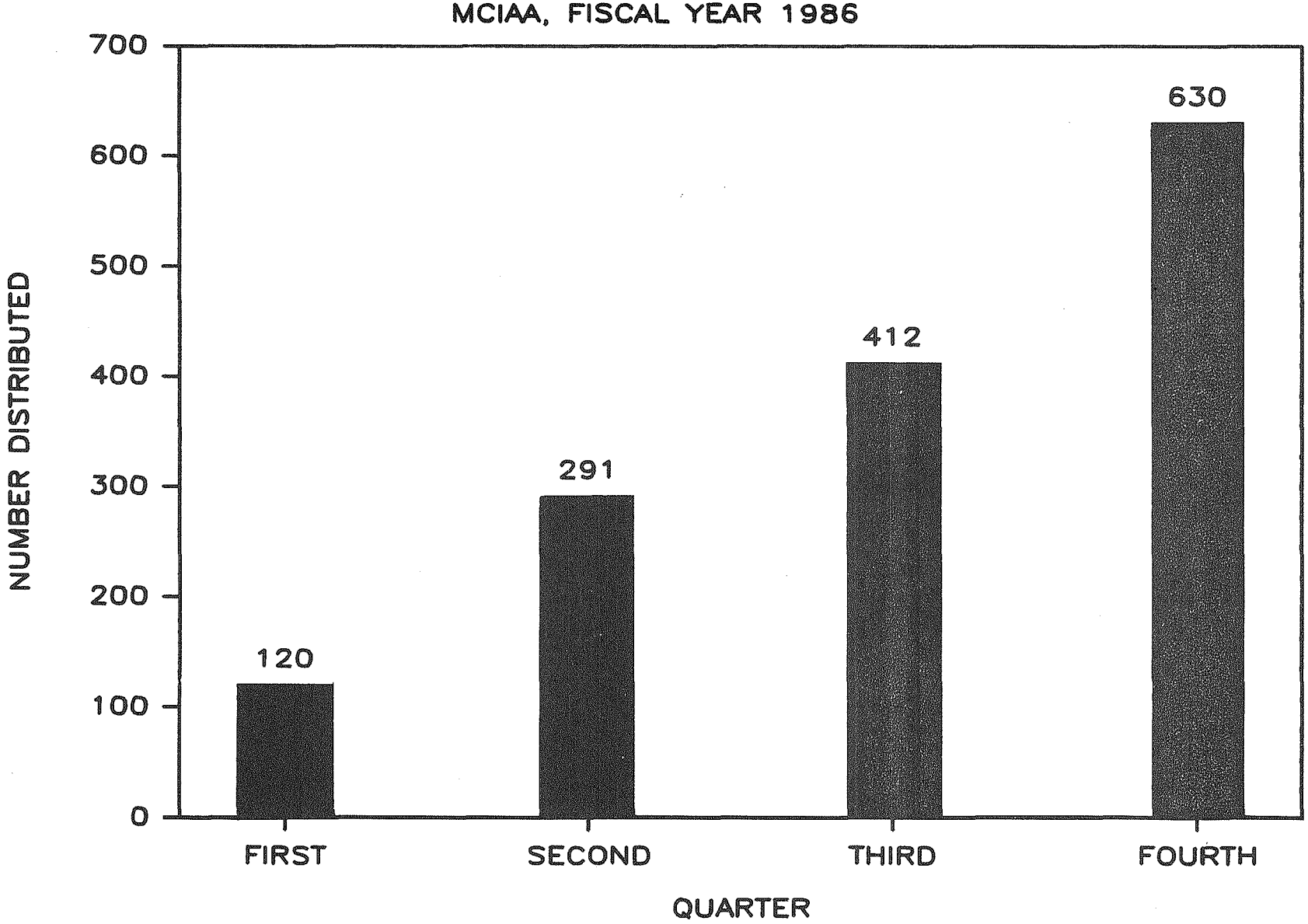
During this past year, the MCIAA consultant worked with the American Lung Association of Hennepin County to develop an informational piece on the MCIAA which the Association's national office is distributing in its legislative packet. This packet is intended for use by governments and individuals interested in developing smoking legislation.

The Health Department has also developed a fact sheet on applying the MCIAA to schools and is in the process of developing other related materials.

The MCIAA consultant and staff of the MDH Center for Nonsmoking and Health have worked cooperatively with Healthways, Inc., a private agency that focuses on smoking issues. Cooperative projects have included development of a manual and a videotape on how to develop effective worksite smoking policies.

Figure 6-3 shows the number of print materials the MCIAA consultant distributed during each quarter of FY 1986. As the graph illustrates, the number of requests for MCIAA materials has increased each quarter.

FIGURE 6–3. REQUESTS FOR MATERIALS



Technical Consultation and Assistance

Staff members at the state Health Department offer technical consulation to a variety of groups and individuals interested in tobacco-use issues, including worksites, health professionals, educators, legislators, and community groups. Due to its reputation as a leader in this area, staff are often asked to make presentations on various topics. (See Presentations section of this report.)

The MDH Center for Nonsmoking and Health maintains a large database on tobacco-use issues ranging from research on health effects and on smoking cessation to information on the tobacco industry and on advertising approaches. Copies of articles or reports on the most frequently requested topics are readily available for distribution on request. These topics include:

- the economic impact of cigarette smoking
- the health effects of smoking
- Minnesota's 1985 tobacco-use prevention legislation
- the Minnesota Clean Indoor Air Act
- worksite smoking policies
- smoking cessation
- smokeless tobacco

The Center for Nonsmoking and Health also distributes films, videotapes, and pamphlets related to tobacco use. Since 1984, CNSH has distributed 3,000 copies of The Minnesota Plan for Nonsmoking and Health.

Requests for assistance and consultation are often handled over the phone. Areas of greatest concentration include consultations on community nonsmoking grants (problem solving, research design, data collection questions), economic information (SAMMEC software applications), adolescent survey (survey results), and health research (e.g., on passive smoking, health effects on women), and worksite smoking policies (MCIAA rules, legal and procedural issues).

Health Department staff gained first-hand experience in developing a comprehensive worksite smoking policy in 1984 when a committee of employees began to develop recommendations for a new nonsmoking/smoking policy at the Health Department. The new policy was adopted in July of 1985, and provides for progressive expansion of nonsmoking areas in the Health Department over a two-year period. The new policy and procedure offer other health organizations and governmental units a model for similar action.

Some notable examples of Health Department consultations over the past year and a half include:

- Acting as a consultant to the New York City Health Department and, using the SAMMEC software, calculating the costs of smoking to New Yorkers. This cost data was included in a report to the mayor in May of 1986.

- Consulting (sometimes quite extensively) with other departments of state government in Minnesota on developing smoking policies. These include the departments of Administration, Corrections, Transportation, Labor and Industry, Education, Natural Resources, and the State Board of Vocational Technical Education.

- Consulting with other businesses and governmental units on worksite smoking policy, including the Hennepin County Personnel Office and Honeywell.

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Software for Determining Costs of Smoking

Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)

In keeping with its role as a national leader in the promotion of nonsmoking, the Health Department has taken the lead in developing software to calculate the economic impact of smoking. Since 1984, staff from the MDH Center for Nonsmoking and Health have been developing a software package entitled "Smoking-Attributable Mortality, Morbidity, and Economic Costs" (SAMMEC). An early version of this software was used to calculate the disease impact of cigarette smoking for the state of Minnesota. These data were useful in planning the Minnesota Nonsmoking Initiative; both data and methods of analysis were published in The Minnesota Plan for Nonsmoking and Health.

Data generated with SAMMEC software has many applications. First, it can be used to calculate disease impact attributable to cigarette smoking in terms of both human and economic losses. Second, this kind of data provides perspective on the magnitude of the smoking problem for comparison with other health problems when planning health policy and disease control programs. Third, using a standard method when evaluating disease impact data from a number of states will provide a more accurate basis for comparison. Fourth, data from several states could be used in correlational studies of tobacco consumption patterns, smoking prevalence, and smoking-attributable disease outcomes. Such data would serve as a resource for state legislation and health policy planning. Fifth, smoking-related costs can also be used to develop economic recommendations for state and national smoking control plans, since many of the control measures deal with economic issues such as excise taxes, funding for nonsmoking programs, worksite smoking policies, economic incentives for nonsmoking, and disincentives for smoking. Sixth, the methodology can be adapted for use in smaller geographic areas and with smaller populations, or for use in other provinces or countries. Future uses include adaption of the methodology to other modifiable risk factors for disease, such as elevated blood pressure, elevated serum cholesterol, or alcohol and drug abuse.

Since the early version of this software was developed, both software and methods of analysis have been revised and refined. Consequently, SAMMEC software uses the most advanced methods from the fields of epidemiology and health economics to estimate smoking-attributable mortality, years of potential life lost, direct health care costs, and lost income resulting from premature disability or death. The software uses a spreadsheet format, and is designed for use with a personal computer, making it practical and accessible to state and regional health departments.

A series of Surgeon General's reports has implicated cigarette smoking as a major cause of death for Americans. Many smoking-related illnesses result in premature death. In 1984, about 4,500 Minnesotans died of smoking-related diseases. This figure represents smoking-attributable deaths from heart disease (1,900 deaths), cancer (1,600 deaths), and chronic respiratory disease (1,000 deaths). Years of potential life lost in

Minnesota as a result of smoking-related illnesses has also been calculated with SAMMEC. This estimate exceeds 47,000 person-years annually. (See Figure 7-1 for SAMMEC-generated data on years of potential life lost by cause of death for Minnesota residents.)

Health economists have developed and refined cost of illness calculations over the last 20 years, and the rationale and methods for these calculations have been applied to diseases attributable to smoking. These methods are the basis of SAMMEC, and allow calculation of costs for medical care and lost wages that can be attributed to smoking. Direct medical care costs for treatment of smoking-related illnesses in Minnesota exceeded $250,000,000 in 1984. Smoking-attributable indirect costs, which represent the present value of lost future earnings for those who die prematurely or become disabled, were also estimated at about $373,000,000 in 1984. (Table 7-1)

Table 7-1 Costs Resulting from Smoking-Attributable-Diseases: Minnesota, 1984

Direct Medical Costs

Male:	$149,000,000
Female:	$115,000,000
Total:	$264,000,000

Indirect Costs Resulting from Lost Income

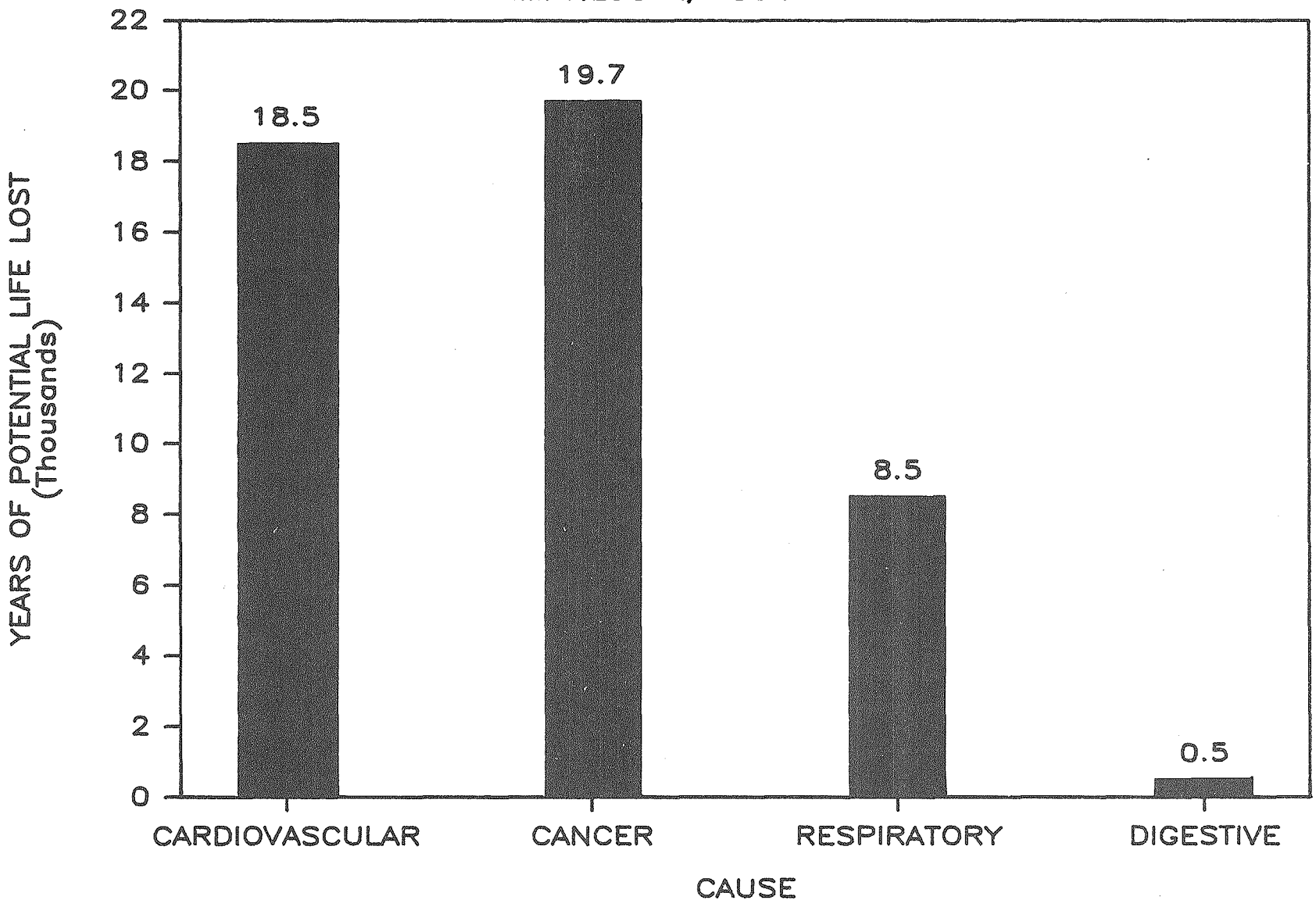
Male:	$281,000,000
Female	$ 92,000,000
Total:	$373,000,000

Total Costs, Direct + Indirect: $637,000,000

The MDH Center for Nonsmoking and Health has received more than 25 requests for SAMMEC software from 14 states and from Ontario, British Columbia, Puerto Rico, and Northern Ireland. Requests have also come from national health agencies such as the Centers for Disease Control, the National Cancer Institute, the National Center for Health Statistics, and the National Heart, Lung and Blood Institute. Health officials from Washington, Florida, and Kentucky have used the early version of SAMMEC to calculate smoking-related costs for their states, while health officials from North Dakota, Wyoming, Texas, Colorado, and New York City have used revised versions of SAMMEC to derive similar cost calculations. In Minnesota, an early version of SAMMEC was used to calculate smoking-related

FIGURE 7—1.
SMOKING—RELATED YEARS OF LIFE LOST

MINNESOTA, 1984



costs for 1981, and the revised version was used to compute Minnesota costs for 1984. The revised version of SAMMEC was used to compute cost data for a two-county area as a part of an MDH-funded nonsmoking grant project. The software will also be used to compute statewide costs for more recent years as mortality data become available.

Coordination With Other Organizations

From the beginning the Minnesota Nonsmoking Initiative has been seen as a multifaceted approach to a complex problem. The Health Department staff has found it particularly important to coordinate efforts with a variety of other groups that are concerned with tobacco-use issues in the Twin Cities, the state, and nationally. In so doing, the Health Department and the state of Minnesota have often taken a leadership role in promoting nonsmoking. Organizations the Health Department works with include:

American Cancer Society
American Heart Association
American Lung Association
American Public Health Association
A Smoke-Free Generation
Association for Nonsmokers, MN
Centers for Disease Control
Healthways, Inc.
Minnesota Coalition for a Smoke-Free 2000
Minnesota Department of Education
National Association for Public Health Policy
National Cancer Institute
University of Minnesota School of Public Health and
  Division of Epidemiology
Wisconsin Department of Health and Human Serices
Wisconsin Department of Public Instruction

Participation on Planning Committees and in Sponsoring Conferences

Staff at the state Health Department have served on the planning and administrative committees for numerous organizations, conferences, events, and workshops and the Health Department has sponsored or co-sponsored several conferences on tobacco-related issues.

Committees

Up In Smoke Conferences--1983-86
Tobacco, Marijuana, or Health Conference--1986
Community Health Conferences, 1985 and 1986
Minnesota D-Day (yearly since 1977)
A Smoke-Free Generation Board
Association for Nonsmokers Board
Smoke-Free 2,000 Coalition:
- Board Vice President, 1985-86
- Executive Committee, 1986
- Bylaws Committee Chair, 1986
- Nominating Committee, 1986
- Communications, 1985-86
- School Education, 1985-86
- Legislation and Public Policy, 1985-86
- Worksite, 1985-86
- Project Identification, 1985-86
- Smoke-Free Hospitals, 1986

Conferences Co-Sponsored

Up In Smoke, 1983, 1984, 1985, 1986
MN Public Health Association Annual Meeting, 1985

Tobacco-Related Presentations Given by Health Department Staff

Date	Audience	Topic
6/85	Conference of State and Territorial Epidemiologists, Burlington, Vermont	1985 legislation
6/85	School Health Conference, Brainerd	School-based portion of MN Nonsmoking Initiative
8/2/85	MN Department of Administration, St. Paul	Nonsmoking policy
8/5/85	MDH District Representatives, Minneapolis	MN Nonsmoking Initiative
8/9/85	Community Health Services Adminstrators, Minneapolis	MN Nonsmoking Initiative
9/20/85	Minnesota Society for Respiratory Care, Duluth	The MN Plan
11/12/85	Up In Smoke Conference, Bloomington	MCIAA MN legislation Costs of smoking
11/21/85	MN Coalition for a Smoke-Free 2000, Minneapolis	MN Nonsmoking Initiative
12/6/85	National Cancer Institute, Washington, D.C.	MN Nonsmoking Initiative
12/12/85	Denver Department of Health Technical Advisory Committee, Denver, Colorado	MN Nonsmoking Initiative
1/3/86	Association for Non-Smokers, Board, Minneapolis	MN Nonsmoking Initiative
1/10/86	MN Coalition for a Smoke-Free 2000, Board, Minneapolis	MN Nonsmoking Initiative

2/3/86	School Health Education Conference, Minneapolis	Smokeless tobacco School programs MN Nonsmoking Initiative
2/10/86	American Lung Association of Hennepin County, Minneapolis	MN Nonsmoking Initiative
3/86	First Conference on Smoking or Health, Atlanta, Georgia	1985 legislation
4/8/86	International Personnel Management Association, Minneapolis	Policy development
4/24/86	MN Public Health Association Annual Meeting, St. Paul	Worksite health promotion
4/24/86	Adolescent Survey-Interviewers, Minneapolis	Survey techniques
5/1/86	MN Sanitarians, Minneapolis	Community organizing MCIAA
5/7/86	Special Nonsmoking Project Grant Personnel, Minneapolis	Evaluation
5/13/86	MN Department of Administration, St. Paul	Nonsmoking policy
5/27/86	Community Health Services Advisory Committee, Minneapolis	MN Nonsmoking Initiative
5/30/86	Minneapolis Civil Service	Nonsmoking policy
6/5/86	Wisconsin Departments of Public Instruction and of Health and Social Services, Madison, Wisconsin	MN Nonsmoking Initiative
6/10/86	Corporate Smoking Policies Conference, Lincoln, Nebraska	Economic costs of smoking in the workplace
6/12/86	House Energy and Commerce Committee, Washington, D.C.	Testimony on MCIAA

6/17/86	Minnesota Association of Commerce and Industry, Minneapolis	MCIAA rule change
6/27/86	National Cancer Institute, Washington, D.C.	MDH media campaign
7/17/86	Hennepin County Smoking Policy Task Force, Minneapolis	Health effects of smoking
7/18/86	Community Health Services Advisory Committee, Minneapolis	MDH-funded nonsmoking grants
7/22/86	Clay and Wilkin Counties, Moorhead	Nonsmoking policy
9/86	First Annual Chronic Disease Prevention Conference, Atlanta, Georgia	1985 legislation
9/12/86	Community Health Conference, Alexandria	Evaluation of community grants MN Nonsmoking Initiative
10/86	American Public Health Association Annual Meeting, Las Vegas, Nevada	MN Nonsmoking Initiative Economic costs of smoking
10/17/86	Tobacco-Free Young America, National Workshop, Minneapolis	MDH media campaign
10/21/86	Tobacco-Use Prevention Workshop, Rochester	Results from adolescent survey
10/28/86	Tobacco-Use Prevention Workshop, Minneapolis	Results from adolescent survey
10/24/86	MN Department of Corrections Health Symposium, St. Paul	MN Nonsmoking Initiative
11/12/86	Up In Smoke Conference, Minneapolis	Nonsmoking policy MCIAA

11/15/86	Citizens panel on transplants and public policy assembled by the Center for New Democratic Processes, Minneapolis	Allocation of health resources
12/10/86	Smoking and Pregnancy Conference, Bloomington	Women and smoking

Budget Allocations for the 1985-87 Bienniem

The 1985 legislation provided for an increase of 5 cents in the state cigarette excise tax, beginning on July 1, 1985, making Minnesota's tax rate 23 cents per pack. One cent of the tax increase was earmarked for a public health fund, one-quarter of which was to be set aside for tobacco-use prevention as follows:

DEPARTMENT OF HEALTH

Total allocation for biennium: $2,657,900

Public communications and education--$1,500,000
Statewide and community nonsmoking grants--$500,000
Evaluation--$352,900
Worksite MCIAA assistance--$65,000
Administration and technical assistance--$240,000

DEPARTMENT OF EDUCATION

Total allocation for biennium: $1,324,000

To provide technical assistance and financial support to school boards for tobacco-use prevention programs including training of teachers and staff, curriculum materials, community and parent awareness programs, and evaluation of curriculum programs.