

11. The Promise of ASSIST

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Chapter 11: The Promise of ASSIST

The American Stop Smoking Intervention Study (ASSIST) made significant advances in disseminating evidence-based interventions—building an effective infrastructure by mobilizing communities; establishing coalitions; and providing materials, training, and technical support for using media advocacy and policy development. These interventions were not necessarily designed and tested by ASSIST. Rather, they were incorporated into ASSIST because they had been proven effective by earlier research trials. ASSIST demonstrated on a massive scale how to effectively translate and disseminate them.

For some communities, the funding and technical assistance provided by ASSIST made it possible for people and organizations to mobilize around media and policy advocacy. For less experienced but nonetheless receptive communities, ASSIST provided the conceptual framework on which to build a foundation for tobacco use prevention and control efforts. For non-ASSIST states, ASSIST was an example—a viable, effective, adaptable, demonstration model—that gave insight and inspiration about what communities can accomplish. In brief, ASSIST’s legacy to the field of public health is (1) the successful demonstration of the applicability of an ecological model to public health initiatives and (2) the development of effective methods for building state and community capacity for implementing public health interventions.

The core elements of a program endure because they have been proven to be effective. The core elements of ASSIST provide a process for shifting from a major focus on services for individuals to systems-level interventions for large population segments. With this systems strategy approach, ASSIST established enduring infrastructures in the ASSIST states that facilitate their continuing public health efforts over the long term. That infrastructure includes a network of public health professionals, local volunteers, and advocates trained by ASSIST in policy and media advocacy. ASSIST also demonstrated and brought to the forefront that adequate funding and high-quality training are essential for effective tobacco prevention and control programs and for developing and maintaining a competent workforce.

This chapter describes how the effective application of the ASSIST core elements contributed to a fundamental shift in the approach to tobacco use prevention and control and other behavioral health initiatives. ASSIST’s reliance on ecological theory as a basis for its conceptual framework has provided a leading model for other systems-level public health programs. The complexity of evaluating ASSIST led to the development of new models that could be used for future evaluations of public health efforts and other community-based interventions. The complexity of the ASSIST evaluation highlighted the importance of a continued commitment to rigorous evaluation efforts and broadly disseminating results.*

*In order to develop this chapter, input regarding ASSIST’s legacy was solicited from a wide array of public health experts who had integral roles throughout the project. Selected quotations from their input are included in this chapter. See appendix 11.A for a list of these tobacco control professionals.

Beyond ASSIST

The underlying philosophy and core elements of a project that continue to be incorporated into other initiatives constitute its legacy. Those conceptual and practical elements become apparent as they influence future programs and are carried forward in dynamic systems. ASSIST incorporated many of the key ingredients for successful public health efforts—highly credible scientific evidence, passionate advocates, media campaigns, and advocacy in favor of laws and regulations.¹ The conceptual underpinnings of ASSIST are based on almost half a century of public health efforts against tobacco use.² ASSIST borrowed from those legacies and built on its predecessors' successes. Now, 5 years after ASSIST has ended, what is its legacy?

In an unprecedented effort to apply the knowledge gained during the preceding decades, the National Cancer Institute (NCI), in partnership with the American Cancer Society (ACS) and 17 state health departments, established what was then the largest, most comprehensive public health tobacco control project ever initiated in the United States. Based on scientific evidence that emphasized the importance of community mobilization, community ownership, and the creation of structures in the community to ensure that successful programs are maintained, ASSIST built the most visible and promising aspect of its legacy—an evolving infrastructure for implementing comprehensive tobacco prevention and control initiatives.

This infrastructure provided the underpinning necessary for conducting media

I think that ASSIST provided the blueprint to show all of us that it is possible to get major policy changes in states and communities despite the persistent opposition of the tobacco companies.

—*Erwin Bettinghaus, former ASSIST Senior Advisor and current Senior Scientist and Associate Vice President at the Cooper Institute*

advocacy and policy development—a community-based participatory approach to decision making and program implementation.

Another promising legacy of ASSIST is its focus on the use of media advocacy and policy development to shift the emphasis of public health interventions away from just individuals and incorporating systems-level interventions that change broad social, cultural, and physical environmental conditions of organizations, communities, and society at large. This change in emphasis was referred to as a “paradigm shift” among many in the tobacco control community because of its broad impact.

The core elements of the ASSIST model (community mobilization and organization, media advocacy, and policy development) guided the interventions, but other factors were also essential for success. Along with adequate program funding, public health workers needed new skills to effectively deliver these types of interventions. ASSIST provided an exceptional array of tools, materials, training, technical assistance, and other support to staff and volunteers and thereby increased recognition of the need for this level of technical support.

These multiple programmatic aspects have been incorporated into state-based tobacco prevention and control programs as well as into other health promotion initiatives. This chapter examines the aspects of ASSIST's legacy that derive from (1) its evolving infrastructure and (2) the effective applications of its core elements.

A Visible Promise: An Evolving Infrastructure

The quotation from Susan Stuntz (see sidebar) at the June 11, 1992, Tobacco Institute Executive Committee meeting illustrates the tobacco industry's recognition of the significant potential for the ASSIST infrastructure to thwart the tobacco industry's interests.

Tobacco Industry Perspective

"In California, our biggest challenge has not been the anti-smoking advertising created with cigarette excise tax dollars.

"Rather, it has been the creation of an anti-smoking infrastructure . . . right down to the local level. An infrastructure that for the first time has the resources to tap in to the anti-smoking network at the national level. . . .

"The ASSIST program has the potential to replicate our California experience in 17 other states."

Source: Stuntz, S. 1992. Comments on joint NCI/ACS ASSIST program. Tobacco Institute. June 11, 1992. <http://legacy.library.ucsf.edu/tid/rjk86d00>. Bates nos. TI13851813–1818, TI14311813–1818, and TIMN404296–4301. Accessed December 2, 2004.

ASSIST left a living legacy that is evident from the current actions of many (if not all) of today's tobacco control organizations.

—William R. Lynn, former ASSIST
NCI Project Officer

NCI, ACS, and state health departments all played key roles in modeling what a true public-private partnership could accomplish, and the stature of these organizations brought legitimacy and credibility to ASSIST. As they worked together to build a solid infrastructure, there were conflicts and issues that had to be resolved. Although ACS was the designated partner, discussions and negotiations occurred to ensure that other organizations critical to the partnership such as the American Lung Association and the American Heart Association were involved in decision making and implementation of interventions. With

ASSIST taught health departments how to collaborate with community partners and the value and necessity of these partnerships in planning and implementing a comprehensive and integrated approach to tobacco control. It taught ACS and other community organizations how to work with the government to get the job done. ASSIST also caused local communities to come together as state and local coalitions.

—David Harrelson, former Tobacco
Control Program Manager, ACS,
and current Tobacco Prevention
and Control Specialist, Washington
State Department of Health



Helene G. Brown, former ASSIST Senior Advisor from the American Cancer Society, addresses the Fifth Annual National Conference on Tobacco and Health in Kissimmee, Florida, August 1999.

continued collaboration and participatory management, all partners came to a deeper appreciation of the value that local communities bring to tobacco prevention and control efforts. State health departments became more skilled at working collaboratively with community partners and came to appreciate the critical value of those partnerships in planning and implementing a comprehensive, integrated approach to tobacco prevention and control. ACS and other community organizations gained understanding in ways to work with and complement the efforts of governmental agencies to accomplish their common goals.

The momentum of the tobacco prevention and control movement increased

The model of collaboration for coordinated action among the public, for-profit, and not-for-profit sectors was proven by the ASSIST project to be workable. The partners accepted and leveraged funding, sought and received in-kind contributions, and used one another's assets to make the project a success.

—Helene G. Brown, former ASSIST Senior Advisor from ACS and current Associate Director, Community Applications of Research, UCLA Jonsson Comprehensive Cancer Center

as ASSIST grew—strengthening existing partnerships and engaging new partners. The strength of the infrastructure flowed from the network of tobacco prevention and control public health specialists and community advocates trained and tested in the skills essential to implementing a socioecological approach to public health problems. A communications network and extensive training and technical assistance opportunities were critical components developed during ASSIST to support the effective functioning of the infrastructure.

One of the most significant contributions that ASSIST made to public health was the empowerment and mobilization of local volunteers. Along with professional staff, these volunteers were trained at ASSIST conferences known as information exchanges, especially in media and policy advocacy skills. In turn, many of the individuals trained at those meetings helped educate and mobilize state and local networks of people to influence the adoption of local poli-

In 1989, there was no state coalition [in West Virginia] and not even one full-time state employee devoted to tobacco control. ASSIST created a capacity of knowledge and infrastructure at the state and local level and laid the foundation for the enormous progress that has occurred since its inception. This is most evident in terms of clean indoor air. In 1989, people could smoke everywhere. Today, 91% of the public lives in counties with smoking regulations.

—Robert H. Anderson, Deputy Director,
Prevention Research Center,
West Virginia University

cies. (See chapter 4.) Without the contributions of local volunteers and the grassroots networks established in local communities, changes in policies and social norms may not have materialized.

With the development of effective infrastructures in ASSIST states came the recognition that every state needed such an infrastructure. As the scheduled end of the 8-year ASSIST demonstration project grew near, this recognition strengthened the appeals of ASSIST leaders in advocating for the establishment and funding of a national tobacco prevention and control program. In part because of the effectiveness of ASSIST state and local infrastructures, especially the work of coalitions, in stimulating policy changes, the 1998 Institute of Medicine (IOM) report *Taking Action to Reduce Tobacco Use* recommended continued funding of federal, state, and local initiatives, as well as the initiatives of nongovernmental organizations, to hold policymakers accountable because

“The coalition model is valuable in that it will enable the demonstration project to: deliver interventions to the community that have been tested as effective in reducing tobacco use; involve multiple organizations and institutions capable of addressing tobacco prevention and control in a coordinated fashion; encourage smoke-free environments; and effect public policies regarding tobacco use. Furthermore, it is anticipated that by carrying out this effort through channels that are indigenous to our society, coalition members will develop a natural sense of ownership of the project which will strengthen and maintain their efforts.”

Source: National Cancer Institute. 1988.
Concept: *American Stop Smoking
Intervention Study (ASSIST)*. Bethesda, MD:
National Cancer Institute (p. 3).

state and local efforts will “likely remain the bulwark of tobacco control.”^{3(p10)}

This infrastructure is now being threatened as states’ antismoking program budgets are being reduced and landmark programs such as those in Minnesota, Massachusetts, and Florida are being dismantled by budget cuts. In Florida, those cuts constituted 99% of its antitobacco budget.¹ The ASSIST infrastructure that remains has left an important legacy of statewide networks of citizens, government agencies, private organizations, nonprofit agencies, civic leaders, and elected officials committed to reducing tobacco use. Public health specialists were trained with the knowledge and skills needed to mobilize communities, effectively obtain media coverage of their issue, and focus the public’s attention on the need for policy change. Many of these trained individu-

als continue to work in the field of public health. As they left ASSIST for other opportunities, including staffing the new National Tobacco Control Program at the Centers for Disease Control and Prevention (CDC), they took with them the ASSIST concept, experiences, and skills, and had become familiar with its tools. This capacity was essential to demonstrating the applicability of the ecological model to tobacco use prevention and control, as described in the next section.

The Promise of ASSIST: Shaping the Future

Ecological Theory and the ASSIST Conceptual Framework

The ecological model considers a system and all its components—from social factors (environmental, economic, political), to interrelationships (coalitions, agencies), to individual sectors (education, religion), to individuals. The use of ecological models to depict the connections and interrelationships between people and their environments—social and physical—and to guide interventions is not new. A 2003 IOM report *Who Will Keep The Public Healthy?* cites the lessons from community intervention trials that were conducted in the late 1970s and early 1980s that reinforced “the emergence of social ecology principles for informing public health interventions.”^{4(p86)} Ecological theory provided the basis for ASSIST’s conceptual framework, and variations on the cube used by ASSIST have been adapted

“Ecological models of health behavior[:] Models proposing that behaviors are influenced by intrapersonal, sociocultural, policy, and physical-environmental factors; these variables are likely to interact, and multiple levels of environmental variables are described that are relevant for understanding and changing health behaviors.”

Source: Glanz, K., B. K. Rimer, and F. M. Lewis, eds. 2002. *Health behavior and health education: Theory, research, and practice*. 3rd ed. San Francisco: Jossey-Bass (p. 463).

for use in the application of ecological theory to the prevention of other chronic diseases, particularly cardiovascular disease (see figure 11.1).

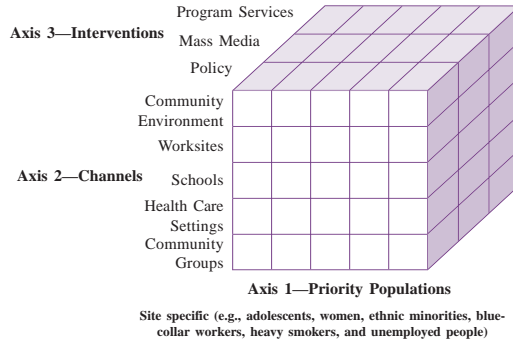
The magnitude of ASSIST and its success brought high visibility to the ecological approach, the ASSIST cube, and other systems-level approaches to preventing chronic diseases. Several IOM reports reaffirm the utility of the ecological approach in guiding public health interventions.^{5,6,7} A 2000 IOM report, *Promoting Health: Intervention Strategies from Social and Behavioral Research*, identifies an “emerging consensus that research and intervention efforts should be based on an ecological model,”^{5(p2)} and a subsequent 2003 IOM report stresses that the education of public health practitioners should be grounded in ecological theory.⁴

Interventions for Systems-Level Change

ASSIST was at the vanguard in shifting the focus of health behavior change interventions from primarily program

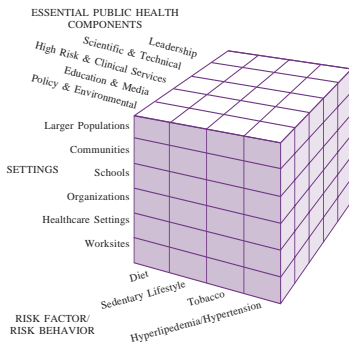
Figure 11.1. The ASSIST Cube and Subsequent Adaptations to Cardiovascular Disease

The ASSIST Conceptual Framework



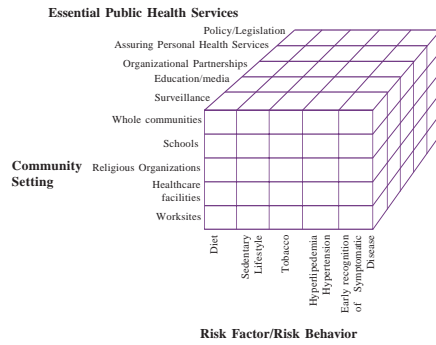
Source: ASSIST Coordinating Center. 1991. ASSIST program guidelines for tobacco-free communities. Internal document, ASSIST Coordinating Center, Rockville, MD.

A Conceptual Framework for Promoting Heart Health Cube from Singapore Declaration



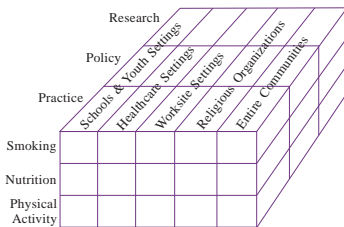
Source: *The Singapore Declaration: Forging the will for heart health in the next millennium*. Declaration of the Advisory Board of the Third International Heart Health Conference. Singapore: Third International Heart Health Conference, September 2, 1998.

Essential Public Health Services



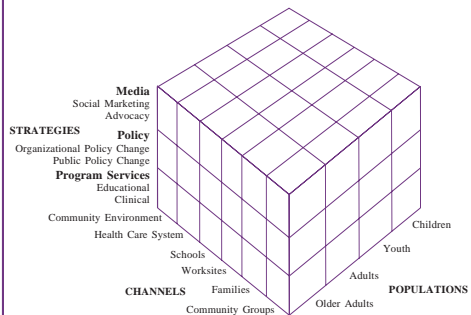
Source: Pearson, T. A., et al. 2003. American Heart Association guide for improving cardiovascular health at the community level. *Circulation* 107 (4): 647.

A Conceptual Framework for Evidence-Based Public Health Practice in CVD Prevention



Source: Stone, E. J., and T. A. Pearson. 1997. Community trials for cardiopulmonary health: Directions for public health practice, policy, and research. Executive summary. *Annals of Epidemiology* 7 (S7): S2.

NC Cardiovascular Health Strategies



Source: North Carolina Plan to Prevent Heart Disease & Stroke 1999–2003. *Start with your heart*. 1999. Raleigh: North Carolina Heart Disease and Stroke Prevention Task Force.

Excerpt from *Healthy People 2010*

“Over the years, it has become clear that individual health is closely linked to community health—the health of the community and environment in which individuals live, work, and play. Likewise, community health is profoundly affected by the collective behaviors, attitudes, and beliefs of everyone who lives in the community.”

Source: U.S. Department of Health and Human Services. 2000. *Healthy People 2010*. Washington, DC: U.S. Department of Health and Human Services (p. 3).

services for individuals to a systems-level, community-based public health approach. It demonstrated on a large scale that the prevention of chronic diseases can be effected by mobilizing social, family, and community networks to advocate for the enactment of policies that will influence social norms and behaviors.

Before ASSIST, a policy and environmental approach to public health problems was used for preventing and controlling infectious diseases but not chronic diseases. Founded by an act that passed in 1798 during an era when infectious diseases such as yellow fever and influenza were often epidemic, the U.S. Public Health Service has a long history of population-wide approaches to preventing the spread of infectious diseases.^{8,9,10} Policy interventions, such as requirements that children be immunized before attending school, inspection of water supplies, and quarantines to prevent the spread of infectious diseases, remain standard practice.

The ASSIST project’s focus on policy- and population-based approaches has contributed immensely to a paradigm shift in health promotion. Gone are the days of T-shirt and button interventions or exclusive focus on individual smoking cessation. Health promotion has matured to recognize that scientifically proven, comprehensive, population-based approaches have the greatest potential for community health improvement.

—Walter ‘Snip’ Young, former Colorado ASSIST Project Director and current Scientist at the Cooper Institute

As chronic disease surpassed infectious disease as the leading cause of death, the public health field moved away from promoting and protecting the public’s health by means of policy or population-based interventions toward an individual approach. Public health initiatives to prevent chronic diseases, such as heart disease and cancer, have traditionally reflected an individual approach. Individuals with high cholesterol levels were identified through screening and referred for counseling, and early tobacco prevention and control efforts focused on convincing individuals to stop smoking. While recognizing that changing health behavior is more complex than requiring immunizations, the ASSIST model called for an emphasis on policy interventions, thus contributing to a fundamental shift in the public health approach to preventing chronic diseases.

The move to incorporate policy- and environmental-level interventions in addition to working directly with individu-

als is now recognized as essential to preventing and reducing tobacco use. The following description of tobacco control initiatives existing in 1998 in a *Morbidity and Mortality Weekly Report* on state tobacco control laws illustrates this point:

Developing and implementing public health policies are a central component of tobacco-control efforts. Tobacco-control policies cover a range of topics, including minors' access to tobacco, retail tobacco licensing, smoke-free indoor air, advertising and promotion, excise taxes, warning labels, and product ingredient disclosure. Some tobacco-related policies are instituted primarily at the federal level; however, most tobacco-related policies are established at the state and local level.^{11(p22)}

This shift in emphasis from the individual to the community is embodied in the ASSIST model.

Media Advocacy

The use of media advocacy to bring about policy change within organizations, communities, and society epitomized the ASSIST approach. The concept of media advocacy, although not originated by ASSIST, is very closely associated with it. Prior to ASSIST, other public health programs, including NCI's Community Intervention Trial for Smoking Cessation (COMMIT) project, used a media advocacy approach. As is reflected in the quotation from Dr. Marc Manley, ASSIST advanced the use of media advocacy interventions for effective policy development. ASSIST brought high visibility to the effective use of media advocacy, thereby cata-

Media advocacy became a public health term.

—Marc W. Manley, former Chief, Tobacco Control Research Branch, NCI, and current Executive Director, Center for Tobacco Reduction and Health Improvement, Blue Cross and Blue Shield of Minnesota

lyzing the dissemination and increasing use of this intervention by public health programs.

One vital area of expertise developed during ASSIST was the media advocacy skills that were crucial for framing prevention of tobacco use as a major public health problem and for countering messages promoted by the tobacco industry. ASSIST capitalized on a strategy the tobacco industry had used to its advantage for years—the use of the media to influence behavior and to change social norms. ASSIST's cadre of professionals were effective at countering many tobacco industry efforts to convince the public that the scientific evidence on the health consequences of tobacco use is unsound, but the challenge persists. Some tobacco companies and their allies continue to dispute whether secondhand smoke causes harm and the magnitude of risk associated with new tobacco products;^{12(p1747)} yet, they appear to have known about these risks since at least 1982.^{13–17} Tobacco prevention and control advocates continue to depend on media advocacy efforts to shed light on the tobacco industry's invalid claims against the relevant science base. To maintain credibility, these media advocacy efforts must be based on sound science.

The strategic use of media to affect social norms and of policies to change cultural, economic, and environmental factors that influence health behaviors has become a vital component of comprehensive programs to change health-related behaviors. The use of media interventions is increasingly included in program standards, requests for proposals, and best practices documents in various public health contexts.^{2,18,19}

Policy

Intervening to change policies is typically a lengthy process that often begins with a gradual awakening to the awareness of a problem, progressing to analyzing and clarifying the problem, and then moving forward to community discussions of potential policy solutions that in time lead to building the social and political will needed for policy change. A hallmark of the ASSIST legacy was using policy as an intervention, ensuring that the policy was based on sound science.¹⁹ ASSIST increased the use of policy in chronic disease prevention and demonstrated how to effect policy change.²⁰ (See Monograph 17 on the ASSIST evaluation.)

While ASSIST did not accomplish all of its policy goals, it did provide needed momentum on a number of policy fronts, as evidenced by (1) tobacco prevention and control policies enacted during the project period that endure today in their original form, (2) policy interventions that were in process and have come to fruition since the end of ASSIST, and (3) similar policies that are being promoted in other programmatic efforts. Three policy interventions are

particularly noteworthy: (1) increasing the price of tobacco products through excise taxes, (2) blocking and reversing preemption laws supported and promoted by the tobacco industry,²¹ and (3) promoting state and local clean indoor air laws.

Excise Taxes. ASSIST contributed to the increased recognition given to excise taxes as a primary tool for discouraging tobacco consumption through price increases and to an evolving process that led to a more favorable environment for these tax increases. In several ASSIST states, excise tax increases on cigarettes have been enacted since 1999—for example, in New York, Washington State, Maine, Rhode Island, Wisconsin,²² and Virginia.²³ States continue to raise excise taxes in an effort to increase revenues as well as to provide a disincentive to use tobacco. Prior to the ASSIST implementation phase in 1993, the average state's cigarette excise tax was 29¢ per pack.²⁴ As of August 1, 2004, the average state's excise tax was 79.2¢ per pack and the average excise tax for the ASSIST states was 95.59¢ per pack.²⁵ Figure 11.2 presents a map with the 2004 cigarette excise tax indicated for each state.

Table 11.1, which contains a list of state excise taxes in 1998 and 2003, illustrates the change in excise taxes since ASSIST ended. Thirty-five states and the District of Columbia enacted state excise tax increases between 1998 and 2003, and 20 of those increases were in excess of 100%. It is noteworthy that several tobacco states—Kentucky, North Carolina, and South Carolina—have not increased their excise taxes in the last 5 years and that their existing taxes are single-digit.^{26,27(p9)} The lack of a tax

Figure 11.2. Map of State Cigarette Tax Rates—2004

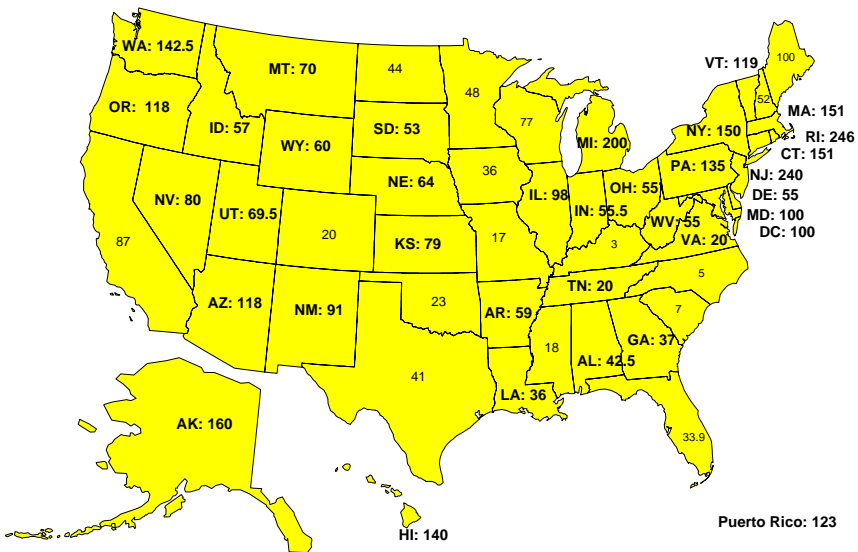


MAP OF STATE CIGARETTE TAX RATES

Average State Cigarette Tax: 79.2 cents per Pack

Average Cigarette Tax in Major Tobacco States: 15.3 cents per Pack

Average Cigarette Tax in Non-Tobacco States: 87.7 cents per Pack



Map shows state cigarette tax rates in effect now or scheduled to be implemented soon. States with increases implemented or passed since 1/1/2002 marked in bold. Oregon raised its tax by 60¢ per pack in 2002, but a previous temporary 10¢ add-on to the tax rate expired on 1/1/04. The major tobacco states with extensive tobacco farming and, often, cigarette manufacturing are NC, KY, VA, SC, TN, & GA. State averages do not include Puerto Rico (which has a population larger than those in 20 different states) or U.S. territories (such as Guam, which raised its tax from 7¢ to \$1.00 on 5/1/03). Including Puerto Rico raises the state average to 80.0 cents per pack and the non-tobacco state average to 88.5 cents. Federal cigarette tax is 39¢. Some local governments also tax cigarettes. For example, New York City increased its cigarette tax from 8¢ to \$1.50 per pack in 2002, Cook County, IL, which includes Chicago, increased its tax from 18¢ to \$1.00 per pack, effective 4/1/04, and more than 35 localities in VA have taxes ranging from two to 50 cents per pack. The U.S. Centers for Disease Control & Prevention estimates that smoking-caused health costs total \$7.18 per pack sold.

National Center for Tobacco-Free Kids, August 1, 2004 / Katie McMahon

For more information on state cigarette taxes and the benefits from increasing them, see:

- <http://tobaccofreekids.org/reports/prices>
- <http://tobaccofreekids.org/research/factsheets/index.php?CategoryID=18>

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Source: National Center for Tobacco-Free Kids. 2004. *Map of state cigarette tax rates—2004* (August 1, 2004). Compiled by Katie McMahon. <http://tobaccofreekids.org/research/factsheets/pdf/0222.pdf>.

Table 11.1. State Cigarette Excise Taxes for 1998 and 2003
(Shading indicates ASSIST states.)

State	1998 Excise Tax Rate	2003 Excise Tax Rate	% Increase
Alabama	\$0.165	\$0.165	None
Alaska	\$1.000	\$1.000	None
Arizona	\$0.580	\$1.180	103
Arkansas	\$0.315	\$0.590	87
California	\$0.370	\$0.870	135
Colorado	\$0.200	\$0.200	None
Connecticut	\$0.500	\$1.510	202
Delaware	\$0.240	\$0.550	129
District of Columbia	\$0.650	\$1.000	54
Florida	\$0.339	\$0.339	None
Georgia	\$0.120	\$0.370	208
Hawaii	\$1.000	\$1.300	30
Idaho	\$0.280	\$0.570	103
Illinois	\$0.580	\$0.980	69
Indiana	\$0.155	\$0.555	258
Iowa	\$0.360	\$0.360	None
Kansas	\$0.240	\$0.790	229
Kentucky	\$0.030	\$0.030	None
Louisiana	\$0.200	\$0.360	80
Maine	\$0.740	\$1.000	35
Maryland	\$0.360	\$1.000	177
Massachusetts	\$0.760	\$1.510	99
Michigan	\$0.750	\$1.250	66
Minnesota	\$0.480	\$0.480	None
Mississippi	\$0.180	\$0.180	None
Missouri	\$0.170	\$0.170	None
Montana	\$0.180	\$0.700	288
Nebraska	\$0.340	\$0.640	88
Nevada	\$0.350	\$0.800	128
New Hampshire	\$0.370	\$0.520	41
New Jersey	\$0.800	\$2.050	156
New Mexico	\$0.210	\$0.910	333
New York	\$0.560	\$1.500	168
North Carolina	\$0.050	\$0.050	None
North Dakota	\$0.440	\$0.440	None
Ohio	\$0.240	\$0.550	129
Oklahoma	\$0.230	\$0.230	None
Oregon	\$0.680	\$1.280	88
Pennsylvania	\$0.310	\$1.000	223
Rhode Island	\$0.710	\$1.710	141
South Carolina	\$0.070	\$0.070	None
South Dakota	\$0.330	\$0.530	61
Tennessee	\$0.130	\$0.200	54
Texas	\$0.410	\$0.410	None
Utah	\$0.515	\$0.695	35
Vermont	\$0.440	\$1.190	170
Virginia	\$0.025	\$0.025	None
Washington	\$0.825	\$1.425	73
West Virginia	\$0.170	\$0.550	226
Wisconsin	\$0.590	\$0.770	31
Wyoming	\$0.120	\$0.600	400

Sources: The Tobacco Institute. *The Tax Burden on Tobacco. Historical Compilation 1998*. Washington, DC: The Tobacco Institute (p. 9); National Center for Tobacco-Free Kids. Map of State Cigarette Tax Rates—2003 (July 24, 2003) compiled by Eric Lindblom. www.tobaccofreekids.org/research/factsheets/pdf/0222.pdf.

increase in 14 states is a reminder of the formidable challenges that remain.

Preemption Laws. When the tobacco industry realized the power that ASSIST represented because of its local and state coalitions and infrastructures,²⁸ the industry successfully promoted the passage of laws in many states that restrict local jurisdictions from enacting local excise taxes and restrictions on tobacco use. ASSIST staff and volunteers brought attention to the threat posed by such preemption laws. In some states, local advocates were able to prevent passage of preemption laws or were able to repeal preexisting laws. (See chapter 6 for a more detailed discussion of preemption.)

At the end of 1998, the tobacco control laws in 30 states contained preemption provisions. The tobacco industry continues to use this tactic to constrain local tobacco prevention and control efforts. However, because of the successful transition of ASSIST to the National Tobacco Control Program and the expansion of effective state-based programs, efforts to prevent or reverse preemption laws continue. Recent actions in Maine,¹¹ Massachusetts,²⁹ Delaware,³⁰ North Carolina,³¹ and West Virginia³² successfully countered the tobacco industry's preemption strategy.³³

Clean Indoor Air. The expectation of a smoke-free environment in public places has become a social norm. This norm was painstakingly achieved through a combination of public and private policy changes. The efforts of ASSIST and many other tobacco control initiatives and professionals drew attention to this intervention as an important tool for re-

ducing tobacco use. Promoting clean indoor air was a central policy goal of ASSIST from the outset, and it became the subject of many activities at the state and local levels, as well as numerous training events and materials. By maintaining this focus on promoting clean indoor air and by training staff and volunteers on this topic, ASSIST was able to build momentum for these initiatives that far outlived the project itself.

California and Delaware led the nation in adopting comprehensive, statewide clean indoor air laws, and five other states continued this trend—Maine, New York, Massachusetts,³⁴ Connecticut, and Rhode Island.³⁵ Four of these were ASSIST states. ASSIST contributed to the supportive environment that facilitated the passage of clean indoor air laws and has led to action on this front in numerous other states and communities across the country.

Essential Components

ASSIST contributed to future public health interventions its insights about which program components are essential for success. During ASSIST, sufficient funding and a highly competent workforce emerged as two essential ingredients for a successful tobacco prevention and control program.

Sufficient Funding

With ASSIST came an increased awareness of the magnitude of resources needed to effectively implement a comprehensive approach to tobacco prevention and control. Considered inadequate by today's standards, the investment of federal funds in ASSIST was the largest

made in tobacco prevention and control programs at that time. That investment was accompanied by significant funding from ACS, NCI's designated private-sector partner in ASSIST. Today, the level of funding that a comprehensive tobacco prevention and control program receives is recognized as the single most important determinant of success.³⁶

The IOM report *Taking Action to Reduce Tobacco Use* cites the evidence of a dose-response relationship between the level of funding and the effectiveness of tobacco prevention and control efforts. That evidence has been gleaned from experiences with ASSIST, state-supported programs, and CDC's Initiatives to Mobilize for the Prevention and Control of Tobacco Use (IMPACT) and was used as a basis for IOM's recommendation to "apply the lessons of ASSIST nationwide."^{3(p10)} California and Massachusetts, which had the highest levels of state funding during the 1990s, experienced the greatest reductions in tobacco consumption. During this time frame, per capita cigarette consumption fell by 57% in California and by 36% in Massachusetts—compared with 27% in the rest of the country.^{37(pl-ii),38(pv)} A 2000 IOM report, *State Programs Can Reduce Tobacco Use*, concludes that the dose-response observation is "strong evidence that state programs have an impact, that more tobacco prevention and control correlates with less tobacco use and that the reduction coincides with the intensification of tobacco control efforts."^{7(p4)}

Recognizing that adequate funding is essential to effective tobacco prevention and control, CDC provided guidance for state decision makers regarding funding

levels necessary for each state to sustain an effective, comprehensive state-level program.¹⁹ Approximate annual costs to implement all of the recommended program components were estimated to range from \$7 to \$20 per capita in states with smaller populations (< 3 million), from \$6 to \$17 per capita in states with medium populations (3–7 million), and from \$5 to \$16 per capita in states with larger populations (> 7 million). In addition, a base funding of \$850,000–\$1.2 million per year per state was recommended.¹⁹

The commitment to sustainable funding levels by CDC's Office on Smoking and Health (OSH) is even more critical today because state budget deficits have resulted in deep cuts in some state tobacco prevention and control programs. In 2002, California's program was cut by \$61 million and Massachusetts's program was cut by \$42 million and nearly eliminated.^{39(p12)}

In a special report in the *New England Journal of Medicine*, "Tobacco Control in the Wake of the 1998 Master Settlement Agreement," Steven Schroeder reviews the small amount of funding that state tobacco prevention and control programs have received from the Master Settlement Agreement (MSA) and concludes with a quote from an interview with Joseph Califano Jr., the former Secretary of Health, Education and Welfare,

The results: the money [from the MSA] is being spent to close budget deficits rather than to stop kids from smoking and help adults who are hooked.^{1(p296)}

Competent Workforce

The issue of a competent workforce has been a growing concern within the

field of public health, as was brought to the forefront by the 1988 IOM report *The Future of Public Health*⁴⁰ and reiterated in the 2003 IOM report *Who Will Keep the Public Healthy?* According to the more recent report, one of public health’s essential services

is to assure a competent public health and personal care workforce. The state health department, in cooperation with local and federal public health agencies, has a major role to play in facilitating the competency of the public health workforce.^{4(pp162-3)}

ASSIST leaders recognized the new set of competencies required for public health professionals and developed a model for providing training and technical assistance to support individuals and organizations in the field. ASSIST acknowledged that because new types of interventions were being promoted, staff needed new skills in community mobilization, media advocacy, and policy development to be able to carry out those new interventions. (See chapter 4.)

These types of skills are described in the recent IOM report on public health professionals, *Who Will Keep the Public Healthy?*:

Public health communication requires skills to use mass media strategically in combination with community organizing to advance public health policies through media advocacy, targeting policymakers, organizations, and/or legislative bodies. Public health professionals should be able to frame public health problems as social inequities to derive policy solutions, as well as apply news values and advertising principles to design stories about these public health issues for media outlets.^{4(p77)}

Examples of ASSIST Training Needs

- Media advocacy, social marketing, media relations
- Community organization (assessment, mobilization, creating ownership)
- Leadership development
- Policy analysis, implementation, and enforcement
- Conflict resolution
- Legislative analysis

ASSIST staff and volunteers advanced the understanding of the types and levels of skills needed by individuals who implement public health interventions and demonstrated how training and technical assistance can be delivered to support those individuals—both professional staff and volunteers.

NCI supported the development of the ASSIST Coordinating Center to provide training and technical assistance that responded to the needs of the staff and coalition members in the 17 states. (See chapter 4.) The states found the ASSIST training and technical assistance to be so worthwhile that they sought to retain this resource after ASSIST ended. They used their skills and worked through the Technical Assistance and Training Transition Team to advocate to CDC and key foundations for continued training and technical assistance. CDC sought to provide the necessary professional expertise and support for the implementation of its new National Tobacco Control Program. In addition, key partners recognized the need for extensive, highly skilled technical assistance, so they advocated for establishing the Tobacco Technical

Assistance Consortium (TTAC) to fill this critical need. (See chapter 10.)

This high level of technical assistance support is increasingly emphasized in public health initiatives and in the literature.⁴ State health department leaders appreciate the importance of comprehensive tobacco prevention and control programs and of maintaining a highly skilled staff, and are working toward attaining this capacity. The pioneers trained during ASSIST constituted a new type of public health worker equipped to respond to challenges of the 21st century.

Effective Strategies for Implementation

Throughout this monograph, the design, core elements, strategies, and activities of ASSIST have been described, along with insights for their application and ASSIST's continued contributions to health behavior change. In addition to the infrastructure built, the methods and materials developed for effective interventions, and the training and technical assistance provided for professional skill development, two strategies—participatory decision making and inclusion—are especially noteworthy.

Participatory Decision Making

Early in ASSIST, the form of program management evolved from a hierarchical structure to a participatory management and decision-making structure. The state programs requested an integral role in decision making, and they became members of the ASSIST Coordinating Committee and its subcommittees. This participatory style of decision making

was also reflected in the management of state programs, as they designated local ASSIST coalition members to serve in state-level leadership roles.

In addition to providing training and technical assistance to the 17 states, the ASSIST Coordinating Center provided administrative support and technical assistance to the ASSIST Coordinating Committee and its subcommittees. This high level of support made possible involvement of state staff in decision making, better feedback for program direction, greater retention of volunteers, and more efficient resource allocation by the coalitions. The Advance Teams and Transition Teams discussed in chapters 9 and 10 considered the ASSIST Coordinating Center and the ASSIST Coordinating Committee to be crucial components of the infrastructure for effective collaboration and coordination of a national tobacco prevention and control program. The principle has been carried forward into CDC's National Tobacco

The ASSIST project located tobacco control at the state and community level, insisting on coalitions in order to include members of the community. Participants demanded that ASSIST become more diverse and inclusive. I think the ASSIST project helped define tobacco control as a national movement and helped the movement itself become more diverse and inclusive.

—*Jerie Jordan, former National Manager, ASSIST Project, American Cancer Society, and current Program Consultant, Office on Smoking and Health, CDC*

The focused nature of ASSIST resulted in a clear strategy to reduce tobacco use. This evidence-based strategy educated health practitioners and community coalition members about best practices in tobacco prevention and control. These practices also translate into other public health arenas. I continue to use the strategic planning process in the public health programs I am involved in by first assessing the community environment through community interviews, scientific literature reviews, considering the five channels of delivery: community, community environment, health site, worksite, and school site.

—*Rebecca Murphy-Hoefer, former ASSIST Western New York Field Director, former Utah IMPACT Coordinator, Utah Department of Health, and current Health Communication Specialist, Office on Smoking and Health, CDC*

Control Program, although the size of the program has necessitated different mechanisms for participation. (See chapter 10.) It remains to be seen how extensively this promising ASSIST legacy of a national coordinating center and a coordinating committee will be realized.

Inclusion

Throughout the life of the project, ASSIST promoted the inclusion of and representation from diverse cultural groups. Progress was made in increasing the cultural diversity and competency of members of the tobacco control community and the staffs of state health departments, ACS, and NCI. They addressed difficult issues and made changes in certain committees to meet diverse needs.

The creation of the ASSIST Multicultural Subcommittee in 1994 helped ensure that all major population subgroups, and especially all ethnic population groups, would be involved or represented in all aspects of the project. (See chapter 3.) With the establishment of the Multicultural Subcommittee, state representatives of ASSIST directed efforts to educate and involve tobacco control priority populations at high risk for tobacco use. The ASSIST Multicultural Subcommittee set the following objectives:

- increasing the awareness and skills of site staff to work more effectively with all multicultural and diverse groups in developing a long term commitment to tobacco control,

- linking with other national multicultural and diverse groups to promote and expand their tobacco control efforts,

- encouraging the dissemination of media materials appropriate to multicultural and diverse groups,

The coalitions included people who were pro-choice as well as pro-life. They included those who were in favor of the use of animals in research and those who had opposite views. They included the wealthy and the less wealthy and the middle class and the poor. The multicultural make-up of the coalition memberships did not constitute ‘unlikely’ partners but spoke forcefully to the determination of the coalitions to find and exploit their common ground.

—*Helene G. Brown, former ASSIST Senior Advisor from ACS and current Associate Director, Community Applications of Research, UCLA Jonsson Comprehensive Cancer Center*

The project focused not only on the inclusion of communities of color, but also gays and lesbians, women, and youths. This model continues to be the mainstay of the National Tobacco Control Program and the SmokeLess States National Tobacco Policy Initiative.

—Victor Medrano, former ASSIST New Mexico Field Director, former Program consultant, Office on Smoking and Health, CDC, and current Health Education Specialist, Youth Media Campaign, CDC Office of Communications

promoting and developing alternative funding options for minority groups particularly in intervention research and program delivery.^{41(p2)}

Addressing multicultural issues was not restricted to the Multicultural Subcommittee. Two principles—ensuring that representation was diverse and that health disparities were addressed—were integrated into all facets of ASSIST. (See recommended benchmarks for multicultural activities in appendix 10.A.) ASSIST leaders sought effective means for reducing health disparities, and CDC built on those efforts. ASSIST staff and volunteers wanted to ensure that multicultural issues were represented in all aspects of the program. ASSIST’s notion of inclusion extended beyond communities of color to other population subgroups such as gays and lesbians, women, and youths.

This principle has persisted in CDC’s National Tobacco Control Program. CDC’s 1999, as well as its most recent, request for applications for the National Tobacco Control Program^{42,43} contained

a specific goal related to health disparities and how that goal is to be integrated into the state programs. The Robert Wood Johnson Foundation’s (RWJF’s) SmokeLess States National Tobacco Policy Initiative and the American Legacy Foundation’s Priority Populations Initiative also exemplify the same principle of inclusion.

Influencing Public Health Initiatives

As researchers increasingly reached consensus on the effectiveness of an ecological approach for addressing public health problems and on the strength of the evidence supporting policy interventions for preventing tobacco use, public health practitioners worked to apply this knowledge and innovative leaders responded. As a result of ASSIST and other important tobacco control programs, many new public health initiatives have proliferated. Many of these initiatives address health issues beyond tobacco control and include elements of the earlier successful programs.

Tobacco Control

ASSIST was an important early initiative that helped reshape tobacco prevention and control efforts. Frequent interactions among all the early leaders led to substantial cross-fertilization of ideas and information about promising approaches to preventing and reducing tobacco use.

Within this climate, states were also moving forward. Two innovative leaders, California and Massachusetts, were

California's Connection with ASSIST

“I can say from direct experience that the strategy that we developed in operationalizing the program was strongly influenced by the National Cancer Institute’s ‘Standards for Comprehensive Smoking Prevention and Control’ in ASSIST RFP-56. Especially important was the statement: ‘A smoking prevention and control initiative is based on successful worldwide examples that show that a widespread change in social acceptability of smoking is required to significantly reduce smoking prevalence’ (p. 3). We often referred to the ‘NCI Standards’ for comprehensive tobacco control to justify and defend our social change approach. If you have looked at our *A Model for Change: The California Experience in Tobacco Control* (October 1998), you will see that California adopted the idea of reducing the ‘social acceptability’ of tobacco use as the key for reducing tobacco use among youth as well as adults.

“The ‘categories of interventions for smoking prevention and control’ in the ASSIST planning model helped us justify the heavy emphasis the California program placed on policy development and implementation. Especially helpful to us was the section of the ‘NCI Standards’ titled ‘Smoking Prevention and Control Activities’ (pp. 17–33), which provided us with invaluable ideas on how to change the social acceptability of tobacco use. We were particularly influenced by the suggestion that achieving and expanding clean indoor air policies could reduce disease and encourage smoking cessation (pp. 21, 22). We focused our program on many of the policies listed on page 24 of this chapter. We benefited also from the caution that ‘public support for them [new policies] must be generated throughout the community’ to achieve successful policy implementation (p. 25). Our mantra was that change happens at the community level.

“Overall, our program benefited tremendously from the ASSIST ‘Standards for Comprehensive Smoking Prevention and Control.’”

—Jon Lloyd, Chief, Data Analysis and Evaluation Unit,
California Department of Health Services,
Tobacco Control Section

conceptualizing and building support for state-level funding. In short order, other government agencies, organizations, and foundations joined the effort. States that had not been selected to participate in ASSIST also insisted on federal support, leading to CDC’s 1993 launch of IMPACT. (For more details, see chapter 9.) Working with coalitions in some states, RWJF provided funds for the American Medical Association to administer the SmokeLess States National Tobacco Policy Initiative. As additional agencies and organizations became more active, the tobacco control movement grew and there were mutual transfers of knowledge and information. NCI and

CDC’s collaboration with Massachusetts and California to air their effective public service announcements and paid media advertisements led to the establishment of CDC’s Media Campaign Resource Center.

Rudiments of ASSIST’s legacy are evident in the incorporation of core elements of the ASSIST model in a number of tobacco prevention and control initiatives that were launched during and following ASSIST. NCI was close to releasing its request for proposals when, in 1988, California passed a 25¢ tax increase on cigarettes known as Proposition 99. With 20% of the revenue from

the tax increase dedicated to its tobacco prevention and control program, the major design work of the California program began.⁴⁴ According to the chief of California's program at that time (who is an author of this chapter*), NCI's scientific underpinnings for ASSIST and the ASSIST model itself informed the design and strategic direction of California's program and also provided the credibility needed to gain support of California's decision makers. The outcomes from California's program were dramatic: Between December 1989 and December 1999, per capita cigarette consumption in California declined by 57%.^{37(pl-iv)} These results demonstrated the effectiveness of a community-based approach to reducing tobacco use and provided the impetus for other states to adopt it.⁴⁵

Massachusetts successfully competed for ASSIST funding while implementing its own tobacco control program with a massive infusion of state funding from its 25¢ tobacco excise tax increase. Using those tax funds, of which \$116 million were used through June 1996⁴⁶; ASSIST funding; and the intensive training programs and technical assistance received through ASSIST, Massachusetts built an exemplary tobacco prevention and control program that focused very successfully on strategic use of the media, one of ASSIST's core elements.

The severe budget reductions that the California and Massachusetts programs

have experienced and the resulting loss of capacity in these two exemplary state programs and in other state programs have undermined years of steady progress in preventing tobacco use. Left unchecked, this erosion of funding and support for state-based tobacco prevention and control will reverse the important advances that have been made.

The SmokeLess States National Tobacco Policy Initiative, supported by RWJF and administered by the American Medical Association, was implemented in 1994. Its primary emphasis was on policy change—another core element of ASSIST. Support from SmokeLess States grants provided funding for activities that complemented work that ASSIST, with its limited funding and government restrictions, could not perform. Many key SmokeLess States national staff, including the codirector, had played important roles in ASSIST or had expanded their skills at ASSIST trainings, information exchanges, and national conferences. In addition, many state project directors and state coalition leaders had benefited from these same ASSIST trainings and had used ASSIST concepts and strategies in advancing their own policy goals in their respective states.

The national staff of the SmokeLess States Program provided considerable technical assistance and support to their grantees that was similar to that provided by ASSIST staff. Staff from the

*Note that the third author was chief, Tobacco Control Section, California Department of Health Services, from 1990 to 1992 and was with the department for 2 years before that. He was then director of the ASSIST Coordinating Center from 1992 to 1994 and chief of the Program Services Branch at OSH of CDC from 1994 to 2000 before becoming director of the Tobacco Technical Assistance Consortium.

SmokeLess States Program also participated in the annual National Conference on Tobacco or Health. SmokeLess States expanded its national staff to provide technical assistance targeted at specific resource gaps. For example, the SmokeLess States staff developed resource materials on clean indoor air, preemption, and taxation.⁴⁷ They enhanced their national meetings by focusing on training sessions and skill building rather than merely sharing coalition strategies. These efforts frequently complemented and strengthened activities of the ASSIST staff. (For more details on the SmokeLess States Program, see chapter 2 in *To Improve Health and Health Care*, vol. viii.)⁴⁸

The ASSIST program increased recognition of the importance of high-quality technical assistance. SmokeLess States and other programs became resources that ASSIST coalitions and staff could use. The Campaign for Tobacco-Free Kids (CTFK) was a valuable resource during ASSIST and continues to play a critical role in the tobacco control movement. Its state advocacy team gives state and local tobacco prevention and control coalitions strategic and technical assistance on policy issues, helps them build stronger grassroots efforts,⁴⁹ and provides expert advice on media strategies. They also mobilize other CTFK resources, such as public opinion research; strategic communications, including media advocacy; and outreach to nontraditional partners.

Another organization that has taken on a key technical assistance role is the American Legacy Foundation, which was established in 1999 to provide

“grants, technical training and assistance, youth activism, strategic partnerships, counter-marketing and grass roots marketing campaigns, public relations, and community outreach.”⁵⁰

Many national organizations acknowledge the importance of high-quality, timely technical assistance, the need for coordination, and the need for diffusion outlets capable of getting knowledge, skills, and abilities to the field in the shortest time possible. Beginning in 2001, ACS, the American Legacy Foundation, and RWJF pooled their resources to create the national Tobacco Technical Assistance Consortium. The consortium’s mission is to build capacity at the state and local levels by providing technical assistance to strengthen the effectiveness of tobacco prevention and control programs.⁵¹ The consortium has been critical in helping to prepare newly hired staff at all levels of government and has improved the effectiveness of tobacco prevention and control programs.

This comingling of ideas and information that occurred in tobacco control that stimulated the development and expansion of ASSIST-like concepts and incorporated the ASSIST core elements also spread to other public health arenas. Examples of such adaptations follow.

Beyond Tobacco Control

Although ASSIST’s conceptual framework was not unique, its high visibility advanced the merits of the ASSIST cube that have been affirmed through its repeated application in other public health contexts. Figure 11.1 presents the ASSIST cube and adaptations

of the cube in four planning documents for heart health programs. The framework, along with core elements of the ASSIST program, can be seen in a number of non-tobacco-related public health initiatives, especially heart health, obesity, nutrition, and physical exercise.

Heart Health

With the success of ASSIST and state tobacco prevention and control efforts in California and Massachusetts, other public health programs looked to tobacco control for lessons learned and opportunities to achieve similar success. In the late 1990s, CDC launched its state-based cardiovascular health program. The CDC cardiovascular health program staff consulted with tobacco control staff for help in conceptualizing a framework for state-based programs that focus on an environmental and policy intervention model to change systemic factors within communities. The goals articulated for CDC's state-based cardiovascular health program mirror those of ASSIST:

To increase state capacity by planning, implementing, tracking and sustaining population-based interventions that address heart disease, stroke, and related risk factors. . . . Strategies should include policy and environmental approaches or education and awareness supportive of the need for policy, environmental, and systems changes to support cardiovascular health.^{52(p2)}

The core elements of the ASSIST model are also contained in the *American Heart Association Guide for Improving Cardiovascular Health at the Community Level*: “The Community Guide emphasizes the social and environmental

In many ways, ASSIST was a leap of faith for tobacco control. Ten years after the state planning phase started, the evidence is clear that the leap was not too far off the mark. ASSIST states have shown that the model works for tobacco control, and other public health programs are now trying to emulate tobacco control's success.

—Pam Eidson, former Director of Health Promotion, Georgia Division of Public Health, and current Program Manager, Directors of Health Promotion & Education, an affiliate of the Association of State and Territorial Health Officials

origins of the CVD epidemic.”^{53(p646)} The Guide also reproduces an adaptation of the ASSIST cube and presents it as a “conceptual framework for public health practice in CVD prevention.”^{53(p647)} Because tobacco use is a major risk factor for CVD, it is especially encouraging to observe the diffusion of effective ASSIST-like interventions to other CVD risk factors and to the conceptualization of state-based cardiovascular health programs.

Nutrition, Physical Activity, and Obesity

There are obvious parallels between overweight individuals and smokers. They both grapple with behavioral health issues that are reinforced by social influences, environmental factors, and advertising. Therefore, efforts have been made to learn from the recent successful efforts in tobacco control for possible applicability to the obesity problem.⁵⁴ Just as passage and enforcement of clean indoor air laws affect tobacco use and the extent of health

Exploring Potential Adaptations for Heart Health

The success of the California and Massachusetts state tobacco control programs motivated planners of public health initiatives in cardiovascular health to consider expanding the reach of their public health initiatives to heart health:

“Illustrating the possibility of a larger focus of action in California, the recent public health campaign to reduce cigarette smoking has doubled the rate of decline of smoking in the entire state (21). Massachusetts likewise has mounted a successful statewide campaign against smoking. These experiences suggest enlarging the concept of community for cardiopulmonary health purposes to the state, or even to the national or global level.”

Source: Breslow, L. 1997. Social origins of cardiopulmonary disease: The need for population-focused prevention studies. *Annals of Epidemiology* S7:S4–S7 (p. S6).

consequences of secondhand smoke, laws or regulations pertaining to school lunch programs, vending machine placement in schools, and food labeling have important implications for weight control.⁵⁴ Pricing is another tool that can be useful for both applications. Raising cigarette excise taxes reduces the affordability of cigarettes and thereby decreases consumption. Similarly, lowering the prices of fruits, vegetables, and low-fat snacks may raise consumption of healthy foods.⁵⁴

The relevance of lessons learned from tobacco control initiatives to the prevention of obesity has been noted by numerous researchers and public health

experts. The goals of CDC’s 12-state obesity control program reflect the core elements of ASSIST; its goals are to

prevent and control obesity and related chronic diseases by supporting states in their development and implementation of nutrition and physical activity interventions, particularly through population-based strategies such as policy level change, environmental supports, and the social marketing planning process.^{54(p1078S)}

Mercer and colleagues also point to the recent experience in comprehensive tobacco control in California and other states as evidence of the efficacy of policy-based initiatives and as suggestive of promising approaches for obesity.⁵⁴

Eating and physical activity patterns are addressed in the scope of activities described for CDC’s Nutrition and Physical Activity Program, which includes “policy and environmental change, communication and social marketing, and partnership development.”^{55(p1)} CDC’s most recent request for proposals for its state nutrition and physical activity programs to prevent obesity and other chronic disease instructs prospective grantees to use the ecological model to guide their program planning:

(f) Use the social-ecological theoretical model to guide State planning to address obesity and other chronic diseases in these populations; select and implement interventions from the list of proven strategies . . . so that multiple levels of influence in the social-ecological model are addressed. Consider using a social marketing approach in this intervention.^{42(p15)}

A recent *Washington Post* article on obesity states that “policymakers nation-

wide are pursuing legislative solutions modeled after the anti-smoking campaigns of the 1990s to attack what many in the medical community say is one of the gravest threats to the nation's long-term health."⁵⁶ The article reports on state legislative efforts to require the posting of nutrition information in restaurants and restrictions on the sale of candy and soda in schools.⁵⁶ Public health approaches to promoting nutrition and physical activity and to controlling obesity that incorporate the insights gained from the tobacco control experience are proliferating.

Future Applications

As more data become available that substantiate the efficacy of the ecological model in programs that promote heart health, obesity control, physical activity, and nutrition, other fields are likely to adopt elements of the ASSIST model and intervention methods to implement environmental and policy changes. A recent IOM report puts forth a strategy to reduce and prevent underage drinking that embodies a number of elements of ASSIST: limits on youth access to alcohol, community-based coalitions, strategic use of the media, and increases in excise taxes. The report recommends restricting glamorous presentations of drinking in movies and music that appeal to teenagers, imposing penalties on those who sell alcohol to minors, and increasing taxes on beer.⁵⁷ A *Washington Post* article points out the link between these recommendations and recent antismoking interventions:

The report marks an important shift in strategy that echoes recent antismoking

efforts. If implemented, the recommendations would be the most dramatic crack-down in decades on alcohol makers, retailers and the entertainment media—and would put the campaign against underage drinking on the same footing as the war against teenage smoking.⁵⁸

Given its enormous health toll, the potential benefits of funding a policy-based intervention aimed at underage drinking are substantial.

Advancing Evaluation Methodology

Efforts to evaluate the ASSIST project brought to the forefront the methodological challenges of evaluating a large-scale, community-based program that uses multiple interventions to effect systems-level change. The next NCI monograph in this series (Monograph 17) addresses in detail the evaluation efforts for the ASSIST program, from the development of the evaluation logic model and its basic assumptions and methodology, through implementation and results.⁵⁹ The evaluation model developed for the ASSIST project represents an important step, not only for gaining valuable data on tobacco control program effectiveness, but also for informing the implementation of evidence-based public health efforts in general. By developing and validating a logic conceptual model that reflects the complexity inherent in tobacco control and developing measures that correlate with tobacco control outcomes, this evaluation effort serves as a model for public health interventions whose components are diffused throughout an entire population, making ran-

Because of their complexity, tobacco control programs are very difficult to evaluate. We have found how hard it is to measure our success in the real world.

—Marc W. Manley, former Chief, Tobacco Control Research Branch, NCI, and current Executive Director, Center for Tobacco Reduction and Health Improvement, Blue Cross and Blue Shield of Minnesota

domized controlled trials infeasible or inappropriate.

The ASSIST evaluation defined and validated indirect measures of performance and correlated these measures with public health outcomes. The following are some of the evaluation methods and measures that evolved from this effort:

- The Strength of Tobacco Control (SoTC), an indirect measure of state-level tobacco control efforts based on three constructs: resources, capacity, and efforts.
- The Initial Outcomes Index (IOI), a measure of state tobacco control policy outcomes, which in turn could be correlated with subsequent population behavior and public health outcomes; and
- The ASSIST Print Media Database, a demonstration project to quantitatively index newspaper coverage of policy issues central to the ASSIST project.

With ASSIST, the field of evaluation advanced. The ASSIST evaluation represents an early step in developing techniques that researchers and policy

makers need to determine which elements of community-based tobacco control programs are effective.

The complexity of the ASSIST project, the challenges posed in evaluating this type of project, as well as limited evaluation resources necessitated that the evaluation focus only on those components of the project that could be quantified as part of the evaluation logic conceptual framework. While it was not possible to fully evaluate all aspects of the ASSIST project, this evaluation was the first such effort to systematically measure the effectiveness of state-level tobacco control efforts across all states and to assess benefits associated with the investment in building infrastructure and focusing on policy change.

The IOM National Research Council report *Taking Action to Reduce Tobacco Use* points to the need for adequate funding and commitment and also highlights the importance of improved evaluation of tobacco prevention and control programs:

The ASSIST program has shown that a more intense intervention produces results, but it does not clearly show which elements are most powerful. . . . An expanded commitment to tobacco control increases the importance of knowing which interventions matter most, requiring demonstrations at sufficient dose and duration to enable credible evaluation.^{3(p11)}

In 1999, NCI released a request for applications for research in state and community tobacco control interventions:

The scientific evidence supporting some of these policies is quite strong; for others it is more limited. Decision-makers

frequently must make decisions about the details of these policies in the absence of strong research.^{60(p3)}

The ASSIST evaluation highlights the need for ongoing, systematic, and coordinated evaluation efforts to be continued. New surveillance and methodological strategies are still needed to identify the environmental factors, such as those identified in the ASSIST evaluation, that influence tobacco use. These new tobacco control evaluation strategies can provide much-needed information about programs at the national, state, and local levels.

Future Interventions and Research Initiatives

The ASSIST experience provided insights for planning research initiatives. Since the completion of ASSIST and the initiation of CDC's National Tobacco Control Program, NCI has sponsored initiatives to address research questions that will advance the ecological approach to tobacco prevention and control. NCI established the Tobacco Research Implementation Group, which brought together 24 leading scientists and experts to identify research priorities related to tobacco control. Some of those priorities are based on research needs gleaned from ASSIST. For example, the group identified the need to refine the media advocacy approach—to learn more about “how to tailor messages and materials appropriately for different populations.”^{61(p2)} They also are focusing on the need for more research on the impact of a range of public poli-

It is our hope and intention that the National Cancer Institute, in partnership with our many public and private partners, will help to achieve nothing less than the complete elimination of tobacco-related disease. Achieving this lofty goal will require that we make strategic decisions to support research that will serve as a solid foundation for policy development, will be effectively used by those in clinics and communities who are in the trenches and working to improve the world one person or community at a time, and will ensure that our understanding of tobacco use and its health outcomes is peerless. We recognize the global threat of tobacco and tobacco-related cancers, and working to provide a solid tobacco control evidence base will therefore benefit not just those in the United States but also children and families around the world—particularly in countries with few resources dedicated to research. We accept these goals as our challenge today, and we remain committed to a comprehensive tobacco control research program that will ensure public health benefits tomorrow and beyond.

—*Scott J. Leischow, Senior Advisor for Tobacco Policy, Office of the Secretary, U.S. Department of Health and Human Services, and previously Chief, Tobacco Control Research Branch, and former Acting Associate Director, Behavioral Research Program, NCI*

cies on tobacco use—for understanding “the full impact on tobacco use of clean indoor air policies, marketing restrictions, and youth access restrictions.”^{61(p5),62}

NCI is supporting targeted research studies that are encouraging partnerships between scientists, state tobacco control

programs, and tobacco control advocates.^{60,63} Through a major initiative called the Tobacco Research Initiative for State and Community Interventions (TRISCI), NCI has funded 19 grants that will result in a total expenditure exceeding \$75 million.^{64,65} The purpose of the TRISCI initiative is to stimulate research on new or existing tobacco control interventions relevant to state and community tobacco prevention and control programs. This goal will be achieved through support of research on innovative tobacco prevention and control interventions at the community, state, or multistate level, particularly policy or media-based interventions, and by fostering collaboration among tobacco control researchers, state-based comprehensive tobacco control programs, and community-based coalitions. The results of this research will guide and inform existing and future tobacco prevention and control programs.

Onward from ASSIST

As the field of public health evolves, milestones are achieved through the application of a continuing accumulation of knowledge until a critical understanding is reached. ASSIST was such a milestone.

This monograph describes ASSIST's many contributions: the building of effective partnerships; the networks, communications, and other mechanisms used to establish community structures for participatory decision making and collaborative work; the effective application of ecological theory; the strategic

use of media advocacy to frame policy development; an increased understanding of the importance of funding and of the critical components of effective programs; and insight into the advancing evaluation methodologies for community-based programs with multiple interventions.

This chapter highlights different ways in which ASSIST's impact can still be felt. Through the local infrastructures built during ASSIST, networks of public health specialists and community advocates with media and policy advocacy skills have taken what was learned during ASSIST and are now applying that knowledge to other public health initiatives. The tobacco industry viewed these local infrastructures as significant threats.

Policy initiatives that were the focus of ASSIST continue to play out at the state and local levels. Smoke-free environments in public places are now the norm though important progress is still required. Excise taxes are universally recognized as effective in reducing tobacco use, and states continue to raise taxes on tobacco products. Increased understanding of the power of preemption bills has given advocates the tools to prevent and in some cases reverse this particular tobacco industry tactic.

Key to these accomplishments and advances in understanding regarding what constitutes an effective tobacco prevention and control program was the cross-fertilization that occurred between ASSIST and other related efforts. Just as ASSIST raised awareness of the critical importance of a highly trained workforce, others took on this role and

informed subsequent ASSIST trainings. Similarly, ASSIST's media advocacy activities inspired others to use similar tactics and to develop resources that were then made available to ASSIST and others.

Researchers and practitioners now have a better understanding of the critical components and processes required to implement effective community-based tobacco prevention and control programs as well as other health behavior change initiatives. Seasoned staff in the

field continue to apply the insights gained during ASSIST. Ultimately, ASSIST's legacy lies in its continuing impact on public health: healthier communities through reduced exposure to secondhand smoke; lower tobacco prevalence and consumption; reduced death and disease from tobacco use; stronger community coalitions; and continuing collaboration among researchers, state health department program staff, and tobacco control advocates.

Appendix 11.A. Tobacco Control Professionals Who Shared Their Insights regarding ASSIST

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