# 19

# The Role of the Media in Promoting and Reducing Tobacco Use

**Executive Summary** 

U.S. DEPARTMENT
OF HEALTH AND
HUMAN SERVICES
National Institutes
of Health

#### **Foreword**

When I first started TV work with the ABC affiliate in Boston in 1972, broadcast television was king, with a realm dominated by only ABC, CBS, and NBC. Even though I got into the business by accident and had no formal training in media, I quickly understood the power of the airwaves to influence the minds and hearts of viewers. I also became very conscious of the attendant responsibility to be accurate and understandable, remembering Mark Twain's admonition (loosely phrased) to beware of reading health books because mistakes can kill you.

Perusing the information in this enormously informative volume, I was once again reminded of those elemental emotions: exhilaration about the opportunities offered by media and anxiety about the potential for misuse. Any phrase or sound bite can affect millions of people. In dealing with tobacco, I think the power of this potential must never be forgotten. Tobacco captivates people when they cannot rationally resist its siren call and can unleash a slow, deadly disease that can kill them even as they try to escape the tenacious trap of addiction. So those of us given the privilege of access to media should be aware of our own responsibilities in the fight against tobacco use—including the need to choose words and images to counter misinformation and temptation aimed at the young entrusted to our care.

I have come to believe that unless we think and feel that we are fighting a lethal battle against tobacco use, we will not succeed in stemming the forces that would promote it. This volume contains a wealth of information about how tobacco companies use media to their benefit. I predict that, like me, even though you have seen them in action, you will be amazed by the tactics used to promote tobacco. Tobacco use is a social phenomenon largely propelled by mass media over the past century, led by tobacco industry professionals who constantly change strategies to reach their goals. They combine the resourcefulness of a profit-making industry with a changing media and regulatory landscape to sell a product that remains our greatest public health challenge. We will not remove tobacco from our society unless we are willing to understand the industry's constantly changing tactics.

But this volume provides encouragement—information about successful efforts to fight back. Again I was surprised by what can work and stimulated to think about new ways to take a stand and make a difference.

I invite you to consider this volume a valuable reference for understanding how media can be used in the war against tobacco. Keep it handy for wise counsel, strategic encouragement, and a partner in a noble cause.

Tim Johnson, M.D., M.P.H. Medical Editor, ABC News June 2008

#### **Message from the Series Editor**

This volume is the 19th of the Tobacco Control Monograph series of the National Cancer Institute (NCI). This series began in 1991 with a visionary blueprint for public health action on tobacco prevention and control. In the years since, it has disseminated important crosscutting research in areas such as the effectiveness of community-based and population-level interventions, the impact of tobacco control policies, the risks associated with smoking cigars and low-tar cigarettes, and systems approaches to tobacco control.

The subject matter of this monograph stands at the confluence of three major trends of the past century: the growth of mass media, the concomitant rise in cigarette smoking as a social phenomenon, and more recently, research to understand and to decrease the disease burden caused by tobacco use. Cigarettes are a product of the mass media era; the art and science of mass communications and mass marketing were critical to the growth of tobacco use in the past century. At the same time, however, the media have contributed significantly to the roughly 50% decline in smoking prevalence that took place over the past four decades, by increasing public knowledge of the health hazards of cigarette smoking, helping to change social norms about cigarette smoking, and increasing public acceptance of tobacco control policies.

This monograph summarizes what we have learned about the ability of the media to encourage and discourage tobacco use. There has been much interest in and study of media, and several government publications document the impact of advertising on tobacco use. This publication provides the most comprehensive and critical review and synthesis of the current evidence base in this area, drawing on work from many disciplines and research traditions. There is growing interest in applying what we have learned in tobacco prevention and control to other public health areas (such as dietary behavior). This monograph has important messages for public health researchers, practitioners, and policymakers as well as those in the communication science and media studies communities.

This monograph provides a comprehensive assessment of the literature on developing effective pro-health media messages and on policies to control tobacco marketing, both in the United States and abroad. This information is critical to support efforts to reduce the use of tobacco and the morbidity and mortality associated with its use. The evidence presented in this volume also underscores the need to continue to study and understand the ability of protobacco forces to change media strategies to adapt to a changing tobacco control policy environment.

We are pleased that Dr. Timothy Johnson, Medical Editor for ABC News, has provided the Foreword to this volume. As a physician who began working in television in 1972, he has a long-standing record of communicating the harmful effects of smoking to the public. His background and commitment provide invaluable perspectives about the power of the media and why this monograph is so important for tobacco prevention and control.

Stephen E. Marcus, Ph.D. Monograph Series Editor June 2008

#### **Preface**

The work presented in the National Cancer Institute's Tobacco Control Monograph 19, *The Role of the Media in Promoting and Reducing Tobacco Use,* is the most current and comprehensive distillation of the scientific literature on media communications in tobacco promotion and tobacco control. This ambitious effort to synthesize the science bridged the disciplines of marketing, psychology, communications, statistics, epidemiology, and public health and represents the combined efforts of five scientific editors, 23 authors, and 62 external peer reviewers.

The six main parts of this monograph deal with aspects of media communications relevant to tobacco promotion and tobacco control. Part 1, an overview, frames the rationale for the monograph's organization and presents the key issues and conclusions of the research as a whole and of the individual chapters. This section describes media research theories that guided this assessment of the relationship between media and tobacco use, which can be viewed as a multilevel issue ranging from consumer-level advertising and promotion to stakeholder-level marketing aimed toward retailers, policymakers, and others.

Part 2 further explores tobacco marketing—the range of media interventions used by the tobacco industry to promote its products, such as brand advertising and promotion, as well as corporate sponsorship and advertising. This section also evaluates the evidence for the influence of tobacco marketing on smoking behavior and discusses regulatory and constitutional issues related to marketing restrictions.

Part 3 explores how both the tobacco control community and the tobacco industry have used news and entertainment media to advocate their positions and how such coverage relates to tobacco use and tobacco policy change. The section also appraises evidence of the influence of tobacco use in movies on youth smoking initiation. Part 4 focuses on tobacco control media interventions and the strategies, themes, and communication designs intended to prevent tobacco use or encourage cessation, including opportunities for new media interventions. This section also synthesizes evidence on the effectiveness of mass media campaigns in reducing smoking. Part 5 discusses tobacco industry efforts to diminish media interventions by the tobacco control community and to use the media to oppose state tobacco control ballot initiatives and referenda. Finally, Part 6 examines possible future directions in the use of media to promote or to control tobacco use and summarizes research needs and opportunities.

Key lessons from this volume can inform policymakers as well as scientists and practitioners. Most critical from a policy standpoint is the conclusion, supported by strong evidence, that both exposure to tobacco marketing and depictions of tobacco in movies promote smoking initiation. A fundamental theme throughout this monograph is the dynamic interplay between tobacco promotion and tobacco control, whereby action in one area produces change in the other. For example, when limits have been placed on tobacco promotion, the tobacco industry typically has resisted, evolving alternative strategies to effectively reach current and potential smokers with media messages that promote its products.

In the United States in 2005—the same year in which 2.7 million American adolescents aged 12 to 17 used cigarettes in the past month¹ and 438,000 Americans died prematurely from diseases caused by tobacco use or secondhand smoke exposure²—the tobacco industry spent \$13.5 billion (in 2006 dollars) on cigarette advertising and promotion,³ an average of \$37 million per day. The tobacco industry continues to succeed in overcoming partial restrictions on tobacco marketing in the United States, and tobacco marketing remains pervasive and effective in promoting tobacco use. Efforts to curb the depiction of tobacco use in movies have increased in recent years, and the evidence reviewed here indicates that progress in this area could be expected to translate into lower rates of youth smoking initiation in the future.

Strong evidence indicates that media campaigns can reduce tobacco use. This underscores the importance of adequately funding mass media campaigns and of protecting them from the tobacco industry's efforts to impede them. The monograph provides guidance about the types of media campaign messages that are most and least likely to perform well.

This volume highlights the complexities of assessing the media's influence on tobaccorelated attitudes and behavior. The ubiquity of the media means that randomized controlled trial designs are typically not feasible, so other study approaches must be used to assess causality of associations between exposures and outcomes. Accordingly, a vast range of research—from experimental forced-exposure studies in the laboratory to survey and cohort studies of populations—is reviewed.

The monograph editors hope that the evidence gathered and synthesized in this volume will facilitate progress in tobacco control in the United States and throughout the world. This review should be a valuable resource for those seeking to understand the effects of tobacco promotion and tobacco control media campaigns in their own jurisdictions as well as those charged with implementing aspects of the Framework Convention on Tobacco Control. Finally, this monograph contributes to a broader understanding of the media's past and potential roles to exacerbate or ameliorate other major public health problems of our time.

The Scientific Editors of Monograph 19 R.D., E.G., B.L., K.V., and M.W.

#### References

- Substance Abuse and Mental Health Services Administration. 2005. Results from the 2005 National Survey on Drug Use and Health. Office of Applied Studies, NSDUH Series H-27, DHHS Publication no. SMA 05–4061. Rockville, MD. http://oas.samhsa.gov/nsduh/2k5nsduh/2k5results.pdf.
- Centers for Disease Control and Prevention. 2006. Smoking and tobacco use fact sheet: Tobaccorelated mortality (updated September 2006). http://www.cdc.gov/tobacco/data\_statistics/Factsheets/ tobacco\_related\_mortality.htm.
- 3. Federal Trade Commission. 2007. Federal Trade Commission cigarette report for 2004 and 2005. http://www.ftc.gov/reports/tobacco/2007cigarette2004-2005.pdf.

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#### **Executive Summary**

This Executive Summary should not be considered a substitute for the comprehensive monograph. Although the Executive Summary provides a useful synopsis of the purpose, organization, and conclusions of the monograph, it is only meant as a starting point for researchers, practitioners, and policymakers in tobacco control and other areas of public health. Readers are encouraged to refer to the full monograph for an in-depth, peer-reviewed synthesis of the scientific evidence, as well as supporting references and other documentation.

Tobacco use is the *single largest cause* of preventable death in the United States. According to the Centers for Disease Control and Prevention, cigarette smoking is responsible for more than 400,000 premature deaths per year and reduces the life expectancy of smokers by an average of 14 years. This total exceeds the death toll of HIV/AIDS, substance abuse, motor-vehicle collisions, suicide, and homicide combined.<sup>1</sup>

In 1964, the first Surgeon General's report on smoking and health raised the alarm about the dangers of cigarette smoking.<sup>2</sup> Four decades later, despite a rapidly growing evidence base on the impact of tobacco use, 1 in 5 American adults continue to smoke<sup>3</sup> and more than 4,000 young people smoke their first cigarette each day.4 Illnesses caused by smoking cost the nation more than \$160 billion per year in health care expenditures and lost productivity. While tobacco use continues, evidence implicating the number of illnesses caused by tobacco continues to mount. Smoking plays a key role in the causation of lung, oral, laryngeal, and pharyngeal cancers. It has also been implicated in other cancers, such as those of the cervix. pancreas, and kidney, and has a substantial

impact on the prevalence of heart disease, emphysema, and pneumonia, among other health problems.  $^{5,6}$ 

Yet, the proportion of adults who are current smokers has declined from 42% in 1965 to 21% in 2006,3 and the percentage of ever smokers (aged 18–35 years) who have quit was 34% in 2006.7 More important for the future, youth smoking prevalence has declined substantially; between 1976 and 2006, the 30-day prevalence of current smoking (smoking on one or more occasions during the past 30 days) among high school students decreased from 39% to 22%.8 Given these promising trends, how does one explain the paradox of millions who successfully guit tobacco use while millions more initiate tobacco use and continue to smoke?

The history of tobacco control efforts to date ranges from educational and community-based efforts directed at smoking prevention and cessation to policy interventions such as tobacco tax increases, clean indoor air laws, and stricter enforcement of laws restricting youth access to tobacco products. 9 Against this backdrop, the monograph focuses on what remains one of the most important phenomena in both tobacco promotion and tobacco control: mass communications. A uniquely twentieth-century development, mass communications are the product of enterprises that are explicitly organized to produce and distribute information products such as news, entertainment, and advertising to inform, amuse, and/or sell commodities to the public. Analogous to the agent-vector-host-environment model for transmission of infectious diseases, mass media became a powerful vector that carried tobacco—the agent to a growing number of susceptible hosts throughout the country. Mass media have

also changed the fabric of the environment in ways that facilitate the movement of that agent (for example, by influencing social norms surrounding tobacco). At the same time, media play a critical role in tobacco control, helping to counterbalance the protobacco cues in the environment.<sup>10</sup>

The influence of the media and their role in product marketing represent one of the key developments of modern society. Effective advertising and promotion through media channels have created entire categories of human product and service needs beyond basic survival, which, in turn, have fueled the economic growth of communication media that include newspapers, magazines, radio, and television. Today, these media have evolved to become part of a global virtual society linked by channels such as the Internet, text messaging, and interactive gaming. As mass communications have bridged societies around the world, they have also magnified the impact of media on global public health. Over 80% of the more than 1 billion smokers worldwide live in developing countries, and the impact of globalization has led to an increase of more than 250% in cigarette exports from the United States alone in the decade preceding 2002.<sup>1,11</sup> Moreover, smoking prevalence in the developing world is rising as prevalence among developed nations continues to decline, with the United Nations projecting a 1.7% net global annual increase between 1998 and 2010. If current trends continue, more than one-half billion of the world's current inhabitants are predicted to lose their lives to tobacco use,12,13 underscoring the urgency of examining the media's role in global tobacco marketing.

At the same time, the media have an equally powerful role in influencing individuals and policymakers and have made critical contributions to the cause of tobacco control. Media channels hold the power to frame conceptual models, influence the

evolution of these models in the public's perceptions, and ultimately guide these perceptions toward the implementation of policy.<sup>14</sup> Tobacco control interventions have been inherently intertwined with the media, ranging from the antitobacco public service announcements broadcast on television under the Federal Communications Commission's (FCC's) Fairness Doctrine in the late 1960s<sup>15,16</sup> to the advertising restrictions of the 1998 Master Settlement Agreement and the advertising restrictions contained in the World Health Organization's (WHO's) Framework Convention on Tobacco Control. 17 Annual adult per capita cigarette consumption in the United States has declined from its peak level of 4,345 cigarettes in 1963 to a preliminary estimate of 1,654 in 2006, 18,19 a process that started with the media publicity surrounding the 1964 Surgeon General's report and continues through today's media advocacy efforts on behalf of tobacco control.

Despite these successes, tobacco use still accounts for nearly one-third of cancer deaths worldwide. As a result of growing international tobacco use, WHO predicts that deaths caused by tobacco will increase to 6.4 million per year by 2015, representing 10% of all deaths worldwide. These trends, combined with the interrelationships between tobacco and media, mean that it is critical to understand how exposure to media influences tobacco use and to explore ways to effectively leverage the media to improve the overall state of public health.

This Executive Summary provides a framework for understanding the relationship between tobacco and the media, methodological issues in researching mediarelated issues in tobacco, and an overview and summary of the specific areas addressed in the monograph. Subsequent sections present the conclusions of individual chapters, followed by the major conclusions of the volume.

# Tobacco and the Media: A Multilevel Perspective

A complete and comprehensive understanding of the role of mass communications in tobacco control and tobacco promotion requires a multilevel approach. At the individual level, one must examine how individual-level factors such as knowledge, beliefs, and attitudes influence and are influenced by tobaccorelated media messages and the channels in which the messages occur. At the organizational level, attention needs to be focused on (1) how the structure of mass media organizations and the practices of media practitioners lead to the production of media messages in the form of advertising, news, and entertainment; (2) how advocates for both the tobacco industry and tobacco control attempt to influence the news and entertainment media; and (3) the role of regulation and public policy in influencing tobacco communications. Finally, at the population level, it is important to consider the larger cultural environment that is shaped by the interplay of the tobacco industry, mass media, tobacco control researchers, advocates, and policymakers.

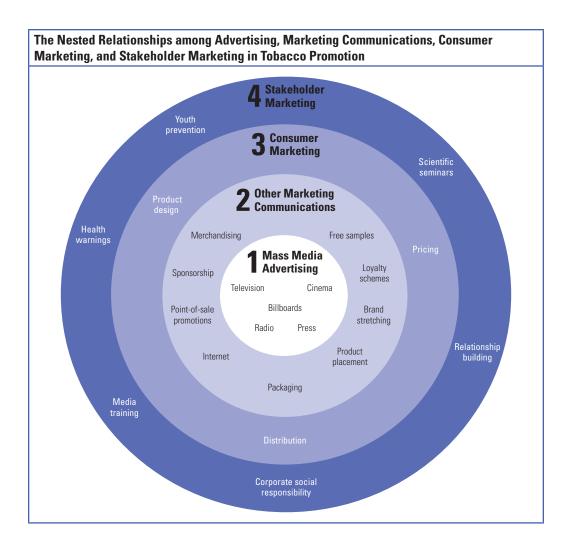
The media also function at several levels. and the levels at which stakeholders on both sides of tobacco issues interact with media can be seen as a nested relationship, as shown in the figure on the next page. Each level from 1 through 4 represents a broader and more indirect level of marketing effort, and at the same time, a more powerful one. For example, although the ultimate impact of media efforts may be felt most clearly by direct consumer response to advertising or marketing communications, interventions at the stakeholder level often have broad-reaching effects on promotional efforts, social attitudes toward an issue or product, or even policies and regulation.

The monograph attempts to examine the dynamics of tobacco-related media interventions at each of these levels, within a systemic framework.

The relationships among these levels and stakeholders on either side of the tobacco debate, and their relationships with chapters in the monograph, can be seen as follows:

**Advertising.** Cigarette advertising and promotion in the United States totaled more than \$13.5 billion in 2005 (in 2006) dollars),21 with effects that included recruiting new smokers, especially young smokers, as well as expanding the market for tobacco products by reinforcing smoking, discouraging quitting, and appealing to health concerns. Chapter 4 provides an overview of tobacco advertising and promotional efforts throughout modern history, while chapters 3 and 8 examine the rationales for and legal issues faced in regulating such efforts. Chapter 11 provides a detailed look at the strategies and themes of media efforts used by tobacco control advocates. Finally, chapter 14 explores how the tobacco industry uses media advertising and promotion to defeat state tobacco control referenda and ballot initiatives.

Marketing communications. Tobacco advertising forms part of an integrated marketing communications strategy combining sponsorship, brand merchandising, brand stretching, packaging, point-of-sale promotions, and product placement, across a broad range of channels ranging from event marketing to the Internet. <sup>22,23</sup> Chapter 3 explores key aspects of the branding process, and (along with chapter 4) defines these terms and strategies as they relate to tobacco. Chapter 6 examines tobacco manufacturers' corporate sponsorship efforts—i.e., those carried out in the name of the company but not connected to a specific tobacco product brand. Chapter 15, the monograph's concluding chapter, examines future issues



in tobacco promotion, including pointof-sale displays, discounting, and brand marketing, in the context of the current regulatory and social environment.

Consumer marketing. Consumer-product marketing efforts, including pricing, distribution, packaging, and product design, are aimed at the development of tobacco product brand identities that often are targeted toward specific demographic, psychographic, or ethnic markets.<sup>24,25</sup> Chapter 3 examines key principles of targeted marketing and communicating brand image, while chapter 5 looks in detail at common marketing themes used

by tobacco companies to reach their target audiences. An even more important issue is the effectiveness of such media efforts on targeted consumers. Chapters 7 and 12 review the impact of media interventions by tobacco industry and tobacco control advocates, respectively, on smoking behavior, while chapters 9 and 10 explore the role of the news and entertainment media in influencing tobacco use among consumers.

**Stakeholder marketing.** Image- and relationship-building initiatives aimed at stakeholders, such as retailers, the hospitality industry, and policymakers, range from personal outreach to mass media

organizations and public relations efforts around broad themes such as corporate social responsibility, youth smoking prevention, and providing information on health risks. <sup>26–28</sup> Chapters 6 and 9, discussed previously, explore corporate advertising and news media advocacy as tools to create an image among stakeholders, while chapter 13 addresses how the tobacco industry uses stakeholder marketing efforts in an attempt to mitigate the impact of tobacco control media interventions on tobacco product sales.

These integrated levels of marketing and promotion pose a challenge to the goals of tobacco control and public health and underscore the need to further examine appropriate policy interventions to address the role of media efforts by the tobacco industry. Moreover, as direct advertising channels have become increasingly restricted by policy interventions on both the domestic and global levels, promotional expenditures for tobacco continue to increase in areas such as point-of-purchase displays, promotional allowances, and viral, or "stealth," marketing. 21,24,25,29,30 Given these trends and the realities of a digitally interconnected age, public health stakeholders must continue to monitor the relationship between media and tobacco use as both evolve in the twenty-first century.

### Studying the Media and Tobacco

As is the case with most social science research, assessing causality is a significant challenge—in this instance, in determining the relationship between mass communications and tobacco-related outcomes. Establishing causality is even more challenging in the case of mass communications, given their ubiquity, the complex nature of communication effects, and the limitations of research designs. Major challenges in assessing causality in media studies include the following:

- Media effects are complex and multidimensional:32 (1) media can have short-term effects such as the impact of a short burst of advertising on consumer attitudes and behaviors—for example, on sales of cigarettes—and long-term effects that are stable and sustained, such as on social norms and values: (2) media influence may be at the micro level, such as on individual cognitions, affect, and behavior, or at the macro level, influencing social policies, social movements, and social actors; (3) some effects may alter norms or opinions, such as changing norms regarding tobacco use, while others may stabilize and reinforce existing norms on smoking; (4) the effects of media can accumulate after sustained exposure to messages or be noncumulative: (5) media influence may range from effects on individual cognitions or attitudes to direct behavior; (6) some media effects are direct and others conditional: and (7) media effects can be as diffuse as general exposure to media or can be content specific.
- It is difficult to establish control groups. In epidemiology, some consider the randomized clinical trial as a gold standard that can clearly establish the difference in "exposures" between control and treatment groups. The fundamental assumption behind the idea of a control group is that the members of this group are not exposed to "treatment," in contrast to an intervention group that is exposed to treatment.<sup>5</sup> In the case of media, it is often difficult to confine the spread of messages to specified geographic areas, control for prior exposure or "background" exposure to the messages, blunt the impact of competing messages, and achieve sufficient exposure to messages in the treatment group so that it can be distinguished from controlgroup exposure.
- As noted above, media effects, particularly in the complex domain of health,

may take longer to establish, whereas most research designs may not have observations for a sufficiently long duration to document the effects.<sup>31</sup> A research design with observations over a short duration may not be able to document media effects adequately.

- Media effects can be selective for certain population subgroups; that is, not all groups are equally influenced by the media. For example, evidence shows that information campaigns or diffusion of information could potentially benefit some groups more than others.<sup>10,33</sup>
- Media effects are not always direct but instead may be diffused through others.<sup>31</sup> For example, a campaign to promote a tobacco quitline may reach a smoker only through a family member or friend who is exposed to the campaign and shares messages with the smoker. If the observations are limited to those receiving quitline services, one might underestimate the effectiveness of the campaign.
- Last, the all-pervasive nature of the media environment includes both messages of interest as well as background "noise."

Given these challenges, no single study method or design is likely to provide the weight of evidence necessary for causal inferences regarding the influence of mass communications on tobacco control or tobacco promotion. What is needed is a combination of methods, designs, interpretive techniques, and judgments that provides a body of evidence to enable an overall assessment of the relationship between media and outcomes pertaining to tobacco use.34 In assessing the impact of media, studies should examine how media messages are generated (e.g., interplay between journalistic practices and tobacco industry efforts to influence news coverage), the nature of the media environment (how news on tobacco use

and its effects are covered or the depiction of tobacco use in entertainment media), and the impact of the media environment on a range of tobacco-related outcomes. The phrase "range of tobacco-related outcomes" is worth underscoring here. Unlike epidemiological studies in many other fields of research—in which exposure-outcome relationships are more straightforward—it is not always easy to establish a direct causal link between media messages and behavior. Often, as discussed above, media effects could be on antecedents to behavior such as beliefs, norms, and intentions. Focusing on behavior alone could lead one to falsely conclude that media effects are weak.

The monograph reviews studies based on multiple research designs and methods including surveys, field and laboratory experiments, and analyses of media content and tobacco industry documents. Studies based on surveys of population groups or subgroups have the advantage of observing people in their natural environment, do not interrupt or disrupt their routines, and are generalizable. What is gained in external validity, however, is traded against internal validity in the form of controlling for extraneous factors. The choice of these control variables is often important. Surveys can be single or repeated crosssections, or they can be longitudinal (or panel) designs in which the same persons are interviewed at different points in time. The latter method can be guite effective in measuring change over time and can be an important contributor to providing evidence of causality.

Experiments, particularly laboratorybased experiments, provide the advantage of internal validity and are helpful in confirming causal relationships. These experiments, however, are often limited in terms of the rather forced nature of exposure, unnatural viewing situations, and the limitations of the experimental populations, which are often college students. Field experiments have the potential to increase external validity, while maintaining a degree of internal validity, but are subject to a number of sources of error, as discussed by Cook and Campbell in their classic work on quasi-experimental designs.<sup>35</sup>

Analyses of media content can be both quantitative and qualitative. The analysis of news content on tobacco for example, as reviewed in chapter 9, demonstrates how systematic analysis of news coverage can provide an understanding of the news to which consumers are likely to be exposed. This facilitates the interpretation of the impact of news content on audiences exposed to news. Systematic content analyses require that the criteria for classifying media content be explicit and formal and that the classification, or coding, be done by more than one coder. Documentary analysis (e.g., the analyses of tobacco industry efforts to influence media) may not be "systematic" but may rely more on expert judgment. This analysis can be considered valid as long as the criteria for interpretation are transparent and the inferences are plausible in light of the evidence from other methods.

In summary, the monograph relies on the totality of evidence from multiple studies using a variety of research designs and methods to understand the effects of media on tobacco promotion and tobacco control. The evidence is based on consistency, strength of associations, and theoretical plausibility.<sup>5,34</sup>

# Preparation of the Monograph

The National Cancer Institute's Tobacco Control Research Branch invited five experts representing the domains of medicine, public health, communications, marketing, epidemiology, and statistics to serve as editors of the monograph.

This ambitious effort to synthesize the science included the contributions from 23 authors selected for their individual expertise. The monograph was subjected to a rigorous review process, which began with a review of the monograph outline. As each chapter was drafted, the chapter was reviewed by multiple peer reviewers with expertise on the individual topic. When the entire volume was complete. the full draft was submitted to expert reviewers who evaluated the monograph as a whole, who related one chapter to another, and who ensured that the volume level conclusions were supported by the monograph's content. The National Cancer Institute conducted the final review before the monograph was printed. Comments from 62 expert reviewers formed the basis of revisions the authors and volume editors made to the monograph. All of these efforts have culminated in a monograph that includes nearly 2,000 references, 44 tables, 15 figures, and numerous illustrative examples used in the media to promote and to discourage tobacco use.

The monograph is supported by its Web page, http://www.cancercontrol.cancer.gov/tcrb/monographs/19/index.htm, where supplemental materials for the monograph (fact sheets and presentation slides) and links to additional resources on the media and tobacco are located.

## Monograph Organization

The monograph reflects a comprehensive examination of how mass media have been used in both tobacco promotion and tobacco control by various stakeholders and the consequences of such use. This examination included reviewing

 different types of media, such as news, television, advertising, movies, and the Internet;

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