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# Engaging Consumers: What Can Be Learned from Public Health Consumer Education Programs?

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Mathematica Policy Research, Inc. for the  
Medicare Payment Advisory Commission*

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**MATHEMATICA**  
Policy Research, Inc.

**Engaging Consumers:  
What Can Be Learned  
from Public Health  
Consumer Education  
Programs?**

*Final Report*

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## EXECUTIVE SUMMARY

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The Medicare Payment Advisory Commission recognizes the importance of engaging consumers in the movement to promote greater quality and efficiency in the healthcare system. In this project, MedPAC contracted with Mathematica Policy Research, Inc. (MPR) to explore what can be learned from other public health campaigns in other arenas about strategies for engaging consumers and influencing their behavior.

### RESEARCH APPROACH AND CAMPAIGNS SELECTED FOR REVIEW

Drawing on a limited review of the literature and key informant interviews, and focusing on selected campaigns that have demonstrated an effect on consumer behavior, MPR set out to identify strategies associated with success and explore their potential application to Medicare.

We selected a mix of public health topics reflecting different types of motivational challenges, including changing individual risk behaviors, promoting participation in mass screening, targeting individual behaviors that affect the well-being of the larger community, and health care purchasing or choice decisions. We then reviewed the literature and selected 10 programs or campaigns to explore further:

- 2 sun-protection campaigns (Choose Your Cover and the Falmouth Safe Skin Project)
- 2 cancer screening programs (Screen for Life and the Georgia Cancer Awareness and Education Campaign)
- 2 programs promoting fitness and weight loss through walking (Canada on the Move and Wheeling Walks)
- 2 programs targeting inappropriate antibiotic use (the Wisconsin Antibiotic Resistance Network and the Campaign to Prevent Antimicrobial Resistance in Healthcare Settings)
- 1 anti-littering campaign (Keep American Beautiful)

- 1 program promoting informed and shared clinical decision-making (Health Dialog)

We identified key informants who could speak to the design, implementation, and outcomes of these programs or who had expertise in related areas of public health promotion, communication, or health decision-making and conducted one-hour interviews with 19 respondents.

### **ELEMENTS OF CAMPAIGN SUCCESS**

Across all of the programs reviewed, we found broad agreement that success was dependent on a program's ability to accomplish the following:

- Make it personal

Target audiences may be defined in terms of demographic or risk groups, but effective campaign messages have to appeal to individuals. This entails segmenting audiences, framing messages, and communicating risk in a way that conveys to consumers how the message relates to them personally. Making it personal can be especially challenging in campaigns that focus on the public good rather than individual health.

- Understand and address multiple influences on individual behavior

Although all campaigns aim ultimately to influence individual behavior, effecting change requires recognizing and addressing multiple levels of influence on individual behavior – including personal health beliefs and attitudes; interpersonal relationships; the larger community environment (including policy, infrastructure, and the regulatory environment); and social and cultural norms. Addressing all levels of influence cannot be achieved in a single program or campaign. The long-term success of campaigns against smoking or drunk driving reflect multiple efforts targeting many different levels of influence over several decades.

- Reach people where they live and work

The most effective campaigns reach people in the environments where the targeted behaviors and the influences on those behaviors take place. The natural social groupings in which people carry out their everyday lives are most readily identified at the community level, and these groups, in turn, can be the vehicles for reaching and influencing individuals. Given limited resources, campaigns will have more impact if they go for more intense “dosage” with these groups, rather than attempting to reach a broader audience through more diffuse efforts.

- Make it actionable

Effective campaigns suggest or provide specific, positive follow-up action(s) for people to take. They avoid preaching, or telling people what not to do. Actions have to be accessible, do-able. Taking action at the community level also enhances commitment and learning.

- Use media strategically

Media campaigns by themselves do not determine campaign effectiveness. Mass media campaigns may reinforce campaign messages or raise public awareness but have limited impact when used alone. Effective campaigns use print, broadcast, and other mass communications, advertising, news, and entertainment media strategically to reach target audiences where they live and work. “Earned” media attention (news or feature stories and entertainment programming) may be more effective than paid advertising, but it is harder to “earn” or influence. Free public service announcements may have limited utility.

#### **CHALLENGES OF PUBLIC HEALTH CONSUMER EDUCATION PROGRAMS**

Our research also highlighted the challenges common to public health consumer education programs:

- Demonstrating effectiveness

The evidence base for public health campaign effectiveness is limited, because behavior change takes time and sustained effort on many fronts. Formal evaluation is expensive, and much evidence is anecdotal. Most evaluations that do exist focus on interim and short-term measures (reach, “dosage,” awareness) rather than behavioral outcomes. Distinguishing impacts of discrete campaigns from secular trends is also difficult.

Although evidence from controlled trials suggests that informed decision-making can prevent the overuse of treatment options of uncertain benefit to patients, patient decision tools to facilitate shared decision-making are not widely used, in practice.

- Getting/staying on the public agenda

There are any number of legitimate issues of public/public health concern competing for resources (money, champions) and/or target audience attention at any given time. Limited windows of opportunity make sustained effort difficult, and most campaigns and/or issues have a relatively short “shelf life.” However, changing social norms and entrenched behaviors requires a sustained effort on many different fronts over many years, as the history of anti-smoking initiatives and campaigns to reduce drunk driving attests.

- Leveraging limited resources

The high costs of designing and implementing consumer campaigns and limited resources dictate finding ways to leverage efforts – for example, through partnerships with commercial enterprises, pro bono contributions (including PSAs), and voluntary alliances. However, the interests of commercial or voluntary partners may not be consistent with those of the campaign, making it difficult to maintain effective control over campaign messages or strategies.

- Informing *vs.* motivating *vs.* manipulating behavior

The principles guiding informed (or shared) decision making recognize that in many clinical decision-making situations there is no strong, evidence-based, or preferred course of action. Shared decision-making protocols are therefore designed to inform patients about the risks and benefits associated with alternatives and help them understand how their personal preferences and values play into the decision.

Most public health campaigns, however, seek less to inform consumers than to influence their behavior in a preferred direction. This entails conveying information in a way that gets their attention and motivates them to take action. When public health advocacy or promotional campaigns lead consumers to have a distorted sense of their personal risks or benefits, however, such strategies may raise ethical questions about the distinction between motivating and manipulating behavior.

## **IMPLICATIONS FOR MEDICARE**

- There may be characteristics unique to the over-65 population that would shape the approach of campaigns targeting Medicare beneficiaries. However, the behaviors and characteristics of older age groups are changing, and commonly-held assumptions may not hold. Program design should be informed by research about the specific audiences and behaviors targeted.
- We need to more clearly define the objectives and the desired behavioral outcomes of engaging consumers in efforts to bring higher quality and greater efficiency to the healthcare system. Consumers have not come to the table around these issues, because the issues have not been framed in terms they perceive to be either personally relevant or actionable. In practice, consumer choice may be limited, variations in quality may not be apparent, information may be conflicting or confusing, and the relevance of quality information to personal health care decisions may not be obvious.
- Creating a better, more efficient health care system may require asking individuals to forego unnecessary high-cost health services. However, the prevailing cultural norm is that more health care and more high-cost

technology is better. Changing social norms around the use of health resources for the common good will require a multifaceted and sustained effort for many years to come. We need to explore examples from other areas of public life that provide better models for appealing to individuals' interests in the welfare of the larger community or their legacy to future generations.

- We need to determine whether the preponderance of evidence that bears on questions of quality and efficiency in health care is strong enough to warrant motivating consumers toward preferred choices, or whether the objective should be to inform their decisions in a more value-neutral way.
- To help Medicare beneficiaries make informed decisions regarding their health care, we need to learn from other fields about ways to translate complex population-based statistics and communicate risk in ways that make the information both understandable and personally relevant.

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# CHAPTER I

## INTRODUCTION

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**T**he voice of the consumer has been notably absent from much of the public debate on health care policy—a debate dominated and shaped by health care purchasers, providers, and other professional stakeholders. Yet there is a growing sense in policy circles that the movement to promote quality and efficiency will not gain serious momentum until health care consumers—the end users and ultimate beneficiaries of the system—are actively engaged in the effort. Nor, amid the growing burden of chronic illness, will the health of the population improve significantly until we develop models that actively involve people in managing their own health care.

Recognizing that these issues are of vital concern to the Medicare population, the Medicare Payment Advisory Commission (MedPAC)—an independent Congressional agency charged with advising the U.S. Congress on a broad range of issues affecting the Medicare program—wishes to explore ways to engage consumers more effectively. As a start, MedPAC hopes to learn from public health and related consumer campaigns in other arenas. The small project whose findings are reported here, undertaken by Mathematica Policy Research, Inc. (MPR), under contract to MedPAC, is a step in that direction.

Health-related consumer education is a vast field, but this project has a modest goal: by drawing on a limited review of the literature and key informant interviews, and by focusing on campaigns that have demonstrated an effect on consumer behavior, to help MedPAC begin to frame the salient questions.

The project addresses the following research questions:

- What types of campaigns or programs are most relevant to MedPAC's interests?
- Which campaigns or programs have produced results?
- What strategies do successful programs employ?
- What outcomes have they been able to achieve?

- To what extent can successful strategies be applied to campaigns or programs targeting Medicare beneficiaries?

We first provide an overview of our research approach (Chapter II), and then, to create a context for our discussion, a brief description of the theory-driven components of public health campaigns (Chapter III). Chapter IV focuses on key findings from our research, beginning with a discussion of common elements that we identified of campaign success. Chapter V describes briefly the challenges common to all the programs and campaigns we studied. We conclude in Chapter VI by reflecting on what our findings imply for Medicare and by recommending avenues for further research.

## CHAPTER II

### RESEARCH APPROACH

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Given the vast literature and the broad range of consumer campaigns that might be explored for this project, the first task of the research team was to define the range of topics to pursue. At the outset, the MedPAC project officer advised the MPR team that MedPAC's primary interest is in learning from experience with public health consumer education programs, rather than from health care quality reporting initiatives or consumer education in other areas (such as financial planning). The team also chose early on not to explore some of the more dramatic long-term successes in changing health behavior (such as those aimed at smoking or drinking and driving), both because they have already been studied and written about extensively and because teasing out the differential effects of multifaceted campaigns waged over several decades would be well beyond the scope of this project.

To frame the discussion and further refine the scope of work, we identified five varieties of behavior typically targeted in public health campaigns: (1) individual risk behaviors (such as those involving smoking, diet/exercise, and sun exposure), (2) participation in mass screening or immunization (such as cancer screening and flu shots), (3) recognizing symptoms and getting timely care for emergent conditions (such as heart attack and stroke), (4) individual behaviors that have consequences for the health or well-being of the larger community (such as littering, antibiotic use, and organ donation), and (5) health care purchasing or choice decisions (such as shared or informed clinical decision-making and value-based purchasing). Although every public health-related consumer campaign aims to influence individual behavior in some way to enhance the public good, we reasoned that motivational considerations would vary in interesting ways, depending on the type of behavior targeted and people's perceptions of the risks and benefits associated with taking action. For these reasons, we recommended selecting a mix of topics reflecting different types of motivational challenges. Table II.1 summarizes the topics selected, examples of programs of potential interest to the research team, and the motivational considerations associated with each.<sup>1</sup>

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<sup>1</sup> At the project officer's recommendation, the research team elected, for this project, not to include campaigns that focused on care for emergent conditions.

**Table II.1. Range of Suggested Topics, Behaviors, and Motivational Considerations**

Examples of Targeted Behaviors	Desired Impact	Who Benefits	Motivational Considerations
<b>1. Individual Risk Behaviors</b>			
<ul style="list-style-type: none"> <li>• Smoking</li> <li>• Obesity</li> <li>• Physical activity</li> <li>• Drunk driving</li> <li>• Sun exposure</li> </ul>	Changing current ongoing/lifestyle behavior to reduce risk of bad outcomes or enhance the probability of good outcomes downstream	<p>Long-term benefits may or may not accrue to individuals taking action</p> <p>Mortality, morbidity in general population is reduced</p>	<p>Gratification or perceived benefits of current behavior versus cost of behavior change</p> <p>Perceived costs and benefits of downstream outcomes</p>
<b>2. Participation in Mass Screening/Immunization</b>			
<ul style="list-style-type: none"> <li>• Mammography</li> <li>• Cervical cancer screening</li> <li>• Colorectal cancer screening</li> <li>• PSA testing</li> <li>• Immunization</li> </ul>	Episodic use of healthcare, in the absence of symptoms, for prevention or early detection of disease	<p>For screening, long-term benefits accrue to individuals found to have early, treatable diseases</p> <p>For immunization, benefits accrue to individuals who may otherwise have gotten sick</p> <p>Mortality, morbidity in general population is reduced</p>	<p>Perceived risk of disease versus inconvenience and/or discomfort associated with screening and immunization</p> <p>Anxiety about negative outcomes versus reassurance of positive outcomes</p> <p>Uncertain outcomes (false positives/negatives)</p> <p>Perceived benefit of early detection and treatment</p>
<b>3. Individual Behaviors That Have Social Consequences</b>			
<ul style="list-style-type: none"> <li>• Littering</li> <li>• Antibiotic use</li> <li>• Name brand versus generic drug use</li> <li>• Organ donation</li> </ul>	<p>Changing individual behaviors for greater social good</p> <p>Promoting more efficient use of resources</p>	<p>Costs, but no benefits, may accrue to individuals taking action</p> <p>General health and welfare of society is enhanced</p>	<p>Perceived self-interest versus altruism</p> <p>Perceived cost/benefit to society</p>
<b>4. Health Care Purchasing/Choice Decisions</b>			
<ul style="list-style-type: none"> <li>• Shared or informed clinical decision making</li> <li>• Medical errors</li> </ul>	Involving patients in self-management, clinical decision-making, and care	<p>Patients' values reflected in clinical decisions</p> <p>Society benefits from reduction in unwarranted variations in clinical practice</p>	<p>Perception of and desire for choice or control</p> <p>Perceived costs/benefits of and personal stake in alternatives</p>

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We next searched the literature to review the evidence base for campaign effectiveness and to identify specific campaigns of interest. Through the multi-database search engines OVID and EBSCOhost, we used the MEDLINE, Academic Search Premier, and EconLit databases to identify relevant journal articles in the peer-reviewed literature. We also searched the web to identify campaigns undetected by the electronic databases. A list of our references and sources is in Appendix A; examples of search terms we used for database queries are in Appendix B.

In reviewing this literature, we looked in particular for programs or campaigns that (1) targeted adult consumers (or consumers and health care providers); (2) included a mass communications media component; (3) had demonstrated some degree of success (preferably through rigorous evaluation); and (4) were recent enough that information about key features of program design and implementation would be reasonably accessible to the research team. On the basis of this review, we identified 10 campaigns or programs that we thought warranted further exploration:

1. *Screen for Life*. A national campaign sponsored by the Centers for Disease Control and Prevention (CDC) to promote screening for colorectal cancer.
2. *Falmouth Safe Skin Project*. A three-year skin cancer prevention program based in Falmouth, Massachusetts, to promote sun protection.
3. *Georgia Cancer Awareness and Education Campaign*. A statewide cancer awareness and education effort in Georgia with an initial focus on promoting awareness of and screenings for breast and cervical cancer.
4. *Wisconsin Antibiotic Resistance Network (WARN)*. A statewide campaign promoting the judicious use of antibiotics by clinicians and consumers in Wisconsin.
5. *Choose Your Cover*. A national skin cancer prevention campaign sponsored by the CDC.
6. *Canada on the Move*. A public-private partnership of the Canadian Institutes of Health Research (CIHR) and Kellogg Canada to promote walking and physical activity with the aid of pedometers.
7. *Keep America Beautiful*. A nationwide nonprofit organization that sponsors ongoing efforts to combat littering by promoting cleanup, recycling, and beautification.
8. *Wheeling Walks*. A Wheeling, West Virginia-based campaign to promote moderate daily physical activity, with emphasis on walking.
9. *Health Dialog*. A for-profit organization that provides personalized health coaching services to identified populations to help them understand their medical issues and become more engaged in managing their health care.

10. *Campaign to Prevent Antimicrobial Resistance in Healthcare Settings*. An effort targeting clinicians, including doctors and nurses, with evidence-based strategies to prevent and control antimicrobial resistance in health care settings.

Detailed information about each of these campaigns can be found in Appendix Table C.1.

Through our review of the literature and subsequent referrals, we also identified two broad categories of key informants: (1) those who could shed light on the design, implementation, and outcomes of specific programs or campaigns of interest; and (2) those with broader expertise in related areas of public health promotion, communication, or health decision-making. We then conducted one-hour semistructured interviews with 19 respondents. At least two members of the research team participated in all interviews, with one taking written notes. Interview protocols and a list of respondents are in Appendix D. Once interviews were completed, members of the research team reviewed all notes and met to identify key themes as well as areas of divergence.

In the chapters that follow, we summarize the principal findings from this research.

## CHAPTER III

# THEORY-DRIVEN COMPONENTS OF PUBLIC HEALTH CAMPAIGNS

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The design and development of most public health consumer education campaigns derive from two main sources of influence: public health and social marketing.<sup>1</sup>

Public health approaches (most notably in the programs associated with the CDC and the National Institutes of Health), drawing on scientific, epidemiologic models of disease, emphasize the importance of research to identify populations “at risk,” the use of evidence-based intervention strategies well-grounded in theory, and a “social-ecological” perspective that recognizes multiple environmental, social, and individual influences on behavior. Research and evaluation figure heavily in public health approaches, as does the language of medicine (“risk,” “risk group,” “dosage,” “boosters,” and so on).

Social marketing, as the name implies, applies the pragmatic principles of product marketing to the advancement of social causes. The language of social marketing similarly reflects its commercial origins: “product,” “consumer,” “market,” “target audience,” “demographic” (as a noun), “campaign reach.” Borrowing from marketing lingo, the principles of social marketing are often described in terms of the “four P’s”:

1. *Product*: Does the product (that is, whatever is being promoted) meet a recognized consumer need?
2. *Place*: Is the product accessible to the consumer?
3. *Price*: Is the cost of the product worth the benefit to the consumer?
4. *Promotion*: Does the consumer know about the product?

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<sup>1</sup> For a detailed but user-friendly summary of the theoretical foundations of public health campaigns, see the National Cancer Institute publication “Theory at a Glance” at [[www.nci.nih.gov/PDF/481f5d53-63df-41bc-bfaf-5aa48ee1da4d/TAAG3.pdf](http://www.nci.nih.gov/PDF/481f5d53-63df-41bc-bfaf-5aa48ee1da4d/TAAG3.pdf)].

In practice, a program or campaign often combines public health and social marketing approaches. For example, public health principles drive the formative research, the strategy development, and the evaluation design, while social marketing principles drive the design, the market and consumer research, and the implementation of the campaign itself.

Feeding into these approaches are numerous theories, derived from many different areas of empirical research, about individual health beliefs, behavior, behavioral change, social and environmental influences, innovation diffusion, and communication theory. Exploration of all these is well beyond the scope of this project, but here we highlight two that are often referenced in public health consumer education campaigns.

In their “transtheoretical model” of behavior change (based initially on research about addictive behaviors), James Prochaska and colleagues have identified successive stages that people typically go through in the process of change, from *pre-contemplation* (when there is no intent to change) to *contemplation* to *preparation* to *action* and, finally, to *maintenance* (when the new behavior is on its way to becoming habitual). The application of this model to health promotion and consumer education suggests that messages be tailored to people’s stage of change, as they wrestle with the costs and benefits of taking action at various points along the continuum. In the pre-contemplation and early contemplation stages, Prochaska emphasizes, people tend to overestimate the costs and underestimate the benefits of initiating action, and informational messages may be designed to shift that balance. In later stages, once they have made the initial decision to change, they need help dealing with practical barriers and maintaining momentum in the face of setbacks (Prochaska et al. 2002).

Everett Rogers’ work on the diffusion of innovations through social networks has also influenced the way public health and social marketing professionals think about the way new behaviors spread in a population and the implications for identifying and segmenting target audiences. Rogers’ model of diffusion suggests that the personality characteristics and communication networks of the *innovators* and *early adopters* of a new practice are very different from those of *later adopters*. The former are more amenable to adopting a new practice based on their own judgment of the evidence supporting it and less constrained by social norms. Rogers observes that people in the innovator and early-adopter groups also tend to have greater access to communication channels and, as trusted and credible sources, are more likely to become the *opinion leaders* who can influence others to adopt the practice. By contrast, those who fall in the *late majority* or *laggard* categories are more influenced by the subjective experience of their peers, conveyed through interpersonal networks, and are unlikely to adopt a new practice until it is well established in their peer network (Rogers 1995).

Although the emphasis varies from campaign to campaign (depending in part on who is involved and from what professional background), the union of public health and social marketing approaches has created a fairly consistent set of iterative activities typically involved in the development and execution of campaigns:

1. *Identifying target populations:* the people whose behavior you want to change or influence (such as identified risk groups)

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2. *Identifying target audiences for the campaign*, which may be either those whose behavior you want to change or the people who influence them
  3. *Conducting (formative) research* to understand what influences target audience behavior
  4. *Developing campaign strategies* to reach these audiences and influence their behavior
  5. *Developing and testing campaign messages and program materials*
  6. *Carrying out programs, interventions, and/or communication campaigns*
  7. *Evaluating the effectiveness of program/campaign components* and of the campaign overall

Research plays an important role throughout the process. Depending on project budgets, this may include epidemiologic and market research to identify target populations and audiences, focus group research to explore their social environment and the influences on target audience behavior, consumer testing of campaign messages and materials to ensure that they resonate with the target audience and convey the messages as intended, media tracking to assess the “reach” of the campaign, and evaluation research to assess its effectiveness.

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## CHAPTER IV

### ELEMENTS OF CAMPAIGN SUCCESS

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In this chapter, we examine the factors that appeared to drive success across the programs we reviewed. These focus on making the campaign personally relevant to members of the target audience, understanding multiple influences on individual behavior, reaching people where they live and work, devising campaign messages that spur action, and using media strategically.

#### MAKING IT PERSONAL

Most health communications experts emphasize that consumers will not pay attention to a campaign message unless they understand how it relates to them *personally*. Public health professionals may define risk populations in epidemiologic terms, but effective campaigns must appeal to the *individuals* in the target audience, not to demographic groups. As one interview respondent noted, this entails communicating in terms of “you,” rather than “people like you.” Indeed, people may resist campaign messages that refer to the health risks of their demographic group and thus seem to be stigmatizing or stereotyping. Engaging consumers personally also requires translating information about population-based risks and benefits in terms that help consumers understand their personal stake in the matter. The best-designed campaigns know their target audiences well, segment them (as much as possible), and refine campaign messages to resonate with their personal perceptions and experiences.

In this project, the most personalized approach we encountered to health communication was Health Dialog’s program of shared decision-making, which provides personalized health coaching services to help people understand their medical issues and become more engaged in managing their health care. Health Dialog provides clients with first-person video narratives of people from different walks of life who faced similar decisions about their medical care (such as about elective surgery or alternative therapies), decision aids that help clients understand the relative risks of alternatives in personal terms, and one-on-one health coaching.

Tailoring information to this degree is not possible for most public health campaigns, but some of the same principles were at work elsewhere. When Katie Couric became a national spokesperson for colon cancer awareness after her husband died of the disease, her

celebrity status certainly helped draw attention to the issue. But the real upsurge in colonoscopy rates, dubbed by some the “Katie Couric effect,” came when she underwent the procedure on the *Today* show in 2000, helping millions of viewers understand in personal terms what the procedure involved and what it might be like for them (Cram et al. 2003).

However, crafting messages that help consumers understand their personal stake in the matter can be particularly challenging in campaigns that focus more on the greater public good than on individual health. WARN used a variety of methods to reach both physicians and consumers (including parents of small children) with messages about the uses and misuses of antibiotics and the dangers of antibiotic resistance. The challenge they faced, however, was in finding ways to convey this information in a way that made members of both audiences feel personally affected. As the campaign’s sponsors observed, many physicians resisted changing their own prescribing patterns for fear of losing patients and argued that it would have no effect on overall antibiotic use, in any case, since patients would simply go elsewhere for the prescriptions they wanted. And selling overworked mothers on the idea that they should avoid giving antibiotics to their toddlers with ear infections for the sake of the common good was an uphill battle.

Keep America Beautiful is another campaign that has, for more than 50 years, sought to change individual behavior for the public good through its anti-littering advertising. The program’s mass media efforts have brought attention to highway litter through catchy slogans (“Every Litter Bit Hurts”) and powerful visual images (such as the “crying Indian” ads of the 1970s). The appeal of the campaign, however, lies not so much in its ability to convince people that not littering is in their personal self-interest as in the opportunities it has created to engage people personally in community group volunteer efforts (highway cleanup, tree-planting, recycling).

## **UNDERSTANDING MULTIPLE INFLUENCES ON INDIVIDUAL BEHAVIOR**

Although all campaigns aim ultimately to influence individual behavior, effecting change requires recognizing and addressing many levels of influence on behavior (or what public health professionals sometimes refer to as multiple levels of the social ecology), including personal health beliefs and attitudes, interpersonal relationships, the larger community environment (including policy, infrastructure, and the regulatory environment), and social and cultural norms (Green and Kreuter 1999; U.S. Department of Health and Human Services 2005). Over its 30-year history, for example, the anti-drunk-driving movement has addressed, at various times, several levels: *personal health beliefs*, by educating the public about the relationship between blood alcohol levels and physical impairment; *interpersonal relationships*, through bystander interventions, such as “Friends Don’t Let Friends Drive Drunk,” and designated-driver campaigns; the *community environment*, through server liability laws, highway sobriety checkpoints, law enforcement, and raising the drinking age; and *cultural norms*, by working with the entertainment industry to change images of normative social drinking behavior (Harvard School of Public Health 2007).

Clearly, addressing all (or even just the most important) levels of influence cannot be achieved in a single program or campaign. Those reviewed for this project recognized their

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limitations, but their research-based strategies also reflected an understanding of the social dynamics at work. For example, both the CDC's Choose Your Cover and the Falmouth Safe Skin Project sought to influence sun-protection behavior through family relationships, by engaging parents in protecting their children, and by enlisting the support of the community. The challenge they faced in getting their messages across, however, was the persistence of both personal health beliefs and cultural norms that equated suntans with health and beauty. One mother who participated in a focus group told CDC researchers that she and her children had an ongoing contest to see who could get darkest the fastest, even though she was presumably aware of the long-term dangers of excessive sun exposure. Persistent cultural beliefs, reinforced by mass media images, were a far more powerful influence than the campaign's messages.

In its efforts to promote judicious use of antibiotics, WARN also sought to appeal to multiple levels of influence, by working with parents of small children, physicians, and day care providers. However, day care centers would not allow sick children to return unless they were on an active antibiotic regimen—a policy whose underlying message to parents and providers undermined the message of the campaign. The program sponsors also concluded that individual physicians were unlikely to change their behavior until a “critical mass” of their peers did the same. Similar reasoning led the CDC's Campaign to Prevent Antimicrobial Resistance in Healthcare Settings to partner with professional societies in an effort to bring the influence of peer networks and opinion leaders to bear on health care providers.

The natural social groupings in which people carry out their everyday lives are most readily identified at the community level, and these groups, in turn, can be the vehicles for reaching and influencing individuals in the target audience. Involving representatives of such groups in the formative design stages of a campaign can help establish buy-in. For example, the sponsors of Wheeling Walks credited the success of its effort to promote physical activity in large part to the way it organized its approach to planning. Instead of designing a campaign *for* a community, Wheeling Walks solicited input from a wide range of participants to craft a campaign congruent *with* the values and interests of the groups it sought to reach.

## **REACHING PEOPLE WHERE THEY LIVE AND WORK**

Public health educators also recognize that people are most receptive to campaign messages that reach them at the point of decision-making, in the environments where the targeted behaviors take place and are influenced. Although sponsors may face political pressure to make the most of limited campaign budgets by waging broad-based communication efforts that reach large numbers of people, most public health professionals agree that campaigns have more impact on behavior if they seek depth—and intense “dosage”—rather than breadth.

Thus the campaigns we reviewed that had a community-level component were generally seen as more promising and effective than those that relied on mass communication. For example, the Falmouth Safe Skin Project targeted a seaside community in the summer to reach people at the time and place they were most likely to experience excessive exposure to

the sun. The project included many different components, including a mass communication campaign, with promotional materials distributed throughout the community. However, its greatest success was in engaging the parents of newborns in hospital nurseries, where sun protection training was integrated into pre-existing instructional sessions demonstrating infant bathing techniques. Because the nursery experience was so successful in achieving results with little inconvenience to staff or parents, program sponsors report that if they had to do the campaign again, given limited budgets, they would go for greater depth through a similar intervention rather than attempting to reach a broader audience through more diffuse efforts.

Starting as a community-based intervention, WARN tried similarly to reach physicians where they lived and worked, using one-on-one “academic detailing” approaches (similar to those used by drug companies) and small-group continuing education programs for physicians. Although the sponsors continue to believe that this is probably the best way to reach physicians, they had to abandon the approach when the only available sources of funding required statewide educational campaigns. Without the financial resources of a large pharmaceutical company, academic detailing was too expensive to implement statewide.

Health Dialog reports that they are most successful in engaging clients who are facing a critical, and imminent, medical decision (such as regarding elective surgery or cancer therapy). With a strategy similar to academic detailing, Health Dialog uses sophisticated analytics to identify clients likely to fit this description. The health coaches then send decision tools and informational material to clients’ homes and reach out to them by telephone.

#### **MAKING THE MESSAGE ACTIONABLE**

Most people resist messages that preach (or tell them what *not* to do). Health communications experts agree that, after getting the audience’s attention, the most effective campaign messages are those that include specific—and positive—follow-up actions for people to take. Action reinforces learning and moves people a step further on a path toward change, even if the step is small. However, the action steps must be both accessible to the consumer and doable.

Canada on the Move, a public-private partnership between CIHR and Kellogg Canada, began as a Kellogg’s Special K promotion that included packaging free pedometers in cereal boxes. Kellogg’s marketing department initially developed simple, and memorable, 1-2-3 messages for the campaign, urging people (1) to wear their Special K pedometer, (2) to “add 2,000 steps” to their everyday activities, and (3) to eat healthy foods (like Special K). To make the campaign more consistent with CIHR’s public health research agenda, the messages developed for Canada on the Move eliminated references to Special K and revised the third message to tap into Canadians’ support for research, urging them to “donate” their steps to health research by visiting a web site specifically designed to track participant progress. The messages were clear and explicit, and the free pedometers and sponsored website helped make them doable.

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The CDC deliberately chose Choose Your Cover as its campaign slogan, in lieu of the stay-out-of-the-sun-altogether message favored by some “hard-line” professionals, because its research showed that the adolescents it targeted would not consider taking such an austere approach to sun protection. The campaign’s messages went on to suggest alternative ways to cover up (wearing protective clothing, using sun block, staying in the shade), leaving the choice up to the individual. When research also showed that teenage boys resisted wearing sun block because it smelled like perfume, the program’s sponsors urged the manufacturers to come up with an unscented product that could appeal to that group.

Keep America Beautiful is best known as a nationwide mass media campaign, but its real action message is not to stop littering, but to become involved in the community-level efforts the program promotes. Program sponsors point out that people will not make a lifetime commitment to cleaning up other people’s trash, but they *will* spend a couple of hours volunteering—and this creates valuable hands-on communal “teaching moments” in which to educate people about the contributing causes and the magnitude of the littering problem, without preaching at them.

### **USING MEDIA STRATEGICALLY**

Because they deliver messages to large numbers of people, mass media campaigns are often attractive to funding organizations or sponsors of public health consumer education campaigns. However, isolated mass media efforts do not make a campaign effective. They might raise public awareness or reinforce messages delivered by other means, but most respondents agree that they have limited impact on target audiences when used alone.

The real power of the media lies in the ability to reach defined audience segments in the various venues where they live and work, as part of a multifaceted strategic approach. At the community level, for example, some communications experts suggest that newspapers or local television news broadcasts are good ways to reach older people, while radio is more effective with younger people and ethnic or linguistic minorities. Transit ads and billboards can also be used to reach specific neighborhoods. Mass circulation magazines can be useful in targeting broadly defined demographic groups at the national level. The web, of course, has rapidly become a powerful mechanism for reaching and mobilizing young people, in their own personal space and across broad geographic boundaries.

Marketing specialists distinguish between pro bono, paid, and “earned” media coverage. Media outlets are often willing to place pro bono public service announcements for public health campaigns, but sponsors have little control over when, where, or how often such ads are placed or aired. Purchased advertising allows more control over content and placement of messages, but limited budgets still may not permit the equivalent of prime-time (or front-page) coverage. Target audiences may also be skeptical of paid advertising, knowing that it is trying to sell them on something. For these reasons, “earned” media coverage—voluntary reporting on an issue in news or features stories—is often seen as more valuable, since it sends the message from a neutral party that the topic warrants interest and attention. However, earned media may be hard to get (given competing newsworthy stories), and reporters may not frame the issues as campaign sponsors would hope. Public health

professionals have been especially interested in tapping the potential of the entertainment media to shape social norms or model behavior. Although they have met with some limited success in a few areas (anti-drunk driving, safe sex), this has proven to be the most difficult media attention to earn.

To the extent that their limited budgets would allow, most of the campaigns and programs we reviewed tried to make strategic use of media rather than rely on mass communication campaigns alone. Keep America Beautiful, for example, began appropriately enough by using highway billboards to deliver its anti-littering messages to drivers, but its media strategy has evolved as the characteristics of its target audiences have changed, and it now uses the web to reach out to younger generations. In its Choose Your Cover campaign, the CDC partnered with *Seventeen* magazine to help deliver its message to teenage girls, and with the Weather Channel to reinforce messages about the hazards of spending summer days in the sun.

## CHAPTER V

# CHALLENGES OF PUBLIC HEALTH CONSUMER EDUCATION PROGRAMS

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Some of the most compelling themes to emerge from our research highlight the challenges common to all the public health consumer education programs we reviewed, and we would be remiss not to mention these in our discussion of key findings. In this chapter, we address the key challenges we identified: demonstrating effectiveness; getting (and staying) on the public agenda; leveraging limited resources; and weighing the distinctions between informing, motivating, and manipulating behavior.

### DEMONSTRATING EFFECTIVENESS

First, we must acknowledge that the evidence base for campaign effectiveness is limited. As we searched the literature for successful programs, we found few that had been formally evaluated and fewer still that could demonstrate an impact on behavior. This cursory impression, based on our limited review, is supported by rigorous reviews and meta-analyses by other researchers (Snyder et al. 2004; van Sluijs 2007; Saraiya et al. 2004; Cavill and Bauman 2004).

This paucity of evidence reflects the challenges that even well-designed campaigns face in generating hard evidence of effectiveness. Behavioral change takes time, but few campaigns have the resources to sustain a long-term effort or to evaluate more than short-term outcomes. Distinguishing discrete campaign effects from secular influences on behavior is also difficult, since campaigns almost never take place in controlled or isolated environments. For these reasons, evaluations more often focus on the performance of the campaign itself (such as the depth and breadth of audience exposure to campaign messages) or on short-term impacts on audience perceptions, awareness, or attitudes. Only rarely are campaigns able to conduct follow-up studies to determine whether short-term impacts persist or lead to changes in behavior.

Although for this study we deliberately selected programs that included fairly rigorous evaluations in their design, they were similarly challenged to demonstrate hard outcomes with lasting effects. For example, the government cosponsors of Canada on the Move recognized that Kellogg Canada's distribution of pedometers in cereal boxes created a rare opportunity to conduct a "natural experiment" in mass communication about the health

benefits of walking. Through its government-funded evaluation, Canada on the Move was able to show that it had attracted the attention of a large segment of the Canadian population, that pedometer ownership increased, and that awareness of the campaign was associated with pedometer use (Craig et al. 2006). Nonetheless, the short time frame and limited budget for evaluation did not permit researchers to determine whether the campaign had had an impact on long-term outcomes related to walking behavior, fitness, or weight loss.

WARN faced similar challenges. A federally funded initiative designed to educate physicians and the public about drug resistance while promoting the judicious use of antimicrobial drugs, WARN used a natural experimental design to evaluate its efforts, selecting Minnesota as the “control” comparison group to its “treatment” efforts in Wisconsin. Although the research team found that antimicrobial prescribing in Wisconsin declined more than 20 percent between 1998 and 2003, that reduction was not significantly different from comparable declines in the control state of Minnesota (Belongia et al. 2005).

Demonstrating the effectiveness of shared or informed decision-making is also difficult, in part because of the challenges of determining what constitutes a “good” decision when outcomes are uncertain—a point we address further below (Holmes-Rovner et al., 2007; O’Connor et al. 2003, 2004; Politi et al. 2007). Several randomized controlled studies have shown that people who more accurately understand the probabilities of outcomes associated with specific procedures (such as elective surgery and cancer screening) are more likely to decide against them (Ward 1999; Sarfati et al. 1998; Schwartz et al. 1999; Halvorson et al. 2007; Edwards et al. 2001, 2003; O’Connor et al. 2004). However, the evidence also suggests that efforts to engage consumers in using decision aids or otherwise participating in shared decision-making have had limited success (O’Connor et al. 2004). One study found wide variation in the extent to which people want to be involved in decisions about their care, with older people, in particular, less inclined to participate actively (Levinson et al. 2005).

## **GETTING/STAYING ON THE PUBLIC AGENDA**

At a given moment, any number of legitimate concerns compete for public attention and limited public health resources. In what one group of health communications researchers described as “marketing health in a crowded media world,” advocates and advocacy organizations try to bring their issues to the fore by whatever means they can: by soliciting celebrity endorsements, by taking advantage of events in the news to draw attention to a particular problem, or by framing messages in a way that raises public alarm (Randolph and Viswanath 2004). Meanwhile, public priorities and attention can and do shift often and quickly, creating limited windows of opportunity in which to take action.

Changing social norms and entrenched behaviors requires a sustained effort on many different fronts over many years, as the long-term success of anti-smoking initiatives and campaigns to reduce the incidence of drunk driving clearly attests. The experience of these initiatives underscores the fact that progress requires a continuously renewed commitment,

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and a substantial amount of resources, before a “tipping point” is reached. Yet most issues and campaigns have a short “shelf life” that makes sustained effort difficult.

Keep America Beautiful has been able to maintain momentum behind its anti-littering campaigns for more than 50 years, in part because it has been able, at critical junctures, to realign its core messages with larger social phenomena that resonate with broad sectors of the American public, from the “See the USA” ethos of the post-World War II era (commensurate with the proliferation of automobiles and federal highway development) to the environmental movement of the 1970s to more recent interests in recycling and minimizing the “carbon footprint.”

Yet several of the other programs we studied acknowledged that both their life span and their effectiveness were limited by competing and shifting priorities. For example, the programs promoting sun protection arose from the CDC’s search for “low-hanging fruit” in cancer prevention in the 1990s: skin cancer was commonly diagnosed, most forms were eminently preventable, and the means for preventing them (avoiding excessive sun exposure in children and adolescents) seemed straightforward and accessible. In spite of broad professional consensus on these issues, efforts to get cooperative support for the campaign among health care providers and schools were largely unsuccessful amid competing (and more compelling) concerns about other adolescent risks, like unprotected sex and substance abuse.

Similarly, WARN was unable to secure discretionary state funding to support even a modest continuation of its campaign to promote more judicious antibiotic use after federal money ran out, because those who made the funding decisions had other more immediate public health priorities, such as improving children’s access to dental care. This experience in particular suggests the importance of having champions with influence over the distribution of resources who can help sustain momentum behind public health campaigns that seek to enhance the public good over the long term, even though benefits may not accrue to individuals in the near term.

### **LEVERAGING LIMITED RESOURCES**

The expenses associated with the development, implementation, and evaluation of well-designed consumer education campaigns and the limited availability of funding to support such efforts often dictate the need to leverage resources, wherever possible, through partnerships with commercial endeavors, pro bono contributions, and voluntary alliances. Most of our respondents agreed that such partnerships are critical and have the potential to expand a program’s reach or effectiveness well beyond what it would otherwise be. However, they can sometimes make it difficult for program sponsors to maintain control over campaign messages or strategies.

The common interest of CIHR and Kellogg Canada in delivering messages about diet and exercise led them to join forces in an unprecedented public-private partnership for Canada on the Move. Kellogg’s resources and promotional ability could reach far more people than government funding alone. However, CIHR worried initially that its association

would be seen as product endorsement and that its credibility would be undermined by association with a manufacturer of high-sugar cereals popular with children. On the advice of independent consultants, it addressed this concern by separating the launch of the campaign from the launch of the cereal and appealing to the Canadian public for support for health research.

The CDC's Choose Your Cover sun protection campaign targeted adolescents with the practical message about the need to cover up during peak midday hours, after research showed that this audience would not respond well to stronger admonitions. The campaign was able to stretch its limited budget by enlisting pro bono support from *Seventeen* magazine and the Weather Channel in spreading its message. Ironically, however, it faced opposition from a vocal professional group with whom it had hoped to partner, which insisted that the message be *Do not go outside during these hours*.

### **INFORMING VERSUS MOTIVATING VERSUS MANIPULATING BEHAVIOR**

Virtually everyone agrees that information alone does not change behavior. Because most public health campaigns do seek to influence behavior, however, they must convey information in a way that gets consumers' attention and motivates them to take action. In this connection, both the literature and the experts we interviewed emphasize the importance of message "framing" in motivating behavior. Numerous studies, for example, have explored how "loss framing" (that is, stressing the risk of dire outcomes) and "gain framing" (emphasizing the benefits or the chances of good outcomes) influence behavior, depending on people's emotional response to the perceived risks and benefits associated with the behaviors and the uncertain outcomes (Kahneman and Tversky 1984; Rothman and Salovey 1997). Under some circumstances, appeals to fear have also been shown to be effective in arousing people to take action (although if overdone they can prompt people to block the messages altogether).

However, a number of other research findings raise questions about whether the way information is presented perhaps unintentionally manipulates behavior by creating distorted perceptions. For example, awareness campaigns have helped move breast cancer to the forefront of the public agenda, likely contributing to increased use of mammograms over the past 20 years. Yet several recent studies suggest that these campaigns have led many women to assume that their personal breast cancer risk is far higher than it really is. The women in one study were relieved to learn that their actual risk was much lower (Fagerlin et al. 2005; Boyles 2005). Framing the odds in terms of survival rather than mortality also makes patients more likely to give their "informed consent" for risky procedures (and vice versa) (McNeil et al. 1982). Patients who consent to participate in phase I clinical trials also tend to have an exaggerated sense of the potential benefits of the untested treatments, compared to their physicians and to patients who decline (Weinfert et al. 2003; Merapol et al. 2003).

In contrast to the behavioral objectives of most public health campaigns, the aim of informed decision-making is not to persuade consumers to take a particular course of action, but rather to help them incorporate accurate information about the risks and benefits of alternatives into their decisions. And studies of informed decision-making have shown that

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people who more accurately understand the risks and benefits of specific procedures (such as elective surgery and cancer screening) are actually more likely to forgo them (Ward 1999; Sarfati et al. 1998; Schwartz et al. 1999; Halvorson et al. 2007; Edwards et al. 2001, 2003; O'Connor et al. 2004).

Studies such as these raise a fundamental ethical question about public health consumer education programs that is not often acknowledged: Is it justifiable to exaggerate risks or benefits in order to motivate people to take a preferred course of action?

Health Dialog seeks to sort out questions about informing versus motivating versus manipulating health-related decisions in its approach to communication with clients. Health Dialog makes a clear distinction between situations where there is a strong, evidence-based, preferred behavior or treatment and those where there is not. In the former case (for example, diet and weight management in diabetes control), the health coach's job is frankly motivational. This may require rectifying misperceptions or informational deficits on the client's part, but more often the barriers clients face are emotional and practical (not informational), and the coach' job is to help clients develop appropriate strategies, given their stage of readiness. However, in cases where the evidence is equivocal (for example, PSA screening) or where there are many different options with equivalent outcomes (for example, in early-stage breast cancer treatment), the coach's job is not to influence decisions but to remain neutral, to give clients accurate and unbiased information about the risks and benefits of various options, to help them recognize how their personal preferences and values play into the decision, and to coach them to advocate for themselves within the health care system once they have made their decision.

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## CHAPTER VI

### IMPLICATIONS FOR MEDICARE

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One of the research team's charges in undertaking this project was to consider how our findings might apply to Medicare and to programs or campaigns targeting Medicare beneficiaries. In this chapter, we address these questions (1) by considering ways the Medicare population might be different from other audiences typically targeted in consumer public health education campaigns, (2) by reflecting on what Medicare wants to accomplish by engaging consumers, and (3) by returning to the question raised at the end of the previous chapter about the distinction between motivating and informing behavior.

#### **IS THE MEDICARE POPULATION DIFFERENT?**

The first question that comes to mind when considering the implications of this research to Medicare is whether any characteristics unique to the Medicare population would shape the approach to campaigns that target this population. While the principles identified in Chapter IV would apply regardless of the population (for example, the need to make campaign messages personal and actionable, to focus on multiple levels of influence, and to use media strategically) our interviews revealed several common assumptions about this age-defined demographic group that may shape campaign strategies. For example, one respondent noted that older age groups do not respond well to humorous appeals. Some communications researchers have found that people over 65 are reached best through newspapers, daytime television, and local news broadcasts, and many note that seniors make little use of computers or the web. Several respondents also cited research showing that older consumers are more deferential to their physicians than younger ones and less inclined to take an active part in health care decision-making. Others observed that older people in particular have trouble sorting through complex information about the risks and benefits of alternative courses of action.

Yet evidence also suggests that the behaviors and characteristics of older age groups may be changing and that some commonly held assumptions do not necessarily hold. Computer and web use is rapidly increasing among older people, for example, and will continue to do so as baby boomers age. Based on their health coaching experience, Health Dialog staff also report that older people, far from deferring to their physicians, are often most interested in discussing treatment alternatives, because they are more likely than

younger people to have had negative health care experiences at some point. Regardless of their personal opinions about these questions, all our respondents agreed that prior assumptions about any demographic group often turn out to be wrong, and all stressed the importance of conducting research on the target audience when designing a program.

In sum, rather than making assumptions about the Medicare population, we need to inform our communication or educational campaigns through research into the specific perceptions, attitudes, and behaviors we wish to address.

### **WHAT DO WE WANT TO ACCOMPLISH BY ENGAGING MEDICARE CONSUMERS?**

We began this project by identifying several different kinds of behaviors that public health consumer education programs typically seek to influence, the objectives they seek to achieve, and the different motivational considerations associated with each (Table II.1). As we understand it, what prompted MedPAC to launch this project is the conviction that consumers (who have heretofore been mostly absent from policy discussions) need to become active partners in efforts to bring higher quality and greater efficiency to the health care system and to become active participants in their own health care. What are the desired behavioral outcomes of engaging consumers in these endeavors, and what are the associated motivational considerations? How do our research findings bear on these questions?

One of the biggest challenges is that these objectives have not been well defined in public policy circles. If the aim is to inform consumer choice, the presumption is that consumers do have choices, perceive consequences to those choices, understand the information reported and its relevance to their needs, and see meaningful differences in performance. In practice, however, none of this may be true: choice might be limited or nonexistent; variations in quality may not be apparent; information may be conflicting, confusing, or highly technical; and the relevance of information to personal health care decisions may not be obvious (Gerteis et al. 2004). In sum, consumers have not come to the table for discussions of quality and efficiency, because the issues have not been framed in terms that are either personally relevant or conducive to action.

In many respects, these issues, as well as those in other areas of public policy interest (such as health information technology), are similar to those faced by the programs targeting littering and antibiotic use: that is, the objective of creating a better, more efficient health care system has more to do with the promotion of the greater public good than with the health or well-being of any individual. Just as people are asked to sacrifice some degree of convenience or personal comfort for the greater good by abstaining from littering or antibiotic use, so will they be asked to forgo some high-tech or high-cost health care services in the interest of creating a more judicious and efficient health care system. Indeed, one of the biggest obstacles to getting consumers to consider lower-tech treatment alternatives in shared decision-making protocols, according to spokespersons for Health Dialog, is the prevailing cultural norm, reinforced by the media, that more—*more* health care, *more* high-cost technology—is better.

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How, then, do we engage consumers in conversations that say *less* may be better? Several respondents observed that the individualism of Americans, in contrast to their Canadian or European counterparts, makes them less responsive to appeals based on the interest of the larger community. But others suggested that appealing to their patriotism or to the need to conserve resources for children and grandchildren may resonate, especially, with older Americans. The programs we reviewed for this research helped identify some of the factors that contribute to (or limit) the success of public health consumer education campaigns. But we need to explore other examples, from other areas of public life, that provide better models for engaging people in the pursuit of the common good. There are, however, no simple solutions. Changing social norms around the use of health resources for the sake of the common good—if that is our aim—will require a multifaceted and sustained effort for many years to come.

### **DO WE WANT TO MOTIVATE CONSUMERS OR INFORM THEIR BEHAVIOR?**

Our research raised questions about the distinctions between informing, motivating, and manipulating consumer behavior, as well as about the circumstances that may justify different approaches. As we think through what Medicare wants to accomplish by engaging consumers and how it should do so, it is worthwhile to ask whether our aim ought to be to motivate or to inform. Does the preponderance of evidence we bring to bear on questions of quality and efficiency, for example, indicate that some health care providers are clearly better than others? If it does, then the objective may well be to move consumers toward those providers, just as public health campaigns seek to move them toward evidence-based healthy behaviors. While this will still require sustained effort on many different fronts, our review of public health consumer education programs suggests some of the principles that should guide such efforts.

If, on the other hand, the evidence is mixed, inconsistent, or inconclusive—as often seems to be the case with existing measures of quality and efficiency—then the challenge is to engage consumers with the information in a way that allows them to understand the uncertainties, weigh the costs and benefits of alternatives, and make an informed decision consistent with their own needs and values (Politi et al. 2007). As several of our interview respondents observed, this is an especially difficult task, given limited proficiency with the language of mathematics and statistics throughout the population. We also need to learn from other fields how to convey information about probabilities, risks, and benefits in a value-neutral way and translate complex statistics into terms that consumers can understand.

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**APPENDIX A**  
**REFERENCES**

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**APPENDIX B**  
**SEARCH TERMS USED FOR LITERATURE**  
**REVIEW**

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**Table B.1. Search Terms Used to Identify Public Health Campaigns in Selected Topic Areas**

OVID MEDLINE	
• Sun exposure	“sun exposure” OR “sun protection” OR “skin cancer” campaign OR intervention “public health” OR “health education” behavior adj4 change evaluat\$ OR success\$
• Antibiotic use	antimicrobial OR antibiotic prescri\$ OR use or usage campaign OR intervention “public health” OR “health education” behavior adj4 change evaluat\$ OR success\$ patient OR clinician OR physician
• Mammography	breast adj4 cancer mammography “breast cancer” AND screen\$ campaign OR intervention “public health” OR “health education” behavior adj4 change evaluat\$ OR success\$ woman\$ or women\$ AND health
EBSCOhost (Academic Search Premier and EconLit)	
• Sun exposure	“sun exposure” OR “sun protection” OR “skin cancer” campaign OR intervention “public health” OR “health education” behavior N4 change evaluat* OR success*
• Antibiotic use	antimicrobial OR antibiotic prescri* OR use or usage campaign OR intervention “public health” OR “health education” behavior N4 change evaluat* OR success* patient OR clinician OR physician
• Mammography	breast N4 cancer mammography “breast cancer” AND screen* campaign OR intervention “public health” OR “health education” behavior N4 change evaluat* OR success* woman* or women* AND health

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**APPENDIX C**  
**PROGRAMS SELECTED FOR REVIEW**

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**Table C.1. Public Health Consumer Education Programs Selected for Review, by Type of Behavior Targeted**

Program (Duration)	Goals/Targeted Behaviors	Target Audience(s)	Communication Methods/Strategies	Messages/ Information Conveyed	Evaluation Measures	Reported Outcomes
<b>1. Individual Risk Behaviors</b>						
Canada on the Move (2003-2004)	Walking, physical activity, pedometer use	Adult Canadians	Mass education supported by distribution of pedometers, interactive website	Promoted message of undertaking 30 minutes of moderate-intensity activity most days of the week	Survey data	Increased awareness of campaign messages, increased pedometer ownership, and awareness that campaign messages were associated with pedometer use
Wheeling Walks (2001-2002)	Walking, physical activity	Sedentary and insufficiently active adults aged 50-65 years	Mass education promoted by mass communications, media events, and local interventions	Promoted behavior change with simple, focused message emphasizing self-efficacy	Survey data	Significant and sustained increase of overall levels of walking among least active cohort of adults
Falmouth Safe Skin Project (1995-1997)	Sun protection	Parents, children age 13 and younger, and caregivers	Mass education, community activism, and behavioral interventions	Promoted continuous use of sunscreen, as well as hat and shirt use, outdoors to help prevent skin cancer	Survey data	Improvements in target outcomes were found to be associated with the program; attitudes toward, and awareness of, skin cancer prevention increased during campaign
Choose Your Cover (1998-2003)	Sun protection	Adolescents, young adults	Mass education and supported by mass communications and media outreach	Promoted messages highlighting harmful effects of UV radiation as well as measures to prevent skin cancer, including seeking shade, covering up exposed skin, and applying sunscreen	Survey data, media tracking	N/A

Table C.1 (continued)

Program (Duration)	Goals/Targeted Behaviors	Target Audience(s)	Communication Methods/Strategies	Messages/ Information Conveyed	Evaluation Measures	Reported Outcomes
<b>2. Participation in Mass Screening</b>						
Georgia Cancer Awareness and Education Campaign (2002-2003)	In 2002: Screening education regarding breast and cervical cancer	Georgia residents (focus groups and surveys helped determine specific target audiences)	Mass education, public service announcements, grassroots community outreach	Cancer prevention and detection message was augmented by education regarding the importance of proper nutrition, exercise, and healthy lifestyles	Survey data	Small magnitude of change of knowledge and behaviors regarding cancer screening; however, larger magnitude of change of attitudes
Screen for Life (1999-2007)	Greater awareness of and screening for colorectal cancer	General public, adults aged 50 and older	Mass education, public service announcements	Key facts regarding those at risk, prevention, detection, and treatment	Survey data, media tracking	N/A
<b>3. Individual Behaviors that Have Social Consequences</b>						
Keep America Beautiful (1953 - present)	Preventing littering, reducing waste, beautification	General public	Mass education promoted by mass communications and partnerships	Various messages regarding littering and conservation with intent to change attitudes and behaviors	N/A	N/A
Wisconsin Antibiotic Resistance Network (1999-2003)	Education about drug resistance and judicious antimicrobial drug use	Primary campaign physicians, general public	Mass education supported by mass communications, local interventions	Various messages promoting judicious use and prescribing of antimicrobial drugs	Survey data	Decline in overall rate of prescription of antimicrobial drugs indistinguishable from secular trend of declining usage

**Table C.1 (continued)**

Program (Duration)	Goals/Targeted Behaviors	Target Audience(s)	Communication Methods/Strategies	Messages/ Information Conveyed	Evaluation Measures	Reported Outcomes
<b>3. Individual Behaviors that Have Social Consequences (continued)</b>						
Campaign to Prevent Antimicrobial Resistance in Healthcare Settings (2002-present)	Appropriate use of antimicrobials	Clinicians, including doctors, nurses, and other hospital staff	Dissemination of evidence-based strategies through educational tools and materials	Use of 12-step recommendations as well as four basic strategies regarding diagnosis and treatment of infections, wise use of antimicrobials, prevention of infections, and prevention of transmission of infections	Survey data, focus group	Initial assessment provided feedback on perceptions of problem of antimicrobial resistance, barriers to preventing antimicrobial resistance, important step/strategies, and preferences for materials and information
<b>4. Health Care Purchasing/Choice Decisions</b>						
Health Dialog (1997 – present)	Seeks to engage consumers/ patients in decisions about undergoing diagnostic and therapeutic procedures	Health care consumers at point of decision-making	One-on-one telephone consultation supported by video media and written materials	Conveys risks and benefits of alternative procedures in a value-neutral way	N/A	N/A

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**APPENDIX D**  
**INTERVIEW RESPONDENTS AND GUIDES**

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# LIST OF INTERVIEW RESPONDENTS

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## CAMPAIGN-AFFILIATED INTERVIEW RESPONDENTS

### Screen for Life and Choose Your Cover

Cynthia Jorgensen, DrPH  
Centers for Disease Control and Prevention  
Atlanta, GA

### Falmouth Safe Skin Project

Alan Geller, RN, MPH  
Boston University School of Medicine  
Boston, MA

### Georgia Cancer Awareness and Education Campaign

Kimberly Redding, MD, MPH  
Georgia Department of Human Resources, Division of Public Health  
Atlanta, GA

### Wisconsin Antibiotic Resistance Network

Edward Belongia, MD  
Mary Jo Knobloch, MPH  
Marshfield Clinic Research Foundation  
Marshfield, WI

### Canada on the Move

Diane Finegood, PhD  
Canadian Institutes of Health Research, Institute of Nutrition, Metabolism and Diabetes  
Ottawa, Ontario, Canada

### Keep America Beautiful

Robert Wallace, MA  
Keep America Beautiful  
Washington, DC

Wheeling Walks

William Reger-Nash, EdD  
West Virginia University  
Morgantown, WV

Health Dialog Shared Decision-Making Program

David Wennberg, MD, MPH  
David Veroff, MPP  
Mary Jane Favazza, MBA  
Health Dialog  
Boston, MA

Campaign to Prevent Antimicrobial Resistance in Healthcare Settings

Kristin Brinsley-Rainisch, MPH  
Ronda Sinkowitz-Cochran, MPH  
Centers for Disease Control and Prevention  
Atlanta, GA

**RESEARCH EXPERT INTERVIEW RESPONDENTS**

Tamera Schneider, PhD  
Wright State University  
Dayton, OH

Kasisomayajula Viswanath, PhD  
Harvard School of Public Health  
Boston, MA

David Buller, PhD  
Klein Buendel  
Golden, CO

Steven Coughlin, PhD, MPH  
Judith Lee, PhD  
Centers for Disease Control and Prevention  
Atlanta, GA

# 6384 – STUDY OF PUBLIC HEALTH CONSUMER EDUCATION PROGRAMS

## Final Interview Protocols

### I. Introduction and Project Background (5 minutes)

*Hello, this is \_\_\_\_\_ from Mathematica Policy Research. We scheduled this time to talk with you about your [experience with/observations of] the [campaign name]. Is this still a good time for you? Are there any particular time constraints we should know about before we start?*

*As I said, my name is \_\_\_\_\_, and I'm a [title] here at MPR, and I'm joined by \_\_\_\_\_, [title]. The two of us are working with \_\_\_\_\_, [title and, if Margaret, explanation of her role as Project Director].*

*Let me tell you a little bit about the purpose of this project and what we'd like to talk to you about today. The Medicare Payment Advisory Commission also known as MedPAC (a congressional advisory body), is interested in understanding how public health campaigns affect public behavior regarding health issues. In particular, they are interested in understanding how information is best communicated, and the factors that lead consumers to take action or change behavior. This information, which we are researching on behalf of MedPAC, will inform other efforts to improve health or engage consumers in promoting quality and efficiency in health care. To that end, we are focusing on a few selected campaigns that have demonstrated success.*

*After our research is completed, we will be providing a final report summarizing our findings to MedPAC. This study will, in turn, be incorporated into MedPAC's annual June report to Congress covering a variety of topics related to improvement in cost, quality, and access to health care. Please be assured that we will respect anything you wish kept confidential.*

*During this interview, I'll be asking most of the questions. \_\_\_\_\_ from MPR will be mostly listening and taking notes, or following up on some points that I may have missed.*

*[IF MEDPAC PERSON IS SITTING IN] \_\_\_\_\_ from MedPAC is also on the line and may have some follow-up questions for you.*

*Do you have any questions before we start?*

### II. Campaign/Program Origins and Goals (10 minutes)

**1.** To get us started, please provide a brief overview of the history and original impetus for the campaign/program. Also, what was your role in developing and implementing the campaign/program?

*1a. Probe: who sponsored it? how long did it last?*

**2.** What were its overall objectives? What outcomes did it hope to achieve?

### III. Campaign/Program Design (5 minutes)

*I'd like to focus in now on the design of the program.*

1. Who were the target audiences? Why were these audiences selected?

*1a. Probe: were multiple audiences targeted? was the focus on health provider, ,as well as consumers, or both*

*1b. Probe: was there a geographic focus or other ways in which the scope of the program was limited or targeted?*

2. How was the campaign/program designed to achieve its objectives? What were its principal strategies?

*2a. Probe: was any formative research (such as focus groups and surveys) used in the design?*

*2b. Probe: at what level the campaign focus on: individual attitudes, behaviors, beliefs? interpersonal relationships? institutional structures, policies? community or social norms?*

3. Did the campaign/program seek primarily to convey information or to influence behavior or both? What behavior(s) did the campaign intend to influence?

### IV. Information and Communications (10 minutes)

1. What were the core messages that the campaign/program sought to communicate? How were these messages selected? How were they framed?

*[Note: "framing" refers to the use of a specific message design to ensure its success; for example, the use of gain-framed messages (such as good health) for promoting prevention and the use of loss-framed messages (such as mortality) for promoting early detection.]*

*1a. Probe: how did audience demographics affect messaging?*

*1b. Probe: were messages pre-tested using focus groups or surveys?*

2. How did the campaign/program communicate with target audiences? What tools or media were used?

*2a. Probe: were communications strategies a function of available resources?*

*2b. Probe: were public service announcements used? If so, did they help?*

3. What sources did the campaign/program draw on for technical or other information it provided?

*3a. Probe: was there ever a concern about the technical complexity or ambiguity of the information used or conveyed in the campaign?*

### V. Campaign Implementation (5 minutes)

1. How was the campaign implemented? What partners or stakeholders were involved?

2. Apart from communication campaigns, were there any interventions [e.g., local outreach/education, medical interventions, etc.] used to augment campaign goals?

*2a. Probe: did the campaign have any inherent risks or potential negatives? (e.g., false positives from screening campaigns)*

## **VI. Outcomes (10 minutes)**

1. What were the outcomes of the program/campaign? Did it accomplish its objectives?

2. Was the program/campaign evaluated? How rigorous was the evaluation and what were the key evaluation components?

*2a. Probe: Was data collected before and after the campaign? Was data collected on a control or comparison group?*

3. How was success measured or assessed?

4. Were process analyses used or midcourse corrections implemented?

5. Did the campaign/program raise awareness? Increase knowledge? Change behavior?

*5a. Probe: is there evidence to suggest that the campaign has had enduring effects? That effects were transitory?*

6. What factors led to action or behavior change? Did any specific incentives play a role?

7. Were there other factors, apart from the campaign/program, that may have influenced outcomes, in your view?

## **VII. Other Questions and Conclusion (15 minutes)**

1. Overall, what were the most successful aspects of the campaign/program? What were the least successful?

*1a. Probe: were there any unintended consequences?*

2. What would you do differently, if you were to be involved in another, similar campaign/program?

3. Are there any other campaign “best practices” not discussed that we should know about?

*3a. Probe [where appropriate]: is there anything about the campaign specific to older (over-65) or disabled populations that we should know?*

4. Are you aware of similar campaigns/programs that were successful in (1) effectively communicating information and messages and (2) getting those targeted to take action?

*Thank you very much for your help today. Good bye.*

# 6384 – STUDY OF PUBLIC HEALTH CONSUMER EDUCATION PROGRAMS

## Draft Interview Protocols “Big Picture” Researchers

### I. Introduction and Project Background (5 minutes)

*Hello, this is \_\_\_\_\_ from Mathematica Policy Research. We scheduled this time to talk with you about your [experience with/observations of] the [campaign name]. Is this still a good time for you? Are there any particular time constraints we should know about before we start?*

*As I said, my name is \_\_\_\_\_, and I’m a [title] here at MPR, and I’m joined by \_\_\_\_\_, [title]. The two of us are working with \_\_\_\_\_, [title and, if Margaret, explanation of her role as Project Director].*

*Let me tell you a little bit about the purpose of this project and what we’d like to talk to you about today. The Medicare Payment Advisory Commission also known as MedPAC (a congressional advisory body), is interested in understanding how public health campaigns affect public behavior regarding health issues. In particular, they are interested in understanding how information is best communicated, and the factors that lead consumers to take action or change behavior. This information, which we are researching on behalf of MedPAC, will inform efforts to improve health or engage consumers in promoting quality and efficiency in health care. To that end, we are focusing on focusing on a few selected campaigns that have demonstrated success. We are also interviewing a few people who, like you, have broader research experience in this area.*

*After our research is completed, we will be providing a final report summarizing our findings to MedPAC. This study will, in turn, be incorporated into MedPAC's annual June report to Congress covering a variety of topics related to improvement in cost, quality, and access to health care. Please be assured that we will respect anything you wish kept confidential.*

*During this interview, I’ll be asking most of the questions. \_\_\_\_\_ from MPR will be mostly listening and taking notes, or following up on some points that I may have missed.*

*[IF MEDPAC PERSON IS SITTING IN] \_\_\_\_\_ from MedPAC is also on the line and may have some follow-up questions for you.*

*Do you have any questions before we start?*

### II. Background and Research Area of Expertise (10 minutes)

1. To get us started, please tell us a little bit about your background and your research interests.
2. How would you describe your research approach. Is it mostly theoretical? Experimental? Empirical? A combination?

*2a. Probe: What particular research questions have you explored? What are you involved in now?*

*2b. Probe: [If empirical] What kinds of campaigns have you been involved in or studied?*

### **III. Overview: What Makes Campaigns Effective**

*Let's start at the 50,000-foot level.*

1. Based on your experience, what would you say are the most important factors that determine a campaign's effectiveness?

2. One of the things we're interested in is how strategies may vary, depending on the kinds of behavior that you're trying to influence. For example, we are looking at some campaigns that target individual risk behaviors and some that target behaviors that have broader social consequences. What are your thoughts about this?

*2a. Probe: What are the important distinctions among types of campaigns, in your view?*

*2b. Probe: Are there some principles that apply across the spectrum, or are campaigns idiosyncratic?*

### **IV. Target Audiences**

1. How do you decide whom to target in public health campaigns? What are the most important criteria to consider?

*1a. Probe: Do you focus on populations most at risk? Low-hanging fruit – i.e., people who are most receptive, or most ready to change? Populations who are most likely to influence others?*

2. How does choice of target audience vary with campaign strategies? For example, does it make a difference if you're trying to influence individual behavior or change social norms?

### **V. Message Development and Framing**

1. How does message framing/messaging affect health-related behaviors, in your view? How does it affect individuals' motivation to take action?

2. Do different audiences respond differently to messages, in your experience? Are some types of messages more effective with some audiences?

*2a. Probe: How does age, gender, or race affect audiences' responses?*

*2b. Probe: [Given MedPAC's interest in the Medicare population] Is there anything specific to communicating with the over-65 population that we should know about?*

*2c. Probe: How do you determine what approaches will work with different audiences? (e.g., formative research; message testing)*

## **VI. Communicating Risk**

*We are also interested in the difference (or the trade-off) between communicating to influence behavior and communicating to convey information.*

**1.** In your experience, how important is it to convey information about the risks and benefits of behaviors as part of a public health campaign?

*1a. Probe: Is it more important to motivate behavior or to convey information accurately?*

*2b. Probe: Are there ethical concerns about exaggerating risks in order to motivate behavior? Are there, potentially, unintended negative consequences of doing so?*

**2.** If the evidence around risks and benefits of behaviors is technically complex or ambiguous, how does this affect campaign messaging?

*2a. Probe: Are there ways of framing risks and benefits that make the information more understandable to consumers?*

## **VII. Campaign Implementation/Channels of Communication**

**1.** In your experience, are some channels of communication more effective than others? How do effective channels of communication relate to campaign strategies?

*1a. Probe: What is the value of mass communication versus face-to-face interactions?*

**2.** What makes for successful mass communication campaigns?

*2a. Probe: What is the value of earned versus paid media coverage? Of PSAs?*

*2b. Probe: How important is breadth versus depth in determining the effectiveness of the campaign's reach?*

## **VIII. Outcomes**

**1.** How do you determine whether a campaign is successful?

**2.** In your experience, are there examples of campaigns that have demonstrated sustained long-term results, or are most campaigns evaluated in terms of their short-term impacts?

**3.** What contributes to sustained impact, in your view?

## **IX. Wrap-Up**

**1.** Are there any other important issues that we haven't touched on?