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# Health communication campaigns: A brief introduction and call for dialogue

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A B S T R A C T

This article provides a brief introduction to health communication campaigns as an important method for health promotion. The general approach to campaign development is described and patterns of campaign effects across behavioral contexts are noted. Several high-profile campaigns in the United States are presented as examples and key learnings from each campaign are highlighted. The roles of theory, as well as major types of theories commonly used in campaign research, are also discussed. The article urges greater efforts to document and understand diverse campaign experience around the world.
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### What is known?

- Accumulated experience in health communication campaigns highlights a systematic approach to campaign development, implementation, and evaluation.
- Health communication campaigns have varying effects across behavioral contexts.

### What is new?

- This article introduces the general principles of health communication campaigns and discusses major patterns of campaign effects.
- Several case studies are presented to highlight critical learnings from these high-profile campaigns.
- The article urges greater efforts to document and understand diverse campaign experience around the world.

## 1. Introduction

Communication campaigns are broadly defined as "purposive attempts to inform or influence behaviors in large audiences within a specified time period using an organized set of communication activities and featuring an array of mediated messages in multiple channels generally to produce noncommercial benefits to individuals and society." [1] Health communication campaigns have made important contributions to the advancement of public health globally and are often considered critical components of broad intervention efforts, such as cancer and tobacco control [2–4]. As a way of introduction, this article will briefly describe the general approach to health communication campaigns and highlight some of the underlying communication issues and concerns. A few notable health communication campaigns conducted in the United States will be sketched as concrete examples. The intention of the article is not to provide a comprehensive review of the vast campaign literature, but to delineate a basic framework for meaningful dialogue among campaign researchers from diverse backgrounds. The case studies — as will be apparent later — are also not meant to be examples to follow, but opportunities to develop critical insights that might have relevance in broader intervention contexts.

## 2. General approach to health communication campaigns

Health communication campaigns are often discussed in the contexts of health education interventions and/or social marketing programs. Although the three types of efforts are often intertwined, important differences exist. Some educational interventions are carried out entirely in clinical or institutional settings without necessarily engaging mass-reaching media. Social marketing

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programs, on the other hand, often involve marketing tactics beyond communication strategies, such as ways to maximize rewards and minimize costs to incentivize health behavior change. Health communication campaigns can play a central or supportive role in health education and social marketing. But not all health education and social marketing programs include communication campaign activities. In other words, sometimes health education, social marketing, and health communication campaigns are entirely synonymous; but more often they are not, and the distinct concerns of communication campaigns cannot be obscured or overshadowed by the broad principles of health education or social marketing.

Although different research traditions have influenced the growth of scholarship on health communication campaigns, there is a general consensus on the major tasks a campaign should undertake [2,5–8]. These include: 1) identifying campaign objectives; 2) developing message strategies; 3) disseminating campaign messages through appropriate channels; and 4) conducting systematic research to inform and evaluate campaign activities. More elaborate frameworks exist that further break down or extend these major tasks into smaller steps [e.g., Ref. [1,9]]. For current purposes, however, I will focus on just these four broad categories of tasks.

### 2.1. Identifying campaign objectives

The determination of campaign objectives often begins with the identification of a target audience or multiple target audiences. Despite their mass reach, health communication campaigns rarely target the general public indiscriminately. Increasingly, campaigns choose to focus their attention on specific subgroups that are likely to yield the best return for campaign efforts. Many considerations go into the selection of a target audience, but two questions seem to be relevant in most contexts. First, who are at risk? Second, who are likely to be responsive to potential campaign activities? Answers to questions like these form the basis of audience selection and segmentation, which are believed to enhance both campaign efficiency and effectiveness [1].

The ultimate goal of public health interventions is often, although not always, behavior change. For this reason, campaign objectives often represent a systematic understanding of how behavior change is supposed to happen within the target population. Important sources of insights on this front include relevant theory, past intervention experience, and − probably most important − campaign-specific problem and audience analyses. National and/or regional surveillance data based on probability samples are often helpful in identifying important demographic and behavioral characteristics of the target population. To develop deep insights into the potential pathways of behavior change, however, additional research is often needed to assess the audiences' current knowledge, attitudes, and beliefs, their readiness for change, their communication preferences and habits, as well as relevant social, political and policy environments that may facilitate or hinder behavior change. Learnings from the research efforts are synthesized to inform campaign objectives, which may aim directly at behavior change, or any of its antecedents in the campaign's conceptual framework. Well-chosen campaign objectives are mindful of the constraints of time, resources, and environmental factors and will look to maximize public health gains within those constraints.

### 2.2. Developing message strategies

Campaign message strategies fall in two broad categories: content strategies and executional strategies. Content strategies simply mean what informational content the campaign messages should focus on. A critical step in developing content strategies is identifying specific beliefs that matter for the campaign-targeted

behavior change. Often termed target beliefs, these are ideas or notions that are strongly associated with the health behavior or behavioral intention in question. At the same time, it is also important that these beliefs still have room for change and are amenable to the construction of strong messages [10]. Depending on the nature of the target beliefs, a campaign may seek to promote, suppress, or change these beliefs in order to effect intention and/or behavioral change down the road.

Executional strategies are decisions about the packaging of the informational content of campaign messages so that they are well received by the target audience. Creativity is often at the core of these decisions, but there is also substantial research that may be used to inform thinking and strategizing on this front [11–13]. Some examples of well-researched executional strategies include emotional appeals, message framing, narrative persuasion, and visual representation of risk, to name a few. Although broad conclusions about these message features may or may not be tenable (e.g., framing), evidence in specific health contexts may still be clear enough to inform decision making. It should be noted that content and executional message strategies are not discrete decisions; considerations on one side may greatly influence available choices on the other. Moreover, message strategies are not limited to considerations on the level of individual messages. Sometimes it is the content and structural features of entire messaging systems, and the dynamic change of the systems over time, that requires the most careful strategizing.

### 2.3. Disseminating campaign messages

Even the most carefully-crafted campaign messages will be useless if they do not reach and engage the target audience. Channels for campaign message dissemination include various forms of media, interpersonal networks, community settings, promotional events, among others. Traditionally, large-scale campaigns have relied on mass media, particularly television, as the primary vehicles for message delivery. With the advent and rapid development of social media, campaigns have become increasingly creative and diverse with their channel strategies, hoping to tap into the vast potential of these new media platforms.

In an increasingly complex informational environment, campaign dissemination should seek to optimize exposure to campaign messages while maintaining message fidelity in the dissemination process. I emphasize the optimization of campaign exposure because there is such a thing as too much exposure − as shown by the National Youth Anti-Drug Media Campaign which will be briefly presented later. More often than not, though, campaigns struggle to generate sufficient exposure and resources should be prioritized in this area to ensure that campaign messages reach the target audience with adequate frequency.

Message fidelity is less of a problem in traditional media campaigns, where the messages tend to retain their predetermined form and content through the dissemination process. In today's media world, however, information users are increasingly able to redefine the meaning of campaign messages through commenting, reposting, and sometimes parodying. Although audience engagement is in principle a favorable campaign outcome and can work to amplify campaign reach and influence, negative user interpretation and reframing could nevertheless work against a campaign in powerful ways. Careful planning, diligent monitoring, and nimble adjustments are needed to protect message fidelity and ensure audience engagement as intended by the campaign.

### 2.4. Conducting systematic research

While the previous three tasks often occur in sequence, research

is needed throughout the campaign process. Campaign research typically falls into three categories: formative research, process evaluation, and outcome evaluation. As already alluded to in previous sections, formative research includes efforts to understand the target issue and audience and to aid campaign message development. Both qualitative and quantitative methods can be productively used for these purposes. Whenever possible, campaign developers should try to gather both types of evidence to triangulate research insights. For example, preliminary message concepts may be pretested using focus groups, while rough-cut advertisements can be further tested using controlled experiments.

Process evaluation documents the implementation of the campaign and assesses the extent to which campaign activities are carried out as intended. Approach to process evaluation varies greatly and often includes analysis of campaign records and audience tracking surveys. Regardless of methods, process evaluation generally looks to monitor campaign reach, dosage, message fidelity, and sometimes audience engagement over time.

Outcome evaluation answers arguably the most important question for a campaign: Has the campaign worked? Unfortunately, for a variety of reasons, most notably lack of resources, outcome evaluation is often overlooked in health communication campaigns, leaving doubts as to whether all the other investments in the campaign have paid off. Outcome evaluation is a challenging endeavor because campaign effects are often small and difficult to detect. The setting of real-world campaigns also makes it very challenging to implement highly controlled research designs, such as randomized controlled trials. But a range of other designs exist to provide meaningful answers to the campaign effectiveness question, such as pre-post comparison, longitudinal cohort design, interrupted time series, etc. [14] Campaign evaluators should be cognizant of the relative strengths and weaknesses of these designs and be tolerant of the imperfect but useful answers they produce.

## 3. Effects of health communication campaigns

The contributions of health communication campaigns to public health are well documented [4,7,14]. Without going into details, two general observations can be made about the pattern of campaign effects recorded in the literature. First, the ability of health communication campaigns to change health behavior is typically modest. A meta-analysis of mediated health campaigns conducted in the United States found that the average campaign effect on behavior is $r = 0.09$ (95% CI = .07-.10) [15]. By statistical standards, this is a rather small effect size. This finding should be viewed in a balanced perspective, however. On one hand, campaign designers and funders should hold realistic expectations of what a communication campaign can accomplish when it comes to behavior change. On the other hand, even a modest effect size for a large-scale campaign can still translate into thousands or even millions of people changing their behaviors for the better. This latter outlook has more direct public health significance and should probably be privileged when assessing the value of communication campaigns in the promotion of population health.

Second, campaign effects vary significantly across behavioral contexts. The same meta-analysis referenced above found that media campaigns had larger effects in areas such as seat belt use ($r = 0.15$) and oral health ($r = 0.13$) than in areas such as sexual health ($r = 0.04$) and mammography ($r = 0.04$) [15]. Another comprehensive review of the campaign literature concludes that evidence for campaign effectiveness can be considered strong in some contexts such as tobacco control and road safety, moderate in others such as physical activity and nutrition, and weak or nonexistent in still others such as alcohol consumption and breastfeeding [16]. Reasons for such heterogeneity are many,

including the nature of the behavior (e.g., one-off vs. ongoing), level of enforcement support (e.g., road safety vs. sunscreen use), priority in resource allocation (e.g., tobacco vs. rare disease prevention), among others. Overall, this pattern of results suggests that health communication campaigns are highly contextualized endeavors. Campaign design and evaluation need to be cognizant of and responsive to the unique characteristics of the target behavior context.

## 4. Campaign examples

Many lessons can be harvested from the past experience of health communication campaigns. Comprehensive treatment of these lessons can be found elsewhere [3—5,7,14]. For illustrative purposes, a few notable campaigns conducted in the United States will be briefly described below. Key takeaways from each campaign will be highlighted, not as a systematic demonstration of campaign principles, but as context-specific food for thought.

### 4.1. Back to Sleep Campaign

The Back to Sleep Campaign was launched in 1994 in the United States to reduce sudden infant death syndrome (SIDS), also known as "crib death." Research shows that when infants are placed to sleep on their stomachs, their risk of dying form SIDS increases significantly [17]. The Back to Sleep Campaign aimed to educate parents, family members, child care providers, health professionals, and all other caregivers of infants about ways to reduce the risk of SIDS, particularly the importance of putting infants to sleep on their backs. Campaign messages were disseminated by direct mail, interpersonal channels (e.g., through heath care providers), and TV and radio spots. Evaluation research showed that, between 1992 and 2002, the percent of infants placed to sleep in the prone position decreased from 70% to 11.3%. Coincidentally, the incidence rate of SIDS death dropped from 1.2 to .57 deaths per 1000 live births during the same period [18]. This campaign has since been rebranded as Safe to Sleep and is continuing to educate the public about the SIDS and other sleep-related causes of infant death.

Many consider the reduction of SIDS rate since the beginning of the Back to Sleep Campaign a great public health accomplishment [19]. A key reason for its success is the unique nature of the health behavior it sought to address. First, putting infants to sleep is a simple behavior that caregivers have almost complete control over (as long as they are willing to perform it). As such, it incurs little cost in terms of physical exertion, financial burden, or inconvenience that are often important barriers in other intervention contexts. Second, the behavior is directly tied to infant safety, an issue of paramount importance to caregivers. This offers the campaign a range of advantages in the communication process, such as heightened message attention, deep and careful consideration of the learned information, strong memory, and high congruity between intention and behavior change. This campaign is a prime example where the "right" target behavior paves the way for campaign success.

### 4.2. The Real Cost Campaign

The Real Cost is an ongoing tobacco education campaign conducted by the United States Food and Drug Administration (FDA), targeting primarily youth and young adults [20]. The campaign was launched in 2014 and focused on the prevention of cigarette smoking among youth in its initial efforts. The campaign has since expanded its coverage to include also smokeless tobacco and electronic nicotine delivery systems (ENDS). For cigarette smoking prevention, The Real Cost targets two specific youth groups:

nonsmokers who are at risk of initiation and experimental smokers who have yet to progress to established smoking. Advertisements for the campaign were developed based on systematic formative research [21] and aired on national TV, radio, the Internet, out-of-home displays, social media, in mobile gaming and magazines, and at movie theaters. Evaluation research shows that the campaign had broach reach [22], was well received [23], and prevented up to 587,000 youth aged 11—19 from initiating cigarette smoking within its first two years [24], saving not only thousands of lives, but also billions of dollars for the American society [25].

While many lessons can be learned from The Real Cost, none is probably more powerful than the fact that a serious, well-funded, and sustained tobacco education campaign can bring about substantial public health and economic benefits. Tobacco control is an urgent public health need around the globe. Take China for example. More than half of China's adult men smoke and every one in three cigarettes manufactured in the world is consumed in China [26]. Every year, approximately one million Chinese citizens die from tobacco-related diseases — around one in six of all such deaths worldwide. If the current smoking trends continue unabated, tobacco-related death toll in China will reach three million a year by 2050 [26]. China has made significant strides in tobacco control in recent years, including increased taxation and smoking ban in various places and communities. But so far it has fallen short on many of the requirements set forth by the World Health Organization Framework Convention on Tobacco Control [27]. In particular, it has yet to fully tap into the power of mediated communication to educate its public about the many health risks and other costs associated with smoking. To reduce the public health burden of tobacco in China, sustained communication campaigns both locally and nationwide may be important measures to consider.

### 4.3. National Youth Anti-Drug Media Campaign

One of the most expensive health communication campaigns ever conducted in the United States is the National Youth Anti-Drug Media Campaign [28]. Between 1998 and 2004, the U.S. Congress appropriated nearly $1 billion for the campaign, which aimed at curtailing illicit drug use among America's youth. The primary target audience of the campaign included at-risk youth nonusers and occasional youth users; heavy users were not expected to be influenced the campaign. Campaign advertising appeared in a range of media channels, including television, radio, websites, magazines, and movie theaters. A comprehensive social marketing program, the campaign also included extensive organizational partnership and community outreach. A significant portion of the campaign's budget went into media buy, which was expected to generate exposure to 2.5 campaign ads per week among its target audience. Despite heavy investment and careful planning, the campaign failed to produce the expected outcomes among youth. Not only that, there is evidence that greater exposure to the campaign was associated with greater pro-marijuana social norms and increased intention to use marijuana at a later point in time [28].

The biggest lesson from the National Youth Anti-Drug Media Campaign is probably that campaigns can and do fail. In many ways this campaign was well positioned to succeed: it had strong political support, ample resources, vast scientific expertise on its advisory board, creative muscles from top advertising agencies, broad-ranging partnerships and community support, as well as well-planned research efforts. Yet it still fell short of its objectives and produced boomerang effects on important campaign outcomes. A long-standing principle in public health intervention is "Frist do no harm." The National Youth Anti-Drug Media Campaign shows that

this principle is just as important to bear in mind in health communication work as in other domains of health promotion.

Another, more specific, lesson from this campaign is that campaign messages may convey information beyond their literal content. One potential explanation for the campaign's unintended effects is that its messages might have led youth to infer that drug use was commonplace. Indeed, most youth during the campaign period did not use drugs and probably were not interested in initiating either. The constant bombardment of anti-drug advertisements, however, might have convinced them that many of their peers were using drugs. Influenced by this misperceived norm, some youth might then become inclined to initiate use just to fit in. There is some evidence in support of this reasoning [29]. Focusing on exposure, this possibility suggests that more is not always better. Too much exposure may generate meta-messages about the risk behavior in question that may or may not work in a campaign's favor.

## 5. The role of theory

The discussion so far has focused primarily on the practice of health communication campaigns, although the importance of research has been highlighted repeatedly. To approach health communication campaigns as a scientific endeavor, the role of theory cannot be overlooked. A range of theories have been used to guide the development and evaluation of public health campaigns. A thorough discussion of individual theories is beyond the scope of this article. In what follows, I will briefly note the general kinds of theories that campaign practitioners and researchers have found useful.

The most visible type of theories in the campaign literature are probably behavioral theories. This comes as no surprise because health communication campaigns are often aimed at inducing behavior change. To that end, it is imperative to develop a systematic understanding of what drives behavior and how behaviors can change. Influential theories in this category include the theory of reasoned action, theory of planned behavior, social cognitive theory, health belief model, and transtheoretical model (or stages of change model). These models provide valuable insights into the cognitive processes and social-environmental factors that influence behavior and behavior change. As an example, the theory of planned behavior [30] contends that the best predictor of behavior is behavioral intention. Intention itself is predicted by attitude, subjective norm, and perceived behavioral control, which in turn are predicted by their respective underlying beliefs. To change behavior, a campaign can take many different routes. But fundamentally, it is all about changing beliefs that can eventually induce the most change in the target health behavior.

A second type of theories that are often used in campaign development and research are communication theories. These theories provide systematic accounts of the communication processes and effects involved in health communication campaigns. Within this broad category, there are many different theoretical foci. The elaboration likelihood model [31], for example, is a widely used persuasion theory that illuminates the different modes of information processing the audience might engage in when they encounter campaign messages. The extended parallel process model [32], for another example, addresses a very specific message design issue, that is, how to appropriately leverage fear as a source of motivation to engender health behavior change. Other theories, such as agenda-setting [33], are useful in campaign efforts to mobilize public and policy support through media advocacy. Yet other theories, such as diffusion of innovation and opinion leadership [34], can be used to inform strategies to disseminate and amplify campaign messages through existing social networks. The

possibility of engaging communication theory in health campaign work is endless and efforts to test and advance theory in this unique communication context have been increasing over the years.

In addition to behavioral and communication theories, other types of theories can also inform health communication campaigns. Psychological theories, for example, can provide critical insights for audience segmentation and targeted messaging. Ecological public health models and sociological theories may shed important light on supra-individual mechanisms of change that a campaign may seek to leverage. Regardless of its origin, any theory that holds promise to enhance campaign effectiveness is a theory worth considering and investigation. Without theory and theory-guided research, health communication campaigns will remain largely an undertaking by trial and error and knowledge growth in this area will stay scattered and inefficient.

## 6. Conclusion

The goal of this article is to provide a brief introduction to the general practice of health communication campaigns, with a few notable campaigns from the U.S. as illustrative examples. This cursory discussion is necessarily incomplete and does not do full justice to the richness of the literature in this area. It is hoped, however, that this introduction could trigger greater interest in health communication campaigns within the nursing sciences and other relevant disciplines. Moreover, much of what we know about health communication campaigns is based on research conducted in a small number of countries, particularly the U.S. Health communication campaigns have a long and storied history around the globe. We need systematic research to document and understand culturally defined campaign experiences in international contexts. We also need efforts to open and sustain dialogues among campaign researchers from diverse national and disciplinary backgrounds.

## Declaration of competing interest

None.

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## Appendix A. Supplementary data

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