

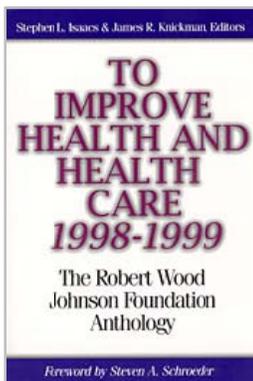
Tobacco Policy Research

BY MARJORIE A. GUTMAN, DAVID G. ALTMAN AND ROBERT L. RABIN



Robert Wood Johnson Foundation

Chapter Two,
excerpted from the Robert
Wood Johnson Foundation
Anthology:
**To Improve Health
and Health Care,
1998–1999**



Edited by
Stephen L. Isaacs and
James R. Knickman
Published 2000

Editor's Introduction

This chapter looks at one strategy used by the Foundation to help the nation address problems associated with tobacco use: the support of policy-related research. It describes two key research programs—the Tobacco Policy Research and Evaluation Program and its successor, the Substance Abuse Policy Research Program. Although funding research might seem like an indirect way of decreasing tobacco use, the chapter makes a strong case that these programs provided useful information rapidly to those in a position to formulate policies on tobacco use.

These programs shaped a new field of research. In the past, researchers interested in tobacco tended to focus on epidemiological questions—such as patterns of use and cancer rates across different types of users—or assessments of strategies to reduce initiation into tobacco use or to stop people from smoking. The new programs, however, steered researchers into another important area of research: assessments of public and private-sector policies that can affect tobacco use. These policies might involve regulatory issues, taxes, or different approaches to reducing access to tobacco products by youth.

In addition to the research described in this chapter, the Foundation supports a large effort to develop a surveillance system of tobacco policies directed at young people. It also sponsors evaluations of interventions to change the behavior of smokers, funds surveys of tobacco use, and supports the work of leading researchers trying to understand better why people smoke.

Marjorie Gutman is a former senior program officer at the Foundation. She is currently the director of prevention research at the Treatment Research Institute at the University of Pennsylvania. Robert Rabin, an attorney, is professor of law at Stanford University. David Altman is professor of public health sciences at the Wake Forest University School of Medicine.

In the late 1990s, it is hard to remember that even a decade ago tobacco policy was not constantly in the headlines. A "tobacco settlement" had not been proposed, or even thinkable. Attorneys representing plaintiffs with tobacco-induced disease had never won a case against the industry. The industry whistle-blowers of the nineties had yet to emerge. States had not initiated lawsuits against tobacco companies to recover Medicaid expenditures attributable to smoking. The Food and Drug Administration had not yet taken steps to regulate tobacco as a drug. States such as California and Massachusetts had not yet passed landmark tobacco excise tax increases. National health care reform, to be funded in part by increases in the federal excise tax on tobacco, had not yet been proposed. The international journal *Tobacco Control* did not exist. Grassroots advocacy organizations were by and large living-room operations run by a handful of dedicated activists. And the Robert Wood Johnson Foundation and other funders were not actively involved in supporting tobacco policy research and programs. Eventually, of course, all these negatives became positives and, as a result, tobacco policy moved front and center.

One could argue that these developments, and the concurrent wave of public and policy-maker recognition of the health, economic, ethical, and social costs of smoking, had their roots in the previous three decades. Still, many tobacco-related problems remain. Although more than fifty million Americans have quit smoking since the Surgeon General's report of 1964—a report that jump-started the transformation of societal views toward tobacco—monthly use of tobacco among male high school seniors did not change much from 1980 to 1990, while use among females dropped only slightly.¹⁻³

Worse still, smoking among teenagers rose rapidly in the 1990s. Between 1992 and 1995, the percentage of high school seniors who had smoked cigarettes during the past month increased 20 percent—from 28.5 percent to 33.5 percent. Among younger adolescents, the number of smokers rose by an even more dramatic 33-34 percent: the percentage of high school sophomores who had smoked during the past month increased from 20.8 percent in 1992 to 27.9 percent in 1995, and, during the same years, the percentage of eighth-graders who had smoked during the past month rose from 14.3 percent to 19.1 percent.⁴⁻⁵

Internationally, tobacco use is on the rise, with a pandemic clearly in sight.⁶⁻⁷ To meet the growing international demand for tobacco products, the tobacco companies produce nearly six trillion cigarettes a year, or a thousand cigarettes (fifty packs) for everyone on earth. Tobacco company investments in marketing, litigation and lobbying remain substantial and effective. In Congress, statehouses and city

council chambers around the country, tobacco lobbyists remain highly effective advocates for positions that benefit the industry. Tobacco company profits, despite the considerable negative press the companies have received, continue to rise. Indeed, most analysts predict that if the tobacco companies, the state attorneys general and Congress agree on a settlement for Medicaid expenses, the stock value of tobacco companies will increase markedly. In essence, then, the tobacco companies have thus far weathered intense criticism, internal bickering, damaging documents and testimony and negative public opinion and are stronger financially than ever before.

ORIGINS OF THE TOBACCO POLICY RESEARCH PROGRAM

Because of the burden of death and illness attributable to smoking, the Robert Wood Johnson Foundation adopted the prevention of tobacco use as a priority within its goal area of reducing harm from substance abuse in February 1991, and two months later authorized funding for the Tobacco Policy Research and Evaluation Program, or TPREP. Although there was a relative paucity of tobacco policy studies at the time that TPREP was established, available epidemiological data provided persuasive evidence that a Foundation commitment to tobacco policy research could improve the health of many Americans. Since TPREP was launched, public momentum for reducing smoking has surged and tobacco control policy has come of age.⁸ Although it is not possible to quantify the specific contributions that TPREP and its successor, the Substance Abuse Policy Research Program, have made to the field and to policy-making, the research generated under these two programs and the researchers themselves have been at the forefront of recent tobacco policy discussions.

In the late 1980s, it was estimated that more than four hundred thousand deaths a year were attributable to tobacco use—one-third of all deaths from major chronic diseases.⁹ Cigarette smoking during pregnancy accounted for 20 to 30 percent of low-birth-weight infants and about 10 percent of infant deaths; as much as 25 percent of Medicare expenditures was due to diseases related to smoking—heart and lung disease and certain cancers.¹⁰

Further, the proportion of smokers, especially among young people, did not portend well for the future. Despite the enormous health and fiscal costs of smoking, 1990 data indicated that 29 percent of Americans had smoked during the past month at the time they were interviewed. Although this represented a decline from 40 percent in 1965, it was still much higher than stated public health goals. Approximately two-thirds of all high-school seniors had smoked once or more in their lives, and close to one-third had smoked in the last month before being interviewed.¹¹ Twenty percent of seniors smoked daily, and 30 percent of them had started smoking by the sixth grade. Of even greater concern, trends in

the number of teenagers smoking had leveled off in the beginning of the 1980s after declining during the previous decade. We now know that since 1991 an upturn has occurred in the proportion of teenagers who have smoked. By 1996, about half of American eighth-graders had already used tobacco.¹²

The Foundation's trustees and staff members recognized that there was a clear need to dedicate resources toward reducing tobacco use, but they also recognized that such an effort could be controversial because it pitted Foundation resources against a powerful industry. The challenges taken on by the Foundation were to identify policies that could help reduce tobacco use; assess their feasibility, effectiveness and likely consequences; and facilitate decision makers' use of the understanding gained through these analyses.

The Foundation's involvement in the tobacco policy arena was made easier by the diligent groundwork that several key organizations laid in the 1980s. Indeed, the initiative built substantially on the work of the National Coordinating Committee for Tobacco-Related Research, or NCCTR. The NCCTR, whose chairman was former Surgeon General Jesse L. Steinfeld, was established in 1982 by the American Cancer Society following a recommendation that emerged from the National Conference on Smoking and Health. The NCCTR had multiple purposes: to provide a means of assessing scientific progress in the field of tobacco and health, to share future research plans among the participating agencies and voluntary organizations, and to recommend priority topics for additional research. As part of carrying out this charge, in 1987 the NCCTR, along with the National Cancer Institute, reviewed and categorized the tobacco-related research funded by the Institute and the National Heart, Lung and Blood Institute, the two principal government sponsors of tobacco-related research. This review concluded that some areas, such as self-help and physician cessation interventions, had been adequately studied, whereas relatively little work had been done in policy research.

Prompted by this finding and by a report on tobacco policy research prepared for the National Cancer Institute by John Pinney, former director of the Office of Smoking and Health at the Centers for Disease Control and Prevention, or CDC,¹³ the NCCTR established a subcommittee on policy research. The NCCTR engaged in a variety of activities, including the formation of study groups to identify and set priorities among policy research questions in the following areas: tobacco tax and pricing policy, smoke-free air policy, access to tobacco products, regulation of tobacco products, tobacco marketing and promotion, and insurance and reimbursement. In short, by the late 1980s a broad spectrum of organizations and health professionals, including those that funded the majority of all tobacco research

in the United States, had determined the need for policy research and had identified at least some of the priority policy topics.

The Foundation was also encouraged to enter the area by the low level of support available from other sources. Although it was not possible to assess exactly how much total funding was available for tobacco policy research, it was possible to estimate the approximate resources devoted to such projects by major funders of tobacco research. The National Cancer Institute was the major federal source of funding for research on smoking, and the American Cancer Society was the voluntary health organization with the most interest. Although the Society largely supported biomedical cancer research, it did fund a small amount of policy research through specific projects. However, neither the National Cancer Institute nor the American Cancer Society had an initiative or a research program in this area. The CDC's support of tobacco policy research was also project-specific. Taken together, the Centers for Disease Control, the National Cancer Institute and the American Cancer Society were allocating about \$1 million a year for tobacco policy projects.

In addition, the state of California, with funding derived from a state tax increase instituted in 1991 and administered by the California Tobacco-Related Disease Research Program, had begun providing a small amount of funding for tobacco policy research.¹⁴ Of the roughly \$30 million a year awarded in research grants in the first two funding cycles, nine of 289 awards totaling \$1 million could be considered policy research. Funding was limited to California researchers.

Yet another incentive for the Foundation to undertake a tobacco policy research initiative was the fact that government funders were less likely than a private foundation to pay for more controversial policy science.

Given these factors, in April 1991 the Foundation's board of trustees authorized \$5 million over two years for TPREP. The first Call for Proposals was mailed in September 1992, and the first set of grants was awarded in early 1993. A second round of grants was awarded a year later. Subsequently, in 1994 the board of trustees authorized an expansion of policy research initiatives to include alcohol and illicit drugs as well. As a result, the Substance Abuse Policy Research Program, or SAPRP, came into being. This new program was initially granted \$11 million over the years 1994 to 1996, and was renewed in 1997 for three more years and \$18 million. Thus, the Foundation has committed \$34 million for policy research on tobacco, alcohol and illicit drugs to be awarded between 1992 and 2000.

TOBACCO POLICY RESEARCH: STRUCTURE AND IMPLEMENTATION

TPREP was an investigator-initiated, peer-reviewed program that supported investigators conducting research on a diverse array of tobacco policy topics. The initiative encouraged researchers from a variety of relevant fields such as medicine, public health, law, sociology, political science, psychology and health economics to apply their expertise to tobacco. Research projects could address policies at the national, state, local, or organization levels in the public sector, or private-sector policies within companies, associations, or trade groups.

The overall goal of the program was to increase the amount of policy science available to public and private policy-makers as they considered new policies to reduce tobacco use. More specifically, the initiative aimed to increase the awareness of policy alternatives and their feasibility and potential consequences.

All the Foundation's research has an applied focus, but particular attention was given in this initiative to active and creative dissemination of findings in order to heighten their use by decision makers. Along these lines, investigators were required to include a section in their proposals on dissemination plans, and technical assistance was provided to maximize active and creative efforts.

The secondary goal of the program was to "grow the field" of tobacco policy research. When the program was initiated, a highly committed but fairly small number of individuals were engaged in tobacco policy research. The expectation was that the initiative would attract additional researchers from a wide range of relevant disciplines to the study of tobacco policy, in addition to providing an increased and more stable level of support for existing tobacco policy researchers. The Foundation thought that the initiative could also serve as a focal point for sharing findings, methods and concerns among individuals conducting research in this area. Less tangible but nonetheless important, the Foundation hoped that the program would heighten the visibility and the credibility of tobacco policy research in the health and policy sciences.

Two rounds of competitive proposal review were contemplated, the second round eighteen months after the first. It was anticipated that perhaps twenty projects would ultimately be funded. Individual projects could range up to \$350,000, and could last up to three years. A national program office was established at Stanford University under the leadership of Robert Rabin of the Law School, who became program director, and David Altman of the Medical School, who became deputy director. The program office was responsible for publicizing the initiative, overseeing and participating in the competitive review and

selection process, monitoring the performance of grantees, providing technical assistance as needed, convening grant recipients at annual meetings, coordinating the dissemination of findings to appropriate audiences and ensuring that proposed projects complemented rather than duplicated policy research supported by other funders. A pool of peer reviewers and a National Advisory Committee were established to assist the national program office in this process. During the early stages of the program, a national ad hoc advisory group consisting of seven tobacco control experts was convened to provide guidance and advice to program and Foundation staff on program priorities.

Two hundred twenty applicants submitted letters of intent for the first round of grants, from which eleven were selected. The ten second-round grantees were selected from a pool of 114 applicants. A list of the grants awarded under the TPREP appears in Exhibit 2.1 at the end of this chapter.

About 25 percent of the researchers supported under TPREP reported in interviews that they were relatively new to the field of tobacco policy research.¹⁵ Thus, the effort to support and expand research on tobacco policy was able to attract researchers from a wide array of disciplines to investigate a broad spectrum of the current policy issues, including researchers who had not studied tobacco policy previously. At the same time, the program helped to continue, and even accelerate, the work of researchers who were already in the forefront of tobacco policy research.

SAPRP, begun in 1994, was modeled after TPREP. As of June 1998, thirty-five tobacco-related grants had been funded (see Exhibit 2.2 at the end of this chapter). These were selected from a pool of 371 applicants who submitted letters of intent requesting almost \$35 million. An innovative new structure for grantmaking was introduced with the SAPRP program. Applications for grants could be submitted on either of two schedules. Using the more typical process, applications for grants between \$100,000 and \$350,000 were submitted at one deadline per year and reviewed and awarded in a "batch." However, to provide also for "quick-strike" research capacity, applications for grants under \$100,000 could be submitted on a rolling basis, at any date, and grants were awarded accordingly. Using this fast track, research could be fielded rapidly to fit the reality of policy-making. For example, baseline information could be collected rapidly before a new policy is put into place.

Across the two initiatives, a broad array of policy studies has been funded. Sixteen grants have focused on the evaluation of multiple tobacco policy interventions (access, media, cessation and smoke-free buildings). Nine grants have been concerned with economic issues, including taxing and pricing, state

Medicaid expenditures attributable to smoking, and the economic impact of progress toward a tobacco-free society. Almost half that number have supported projects characterized by legal or historical analysis, including legal analysis of the constitutionality of banning or limiting billboards, and of whether tobacco products fit the regulatory definition of a drug. A comparable proportion of grants was devoted to other major current policy areas—marketing, youth access, media and marketing, secondhand smoke—and to an analysis of the attitudes of the public and policy-makers and evaluations of multiple policy interventions.

In keeping with the goals of the program, investigators from a wide variety of disciplines were awarded grants, including experts in economics, public health, medicine, law, psychology, sociology, communications and management. Economics was the discipline of approximately 31 percent of the researchers supported under the program, with psychology, law and behavioral science being the next most well represented disciplines.

THE ROLE OF RESEARCH IN POLICY-MAKING

A key goal of TPREP and SAPRP has been to provide credible policy analysis and socioeconomic research findings to assist policy-makers and the public in sifting through and assessing the options available to them in making important health policy decisions. What has occurred in the crucial linkage between research and policy? Summary information on studies supported by TPREP is suggestive and encouraging. Most of the studies supported under SAPRP were not completed as this chapter was being written and thus were not included in the discussion of the research-to-policy linkage. As of the end of 1997, the twenty-one studies supported under TPREP had produced thirty-nine articles in peer-reviewed journals and fifty-four presentations at professional conferences.¹⁶ The findings presented in these articles and presentations were cited 203 times in the media, including major newspapers such as the *New York Times*, *Washington Post* and *Wall Street Journal*, on television, radio and the World Wide Web. More directly related to policy-making, five presentations were made before federal and state legislative bodies, and on 39 occasions, findings from the studies were cited in legal cases, including depositions, briefs and other documents. Six studies funded under the program were cited in the commentary accompanying the FDA tobacco regulations. The dissemination of the findings will undoubtedly increase with time, as more information and new papers emerge.

Two case studies help to illustrate how research findings informed policy-making. The first describes an analysis of the effect of the price of cigarettes on consumption,¹⁷ and the second an analysis of whether tobacco meets the legal definition of a drug.¹⁸

Case Study No. 1

Not surprisingly, research on economic issues related to tobacco policy has been of keen interest to policy-makers and the public. In the first round of TPREP grants, an award was made to Dr. Frank Chaloupka at the University of Illinois at Chicago to study the impact of cigarette prices on demand among young people. Previous research by Chaloupka and others had shown that an increase in the price of cigarettes reduced not only the probability of smoking but also the amount of cigarette consumption among adult and younger tobacco users.¹⁹ Among adults, it was estimated that a 10 percent increase in the price of cigarettes reduced consumption by 3 to 4 percent. Among younger people, however, the data were less conclusive. Chaloupka proposed to use a larger, more representative dataset to explore the question of how price affects demand and to control for the level of state restrictions on smoking in public places and laws governing how old you must be to buy cigarettes. Partly as a result of additional funding from the CDC, Chaloupka, in collaboration with Dr. Henry Wechsler of Harvard University, was also able to conduct substudies on how sensitive young people were to the price of tobacco products.

One clear finding emerged from Chaloupka's studies: higher cigarette prices had a negative impact on cigarette smoking among teenagers and young adults; that is, increased cigarette prices (which would result from increases in cigarette excise taxes) led to sharp reductions in cigarette smoking among high school and college students. Moreover, these effects were not limited to reductions in the number of cigarettes consumed by smokers. Increases in the price of cigarettes also significantly reduced the number of students who used tobacco. Indeed, every 10 percent increase in the price of cigarettes was estimated to reduce consumption by 11.1 percent among college students and 13.1 percent among high school students. Chaloupka also found that young men were more sensitive to price than young women, and that young black people were nearly three times as sensitive to price as their white counterparts. These findings were published in peer-reviewed journals and widely cited in the press and among policy-makers.

Chaloupka testified at the House Ways and Means Committee during the debate on the Clinton Health Care Reform Act and advised Senator Kennedy's office in 1996 and 1997. He has also provided expert consultation to several states in recent years. For the American Cancer Society project on tobacco tax policy, he helped staff members produce state-level estimates of price effects and provided advice on this topic for the National Center for Tobacco-Free Kids, a center funded in part by the Robert Wood Johnson Foundation. Most recently, Chaloupka has conferred with staff members of the special congressional committee for the tobacco settlement and has assisted the American Medical Association in assessing that settlement.

Many of these federal and state efforts couple the increase in cigarette excise tax with the earmarked use of the resulting revenues for a worthy, related cause—tobacco prevention and treatment or providing medical insurance for uninsured children and families. It should be noted that more of these tax increase attempts have failed than have succeeded, and that the tax increases that have been enacted have tended to be small. In addition, in states that have raised the excise tax, the tobacco industry has responded in some instances by lowering prices or increasing marketing. Given the power of the tobacco industry at all levels, however, it is remarkable that so much action has occurred.

Research findings on the price sensitivity of adults and younger people are only one factor, and perhaps not the biggest factor, in the popularity of this policy option. Policy-makers and the public are less averse to "sin" taxes than to other taxes, and the fact that an increase in the tobacco tax produces not only reductions in demand and attendant health benefits but also revenue for worthy purposes enhances their appeal.

Case Study No. 2

The second example of the relationship between research and policy impact focuses on an analysis of whether tobacco meets the definition of a drug within the Food & Drug Act—and thus comes under the FDA's authority to regulate it. Dr. John Slade, of St. Peters Medical Center and the University of Medicine and Dentistry of New Jersey, used an unconventional method in making his analysis: he collected extensive information and documents generated by and about the tobacco industry—court documents, patents, scientific papers generated by industry-supported scientists, industry newsletters and other public documents—and analyzed them for evidence on whether tobacco fits the legal definition of a drug.

Slade's interest in the regulatory role of the FDA arose a decade ago, when he began noticing nicotine delivery products that were occasionally introduced by the tobacco industry. In the late 1980s, for example, the R. J. Reynolds Tobacco Company test-marketed a novel nicotine product called Premier, which looked like a cigarette but did not burn tobacco. It consisted primarily of an apparatus with a charcoal fuel element that focused heat on nicotine and glycerin. The American Medical Association and the American Public Health Association sent petitions to the FDA to regulate this product as a drug. Slade conducted analyses on Premier, communicated with the FDA about it, and later wrote articles about it. After testing Premier for three or four months, Reynolds withdrew the product before the FDA took any action.

From Slade's perspective, these earlier episodes helped to educate staff members at the FDA to the view that tobacco products are similar to pharmaceutical products. The interest of the American Medical Association and the American Heart Association in having the FDA play a central role in regulating tobacco also helped to sensitize staff members at the FDA to the possibility of FDA authority. Other petition drives sponsored by these organizations in the late 1980s, such as the one to regulate cigarettes because of claims for weight reduction made in advertising, helped to move the cause forward. In the late eighties and early nineties, Representative Michael Synar, an Oklahoma Democrat, introduced bills on FDA regulation. Though these bills were not enacted into law, they did raise public awareness of this policy alternative. In January 1993, the American Medical Association held a tobacco workshop to help develop the agenda on tobacco for the newly elected Clinton administration. This further focused attention on the potential role of the FDA.

Thus the idea of the FDA's regulating tobacco as a drug was certainly under discussion in some circles when Slade received a Robert Wood Johnson Foundation grant in 1993 to conduct a detailed policy analysis. As a result of the grant, he was able to accelerate his work and thereby have the time to respond to requests for information from FDA staff members. In one case, he sent information to the FDA on patents issued to tobacco companies. One patent filed by inventors at RJR described nicotine absorption as important to the drug delivery function of cigarettes.

In August 1995, the FDA made its historic decision to propose regulating nicotine as a drug. As a result, Slade used his research to provide a formal commentary on the proposed FDA regulations on behalf of the American Society for Addictive Medicine. The commentary Slade eventually submitted in 1996 was the second most extensive one submitted, exceeded only by that from the tobacco industry. Slade's commentary included a lengthy analysis of whether tobacco fit the legal definition of a drug (he concluded that it did) and several boxes of documents upon which the analysis was based. In the final FDA ruling, published in August 1996, Slade's commentary is cited several times, as are other studies supported under TPREP.²⁰

These two case studies illustrate a few key lessons about bringing research findings from TPREP and SAPRP to bear on informing policy-making. First, timing is critical. The Robert Wood Johnson Foundation invested resources in tobacco policy research at a time when there was sufficient capacity in the research community to conduct high-quality studies, but the field was not oversaturated with either researchers or other funders. In fact, once the Foundation invested relatively limited resources, it had the dual effect of attracting more

researchers to the field and helping funders realize that tobacco policy research was a legitimate place to invest. Fortuitously, substantive developments in tobacco policy—from litigation to whistle-blowers to tax increases—further facilitated the increased relevance of tobacco policy topics among the research community, the public and policy-makers, and produced fertile ground for disseminating results.

Second, the combination of applying stringent review standards for which studies were funded, combined with flexibility in funding studies that might be too risky for other funders to support, led to a funding portfolio that was both methodologically strong and innovative. In addition, the Foundation generally invested both in investigators with known track records in tobacco control or other research fields and in new investigators showing potential for developing into high-quality researchers.

FUTURE DIRECTIONS FOR TOBACCO POLICY RESEARCH

SAPRP will continue funding investigator-initiated tobacco policy research for at least three more years. A number of broad areas are in need of additional research. In the most recent call for proposals, many general topics were identified as being of interest:

- The effects of policies to control the availability and the accessibility of tobacco.
- The intended and unintended consequences of changes in policies regulating tobacco.
- The effects of societal trends in attitudes and norms on tobacco.
- The effects of tobacco treatment policies within organized health care systems.
- The effects of harm reduction policies.
- Policy studies on tobacco and social class, ethnicity and gender.
- The nature and effects of changes in advertising and media policies.
- Changes in how school systems select and monitor or assess tobacco prevention programs.
- The interplay between litigation and legislation in developing controls on tobacco.
- Legal, ethical and historical policy analyses of public- and private-sector strategies that influence tobacco use.

More specifically, future research should take into account emerging societal and industry trends. For example, changes in information technology are occurring rapidly, both in the United States and abroad, opening up new channels of communication—the Internet and other interactive media. These information technologies will undoubtedly be used by tobacco companies to promote their products, so understanding the impact of the new technologies is critical. Moreover, regulation of tobacco company marketing, either through a settlement or in a more piecemeal fashion, will change the ways in which tobacco companies reach consumers. We need to look no further than the early 1970s, when, despite bans on cigarette advertising on television and radio, the tobacco companies were able to reach consumers more cost-effectively through print and promotional media campaigns. If billboards, certain

promotions, and some magazine advertising are banned in the nineties, we must be ready to study the effects of new industry strategies to market tobacco.

There is also a great need for research on new products. Whether or not the FDA is granted the ability to regulate nicotine, there are new nicotine and nonnicotine delivery devices being test-marketed (RJR's Eclipse "low-smoke" cigarette, for example) or in the product development stage. The health impact of these products and how they are regulated is important to examine.

In the mid-nineties, tobacco litigation has emerged as an effective strategy for rectifying many of the problems caused by tobacco use. Researchers need to study different litigation strategies, documents obtained through the litigation process and the impact of this approach.

Changes in health care systems brought about by managed care and welfare reform have considerable influence on reimbursement for prevention, cessation and treatment services available to a large number of current and future tobacco users. The impact of these changes in reimbursement and service delivery on tobacco prevention and cessation needs further study. Also, the availability and the use of nicotine replacement products, both over the counter and through prescription, will require study.

The impact of economic adjustments in the tobacco sector among farm families and communities heavily dependent upon tobacco has emerged in recent years as a topic worthy of much additional research.

The effect of tobacco policies on tobacco use remains a key area for further research. For example, there is still much to learn about the impact on tobacco use of policies that limit tobacco marketing, young people's ability to buy tobacco and smoking in public settings.

Tobacco use in foreign countries and the role played by American tobacco companies may well be the most important tobacco policy issue of the next century. Although Foundation guidelines currently state that "studies of policies in other countries will be considered only to the extent they may directly inform U.S. policy," other philanthropies are well advised to dedicate resources to this critically important issue. Unfortunately, whatever progress the nation makes is more than offset by a steep increase in worldwide demand for tobacco.

CONCLUSION

In the 1992 annual report of the Robert Wood Johnson Foundation—a report that highlighted the Foundation's commitment to substance abuse—the chairman of the board of trustees, Sidney F. Wentz, wrote, "This country will somehow bring substance abuse under control.... There's no sword to cut through this Gordian knot, but we, as a Foundation, are obliged to keep picking at the strands of it with unremitting determination if we are ever to achieve our goal of improved health care for all Americans." In the short period of time that the Foundation has funded tobacco policy research, much has been achieved. Indeed, in the past ten years the field of tobacco policy research has literally blossomed. There is now a critical mass of established researchers. There is a recognition by the larger research community that tobacco-related research must include policy studies. And, largely as a result of investments made by the Foundation, both directly and through its influence on other funders, substantially more resources are available to support tobacco policy research.

Tobacco policy research has made important contributions both to the policy sciences and to policy impact. Indeed, the ability of tobacco policy researchers to contribute to the academic enterprise and to policy-making reflects the vitality of the field. The Robert Wood Johnson Foundation, through its investment in tobacco policy research, provided critical support at a critical time to this emerging subdiscipline. By providing this support, the Foundation effectively pursues its mission to improve the health and health care of all Americans. As we look to the future, we see tobacco policy research thriving in a dynamic environment. The continuing harm caused by tobacco use in the United States and abroad necessitates that tobacco policy research remain front and center.

Notes

¹ G. A. Giovino, M. W. Schooley, B. P. Zhu, J. H. Chrismon, J. P. Peddicord, R. K. Merritt, C. G. Husten and M. P. Erickson. "Surveillance for Selected Tobacco-use Behaviors—United States—1990–1994," *MMWR* (1994), 43, 1–43.

² L. D. Johnston, P. M. O'Malley and J. G. Bachman, *National Trends in Drug Use and Related Factors among American High School Students and Young Adults, 1975–1993* (Rockville, Md.: U.S. Department of Health and Human Services, 1994).

³ U.S. Department of Health and Human Services, *Preventing Tobacco Use Among the Young: A Report of the Surgeon General* (Atlanta, Ga.: Public Health Service, Centers for Disease Control and Prevention, Office on Smoking and Health, 1994).

⁴ J. M. McGinnis and P. R. Lee, "Healthy People 2000 at Mid Decade," *Journal of the American Medical Association* 273 (1995), 1123–1129.

⁵ L. D. Johnston, *Cigarette Smoking Continues to Rise Among American Teenagers in 1996* (University of Michigan, 1996).

⁶ R. Peto and others, *British Medical Bulletin* 52 (1996), 12–21.

⁷ C.J.L. Murray and A. D. Lopez, *Lancet* 349 (1997), 1498–1504.

⁸ R. M. Davis, "Tobacco Policy Research Comes of Age," *Tobacco Control* 4 (1995), 6–9.

⁹ U.S. Department of Health and Human Services, *Reducing the Health Consequences of Smoking—25 Years of Progress: A Report of the Surgeon General* (Vol. DHHS Publication No. CDC89-8411, Rockville, Md.: U.S. Department of Health and Human Services, Office on Smoking and Health, 1989).

¹⁰ See note 9.

¹¹ See note 3.

¹² See note 5.

¹³ J. Pinney, *Report on a Study of Tobacco Policy Research and Development* (Prepared for the Smoking, Tobacco and Cancer Program, National Cancer Institute, Bethesda, Md.: Corporate Health Policies Group, Inc., 1989).

¹⁴ J. P. Pierce, D. M. Burns, C. Berry, B. Rosbrook, J. Goodman, E. Gilpin, D. Winn and D. Bal, "Reducing Tobacco Consumption in California: Proposition 99 Seems to Work." *JAMA* 265 (1991), 1257–1258.

¹⁵ The Lewin Group, *Assessment of the Substance Abuse Policy Research Program and Tobacco Policy Research and Evaluation Program* (Fairfax, Va.: The Lewin Group, 1997).

¹⁶ See note 15.

¹⁷ F. Chaloupka, personal communication, July 29, 1997.

¹⁸ J. Slade, personal communication, July 29, 1997.

¹⁹ See note 3.

²⁰ Food and Drug Administration, *Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco Products to Protect Children and Adolescents; Proposed Rule Analysis Regarding FDA's Jurisdiction over Nicotine-Containing Cigarettes and Smokeless Tobacco Products* (Federal Register 60, No. 155, 21 CFR Part 801, et al.: Department of Health and Human Services, Food and Drug Administration, 1995).

EXHIBITS

2.1 Tobacco Policy Research and Evaluation Program Grant Titles

2.2 Substance Abuse Policy Research Program: Tobacco-Related Grant Titles