

Advances in Public Communication Campaigns

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ABSTRACT

This chapter presents an overview of the recent literature on the persuasive effects of public communication campaigns. The scope of the review is substantial, ranging from traditional media to new technologies and from US settings to developing countries. The campaign topics primarily deal with health promotion, along with prosocial behavior and environmental reforms. The chapter examines key theoretical concepts, processes, and strategic guidelines, including campaign design, evaluation (formative, process and summative), types of effects (direct and indirect), messages (prevention vs. promotion vs. informational vs. persuasive, and appeals), message sources, mediated communication, and quantitative dissemination factors. The chapter then illustrates these guidelines with three campaign foci: drug use, smoking, and risky drinking.

Studying Public Communication Campaigns

Public communication campaigns encompass strategies for producing effects on knowledge, attitudes, and behavior across a variety of domains, including political, prosocial, environmental, and health outcomes. Definitions of public communication campaigns typically specify the following components: Purposive attempts to inform,

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persuade, or motivate behavior changes in a relatively well-defined and large audience, generally for noncommercial benefits to the individuals and/or society at large, within a given time period, by means of organized communication activities involving mass and online/interactive media, and often complemented by interpersonal support (Rice & Atkin, 2009). The theories, designs, and impacts of media-based public campaigns have been summarized by Abroms and Maibach (2008), Atkin (2001), Backer, Rogers, and Sopory (1992), Noar (2006), Rice and Atkin (2009), and Snyder and Hamilton (2002). This chapter focuses primarily on the role of media campaigns in health promotion, because political effects are covered elsewhere in this volume (Section V: In the Political Arena) and because the theory and literature on health campaign effects are far more advanced than for environmental and prosocial effects. The communication strategies described in this chapter complement and augment the components of the social marketing framework presented in Chapter 25.

The content coverage emphasizes persuasive aspects of campaigns, which are the more consequential and well-studied aspects compared to awareness-oriented or instructionally oriented campaign strategies. Because the research literature indicates that campaigns typically have only limited direct effects on behaviors, a key priority throughout the chapter is to identify concepts, processes, and strategies for increasing the effectiveness of public communication campaigns.

The strategic guidelines presented in this chapter draw upon models, processes, generalizations, and recommendations in the voluminous quarter-century research literature on campaigns and related forms of persuasive communication. Key book-length theoretical perspectives and reviews include Atkin and Wallack (1990), Edgar, Noar, and Freimuth (2007), Hornik (2002), Maibach and Parrott (1995), O'Keefe (2002), Rice and Atkin (2001), Salmon (1989), Stiff and Mongeau (2003), and Witte, Meyer, and Martell (2001).

The following sections briefly describe the main phases and components of communication campaigns: Campaign design, evaluation (formative, process and summative), types of effects (direct – focal segment, prevention/treatment – and indirect – interpersonal influencers, media and policymakers), messages (promotion/prevention, informational/persuasive, qualitative dimensions, persuasive incentive appeals), message sources, mediated communication (interpersonal, mass, digital/online), and quantitative dissemination factors. The chapter then provides a brief summary of a major campaign from each of three campaign foci: drug use, smoking, and risky drinking.

Campaign Design and Management

Campaign design begins with a conceptual assessment of the situation to determine opportunities and barriers and to identify which outcome behaviors would be performed by which people (Atkin & Salmon, 2010). The design specifies *focal segments* of the population whose practices are to be changed, and the bottom-line *focal*

behaviors that the campaign ultimately seeks to influence. The next step is to trace backwards from the focal behaviors to identify the proximate and distal determinants, and then create *models* of the pathways of influence via attitudes, beliefs, knowledge, social influences, and environmental forces. The next phase is to examine the model from a communication perspective, specifying *target audiences* and *target behaviors* that can be directly influenced by campaign messages. A sophisticated campaign will seek to impact the most promising pathways, guided by a comprehensive plan for combining manifold components, and an appropriate theoretical framework matched to the desired outcome and the relevant audiences and social systems.

Among the notable frameworks are the Ajzen and Fishbein (1980) theory of reasoned action, which combines attitudes and norms along with belief expectancies and values to predict behavioral intentions; campaigns can influence beliefs about the likelihood of experiencing positive and negative outcomes and other components of the theory. Ajzen, Albarracin, and Hornik (2007) present models that incorporate reasoned action approaches into the theory of planned behavior; this provides insight into the pathways of influence from campaign messages to behavioral outcomes. Likewise, viewers exposed to messages depicting rewards for actions exhibited by credible role models are more likely to perform similar behaviors, according to Bandura's (1986) social cognitive learning theory.

The integrative theory of behavior change (Cappella, Fishbein, Hornik, Ahern, & Sayeed, 2001) applies a combination of the health belief model, social cognitive theory, and theory of reasoned action in a campaign setting. The transtheoretical model (Prochaska & Velicer, 1997) identifies subgroups based on their current stage in the process of behavior change (precontemplation, contemplation, preparation, action, or maintenance). Slater (1999) integrates the application of media effects, persuasion, and behavior change theories in a stages-of-change framework. Over time, campaigns target specific audience segments at different stages of progression, which is now more feasible with new technology such as interactive websites.

Diffusion theory (Rogers, 2003) describes how new ideas and practices spread through interpersonal networks and the influential role played by opinion leaders. Opinion leaders tend to have greater exposure to media messages about a domain such as health, and are more likely to exercise informal influence over the attitudes and behaviors of friends and family members. A relevant application from the persuasion field is the dual processing conceptualization articulated in the elaboration likelihood model (Petty & Cacioppo, 1986) and the heuristic systematic model (Eagly & Chaiken, 1993); campaign strategists may design varied campaign stimuli operating via peripheral as well as central routes to attitude change. Glanz and Bishop (2010) review behavioral science theories used in public health interventions and campaigns.

Formative Research in Campaign Design

Effective design relies on the background information about the focal segments and interpersonal influencers collected in formative evaluation (Atkin & Freimuth, 2001).

Formative research is important in order to bridge the substantial gap between campaigners and their audiences, in terms of level of involvement in the topic, information holding, and attitudinal orientations. The first stage of formative evaluation involves preproduction information gathering to learn more about the situation and audiences. Databases, focus groups, and custom surveys provide useful understandings and insights into audience predispositions (e.g., current behavior patterns, values, attitudes, beliefs, and knowledge), channel usage patterns, and evaluations of prospective messengers and appeals. For community-based campaigns, researchers analyze communication networks, patterns of opinion leadership, and relationships among businesses and government agencies (Bracht, 2001).

In lieu of collecting customized preproduction information, designers can utilize available research programs with standard inventories of demographic and psychographic variables for use in campaign development. For example, the Centers for Disease Control and Prevention (CDC) licenses the annual American Healthstyles survey for audience analysis (CDC, 2009), and the Health Information National Trends Survey (HINTS) provides access to research on a representative US sample of adults on variables such as channel usage and risk perceptions (National Cancer Institute, 2009).

The second stage of formative research involves pretesting of rough message presentations to generate qualitative reactions in focus group discussion sessions and to measure quantitative ratings in message testing labs. Pretesting helps to determine whether the audience regards the message content and style positively (informative, believable, motivating, convincing, useful, on-target, enjoyable) or negatively (preachy, disturbing, confusing, irritating, dull). For example, pretesting can detect problematic elements that may trigger psychological reactance on the part of the audience, which can produce the dreaded boomerang effects that reinforce counter-productive behaviors.

Process Evaluation of Campaign Management

Process evaluation assesses both the design and management of the campaign, the extent to which designed elements have actually been implemented, and ways in which the campaign program can be improved for subsequent designers and implementers (Steckler & Linnan, 2006). Process evaluation is useful for maintaining ongoing awareness of, and identifying lessons for overcoming, social and structural obstacles, in community, workplace, school, state, and national campaigns. Such evaluation is often required by funding agencies, and provides valuable insights for subsequent campaign designers.

Summative Evaluation of Campaign Effects

After a campaign has been implemented, summative evaluation research is performed to assess outcomes. Valente (2002) summarizes the basic methodologies,

including field experimental, cross-sectional, cohort, panel, time-series or event-history designs, although qualitative components and mixed-methods evaluations provide unique, additional, and triangulated insights (see also Mertens, 2010; Noar, Palmgreen, & Zimmerman, 2009). Summative research can be conducted both during and after major campaign phases. Indeed, rigorous summative research requires designing-in evaluation activities right from the start, including baseline, ongoing (including usage data for online and interactive activities), end-of-campaign, and longer-term measures. At the individual level, evaluation researchers typically measure exposure and learning as well as effects on attitudes and behaviors. The preponderance of evaluation data suggests that campaigns are capable of exerting moderate to powerful influences on cognitive outcomes, less influence on attitudinal outcomes, and still less influence on behavioral outcomes (Atkin, 2001; Snyder & Hamilton, 2002). Further, behavioral outcomes tend to vary in proportion to such factors as the dose of information, duration of campaign activities, integration of mass and interpersonal communication systems, and integration of social-change strategies (enforcement, education, and engineering).

There are a number of reasons why a campaign does not attain a strong impact. Audience resistance barriers arise at each stage of response, from exposure to behavioral implementation. A major problem is simply reaching the audience and attaining attention to the messages (Hornik, 2002). Audience members are also lost at each subsequent response stage, including misperception of susceptibility to threatened consequences, denial of applicability of message incentives to self, defensive counterarguing against persuasive appeals, rejection of unappealing behavioral recommendations, and sheer inertial lethargy. Effectiveness of public communication campaigns is limited when receivers regard messages as offensive, disturbing, boring, stale, preachy, confusing, irritating, misleading, irrelevant, uninformative, useless, unbelievable, or unmotivating.

Evaluation may also assess the impact of the campaign on policymakers, organizations, and the community level. These outcomes usually involve alterations in environment factors (such as access to health resources, or changes in broader systems) that produce improvements in society (Rice & Foote, 2001). The population-wide consequences are typically examined via evaluation of aggregate changes in behavioral patterns to determine how fluctuations correspond to environmental variations.

Salmon and Murray-Johnson (2001) make distinctions among various types of campaign effectiveness, including *definitional effectiveness* (e.g., getting a social phenomenon defined as a social problem or elevating it on the public agenda), *contextual effectiveness* (e.g., impact within particular contexts such as education vs. enforcement vs. engineering), *cost-effectiveness* comparison (e.g., prevention vs. treatment, addressing certain problems over others), and *programmatic effectiveness* (e.g., testing campaign outcomes relative to stated goals and objectives).

It should be noted that campaign effectiveness is increasingly defined using relative rather than absolute standards. For example, a campaign may be deemed "effective" if it meets the objectives set by its planners. Indeed, some prescriptions for attaining

greater impact suggest that campaign planners set readily attained objectives. This does not improve campaign performance *per se* but it lowers the bar of expectation and, in so doing, increases the odds that the campaign will be viewed as a success.

Direct Effects on Focal Subpopulations

Most campaigns aim messages directly at the *focal segments* – at-risk subpopulations who might benefit from the campaign. The potential for direct effects depends on the relative prevalence of various types of receptiveness among target audience segments. A fundamental receptivity factor is stage of readiness to perform the practice; campaigns typically achieve the strongest impact with triggering or reinforcing messages designed for people who are already favorably predisposed. Another key audience segment includes those who have not yet tried the undesirable behavior but whose background characteristics suggest they are “at risk” in the near future; many may be receptive to persuasive messages. Those committed to unsuitable practices are not readily influenced by directly targeted campaigns, so a heavy investment of resources to induce discontinuation tends to yield a marginal payoff. Among focal targets, there are demographic, social, and psychological-based subgroups such as higher vs. lower income strata, high vs. low sensation-seekers (Palmgreen, Donohew, & Harrington, 2001), those experiencing psychological or social obstacles in accomplishing certain behaviors (Dervin & Frennette, 2001), and members of different cultures (Horner, Romber, Venable et al., 2008).

Indirect Effects on Interpersonal Influencers and Policymakers

A second effects strategy is to initiate an indirect or multistep flow by disseminating messages to potential *interpersonal influencers* who are in a position to personally influence focal individuals (Rogers, 2003). In a third effects strategy, the campaign may seek to alter the environment indirectly by aiming messages at societal and *organizational policymakers* who are responsible for devising constraints and creating opportunities that shape focal individuals' decisions and behaviors (Wallack & Dorfman, 2001). Rather than relying predominantly on direct persuasion, campaigners may attain greater impact by investing effort and resources in campaign components affecting indirect or secondary target audiences who can (a) exert interpersonal influence on focal individuals or (b) help reform environmental conditions that shape behavior. According to Salmon and Atkin (2003), mass media campaigns have considerable potential for motivating personal influencers in close contact with the focal individuals, as well as producing effects on institutions and groups at the national and community level.

The interpersonal influence process has been demonstrated in numerous projects utilizing the two-step flow from media to opinion leaders, a cornerstone of the

diffusion of innovations model (Rogers, 2003). Campaigns aim at opinion leader audiences because they tend to be more receptive to campaign messages, and their indirectly stimulated activities are more likely to be effective than campaign messages directly targeted to the focal segment. Interpersonal influencers can impact behavior through activities such as dispensing positive and negative reinforcement, exercising control via rulemaking and enforcement, facilitating behavior with reminders at opportune moments, and serving as role models. These types of interpersonal communication provided a significant boost to the media-oriented campaigns in the seminal Stanford heart disease prevention project (Flora, 2001); behavioral impact was greater in a condition where the mediated messages were supplemented by intensive face-to-face instruction and informal interpersonal influence. One key advantage of opinion leadership is that the influencers can customize their messages to the unique needs and values of individuals in a more precise manner than mediated messages.

Valente, Hoffman, Ritt-Olson, Lichtman, and Johnson (2003) showed that first identifying student opinion leaders and then creating groups by assigning students to their nominated leaders was a more effective structuring procedure in a school-based tobacco prevention program than either having a teacher naming the leader and group members, or randomly assigning group members to an opinion leader nominated by students. Students in the first condition had more improved attitudes and self-efficacy, and decreased intention to smoke, compared to the random condition. The effectiveness of social network-oriented media campaigns, typically targeted to friends and family members of the focal individuals to be influenced, is reviewed in the health domain by Abrams and Maibach (2008). Examples of the impact of social agents can be found in HIV prevention interventions (Durantini, Albarracin, Mitchell, Earl, & Gillette, 2006) and parent-child communication about alcohol (Surkan et al., 2003).

Individuals' decisions are strongly shaped by the constraints and opportunities in their societal environment, such as monetary expenses, laws, industry practices, entertainment role models, commercial messages, social forces, and community services. Policymakers in government, business, educational, medical, media, religious, and community organizations can initiate interventions that alter the environment. Thus another means of integrating media and interpersonal communication is to organize campaign activities at the community level, which can engage stakeholders to interface with government agencies, schools, or businesses (Bracht, 2001). Some reformers combine community organizing and media publicity to advance healthy public policies via *media advocacy* (Dorfman, Wallack, & Woodruff, 2005; Wallack & Dorfman, 2001). The media advocacy approach seeks to frame public health issues to emphasize policy-related environmental solutions rather than the usual focus on individual responsibility for good health. Activists generate news media coverage to mobilize the public to influence policymakers to enact reforms to address health problems, particularly relating to smoking and drinking (Dorfman

et al., 2005; Holder & Treno, 1997; Niederdeppe, Farrelly, & Wenter, 2007). Gaining consistent visibility in the news media is a key to achieving an agenda-setting effect, which is particularly important in media advocacy strategies targeted to opinion leaders and policymakers in society.

Through agenda setting on health issues, news coverage can shape the public agenda and the policy agenda pertaining to new initiatives, rules, and laws. An important element involves changing the public's beliefs about the effectiveness of policies and interventions that are advanced, which leads to supportive public opinion (and direct pressure) that can help convince institutional leaders to formulate and implement societal constraints and opportunities. When Freudenberg, Bradley, and Serrano (2009) analyzed a dozen case studies of health campaigns, they found that the most widely used strategies are coalition building, media advocacy, and public mobilization, followed by policy advocacy, community organization, litigation, letter-writing, and public protest. Collaboration with the business sector is rarely used. A common theme is that advertising and promotional campaigns attempt to target vulnerable groups (e.g., youth, minorities, females, low social-economic status segments) in order to gain new markets despite evidence that the product harms health; this provides the rhetorical basis for undertaking initiatives.

Message Types

Messages: Prevention versus Promotion

In influencing behavior, campaigns either attempt to promote positive behaviors (e.g., eat fruit, buckle safety belt, recycle paper) or to prevent problematic behaviors (e.g., consuming fats, driving while intoxicated, burning forests), see Chapter 26. Traditionally, prevention campaigns present fear appeals to focus attention on negative consequences of a detrimental practice, rather than promoting the desirability of a positive alternative. This approach is most potent in cases where harmful outcomes are genuinely threatening, or positive products are insufficiently compelling.

The social marketing perspective is especially applicable to promoting desirable behavior, which involves offering rewarding gains from attractive "products" (such as tasty fruit, the designated driver arrangement, or staircase exercising). In developing behavioral recommendations in promotional campaigns, designers can draw upon an array of options from the "product line." These target responses vary in palatability associated with degree of effort, sacrifice, and monetary expense; a central strategic consideration in determining the degree of difficulty is receptiveness of the focal segment (Kotler, Roberto, & Lee, 2002). The prolonged nature of campaigns enables the use of gradually escalating sequential approaches over a period of months or years.

Message Content: Informational vs. Persuasive

In many campaign situations, informational messages that seek to create awareness or provide instruction play an important role. Awareness messages present relatively simple content that informs people what to do, specifies who should do it, or provides cues about when and where it should be done. Even superficial messages can stimulate the audience to seek out richer in-depth content from elaborated informational resources such as web pages, books, and opinion leaders. The more complex instruction messages present “how to do it” information in campaigns that need to produce knowledge gain or skills acquisition, including enhancing personal efficacy in bolstering peer resistance and acquiring media literacy skills.

However, the central type of message in campaigns is the persuasive appeal. Most campaigns present messages featuring persuasive reasons why the audience should adopt the advocated action or avoid the proscribed behavior. The classic case involves the mechanism of attitude creation or change, usually via knowledge gain and belief formation. For audiences that are favorably inclined, the campaign has the easier persuasive task of reinforcing existing predispositions: strengthening a positive attitude, promoting post-behavior consolidation, and motivating behavioral maintenance over time. Because a lengthy campaign generally disseminates a broad array of persuasive messages, strategists often marshal a variety of appeals built around motivational incentives designed to influence attitudes and behaviors; the selection and organization of persuasive appeals is described in detail in subsequent sections.

Message Features: Qualitative Dimensions

A campaign encompasses a collection of individual messages varying in content, form, and style. Designing these messages involves the strategic selection of substantive material and creative production of stylistic features. In developing the combination of message components, the campaign designer seeks to emphasize one or more of five key message qualities (Salmon & Atkin, 2003). *Credibility* is the extent to which the message content is believed to be accurate and valid, and this qualitative factor is conveyed by the trustworthiness and competence of the source and the provision of convincing evidence. As more campaigns and their messages become accessible online, designers and evaluators need to become more familiar with the growing research on website and online credibility (Metzger, Flanagin, Eyal, Lemus, & McCann, 2003). Second, the style and ideas should be *engaging*, by using stylistic features that are superficially attractive and entertaining (or at least arresting), along with substantive content that is interesting, mentally stimulating, or emotionally arousing. To augment the influence on behavior, the presentation should be personally *relevant*, such that the receivers regard the recommendation as applicable to their situation and needs. Next, the *understandability* of the message contributes

to recipient processing and learning via presentation of material in a comprehensive and comprehensible manner that is simple, explicit, and sufficiently detailed. The final qualitative factor consists of *persuasive incentives*, the motivational appeals which are fundamental to the effectiveness of messages seeking to persuade the audience.

Message Appeals: Persuasive Incentives

Persuasive messages in public communication campaigns utilize a basic expectancy-value mechanism that is incorporated in several popular theoretical frameworks (theory of reasoned action, protection motivation theory, and health belief model). In this conception, messages primarily influence a collection of beliefs regarding the subjective likelihood of each outcome occurring, and attitudinal and behavioral responses are contingent upon each individual's valuation of these outcomes. The operational formula for preventing undesirable behaviors is *vulnerability x severity*, positing that the audience is maximally motivated by a high likelihood of suffering a very painful consequence. The incentive appeals often build on existing values of the target audience, so the messages tend to reinforce the predispositions or change beliefs about the likelihood of experiencing consequences.

For campaigns in the health domain, the basic dimensions of incentives include physical health, time/effort, economic, moral, legal, social, psychological, and aspirational aspects. Rather than over-emphasizing the narrow domain of negative health threats (e.g., death, illness, injury), campaigners are increasingly diversifying their loss-framed incentive strategies to include appeals not directly related to physical health *per se* (e.g., psychological regret, social rejection) and to give greater emphasis to gain-framed positive incentives (e.g., valued states or consequences such as physical well-being, saving money, social attractiveness; see Chapter 26, this volume).

One form of diversification of a campaign message mix is to increase the generally modest proportion of gain-framed incentives. Corresponding to certain negative consequences of performing the proscribed practice, there are mirror-image positive outcomes that can be promised. For example, the social dimension of positive social incentives includes gaining approval and respect, forming deeper friendships, building trust with parents, and being a good role model; examples of psychological gains include gaining control over one's life, positive self-image, attaining one's goals, feeling secure, or acting intelligently.

Regarding the number of different incentives, it is generally advantageous to use multiple persuasive appeals across a series of messages in a campaign, particularly when seeking to influence varied audiences. The key criteria for selecting incentives are the salience of the promised or threatened consequences, the malleability of beliefs about the likelihood of experiencing these outcomes, and pretest ratings of the persuasiveness of the potential arguments (see Cappella et al., 2001). These are identified and elaborated during the formative evaluation stage.

In conveying incentive appeals, campaign designers need to provide evidence to support claims made in messages. The type of evidence to be featured varies according to audience segment; for example, those who are knowledgeable tend to be more influenced by messages citing statistics or quoting technical experts, whereas dramatized case examples and testimonials by famous messengers may work better for low-involvement audience members (Perloff, 2003; Reinard, 1988). It should be noted that broad media audiences inevitably vary in predispositions, so special care should be taken when using extreme claims or selective factual information that may strain credulity and trigger counterarguing.

Message Sources

The *messenger* is the presenter appearing in the message who delivers information, demonstrates behavior, or provides a testimonial. Messengers help enhance each qualitative factor by being engaging (attractiveness, likability), credible (trustworthiness, expertise), and relevant to the audience (similarity, familiarity). These attributes can (a) attract attention and facilitate comprehension by personalizing message concepts, (b) elicit positive cognitive responses during processing, (c) heighten emotional arousal via identification or transfer of affect, and (d) increase retention due to memorability. The key categories of public communication campaign messengers are celebrities, public officials, topical expert specialists, professional performers, ordinary people, especially experienced individuals (e.g., victims or beneficiaries), and unique characters (e.g., animated or costumed).

Mediated Communication Channels: Mass and Digital

In disseminating messages, most campaign designers still rely on traditional broadcast and print channels that carry public service messages, entertainment-education placements, and news coverage. Websites carrying prepackaged informational pages have also been a central campaign vehicle since the late 1990s. In the past decade, campaigns have increasingly utilized interactive technology (e.g., blogs and microblogs, CDs and DVDs, tailored messages and websites, computer games, mobile phones).

In assessing each option for channeling campaign messages, myriad advantages and disadvantages can be taken into consideration along a number of communicative dimensions. Atkin and Salmon (2010) discuss channel differences in terms of *reach* (proportion of population exposed to the message), *specializability* (targeting specific subgroups or tailoring to individuals), *intrusiveness* (capacity for commanding atten-

tion), *participation* (active receiver involvement while processing stimulus), *meaning modalities* (array of senses employed in conveying meaning), *personalization* (human-relational nature of source-receiver interaction), *decodability* (mental effort required for processing stimulus), *depth* (channel capacity for conveying detailed and complex content), *credibility* (believability of material conveyed), *agenda setting* (potency of channel for raising salience priority of issues), *accessibility* (ease of placing messages in channel), *economy* (low cost for producing and disseminating stimuli), and *efficiency* (simplicity of arranging message production and dissemination). Channel appropriateness should be determined by the usage patterns of the priority or target audiences and the nature of the message, although compromises are made due to pragmatic factors shaped by resource limitations. Instead of paid TV ads, campaigns may rely on creative publicity techniques for generating news and feature story coverage in print media. Fortunately, certain topics in the health, safety, and environmental domains are considered to be attractive to professionals working at newspapers, women's magazines, TV newscasts, and daytime TV talk shows. The related practice of entertainment-education (Singhal, Cody, Rogers, & Sabido, 2004), which involves embedding campaign topic-related material in entertainment programming, is widely welcomed by media gatekeepers in developing nations; however, campaigners have attained only sporadic access in the US.

Health interventions and campaigns are increasingly emphasizing digital media technologies (Edgar, Noar, & Freimuth, 2007; Parker & Thorson, 2009; Rice & Atkin, 2008). New media offer additional dimensions of campaigning through interactivity, narrowcasting, and tailoring. *Interactivity* has two primary dimensions, direction of communication and level of receiver control over the communication process, which yield four kinds of relationships between the user and the source (monologue, feedback, responsive dialogue, and mutual discourse). Each of these relationships can be associated with specific design features, such as surveys, games, purchasing products or services, email, hyperlinks, and chat rooms. Rimal and Adkins (2003) suggest applying social marketing principles to *narrowcasting* via segmentation and targeting Internet users. *Tailoring* involves designing customized messages that reflect the individual's predispositions and abilities (Kreuter, Farrell, Olevitch, & Brennan, 1999; Noar, Harrington, & Aldrich, 2009). Tailored messages can match the theoretically relevant characteristics of narrowcast audiences, and interactive/individualized feedback facilitates motivation to adopt behaviors. Online-screening questionnaires assess factors such as readiness stage, stylistic tastes, knowledge levels, and current beliefs, and then direct them to narrowly targeted messages. Not only does this approach increase the likelihood of learning and persuasion, but it decreases the possibility of boomerang effects. Using new media in campaigns to foster interactivity, individually tailored messages, and mobile access increases the likelihood of desired outcomes (Strecher, 2007; Ybarra & Bull, 2007).

The Internet has become a major source for online information, discussion, therapy, and access to physicians (Rice, 2006). Online health-related social support groups can increase reported social support, quality of life, and self-efficacy in

managing one's health condition, and decrease reported depression, according to a recent meta-analysis (Rains & Young, 2009). The value of anonymity inherent in web information search and online discussion groups is valuable for private or sensitive topics (e.g., STD/HIV prevention and testing). Portnoy, Scott-Sheldon, Johnson, and Carey's (2008) meta-analysis of 75 randomized controlled health trials involving computer-delivered intervention found improved knowledge, attitudes, intentions, health behaviors, and general health maintenance, across a variety of health domains (addiction/substance use, chronic diseases, nutrition, physical activity, and sexual health). Another meta-analysis of 85 studies using the Internet for health behavior change reported an overall small but significant positive effect, with stronger results for interventions applying theory in general and the theory of planned behavior in particular, those applying behavior change techniques, and those using other communication approaches, especially text messaging (Webb, Joseph, Yardley, & Michie, 2010).

Campaigns may utilize online public service promos, typically in the form of brief banner ad messages or solicitations to click through to a website. However, these messages have severe content capacity limitations, the sponsors have little control over placement of their banner ads, and ads are often blocked by computer software. Paid health promotion ads on social media sites have greater potential for impact because of more prominent placement and more precise targeting. Health PSA spots and long-form video messages attract modest viewership on YouTube, although unhealthy portrayals and parodies are also featured among the mix of messages accessible on this site.

Online mentors can use email to improve interpersonal support over time, such as the Digital Heroes Campaign designed to foster better youth development (Rhodes, Spencer, Saito, & Sipe, 2006). Mobile phones, especially short message service (texting) are well-suited for offering tailored, wide-reaching, interactive and continuing campaign interventions (Fjeldsoe, Marshall, & Miller, 2009). Cole-Lewis and Kershaw's (2010) review found consistent evidence of positive effects of text messaging on behavioral changes, across demographic and national differences.

Blogs serve an important role in linking users with similar information needs and concerns to share their views and experiences, while wikis support collaboration among campaign members. Podcasts can provide relevant audio information (such as social support, variations on the persuasive message, or related health news) to motivated audiences at their convenience (Boulos, Maramba, & Wheeler, 2006). Twitter can be used to provide updates and protocol reminders to campaign-specific followers. However, as with many Internet health information sources, tweets may include considerable misunderstandings or abuse of health information and medicines (Scanfeld, Scanfeld, & Larson, 2010).

Voice response systems, interactive video, DVD and CD-ROM, mobile phones, and computer games can be effective in reaching young people. Lieberman (2001, 2006) recommends that computer-mediated campaigns feature youthful genres, support information seeking, incorporate challenges and goals, use learning-by-doing,

create functional learning environments, and facilitate social interaction. Videogame learning relevant to campaigns includes skill acquisition from interactive games, improved self-efficacy through success in vicarious experiences, and role-playing and modeling. An effective example is the CDC's national VERB campaign designed to promote exercise among preteens; the campaign stimulated heavy traffic on the website and wide-scale engagement in site activities (Bauman et al., 2008; Berkowitz et al., 2008). Baranowski, Buday, Thompson, and Baranowski's (2008) meta-analysis of 25 studies of using videogames to affect health behavior (chronic disease management, exercise, and diet) found improvements in nearly all outcomes.

Quantitative Dissemination Factors

Beyond message qualities, four key quantitative factors are total volume of stimuli disseminated, amount of message repetition, prominence of placement, and scheduling of presentations within one medium or across multiple media (Silk, Atkin, & Salmon, 2011). A substantial *volume* of messages helps attain adequate reach and frequency of exposure, as well as responses such as comprehension, recognition, and image formation. A certain level of *repetition* of specific executions facilitates message comprehension and positive affect toward the recommended behavior, but overly high repetition produces wearout and diminishing returns. The optimum level depends on factors such as the qualities featured in the message execution and complexity of the subject matter.

Placement *prominence* of messages in conspicuous positions within media vehicles (e.g., front-page newspaper positioning, heavily traveled billboard locations, or high-rank search engine websites) serves to enhance both exposure levels and perceived significance of the topic on the public agenda. Depending on the situation, the *scheduling* of a fixed number of presentations may be most effectively concentrated over a short duration, dispersed thinly over a lengthy period, or distributed in intermittent bursts of "flighting" or "pulsing."

To maximize quantity, campaigners seek to gain media access via monetary support from government and industry (to fund paid placements and leveraged media slots), aggressive lobbying for free public service time or space, skillful use of public relations techniques for generating entertainment and journalistic coverage, and reliance on low-cost channels of communication such as websites and social media. Moreover, the reach of a campaign is often boosted by sensitizing audiences to appropriate content already available in the media and by stimulating information seeking from specialized sources.

Regarding the *length* of a campaign, the realities of the unrelenting problems addressed in public communication campaigns usually require exceptional persistence of effort over long periods of time ranging from several months to many years as successive phases of the campaign are implemented. In many cases, perpetual

campaigning is necessary because various focal segments are in constant need of influence: *newcomers* constantly move into the priority audience, *backsliders* occasionally revert to prior misbehavior, *evolvers* take their time in gradually adopting the recommended practice, *vacillators* need regular doses of reinforcement to stay the course, and *latecomers* finally give up bad habits and become receptive to the campaign. In other contexts, such as colleges, each year a new cohort arrives and provides new target audiences for campaigns concerning drinking, drugs, sexual behavior, depression, and other issues, so college campaigns must be continually implemented, formatively and summatively evaluated, and revised (Martell et al., 2006).

Identifying which media the target audience is most likely to use, and at what times, requires access to audience ratings and usage data, as well as an understanding of audience research methods and markets (Webster, Phalen, & Lichy, 2006). New media, such as interactive websites, social media, mobile phones, and virtual reality settings (Ybarra & Bull, 2007) present new challenges and new sources of data.

Example Campaign Focus: Anti-Drug Campaigns

Campaigns to prevent drug abuse have been a fixture in the media for more than a quarter-century, beginning with the "Just Say No" initiative during the Reagan presidency. The initial wave of campaigning occurred between 1985 and 1990, and corresponded with a decline in the use of drugs (particularly cocaine, the focus of the prevention messages in that era). Youth drug-usage tracking surveys in the early and mid-1990s showed a slight but steady upswing, which led to a revival in 1998 of campaigning by the White House Office of National Drug Control Policy (ONDCP, 2010). From the start, the anti-drug campaigns have drawn upon substantial resources to obtain prominent media placements; funds have been allocated by the federal government, and access has been gained via cooperative ventures with the media industry.

Nearly \$1 billion was spent between 1998–2004 on the ONDCP campaign to combat drug use among adolescents in the 9–18 age range, with the key objectives of preventing initiation (especially marijuana and inhalants) and encouraging cessation among occasional users. This comprehensive social marketing effort featured messages targeted to youth, their parents, and other influential adults, disseminated primarily via television and radio, along with websites, magazines, and movie theaters. Ads sought to teach drug resistance skills, promote non-usage norms and positive alternatives (focusing on benefits of not using drugs), and prompt peer intervention; negative consequences played a significant role, but emphasized effects on academic and athletic performance rather than severe health harm.

Tracking studies since 2001 show a slight but steady decline in youth drug usage; two recent correlational studies indicate that youth exposed to anti-drug messages in the media are about one-third less likely to have recently used illicit drugs (notably

marijuana) and to hold stronger anti-drug beliefs (ONDCP, 2010). On the other hand, little impact of the national campaign on marijuana use and related cognitions was found by Hornik et al. (2008), who performed time-series analyses of a large-scale adolescent panel. Indeed, there are some indications of a boomerang effect, and the authors note that the sheer pervasiveness of anti-drug campaign messages may convey an "implicit meta-message" that drug use is prevalent (Hornik et al., 2008).

A more limited time-series analysis of one phase of the ONDCP anti-marijuana campaign in a mid-sized market demonstrated significant effects in lessening marijuana usage, attitudes, and beliefs among adolescents classified as "high sensation-seekers" (Palmgreen, Lorch, Stephenson, Hoyle, & Donohew, 2007). The researchers concluded that this impact was due to the dramatic depiction of negative consequences of marijuana use. Longshore, Ghosh-Dastidar, and Ellickson (2006) report that moderate or high exposure to the media campaign messages in combination with a classroom-based drug prevention curriculum led to a significant reduction in marijuana use among a statewide sample of high school students.

In conclusion, there is mixed evidence about the effectiveness of anti-drug campaigns. The overall pattern indicates that campaigns reduce usage among certain population segments, but the degree of impact is not proportionate to the high quantity of messages. Moreover, persistent portrayals of drugs in prevention messages may contribute to perceptions of a descriptive norm that usage is widespread; normative issues are examined further in the risky drinking campaign example below.

Example Campaign Focus: Antismoking Campaigns

The indirect approach (influencing the focal segments via campaign impact on policymakers) has been successful in the case of antismoking campaigns over the past 20 years. The initial large-scale campaign utilizing the environmental control approach occurred in the state of California, which effectively combated smoking with a coordinated combination of strategies promoting cigarette taxation, restrictions of smoking in public places and sales to minors, and attacks on the tobacco industry to undermine public attitudes toward marketing of cigarettes (Pierce et al., 1998). This was followed by a statewide campaign in Florida featuring the "truth" theme to challenge the industry's deceitful marketing practices. This campaign also achieved substantial smoking reduction impacts on youth (Sly, Hopkins, Trapido, & Ray, 2001). The "truth" campaign was subsequently carried out nationally by American Legacy Foundation. Tobacco settlement funds provided resources for a wide dissemination of messages, primarily aimed at adolescents. Supplementing traditional strategies that emphasize smoking prevention or cessation appeals, the "truth" message themes featured public demonstrations against the tobacco industry. Studies show increases in anti-tobacco attitudes and substantial declines in youth smoking as a result of this campaign (Farrelly, Davis, Haviland, Messeri, & Healton, 2005). In addition, a survey

of recent quitters showed that anti-tobacco TV spots were the most frequently mentioned source of help, particularly younger former smokers; the most influential ads depicted illness or provided "inspirational" quit tips (Biener et al., 2006).

Two other examples demonstrate the effectiveness of media antismoking campaigns. A time-series tracking over a decade showed that exposure to tobacco control media campaigns significantly reduced smoking rates among adults (Wakefield et al., 2008). Multi-wave analyses by Levy, Mumford, and Compton (2006) showed that media campaigns and higher cigarette taxes led to reduced smoking prevalence among low-income women.

Example Campaign Focus: Risky Drinking Campaigns

A growing number of media campaigns have sought to create or alter public perceptions of social norms regarding the prevalence of unhealthy behaviors such as risky drinking, which is commonly overestimated by key segments of the population. In numerous college communities, media campaigns present statistical information to correct misperceptions about normative drinking levels; preproduction research helps to identify the dimensions of misperception; and pretesting research enables refinement of the messages to heighten understandability and credibility. Summative evaluation research generally supports the effectiveness of social norms campaigns in reducing undergraduate student drinking problems, as demonstrated in a multiple randomized trial of college campuses showing that the perceptions and consumption were lower in intervention locales than control locales (DeJong et al., 2006).

One of the federally funded model projects utilizing the social norms approach has been implemented at Michigan State University (MSU), where an elaborate series of campaign phases has been carried out starting in 2000. Each semester, a significant quantity of messages is disseminated via multiple channels including ads in the campus newspaper, posters displayed across campus, table tents in dining rooms and bars, campus TV and radio spots, a website, and social media. The basic strategy is to correct misperceptions of MSU student drinking behaviors and attitudes, using messages reporting actual survey data representing a variety of descriptive and injunctive norms (e.g., proportion consuming moderate amounts on typical evening of partying, proportion drinking on celebratory occasions such as Halloween and football tailgates, proportion performing protective behaviors such as arranging designated driver or staying with same group all evening, and proportion disapproving of "getting wasted" or pressuring friends to drink). Several outcome evaluation methods have been used, but one key technique is tracking global trends over time; data show a steady downward trend in reported consumption per occasion (from 5.6 drinks at the baseline in 2000 to 4.7 drinks in 2008), increases in protective behaviors,

and decline in experiencing negative consequences of binge drinking (Atkin, Martell, Smith, & Greenmayer, 2004; Martell et al., 2006; Smith & Atkin, 2009).

The MSU campaign also features a major environmental management component that encompasses police enforcement of public disturbance laws, strict ID checks and server intervention in bars, party restrictions by landlords and hosts, limits on location and length of tailgating on football game days, and suspension of students violating laws. These initiatives are promoted with campaign messages aimed at city policymakers, law enforcers, bar owners, involved publics, and drinkers. The message themes highlight evidence of harms to be avoided, marginalization of misbehavers, support for restrictions by constituencies, and warnings about consequences for violators. These control-oriented approaches provide a valuable supplement to the softer norms component of the overall campaign.

An example of environmental reforms at the national level can be seen in a pair of long-running campaigns by the Center for Science in the Public Interest to reduce youth alcohol problems. One campaign seeks to combat marketing of sweetened, high alcohol-concentration beverages ("alcopops") that appeal to young drinkers; limited success has been achieved via federal regulations and limits on local retailers. The second campaign is designed to mobilize college officials to persuade the NCAA to eliminate beer advertising during its televised sports event. The campaign has received the endorsement of hundreds of organizations and colleges, and more than 200 schools agreed to ban alcohol ads from local telecasts of local sports events (Freudenberg et al., 2009).

Conclusion

Most experts conclude that public communication campaigns have attained a modest rather than strong impact, notably in the health domain. This is partially due to meager dissemination budgets, unsophisticated application of theory and models, and poorly conceived strategic approaches. It is also due to the difficulty of the task facing the campaigner, who may be promoting complex or difficult behaviors, targeting resistant audience segments, or coping with limited resources, while at-risk audiences are constantly exposed to media portrayals and advertisements that highlight detrimental behaviors. In these situations, more emphasis should be given to relatively attainable impacts, by aiming at more receptive focal segments, by promoting more palatable positive products perceived to have a favorable benefit-cost ratio, by creatively generating free publicity, and by shifting campaign resources to indirect pathways that facilitate and control behavior of the focal segment via interpersonal, organizational, and societal influences. More generally, the degree of campaign success can be improved via greater diversification of pathways, products, incentives, and channels beyond the approaches conventionally used in public communication campaigns.

Despite the many barriers that diminish campaign effectiveness, the research literature shows many success stories over the past several decades. Health campaigns have made significant contributions to the progress in addressing important problems such as smoking, drunk driving, AIDS, drug use, heart disease, and unprotected vehicle occupants. These domains tend to be characterized by substantial quantity of message dissemination over sustained periods, widespread receptivity to the advocated action and accompanying persuasive incentives, and supplementation of mediated messages by campaign-stimulated factors such as informal interpersonal influences and social engineering policy initiatives. With the increasing adoption of sophisticated strategies and the rising priority of healthy and prosocial practices for individuals and society, there is a sound basis for optimism that campaigns can produce stronger impacts in the future.

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