II. Mass-Reach Health Communication Interventions

Justification

Mass-reach health communication interventions can be powerful tools for preventing the initiation of tobacco use, promoting and facilitating cessation, and shaping social norms related to tobacco use.[1,2] The Community Preventive Services Task Force recommends mass-reach health communication interventions on the basis of strong evidence of effectiveness in: decreasing the prevalence of tobacco use; increasing cessation and use of available cessation services such as quitlines; and decreasing initiation of tobacco use among young people.[3]

Mass-reach health communication refers to the various means by which public health information reaches large numbers of people. The term "mass-reach" has been added to the description of health communication interventions in this edition of *Best Practices* because the available evidence suggests that the use of mass-reach vehicles, in particular television, is required to make meaningful changes in population-level awareness, knowledge, attitudes, and behaviors.[3]

Impact of Tobacco Advertising and Promotion

Billions of dollars are spent annually by tobacco companies to make tobacco use more affordable and attractive, as well as an accepted and established part of American culture.[4,5] Young people are particularly vulnerable to social and environmental influences to use tobacco. Messages and images that make tobacco use appealing to them are everywhere.[2,6] For example, youth and young adults see smoking in movies, video games, Web sites, in their social circles, and throughout the communities where they live. Tobacco marketing portrays smoking as a social norm, and young people exposed to these images are more likely to smoke. Nonsmoking adolescents exposed to tobacco advertising and promotional campaigns are significantly more likely to become young adult smokers.[2,7,8] Youth who are exposed to images of smoking in movies are more likely to smoke. Those with the most exposure to onscreen smoking imagery are about twice as likely to begin smoking as those with the least exposure.[2] Evidence also indicates that tobacco purchase and cessation behaviors among adult smokers are influenced by tobacco promotion, particularly at the point of purchase.[9–11] Because youth and adults continue to be heavily exposed to pro-tobacco media, advertising, and promotion, public education campaigns are needed to prevent tobacco use initiation and to promote cessation.

Despite the 1998 Master Settlement Agreement (MSA) between 46 states and several major tobacco companies that established restrictions on tobacco marketing and some types of outdoor advertising, tobacco product promotion remains prevalent. In 2011, tobacco companies spent more than $8.3 billion, or approximately $23 million per day, to market cigarettes in the United States;[4] this level of spending exceeded spending on tobacco prevention and control efforts by all of the states and territories by a ratio of approximately 18 to 1.[4,12] In addition, marketing expenditures for smokeless tobacco exceeded $452 million in 2011—more than double the spending in 2000.[5] Although the majority of current tobacco marketing comprises price discounts, which offset the impact of excise taxes on tobacco use, traditional tobacco company advertising and marketing spending, at more than $700 million in 2011, still far exceeds the $175 million spent on public health-sponsored antitobacco campaigns by the states and CDC.[4,5,13] Since the MSA, tobacco promotions have shifted away from traditional media (e.g., billboards and magazines) and moved toward digital media and retail outlets,[2,14–17] and tobacco companies are increasingly using tobacco product packages (e.g., shapes, colors, text) as a form of marketing.[18,19] In addition, tobacco companies are re-entering the television market as they acquire or introduce electronic cigarette (e-cigarette) products and advertise these products.[20] For example, Lorillard, Inc. acquired the e-cigarette manufacturer blu eCig® in 2012 and was among the first companies to advertise an e-cigarette product nationally on television.[21]

Tobacco advertising and promotion are real threats to public health. The 2012 Surgeon General's report stated, "The evidence is sufficient to conclude that there is a causal relationship between advertising and promotional efforts of the tobacco companies and the initiation and progression of tobacco use among young people."[2] The National Cancer Institute's (NCI's) *Monograph 19* concluded that a causal relationship exists between tobacco advertising and promotion and increased tobacco use, including both increased smoking initiation and increased per capita tobacco consumption in the population.[19] Evidence-based strategies, including mass-reach health communication interventions, are needed to counter the negative impact of tobacco industry marketing efforts and protect public health.[19]

Effectiveness of Tobacco Countermarketing

The research literature provides ample evidence that tobacco countermarketing, which is the use of commercial marketing tactics to reduce the prevalence of tobacco use, can be a valuable tool in reducing smoking.[19,22] The NCI *Monograph 19* reviewed the available literature from 1970 through 2007 and found extensive evidence that tobacco countermarketing campaigns curbed smoking initiation in youth and promoted smoking cessation in adults, particularly in the context of comprehensive tobacco control programs.[19] A 2012 review further confirmed the efficacy of mass-media campaigns in reducing smoking among adults.[23] In addition, a 2013 study found that greater exposure to tobacco control mass-media campaigns may reduce the likelihood of relapse among quitters.[24]

Media campaign research and evaluations have shown that advertising that elicits negative emotions through graphic and personal portrayals of the health consequences of tobacco use is especially effective in motivating smokers to quit.[19,23,25] There is also evidence that this kind of approach to advertising messages reduces tobacco use among youth and young adults.[2,26] CDC's *Tips From Former Smokers (Tips)* campaign, the first federally funded, nationwide, paid-media tobacco education campaign in the United States, is an example of this approach. The first *Tips* campaign was conducted during March–June 2012 and featured former smokers talking about their experiences and their families' experiences living with diseases caused by smoking and secondhand smoke exposure.[27] In addition to a comprehensive earned media component, the *Tips* campaign included advertising on national and local television, local radio, online media, and billboards as well as in movie theaters, transit venues, and print media. A subsequent evaluation of *Tips* found that an estimated 1.6 million smokers attempted to quit smoking because of the campaign and that more than 100,000 of them would likely quit smoking permanently.[26] Additionally, the 2012 *Tips* campaign and a subsequent 2013 *Tips* campaign resulted in immediate and significant increases in state quitline call volumes, which rapidly declined to baseline levels upon completion of these campaigns.[26,27]

There have been fewer studies examining the effectiveness of tobacco countermarketing campaigns among population subgroups that bear a disproportionate burden of tobacco-related disease and death. However, some studies have assessed the potential differential impact of mass-media campaigns by socioeconomic status (SES). A 2012 review found evidence to suggest that general-population campaigns may be effective for encouraging quitting in low SES smokers if the campaigns have sufficient reach, frequency, and duration.[23] A 2012 study in New York state found increased quit attempts among both the general population and low-SES groups who were exposed to strongly emotional and graphic antismoking advertisements.[25]

Over the past decade, states have remained an important source of innovative countermarketing content; however, many have also found that they can save time, money, and the risks associated with new advertisement development by adapting existing advertisements from other states, cities, national governmental agencies, or other countries. For example, New York City has used advertisements from Australia, England, Massachusetts, California, and Minnesota; Florida has used advertisements from Australia, California, Washington State, and New York City; and Minnesota has used advertisements from Canada, California, Vermont, Ohio, Arizona, and CDC.[28] Many of the advertisements were found in CDC's Media Campaign Resource Center (MCRC) database.[28]

In addition to the importance of effective messaging strategies, research from many sources shows that tobacco countermarketing campaigns must have sufficient reach, frequency, and

duration to be successful.[24,27,29–31] A key goal for tobacco control campaigns is to reach a defined target audience with attention-getting messages in the most efficient and effective way possible. Media buying, which typically includes how placements are purchased, the channels selected, and how the budget is allocated across channels, is an integral part of an overall strategy.

Evidence also suggests that earned media, which is the process of securing free news placements in a variety of media outlets through dedicated efforts to communicate key messages, can contribute to tobacco countermarketing campaign effectiveness. Local and statewide earned media campaigns have been shown to effectively support key tobacco control goals, including increasing calls to a state quitline, influencing smoking knowledge, attitudes, and behavior among youth, and implementing changes in local tobacco control policy.[32–35]

Digital media, including electronic delivery of information via Web sites, mobile applications, and social networking sites, are emerging and promising vehicles for reaching and influencing key target audiences. However, there is not yet sufficient evidence to draw conclusions or to make formal recommendations on the efficacy or ideal use of these media at this time. The measurement and evaluation of digital media interventions are critical to help build an evidence base, to gauge their effectiveness, and to optimize future digital media interventions. Given that the tobacco industry is allocating significant funding to these media,[4,5] use of digital media is likely a promising area for states to consider.

Recommendations

An effective state mass-reach health communication intervention delivers strategic, culturally appropriate, and high-impact messages via sustained and adequately funded campaigns that are integrated into a comprehensive state tobacco control program effort. Typically, effective health communication interventions and countermarketing strategies employ a wide range of efforts, including:[22]

- Paid television, radio, out-of-home (e.g., billboards, transit), print, and digital advertising at the state and local levels
- Media advocacy through public relations/earned media efforts (e.g., press releases/conferences, social media, and local events), which are often timed to coincide with holidays, heritage months, and health observances
- Health promotion activities, such as working with health care professionals and other partners and promoting quitlines
- Efforts to reduce or replace tobacco industry sponsorship and promotions as well as to decrease movie smoking imagery

Innovations in health communication interventions include the ability to target and engage specific audiences through multiple communication channels, such as online video, mobile Web, and smartphone and tablet applications (apps). Social media platforms, such as Twitter and Facebook, have facilitated improvements in how messages are developed, fostered, and disseminated in order to better communicate with target audiences and allow for relevant, credible messages to be shared more broadly within the target audiences' social circles. However, these platforms are complements to, not substitutes for, traditional mass media. Because data on the contribution of digital media efforts to reaching tobacco countermarketing campaign goals are still emerging, evaluation of digital media efforts can help determine effectiveness and establish an evidence base.[22]

Behavior theory, audience insight research, pretesting of campaign materials, and surveillance and evaluation are grounded in communication science and are used to develop interventions that target specific audiences with messages that can change awareness, knowledge, attitudes, and behaviors. Examples of these audiences include adult tobacco users, youth, and high-risk populations such as members of the lesbian, gay, bisexual, and transgender (LGBT) communities, those with lower socioeconomic status, and certain races such as American Indians. These methods are often used to identify key strategies, influential messages, and the most effective communication channels and media options to reach specific audiences. However, ensuring that messages resonate with specific population subgroups does not require that unique materials be developed for each audience. Evidence has confirmed that strong ads, such as those that graphically or emotionally portray the serious consequences of smoking, resonate well with a

wide variety of audiences.[19,23] Advertising concepts and advertisements can be tested among specific target audiences to ensure that they communicate persuasively, and media buying can be tailored, when feasible, to ensure appropriate reach of those audiences.

Effective media planning works within the total framework of a mass-reach health communication campaign's goals. For an overall campaign, it is estimated that advertisements should reach 75% to 85% of the target audience each quarter of the year, with a minimum average per quarter of 1,200 gross rating points (GRPs) during the introduction of a campaign and a minimum average of 800 GRPs per quarter thereafter.[22,23,29,36] GRPs track the total reach and frequency of the campaign. A campaign is expected to run at least 3 to 6 months to achieve awareness of the issue, 6 to 12 months to influence attitudes, and 12 to 18 months to influence behavior,[22,29] although some campaigns, including CDC's *Tips* campaign, have influenced behavior within a 3-month time frame.[26,27] Campaigns need to overcome pro-tobacco marketing influences; thus, it is important to set reasonable expectations of effectiveness. In addition, campaigns must run as continuously as possible because their impact can diminish over a relatively short time period.[26,27,37–39] For more information regarding the media planning process, consult CDC's countermarketing manual, *Designing and Implementing an Effective Tobacco Countermarketing Campaign*.[22]

The experiences of many states, including New York, California, Florida, Massachusetts, and Minnesota; the national organization Legacy (formerly the American Legacy Foundation); and CDC emphasize that message content of tobacco control campaigns is very important. Messages that elicit strong emotional response, such as personal testimonials and viscerally negative content, produce stronger and more consistent effects on audience recall, knowledge, beliefs and quitting behaviors.[2,22,25,26,40] Aggressive state and national countermarketing campaigns that have more directly confronted the tobacco industry's marketing tactics have also demonstrated effectiveness, but have often become targets for budget cuts.[41–43]

Resources such as CDC's countermarketing manual and the MCRC database can be used to develop effective communications plans and to acquire effective advertisements cost efficiently.[22,28] The countermarketing manual is a toolkit with chapters on all major aspects of campaign development, and MCRC is a clearinghouse of tobacco-related media campaign materials produced by states and other organizations that other states can adapt and reuse. Evidence suggests that it is not necessary to develop new advertising,[44–46] particularly considering the availability of existing advertisements in the MCRC — many of which have been used with very effective results.[28] Typically, new advertising should be developed only when a campaign objective is unique enough that existing advertisements may not address it, when a campaign needs to publicize a local event (e.g., a quitting program or implementation of a new smokefree law), or when another unique situation arises.

Comprehensive earned media efforts are an essential part of the strategic plan, regardless of the size of one's media campaign budget, but especially when funds are limited. Additionally, each major campaign element and activity should have an earned media component. Although paid media benefits from the ability to control the message and the placement, news media coverage is important because it can help set the public agenda, influence what people are talking about, and further broaden and add credibility to paid messages. Examples of earned media tactics include: establishing relationships with journalists to become a trusted, responsive, and knowledgeable resource; issuing press releases; scheduling editorial board briefings; holding events to generated media coverage; writing letters to the editor; and training spokespeople for interviews.[22,28,32–34]

In addition to providing sufficient reach, frequency, and duration, effective media and mass-reach health communication intervention efforts will benefit from the activities identified in the following box.

Beneficial Activities for Effective Media and Mass-Reach Health Communication Intervention Efforts

- Audience insight research to determine the current knowledge, attitudes, and behaviors of target audiences, as well as the motivations and behavioral theory that can best influence change among specific audiences.
- Formative research to identify promising messages and concepts.
- Formative evaluation to pretest campaign materials to ensure that they are clear, credible, and persuasive and that they motivate the audience to change their attitudes and behaviors.
- Surveillance to understand pro-tobacco messaging, media placements, and marketing tactics.
- Local media promotion, event sponsorships, and other community collaboration tie-ins to support and reinforce the statewide campaign, increase awareness about policies that protect and promote health, and shift social norms related to tobacco use.
- Digital technologies, such as text/SMS messaging, social media, Web sites, and blogs to generate messages that can be further disseminated by the target audience.
- Process and outcome evaluation of a comprehensive communication effort, as well as specific evaluations of new and innovative approaches, including the use of digital media.
- Promotion of available services, including the state's telephone cessation quitline number or the quitline portal numbers (1-800-QUIT-NOW, 1-855-DÉJELO-YA), as well as quitting Web sites and social media pages.

Achieving Equity to Reduce Tobacco-Related Disparities

Recognition of, and sensitivity to, diverse audiences is critically important in tobacco control mass-reach health communications campaigns, particularly to address disparities in tobacco use and corresponding inequities in tobacco-related health outcomes across population groups. The experiences of multiple states and CDC have shown that mass-reach health communication campaign funds can be efficiently and effectively used to reach and influence populations with the greatest tobacco-related burden through carefully-planned formative research that determines which messages and approaches resonate powerfully across diverse audiences, as well as thoughtful media placement that reaches key audiences where and when they are most receptive to the messages.

Television advertisements that are not tailored by audience segment are frequently used by state tobacco control programs in an effort to ensure the broad and consistent delivery of key messages. This approach is supported by evidence suggesting that there are some universally strong messages for tobacco prevention education advertisements, such as the serious negative effects of smoking on the body and the emotional impact on family members, and that these types of messages are effective across a broad spectrum of geographies and populations without requiring significant tailoring.[19,23,47] However, it is still important to consider and address audience diversity when developing or selecting advertisements. For example, testimonial advertisements could feature individuals of varied sexes, ages, race/ethnicities, sexual orientations, gender identities, or other population characteristics. At the national level, CDC's *Tips* campaign featured testimonials of former smokers from multiple population groups with high rates of tobacco use.[27]

Some state tobacco control programs also tailor media buys to reach specific audience segments within general-population campaigns. For example, certain population subgroups may be more likely to listen to radio, while others may be more likely to read language-specific print materials or to engage in social media. States can use these media channels to cost efficiently supplement television placements. For example, to reach low-SES male audiences, North Carolina placed an advertisement in a NASCAR publication and distributed earplugs with the state's quitline number at the race. Similarly, New York purchased placement on a sports cable network and used baseball-themed advertisements from Florida and Massachusetts. To reach American Indians and Alaska Natives, CDC purchased placements on radio networks and regional print publications targeted to these audiences.

When planning and developing a mass-reach health communication campaign, the most critical considerations are that the messages resonate effectively with each priority audience and that the tailored media placements help ensure that each key audience notices and internalizes those messages. Taking into account these considerations should ultimately help increase the likelihood that the messages lead to meaningful changes in tobacco-related knowledge, attitudes, and behaviors.

Budget

Mass-reach health communication efforts must be adequately funded, sustained over time, and integrated with other program activities in order to counter tobacco industry marketing, reduce tobacco use initiation, increase cessation, and reduce exposure to secondhand smoke.

Campaigns of longer duration and higher reach and frequency are associated with greater declines in smoking rates.[2,22,23,48] Future funding for national campaigns sponsored by CDC, Legacy, and other organizations remains uncertain, and even if federal mass-media campaign efforts are conducted during some years, they are not sufficient alone and should not take the place of state-level media campaigns. Therefore, states may want to plan to provide the primary budget for mass-reach health communication interventions to ensure broad population-level exposure to messages that address the goals of a comprehensive tobacco control program. The three major content areas of these messages include:

- Motivating tobacco users to quit
- Protecting people from the harms of secondhand smoke
- Transforming social norms to prevent tobacco use initiation

Budget recommendations should be sufficient to conduct mass-reach health communication campaigns in the state's major media markets addressing these three key content areas. Evidence suggests that if proven message strategies are used, such as personal and graphic portrayals of the negative health consequences of tobacco use, the same advertisements can be effective among both youth and adults,[2,19] thus maximizing the impact of limited funds. Funds can be competitively awarded to firms that understand a state's media markets, have experience in reaching culturally diverse audiences, have the ability to conduct market research and surveillance of counter-marketing efforts, and exhibit a willingness to review existing advertising before recommending that new advertising be developed. Additional guidance on selecting contractors for health communication interventions is available in *Designing and Implementing an Effective Tobacco Countermarketing Campaign*.[22]

Budget estimates for funding mass-reach health communication interventions are generally based on the *Best Practices—2007* funding formula, but the estimates have been revised based upon more recent state and national experiences. These evidence-based levels of media presence were used to calculate the *minimum* and *recommended* levels of spending (see Appendix A for more details).

The *minimum* budget level assumes that three campaigns are conducted each year to address the following goals: 1) motivating smokers to quit; 2) protecting people from the harms of secondhand smoke exposure; and 3) transforming social norms to prevent tobacco use initiation, with a delivery of an average of 1,200 GRPs per quarter for either one of the cessation or secondhand smoke campaigns (assumes it is an introductory campaign and, thus, requires higher levels) and a delivery of an average of 800 GRPs for each of the other two campaigns. The *minimum* budget level also assumes a 20% reduction in costs to account for efficiencies in message communication and media negotiation (reduced rates or bonus placements) that would be expected when conducting three campaigns simultaneously. The *recommended* budget level assumes delivery of campaigns with the same overall goals, with an average of 1,600 GRPs per quarter for one of the cessation or secondhand smoke campaigns and 1,200 GRPs per quarter for the other two campaigns, and a 20% reduction in costs based on message and media negotiation efficiencies.

This range of funding was applied to states according to the cost and complexity of their media markets, in part measured by the coverage provided by a state's designated market areas (DMAs). State-level cost estimates for buying televised air time in all 210 U.S. DMAs in 2014 were acquired by CDC in May 2013. States with counties that fall outside their primary DMAs may need to consider purchasing media in a neighboring state or using other vehicles, such as digital, in order to reach 75% to 85% of the target audience. Also, budgeting for cost-effective media campaigns is more

complicated for states having media markets that share major metropolitan areas with neighboring states, so such states may need to rely more on local vehicles (digital, out-of-home, newsprint, radio) and less on broadcast television to limit spending to reasonable levels. However, those placements may not easily translate to GRP levels.

It is important to note that the *recommended* level of media investment is for media placement only. Because they vary significantly across states, the following costs were not included in the budget estimates: advertising agency and media planning firm fees; audience insight research; pretesting of materials; advertising development and production; and talent fees.

In addition, the more campaigns a state conducts, the more staffing will be required. Although the *Infrastructure, Administrative, and Management* chapter of this report provides general funding levels for staffing, additional funds will be needed to support three unique multimedia campaigns. Also, additional funds may be needed to tailor the campaign to specific population groups, especially to ensure language appropriateness, through the use of unique messages, materials, or media vehicles. However, states can lower advertising development costs by using existing television, radio, print, and outdoor advertisements from CDC's MCRC.[28] Also, alternative forms of communication—such as direct mail, Web sites, blogs, social media and text messaging, and working through health care providers, other government organizations, and the news media—can extend the reach and frequency of messages, as can recruiting audiences to produce or adapt, place, and promote messages themselves through social media and other digital technologies.

In the event that available funding for mass-reach health communication interventions exceeds *minimum* levels and approaches *recommended* levels, state programs may want to consider allocating resources for elements related to the creation of their own advertisements, including audience insight research and advertisement development and production. It is important to note that these funding levels are general; thus, states may have to tailor certain factors—such as number of goals, campaigns conducted, and target audiences—to their unique situations.

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