

PROMOTING NUTRITION AND PHYSICAL ACTIVITY THROUGH SOCIAL MARKETING: CURRENT PRACTICES AND RECOMMENDATIONS

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Prepared for the Cancer Prevention and Nutrition Section
California Department of Health Services
Sacramento, California
June 2000

Acknowledgements

The authors wish to thank the following colleagues for their comments on an early version of this report: Susan Foerster, Christopher Gardner, Marilyn Townsend, and Sallie Yoshida. We also acknowledge Diana Cassady, Lisa Craypo, Gail Feenstra, Jennifer Gregson, Mary Haan, Lucia Kaiser, Kellan London, Sarah Samuels, Maria Stoecklin, and Cyndi Guerra Walter for their contributions to our project and to the University of California, Davis Center for Advanced Studies in Nutrition and Social Marketing. Appreciation is also extended to Janice Murphey for cover design and layout.

The University of California at Davis, Center for Advanced Studies in Nutrition and Social Marketing works in alliance with the California Department of Health Services (CDHS), Cancer Prevention and Nutrition Section, to improve nutrition and physical activity behaviors related to the prevention of chronic diseases. The Center for Advanced Studies in Nutrition and Social Marketing was established in 1999 with the mission to advance social marketing practice, methods and evaluation of diet and physical activity for the primary prevention of cancer and other chronic diseases in California. This collaboration was established as a joint effort to assemble a multidisciplinary team of faculty and researchers to address the complex issues in nutrition, physical activity, and cancer prevention. The Center is considered the first of its kind in the United States dedicated to examining social marketing specifically in the context of nutrition and physical activity.

Funding: The Center for Advanced Studies in Nutrition and Social Marketing is supported by the Cancer Research Program, California Department of Health Services, pursuant to Statutes of 1997, Chapters 755 and 756 (AB 1554 and SB 273), grant number 98-16026.

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Suggested Citation: Alcala, R. and Bell, R.A. Promoting Nutrition and Physical Activity through Social Marketing: Current Practices and Recommendations. Center for Advanced Studies in Nutrition and Social Marketing, University of California, Davis, CA, 2000.

Disclaimer: This publication is an independent research report of the University of California, Davis, Center for Advanced Studies in Nutrition and Social Marketing. The opinions expressed here do not necessarily represent those of the Cancer Prevention and Nutrition Section, California Department of Health Services.



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June 27, 2000

Foreword

This exceptional report fills a significant void, and is the most comprehensive review to date of social marketing campaigns that have focused on the promotion of nutrition and physical activity. It is well established that healthy eating habits and regular physical activity can have beneficial effects in health promotion and disease prevention. While these findings have been reported repeatedly in controlled experiments, it is an entirely different matter to try to change social norms and health behaviors in the general population, or in high-risk subsets of the general population. Many approaches, designs and strategies have been employed to promote these changes in various communities. The impressive contribution that Drs. Alcalay and Bell make in this report, is to pull an extensive list of past work together at one time, point out successes and failures, and recommend what we should do next.

Particularly satisfying in this report are the methodical approaches taken, and the scientific basis for presenting findings and conclusions. The opening sections on defining the *Social Marketing Perspective*, followed by an overview of *Theoretical Tools*, will be useful and informative to readers regardless of their familiarity with the topic area. This background is then followed by a thoughtful explanation of the specific *Research Questions* to be addressed, and the selection criteria for the studies to be reviewed (*Review Methodology*). The *Results* that follow are a clear presentation of the findings, in response to the specific questions proposed. Most satisfying of all, Drs. Alcalay and Bell then provide us with their expert guidance on how to move the field forward in their *Conclusions and Recommendations* section.

The powerful conclusions presented here challenge much of the work that has been done in nutrition and physical activity promotion under the guise of “social marketing”. The constructive recommendations are to make substantial changes in future campaigns, and to broaden the social marketing approach. The scope and depth of this excellent review is certain to have an important impact on the future work of health professionals in their efforts to promote healthy eating habits and regular physical activity in the context of changing social norms and health behaviors. We encourage you to take advantage of this report and join us in accepting the challenge to learn how to be more effective in promoting healthy nutrition and physical activity behaviors using social marketing approaches.

A handwritten signature in black ink that reads "Christopher Gardner".

Christopher Gardner, PhD

Director, Center for Advanced Studies in Nutrition and Social Marketing

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Executive Summary

Objectives

This report describes the essential features of the social marketing perspective, as well as the primary social-behavioral theories used by social marketers; reviews social marketing campaigns intended to promote better nutritional practices and increased physical activity; and offers recommendations for improving future health promotion efforts in this area.

Research Questions and Review Methodology

Thirty-three research questions were posed and organized around a four-phase model of social marketing campaigns (research/planning, strategy design, implementation, and evaluation). To be considered a social marketing intervention, minimum criteria were established that a campaign had to satisfy to be included in this review. Fifty campaigns satisfied these criteria. Published reports for each intervention were collected, grouped, and then treated as the unit of analysis in our review. Each intervention was coded on the variables identified in the research questions. Data analyses were based on descriptive statistics, as the assumptions required for inferential tests were not met by these data.

Key Findings

Research and Planning

The most common goal targeted in these fifty interventions was the prevention of cardiovascular disease, followed by prevention of obesity, high cholesterol, cancer, hypertension, diabetes, and osteoporosis. The specific objectives most frequently pursued were reductions in dietary fat intake, increases in physical activity, and the promotion of fruit and vegetable consumption. A majority of campaigns promoted both improved nutrition and regular physical activity. Campaign goals were given in measurable terms in fewer than one-third of campaigns and were rarely formulated on the basis of data descriptive of target audiences. The social-behavioral theories most often referenced in these campaigns were Social Learning Theory, the Community Organization Model, and the Social-Ecological Model; many campaigns did not mention any theory whatsoever. Audience segmentation strategies were primarily based on demographics (usually age) and only occasionally made use of psychological and lifestyle principles. Adults were more likely to be targeted than children and adolescents. Consumer research about target audiences was obtained in a minority of campaigns and the nature of these research activities was often not described. Individual behaviors were more likely to be the focus of change efforts than family practices and/or community norms/activities. Changes in policy were attempted in only a few cases and media advocacy techniques were infrequently employed. Most interventions had community involvement in the planning/research activities of the campaign.

Strategy Design

Pretesting of key concepts and messages was reported in only two-fifths of campaigns, with focus groups being the most common method utilized. Pretesting of the entire campaign was reported in less than one-fourth of campaigns. With regard to the social marketing product, nine-tenths reported creating material products such as manuals, recipe books, and brochures, for distribution. Nearly three-fifths offered one or more health-related services

(e.g., free health screenings) to target audiences. The incentives and appeals used in these products could not be discerned from the information provided in campaign planners' reports of their activities. Most campaigns made use of broadcast, print, and interpersonal channels for product dissemination.

Implementation

Community members were enlisted as collaborators in more than four-fifths of the campaigns. Local organizations and groups, employers, health care providers, and school personnel from the community were used in roughly the same proportion of campaigns as mechanisms of community involvement. More than one-half of campaigns explicitly identified intervention maintenance as a long-term goal.

Evaluation

Nearly nine-tenths of campaigns made an effort to evaluate outcomes, but the summative research reported was often modest in scope. The most common evaluation strategy used was a quasi-experimental design. Knowledge gain was the most common cognitive/affective outcome measure reported, self-reported behavior change was the most frequently used behavioral outcome, and measured clinical changes (e.g., cholesterol levels) was the most often mentioned health outcome measure. Attempts to measure changes in morbidity and mortality were reported in less than one-tenth of campaigns. Cost-effectiveness evaluations were also uncommon.

Recommendations

The success of interventions has been limited, particularly in earlier social marketing campaigns. We offer a number of recommendations in order to improve future results. More attention should be paid to setting realistic, specific, and measurable objectives. Subsequent campaign activities should be consistent with these goals and objectives, as well as with desired outcomes. Social marketing concepts should become more central to campaigns, which often mention this framework but do not integrate it throughout the campaign. Behavioral theories should also be more actively applied to the design of campaigns. Audience segmentation and research should be more central to the planning of campaigns. Better definitions of audiences' psychographics and ethnicity should be present. Communication strategies should be formulated based on better information about target audiences' communication patterns. Better understanding of message design decisions and appropriateness should be included. Constructive models of public-private collaboration used in some of these interventions should be widely disseminated. More importantly, a major thrust of social marketing/media advocacy campaigns should be altering the environment and modifying environmental policies.

Introduction

Epidemiological research shows that poor nutrition and inactivity are risk factors for a variety of afflictions, including cancer, cardiovascular disease, diabetes, stroke, hypertension, and obesity (U.S. Dept. of Health and Human Services, 1990). In response to these findings, public health institutions in the United States and abroad have designed numerous health campaigns to improve people's diets and encourage more physical activity. This report reviews research on nutrition and physical activity promotion campaigns that have employed the *social marketing* perspective.

First, we describe the social marketing approach to health promotion. The key components of this approach are explicated and compared with product marketing. We also compare and contrast social marketing with other perspectives, including the traditional information campaign, the media advocacy approach, and the diffusion of innovations perspective. Many features of these "competing" approaches have, in fact, been incorporated into the social marketing framework.

Second, social-behavioral theories and models commonly used for campaign planning are reviewed. These include Exchange Theory, the Health Belief Model, the Theories of Reasoned Action and Planned Behavior, the Social Learning Approach, the Information Processing Paradigm, the Transtheoretical Model, the Community Organization Model, and the Social-Ecological Approach.

Third, a model of social marketing based on established frameworks is detailed and employed as an organizing structure for this review (Walsh et al., 1993). This model depicts social marketing as a process entailing research/planning, strategy design, implementation, and evaluation phases. We identify from the social marketing literature key activities for each phase. A set of research questions is developed for each element in the process. These questions pertain to past practices in the social marketing of dietary modifications and physical activity.

Fourth, the methods for this review are specified. A description of the criteria we used for selecting interventions for the review is provided, a listing of campaigns that satisfied these criteria is given, and the analytical process we followed to synthesize the practices followed in these interventions is outlined.

Fifth, we report the results of our review, focusing on a description of the standard practices employed at the research/planning, strategic design, implementation, and evaluation phases of social marketing. We then shift our attention to an examination of the effectiveness of these campaigns with regard to traditional outcome measures (e.g., exposure, awareness, knowledge enhancement, attitude change, and dietary behavioral changes).

This review concludes with a critique of the state of the art in nutrition and physical activity social marketing campaigns and offers recommendations for planning nutrition campaigns for greater reach and impact.

The Social Marketing Perspective

The academic field of social marketing often traces its roots to 1952, when Wiebe asked, “Why can’t you sell brotherhood like you sell soap?” The perspective did not emerge in a vacuum, however. Rather, it is built upon a foundation of influential studies on public communication campaigns carried out in the 1940s (Paisley, 1989) and on less formal descriptions of campaigns that date as far back as Ancient Greece (Kotler & Roberto, 1989).

In his essay on the American experience with public campaigns, Paisley (1989) notes that U.S. campaigns in the 1700s typically reflected the efforts of committed “individual reformers” who disseminated their messages through the pulpit and the printing press. He uses as an example the efforts of Reverend Cotton Mather to motivate Boston citizens to become inoculated against small pox in the years 1721-1722. In contrast, Paisley notes that the campaigns of the 1800s tended to be organized efforts by associations of citizens. Examples include organizations formed to combat slavery, promote women’s suffrage, and encourage temperance.

In the 1900s, campaigns were distinguished by their increased reliance upon the mass media, in particular their utilization of the new electronic media. Interestingly, evaluations of several of these campaigns revealed that media influence is shaped in powerful ways by interpersonal relationships (Weimann, 1994). As such, most social marketing campaigns came to include face-to-face community participation in all facets of the endeavor (Alcalay & Taplin, 1989).

What is “Social Marketing”?

A number of definitions of the social marketing construct have been offered (Lefebvre & Flora, 1988). Kotler (1975), for instance, defines social marketing as “the design, implementation, and control of programs seeking to increase the acceptability of a social idea or practice in a target group(s). It utilizes concepts of market segmentation, consumer research, idea configuration, communication, facilitation, incentives, and exchange theory to maximize target group response.” Andreasen (1995) defines social marketing as “the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of their society.”

These and other definitions share more commonalities than distinctions. First, the “social marketing” label is typically applied to causes judged by persons in positions of power and authority to be beneficial to both individuals and society. Second, unlike commercial marketing, the agent of change does not profit financially from a campaign’s success. Third, the ultimate goal is to change behaviors believed to place the individual at risk, not simply increase awareness or alter attitudes. Fourth, the optimal social marketing campaign is tailored to the unique perspective, needs, and experiences of the target audience, hopefully with input from representative members of this group. Fifth, social marketing strives to create conditions in the social structure that facilitate the behavioral changes promoted. Sixth and most fundamentally, however, is reliance upon commercial marketing concepts. It is often said that there is poetic justice in using the very marketing concepts employed by such “disease peddlers” as the tobacco and fast food industries to combat their negative influences.

Marketing Concepts

The marketing concepts employed in information campaigns based upon the social marketing approach are numerous. The “5Ps” are perhaps the best known among these. The purpose of the 5Ps is to develop a message strategy that offers consumers the optimal “marketing mix” of *product*, *price*, *place*, *promotion*, and *positioning*. When applied to social marketing, these concepts can be conceived of as follows:

- *Product*: the behavior or health idea that the campaign planners would like the targeted individuals (a.k.a., “consumers”) to adopt. The product can be an action (e.g., performing breast self-examinations regularly) or material item (e.g., fat-free dairy products).
- *Price*: the costs associated with “buying” the product. Costs can involve sacrifices related to psychological well being (e.g., increased anxiety), sociality (e.g., possibility of ostracism), economics (e.g., financial sacrifice), or time (e.g., inconvenience).
- *Place*: the distribution channels used to make the product available to target audiences. When the product is a physical item, it must be easily obtainable by consumers. When it is an idea, it must be “socially available” – supported within the consumer’s social sphere. The target audience must be informed of where, when, and how it can obtain the social marketing product(s). An important placement issue is the competition for finite space in the marketplace for food products, healthy and otherwise.
- *Promotion*: the efforts taken to ensure that the target audience is aware of the campaign. These publicity efforts should be designed to cultivate positive attitudes and intentions regarding the product that pave the way for behavior change.
- *Positioning*: the product must be positioned in such a way as to maximize benefits and minimize costs. “Positioning” is a psychological construct that involves the location of the product relative to other products and activities with which it competes. For instance, physical activity could be repositioned as a form of relaxation, not exercise. Serving low-fat meals to one’s family could be positioned as an act of love.

The 5Ps only begin to touch upon the marketing concepts employed by the social marketer. The following concepts also deserve mention (Andreasen, 1995; Kotler & Roberto, 1989; Lefebvre & Rochlin, 1997; Walsh et al., 1993):

- *Consumer Orientation*: The social marketing program is founded upon the reality (beliefs, attitudes, values, practices, etc.) of the target audience. The consumer’s involvement with the product is a primary facet of his or her orientation.
- *Audience Segmentation*: the target population is segmented into homogeneous groups that are uniquely targeted with messages tailored to their shared qualities. The social marketing product may also be modified for different target audiences.

At minimum, the product will probably require a different positioning for varying groups.

- *Channel Analysis*: An effort is made to identify through research the communication channels most likely to reach each segment and the times when these individuals will be most receptive to the message.
- *Strategy*: The strategic concepts that offer the highest probability of achieving established goals are employed throughout the planning, design, and implementation of the campaign.
- *Process Tracking*: Research and other mechanisms are used to ensure that the program is implemented as planned and to provide feedback about program revisions that may be required.

It is instructive to consider what social marketing is *not*. Social marketing is not a theory. It does not tell us *how* to change a person's behavior. Rather, it is an approach to thinking about and structuring a social change program – one that is *consumer-driven*. Within this framework a number of social and behavioral theories can be drawn upon to develop a strategic course of action; these will be examined later.

Social Marketing Versus Product Marketing

The selling of healthier behaviors and the selling of products have much in common. Even so, neither health nor brotherhood can be sold like soap. Practitioners remind us that there are significant differences between social and product marketing (Flay & Burton, 1990; McCron & Budd, 1981). These differences include the following:

- *Promoted Change*: Health campaigns typically seek to change behaviors. Product marketing can strive for behavioral change, but is just as likely to attempt to activate a favorable disposition. In addition, social marketing can also seek environmental and systems change, something that product marketing rarely attempts to accomplish.
- *Expectations*: Social marketers strive to change the unhealthy behaviors of a large percentage of the target audience. Product marketers are usually delighted with small increases in market share.
- *Saliency*: The attitudes and behaviors targeted by social marketers are often fundamental to the people targeted; product marketing more often than not targets less involving behaviors. As such, social marketers must often overcome attitudes and values that are central to the person's identity. Product marketers typically deal with self-constructs that are more peripheral to the person's identity.
- *Certainty of Gratification*: Social marketers promise only an increased probability that benefits (e.g., a lower risk of cancer) will come to the person who adopts recommended changes. It cannot be proven with certainty that the behavior change advocated will produce a particular health outcome. In contrast, product

marketers usually offer unequivocal gratifications, and may even provide a guarantee that benefits promised will result. The causal link between the purchase and these satisfactions is seldom in doubt.

- *Timing of Gratification:* It may take months or years for the health benefits offered in social marketing campaigns to result. Indeed, many of the benefits sold are preventive in nature, resulting in the *absence* of an event (e.g., the *non*-development of cardiovascular disease). Product marketers offer benefits that are realized soon or immediately after purchase of the product.
- *Presentation:* Social marketers must strive for an “informational tone” and avoid overselling the benefits of recommended changes. With product marketing, overselling, and even some deception, may be accepted by consumers.
- *Trust:* Greater trustworthiness is typically attributed to the sponsors of a social marketing campaign than to the sponsors of product marketers. This trust advantage may be due to the belief that social marketers have no vested interest or other hidden motive, other than the desire to do good. Thus, in social marketing, “purchase” of the product benefits primarily the consumer; in product marketing, the sponsor is the chief beneficiary of the consumer’s decision to make a purchase.
- *Budgetary Constraints:* Social marketers must usually attempt to achieve their goals with small budgets. In-kind services, volunteerism, and donations of other resources may add to the available resources, but the social marketer can seldom match the resources available to product marketers. As a corollary, product marketing campaigns tend to be supported by more extensive formative and summative research and more professional and extensive communications with the consumer.

The greater resources available to product marketers provide them with control over the promotion of their products. They can decide where and how to promote the product, for instance, and can often buy the services of extremely talented marketing personnel. In contrast, the limited resources typically available to social marketers requires that they make use of free media and in-kind services that are often less than optimal.

Related Approaches

Social marketing is not the only perspective employed in health promotion endeavors. At this point, it would be useful to examine similarities and differences between the typical social marketing campaign and other approaches.

Information Campaigns

The terms “social marketing” and “information campaign” are often used interchangeably. For instance, Flay and Burton define the information campaign as “an integrated series of communication activities, using multiple operations and channels, aimed at populations or large target audiences, usually of long duration, with a clear purpose.” Implicit in this definition is the notion of a persuasive intent, achieved through messages that have been adapted to

segmented audiences and communicated through strategically selected interpersonal, community, and mass media channels.

We do not believe that it is appropriate to treat the information and social marketing campaign as synonymous. There is no reason why an information campaign must adhere to a marketing approach, make use of marketing concepts, and so forth. True information campaigns emphasize the communication of messages to promote awareness. Social marketing campaigns also do so, but go further by creating a marketing mix based on the consumer's needs.

Media Advocacy

Social marketing focuses on changing individual behavior through persuasive communications directed at these people and others who influence them. In contrast, media advocacy attempts to alter public opinion in ways that will support policy initiatives that promote the public's health. "Media advocacy" has been defined as "the strategic use of mass media for advancing a social or public policy initiative" (Advocacy Institute for the National Cancer Institute, 1988).

An example would be useful. A social marketing campaign might attempt to convince individuals to reduce the amount of saturated fat in their diets. A media advocacy effort might attempt to get fast food or snack producers to decrease the fat in their foods and develop a new industry standard to make permanent such changes.

Thus, the media advocacy approach seeks to redefine individual health behaviors as social-political issues. The primary tool in media advocacy is the creation of controversy that prompts media coverage of the advocate's issue of interest. This coverage places the issue on the public's agenda, but can also serve to frame the issue in a way that supports legislative initiatives and reforms in commerce.

Wallack (1990) has observed that the media advocate needs to have skills in "creative epidemiology," issue framing, and acquiring access to appropriate media channels. First, the advocate needs to be able to use existing and new research to underscore the importance of the issue. For instance, a new study showing that Americans' intake of dietary fat is increasing could be used as a stimulus for calling upon the restaurant industry to disclose the nutritional profile of its offerings. The media advocate could also seek to create news by conducting "mini-studies" likely to grab the public's attention. For example, a survey could be conducted showing that young children can name more candy bars than state capitols to promote restricted access to vending machines in public schools.

Framing and reframing are also of critical importance, and can be thought of as forms of positioning. The advocate's issue and policy initiatives must be defined in ways that are likely to garner public support. For instance, a campaign opposing the use of hydrogenated fats in processed foods must make the practice frightening enough to place it on the media's agenda. The alleged effects of such fats might be described as "cardiovascular carnage," for instance. The companies that use such fats might be called "morbidity merchants."

Of course, the industry would probably respond against those "food cops" who want to "rob" the public of the "God-given right" to choose freely what to eat. The advocate will need to be prepared to counter these definitions of its efforts through reframing. For in-

stance, it might be said that food cops would not be necessary if the industry would halt its criminal, murderous assault on the public's health.

In a very large sense, creative epidemiology and framing are used to gain access to media outlets. The best access is often that which is free. Health news must often be transformed into controversy to make the evening news. This transformation process requires claims that are grounded in data with logical validity that is readily apparent.

The media advocate can also write articles on the topic for newspapers and magazines or submit pointed letters to the editors of local newspapers. In addition, other avenues to media coverage exist. The media advocate can work to get his or her issue incorporated into entertainment programming (often dubbed "infotainment") and can buy air time to place public service announcements in the electronic media.

Media advocacy has sometimes been portrayed as an alternative to social marketing. Some of its proponents have been known to argue that this approach should be used in lieu of social marketing. This claim reflects a conviction that macro approaches to health promotion are likely to be more effective than approaches that target individuals directly. In truth, media advocacy and social marketing can be used together, and increasingly are being joined to provide a more comprehensive health promotion effort. The best example of such a happy "marriage" between social marketing and media advocacy can be found in the current war against smoking. It may be useful to think of media advocacy as part of the advertising/public relations mix in social marketing, not as a separate strategy for health promotion.

Diffusion of Innovations

The process by which innovations spread through social systems has been given substantial attention over the decades by researchers from many disciplines, including sociology, anthropology, public health, education, marketing, and communication. These efforts have come to constitute an interdisciplinary area of study known as the *diffusion of innovations* (Rogers, 1983). An innovation can be an idea, practice, or physical object.

This research tradition has much in common with the social marketing perspective. Most notably, both approaches are concerned with advancing our understanding of social change. It would be incorrect, however, to equate the two. Among the differences are the following:

- *Planning*: Social marketing is by definition a deliberate taxonomy for planning and implementing interventions. An agent of change devises a strategy to induce target audiences to change their behaviors in some way. In contrast, innovations can diffuse throughout a social system through planned or spontaneous means. Diffusion researchers often refer to planned change as "dissemination" and unplanned social change as "diffusion" (Rogers, 1983).
- *Evaluation*: A social marketing campaign is typically studied by those who initiated the campaign, usually for the sake of evaluating effectiveness. This can also be the case in planned, centralized diffusions. More often than not, however, innovation diffusions are studied by scholars who are more interested in understanding the diffusion process than in evaluating a specific diffusion.

- “*Marketing*” *Change*: Even when an innovation is diffused through planned, centralized initiatives, that innovation is not necessarily “sold” using marketing concepts and strategies.

Despite these differences, a number of diffusion concepts have made their way into the social marketing literature. Indeed, the diffusion model has sometimes been used to better understand the process by which a social marketing campaign influences its target audiences (Kotler & Roberto, 1989). Among the diffusion concepts that have been of value to social marketers are *opinion leadership*, *adopter innovativeness*, and *change agent*, to mention just a few.

Theoretical Tools

As noted earlier, social marketing is an *approach* to the planning, design, and implementation of information campaigns, not a theory per se. It does not tell us how to segment audiences, position products, frame messages, select channels, implement communication strategies, and so forth. Guidance for answering questions such as these must come from other social and behavioral theories. Metaphorically, social marketing provides a skeleton that is given flesh with behavioral theories. Below we provide a brief tutorial of the nine theories and models most often drawn upon by social marketers. Those experienced with social marketing may wish to skip to the next section, which begins on page 25.

Exchange Theory

Exchange Theory is actually a class of theories that model social exchanges in economic terms. These theories have been applied broadly to virtually every aspect of social behavior. When applied to the social marketing context, Exchange Theory suggests that a health communication intervention involves voluntary exchange of resources (Lefebvre & Flora, 1988). Individuals, groups, and organizations have resources they are willing to exchange for perceived benefits (Kotler, 1982). The “buyers” in this exchange are the members of the target audience. These people pay a price, such as money, time, or effort when they “purchase” the social marketing product. Effort is a particularly relevant price in social marketing. Effort-related costs include inconvenience, physical and/or mental tasks, social standing, and comfort. It is important to identify which costs target audience members are willing to incur and which costs they are eager to avoid. These costs should be identified by conducting focus group discussions and other types of planning research with members of the target audience (Maibach, Kreps, & Bonaguro, 1993).

In return for the costs paid by the target audience, the “seller,” or campaign planner, provides a *tangible good*, such as a smoking cessation kit; an *intangible good*, such as “health”; a *service*, such as nutrition counseling; or an *idea*, such as the health risks posed by a high-fat diet. According to Maibach and his colleagues, the benefits most commonly associated with adopting preventive health behaviors include enhanced physical health, such as a reduction in the risk of premature mortality and morbidity; improved psychological well-being, including increased self-esteem, self-efficacy, and personal satisfaction; and a better society.

To persuade someone to take part in an exchange, the person must believe the benefits of adopting preventive behaviors, such as lowering one’s risk of cancer by eating less, outweigh the costs of purchase/adoption (Novelli, 1990). Incentives are benefits that intervention planners can offer to members of target audiences to encourage adoption of health behavior innovation (Bandura, 1986). Thus, exchange theory encourages explicit acknowledgment of the costs and benefits of actions to be promoted in a campaign, and efforts to minimize costs and maximize the benefits.

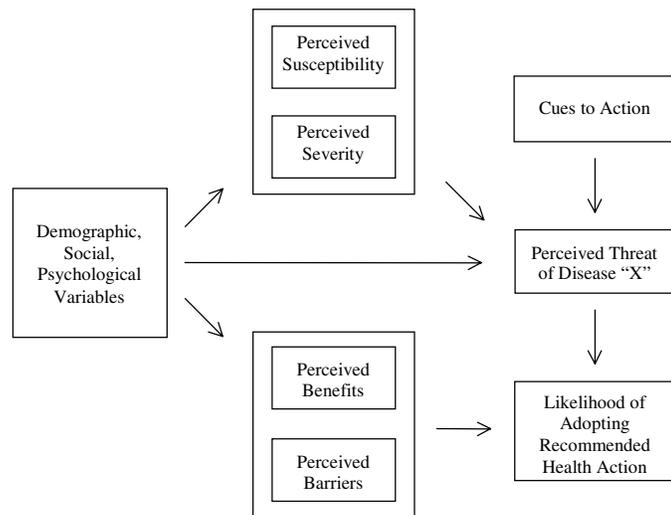
Health Belief Model

The Health Belief Model (HBM) has been used extensively by health researchers since its development nearly 50 years ago (Rosenstock, 1974). Its original purpose was to cast light on why it is so difficult to motivate people to take action to prevent disease. Since most campaigns have focused upon lifestyle modifications for disease prevention, it is not surprising that the HBM has received widespread use by social marketers. It must be noted,

however, that the HBM – indeed, all of the theories presented here – has many applications beyond social marketing. For instance, the HBM has also been used to explain why individuals differ in their responses to symptoms and their adherence to prescribed medical treatment regimens (Becker, 1974).

A simple version of the model is diagramed in Figure 1, which is adapted from the work of Janz and Becker (1984). The HBM specifies that the most proximal determinants of an individual’s decision to adopt a recommended behavioral change (e.g., to eat more fruits and vegetables) are a perceived threat of disease and a perception that the benefits of a recommended change are greater than perceived barriers to adoption.

Figure 1: The Health Beliefs Model



Perceived threat reflects beliefs about how susceptible one is to the medical condition and the severity of that condition. For instance, a person will perceive great threat when susceptibility is judged to be high for a terrifying condition. When susceptibility is judged to be low or when severity is perceived to be minimal, no threat is likely to be felt. This is why perceived threat is low among Americans for both the common cold (high susceptibility, but low severity) and infection with the Ebola virus (high severity, but low susceptibility). More formally, susceptibility is defined as a person’s subjective evaluation of the likelihood of becoming afflicted with the focal condition. Severity is defined as the seriousness of the condition with regard to such dimensions as probability of death, disability, and pain. The model is silent as to whether the relationship of susceptibility and severity to threat perceptions is additive or multiplicative. Together, perceptions of susceptibility and severity provide energy for action.

The perceived benefits of action reflect a person’s subjective judgment of the effectiveness and feasibility of the recommended health action. An action is unlikely to be adopted, even in the face of considerable threat, if it is not perceived to be an effective response. Barriers include the financial cost of the recommended action; associated dangers, such as side effects; and other unpleasant effects of recommendation adoption, ranging from inconvenience to pain. A person is presumed to undertake an informal cost-benefit analysis of the recommended action to determine if benefits outweigh barriers. Taken together, this consideration of benefits and barriers define for an individual the preferred course of action for responding to (or discounting) the health threat.

Demographic, social, and psychological variables are assumed to affect a person’s likelihood of adopting recommended courses of action through their impact on perceptions of susceptibility, severity, benefits, and barriers. Demographics and social-psychological variables

may also influence a person's adoption decision by affecting directly his or her perception of threat.

Perception of a threat does not necessarily lead to adoption of a recommendation, even when perceived benefits of the recommendation are high and barriers are minimal. The model posits that a "cue to action" must be present. For instance, a person may ignore the threat of cancer for years, resisting adoption of healthier nutritional practices that could prevent certain types of cancer. However, a cue of an internal (e.g., age-related impairments) or external nature (e.g., a news story or perhaps a friend's bout with cancer) may suddenly personalize the threat and motivate change.

The HBM provides a social marketer with a set of key constructs that should be considered at various phases of campaign development and evaluation. The model suggests, for instance, that it would be useful to segment audiences into smaller target groups based on shared perceptions of susceptibility, severity, benefits, barriers, and the behavior(s) to be modified. After all, individuals with varying perceptions along these four key dimensions may need to be targeted with different information. As such, the measurement of these constructs in formative research would be invaluable. Summative evaluation efforts should address the effects of a campaign on the target audiences' perceptions of susceptibility, severity, benefits, barriers, and action.

Second, the model suggests that the information conveyed in a campaign needs to elevate perceptions of personal susceptibility, disease severity, and action benefits, while systematically addressing potential barriers to action.

Third, a campaign needs to provide cues to action, such as anecdotes about individuals with whom the target audience can identify who took action and benefited as a result – or perhaps who ignored signs of impending illness to their peril. Interpersonal channels could also be employed to provide such cues; physicians and other community leaders could encourage target persons to take action, for instance. In other words, the health beliefs that led to the recognition of a need to change and the cues to action that pushed the person to act must continue to be reinforced.

Fourth, a social marketing campaign must be ongoing if a sustained effect is sought. The campaign must reinforce change by providing target audiences with repeated reminders of the benefits they are accruing from adopting the recommendation.

The HBM has received considerable empirical support over the years (Janz & Becker, 1984). Even so, criticisms abound. For instance, it has been argued that the model, by focusing on individual beliefs, ignores the larger context in which health care decisions are made. In response, proponents have noted that the HBM was designed by psychologists primarily to model the effects of individuals' health-related beliefs. Other models and approaches can be used in conjunction with the HBM to account for how social, cultural, and economic factors influence people's responses to health recommendations. For instance, social-economic status may influence people's health behaviors by affecting their knowledge of diseases, including their personal susceptibility, and the affordability of recommended actions. It has also been argued that the model does not identify strategies for altering perceptions of susceptibility, severity, benefits, and barriers. For guidance on this important issue, social marketers would need to turn to other literatures, such as theories and research on per-

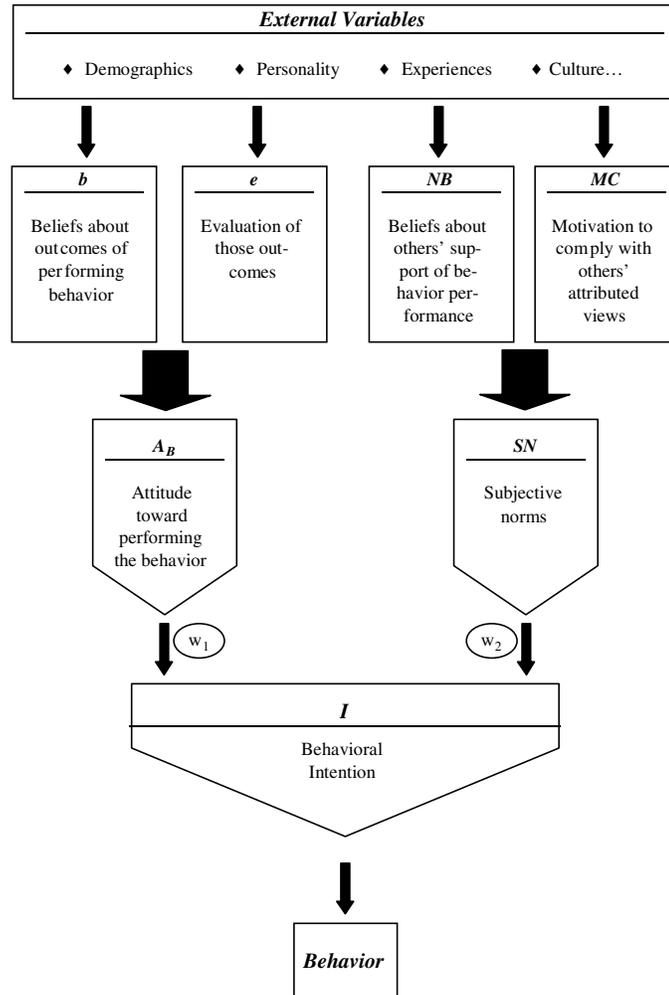
suasive communications. Thorough discussions of the prospects and limitations of the HBM are available (Rosenstock, 1990).

Theory of Reasoned Action

The Theory of Reasoned Action (TRA) provides a framework for predicting people’s behaviors from their behavioral intentions. The model, which is described in Figure 2, is premised on the assumption that people are rational. Our decisions to act reflect a reasoned consideration of the beliefs we have about those actions – hence the name of the theory. The TRA is one of several theories belonging to the family of expectancy \times value models.

The theory posits that within the realm of volitional behaviors – those actions under our complete control – people typically behave as they intend to act. The strength of a person’s behavioral intention to do “X” (for instance, to eat green leafy vegetables on a daily basis) is shaped by that person’s attitude toward performing the behavior (A_B) and subjective norms (SN):

Figure 2: The Theory of Reasoned Action



$$\text{Behavior} \approx \text{Intention} = (w_1)A_B + (w_2)SN$$

That is, behavior is determined by our behavioral intention, which in turn is determined by our attitude toward performing the behavior and subjective norms. A_B and *SN* each have associated with it a weight for a particular person and behavior. Research suggests that for most people and most behaviors, A_B may carry a greater weight than *SN*, but this need not be the case. An example would be an adolescent who smokes tobacco due to peer pressures, even while holding a very negative attitude toward smoking. We shall now look more closely at each component of the model.

The relevant attitudinal construct, according to the theory, is the person's attitude toward *performing* the behavior (A_B) in question. If we wished to predict a person's future consumption of green leafy vegetables, we would be interested in her attitude toward *eating* such foods – not her general attitude toward this type of vegetable. A_B reflects a person's consideration of the outcomes associated with performing the behavior. To stick with our example, the outcomes of eating green leafy vegetables that a person might contemplate include reduced risk of cancer and cardiovascular diseases, increased regularity, increased flatulence, more energy, and a lower body weight.

Each of these consequences has associated with it a belief (b) about likelihood of occurrence and an evaluation (e). Outcomes that are judged to be positive and to have a high likelihood of occurrence contribute positively to A_B ; consequences that are judged to be negative and to have a high likelihood of occurrence contribute negatively to A_B ; outcomes that are perceived to be neutral in their value and/or that have a low judged likelihood of occurring do not affect the person's A_B . The entire set of outcomes a person considers shapes A_B as follows:

$$A_B = \sum b_i e_i$$

People's behavioral intentions are not formed in a social vacuum. The people who are important to us with regard to a particular behavior have opinions that may affect our intentions to perform that behavior. Our perceptions of important others' views about what we should do are depicted in the model as our normative beliefs (NB). Our motivation to comply (MC) with our perceptions of these people's beliefs is also represented in the model. NB and MC together define our Subjective Norm (SN) with regard to performance of the behavior as follows:

$$SN = \sum (NB_i)(MC_i)$$

Variables of a demographic, personality, cultural, or experiential nature are assumed to affect a person's behavior through their impact on A_B and SN . Without question, a person's educational level, cultural background, personality, and so forth, can exert a significant influence on behavior. However, information about a person's demographic profile, culture, personality, and so forth, is redundant with A_B and SN . That is, once we know the consequences of action considered by the individual, as well as the b , e , NB , and MC values associated with those consequences, other information contributes nothing to prediction. This premise has been examined in the literature as the *sufficiency hypothesis*.

The TRA provides an inventory of constructs of great potential value to the social marketer. It tells us, for instance, that our formative research should assess the extent to which a person feels that the health behavior change being promoted is volitional (under their control). It also directs us to assess the outcomes that people consider important when evaluating the recommended change. Suppose our goal is to encourage individuals to eat five servings of fruit and vegetables a day. We would need to learn more about the consequences they believe would result from doing so, as well as the value (e) and likelihood (b) they assign to these outcomes. We might learn, for instance, that our target audience of adults focuses on the disease-prevention properties of the recommendation, whereas children and adolescents are more concerned with how fruits and vegetables taste, whether they might promote physical attractiveness, and if they increase energy levels.

Likewise, we would need to know about these individuals' reference individuals and groups. Who are their opinion leaders? How influential are these individuals with regard to the promoted behavior? Likewise, in the summative research phase of a campaign, we may wish to measure changes in A_B and SN, behavioral intentions, and ultimately behavior that result from exposure to the campaign.

The model also identifies a set of strategies we might consider in our campaign. There may be important outcomes our target audience has not considered. Perhaps the people in question have heard that certain kinds of cancers might be preventable with a diet rich in fruits and vegetables, but simply do not believe that the diet-cancer link is all that strong (low *b*). We might decide, as a result of such formative research, to attempt to persuade these people of the scientific validity of the claim. We might also learn that important outcomes are unknown to the target audience. For instance, perhaps they are unaware that fruits and vegetables can contribute to weight control. One goal of the campaign could be to expand the public's consideration of outcomes to include such potential benefits. We might also attempt to neutralize adverse outcomes that detract from A_B . If our formative research indicates that concerns about flatulence are widespread, information could be disseminated about strategies for minimizing this effect of the recommended dietary change.

With regard to subjective norms, the normative beliefs of target audiences could be targeted for change. Two television campaigns running at the time of this writing, for instance, inform teenagers that a majority of kids their age disapprove of smoking and drug abuse. Other campaigns have encouraged teens to ignore peer pressure altogether – a clear attempt to alter the MC component of SN.

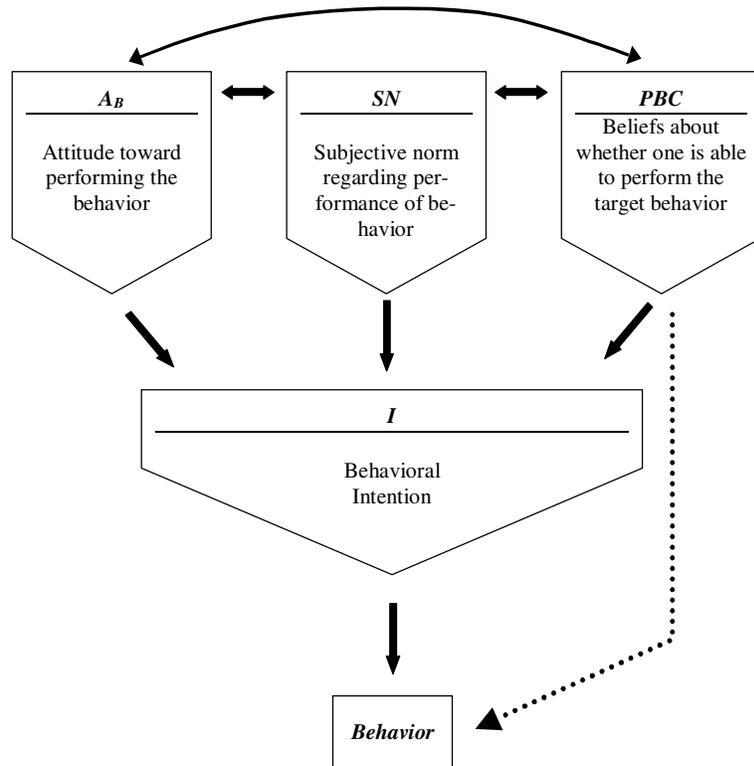
Theory of Planned Behavior

One of the limitations of the TRA is that the model predicts behavior from intentions for only volitional behaviors – actions for which motivation is a sufficient basis for performance. Unfortunately, virtually all health-related behaviors require resources, knowledge, skills, and/or cooperation from others to carry out. Tobacco and drug use, for instance, are driven in large part by physical addiction. Weight control efforts may be thwarted by food addictions, habit, and genetics. The rather simple goal of cutting fat from one's diet may require the cooperation of the family homemaker. The addition of fresh fruits and vegetables to one's diet might be difficult for individuals with low income.

When attempting to modify such behaviors, the social marketer must consider the target audience member's beliefs about his or her ability to carry out the behavior. The Theory of Planned Behavior (TPB) does so by building upon the Theory of Reasoned Action. Specifically, TRA co-founder Icek Ajzen (1985) enlarges the Theory of Reasoned Action by adding a third determinant of behavioral intention to the equation, *perceived behavioral control* (PBC) (see Figure 3). This component represents a person's beliefs about his or her ability to perform the behavior in question.

For simple behaviors that require only motivation for performance, PBC adds nothing to the prediction of behavioral intentions and behavior. However, for more complicated behaviors, PBC contributes to the prediction of behavior above and beyond that offered by A_B and SN (Ajzen, 1991). In addition to affecting behavioral intentions, a person's *actual* behavioral control is assumed to have a direct impact on behavior. However, since the measurement of actual control is problematic, PBC has been

Figure 3: The Theory of Planned Behavior



used as a proxy for actual control; people very often do have accurate impressions of their true abilities to carry out particular actions.

In the context of health behavior, the TPB can be expected to provide a better framework for understanding people's actions than the TRA. In particular, the model underscores the importance of assessing the extent to which target audiences possess the information needed to carry out a promoted action; the skills, resources and opportunities to act; and the support of others.

Social Learning Theory

Social Learning Theory (SLT) provides a broad psychosocial conceptual framework for understanding the reciprocal relationships among behavior, personal factors, and the environment. The theory has evolved dramatically since its introduction nearly 60 years ago (Miller & Dollard, 1941), due in large part to the contributions of Albert Bandura (1962, 1969, 1977, 1986). Behavior occurs in the context of an objective *environment* that is both physical and social in nature. The environment can affect a person's behavior with or without that individual's awareness. For instance, a person's intake of dietary fat may be shaped by the physical environment (e.g., its widespread presence in processed foods) and the efforts of friends, family, colleagues, and the like (e.g., the social support of one's spouse in efforts to reduce dietary fat).

A person's mental representation of the environment is referred to as the *situation*. According to SLT, an important aspect of the situation is the person's perception of the outcomes of a particular behavior (the individual's *expectations*) and the value placed upon these outcomes (*incentives*). Incentives can be positive (e.g., "a reduction in dietary fat lowers my risk of developing heart disease") or negative (e.g., "low-fat foods are not very tasty"). In general, a person will perform behaviors that maximize positive outcomes and minimize negative ones. Short-term benefits appear to be more influential (e.g., "a low-fat diet may lead to weight loss") than long-term benefits (e.g., "a low-fat diet may add years to my life"). Incentives can develop through a person's own experiences (e.g., "I cut fat from my diet and lost 10 pounds in one month") or by observing the outcomes obtained by others when they perform the behavior (e.g., "my friend lost a lot of weight simply by eating a low-fat diet"). These "others" are referred to as *social models*.

An important part of people's calculations is their *capacity for behaving*. Regardless of expectancies, a behavior cannot be enacted unless a person has knowledge of the behavior (e.g., understands the different types of dietary fat) and possesses the skills to perform the behavior (e.g., understands the "hows" of low-fat cooking, can identify sources of hidden fats, and can read food labels to identify fat content in processed foods).

Another significant personal factor is the confidence (*self-efficacy*) a person possesses regarding his or her ability to perform the behavior. A person who believes that caloric restriction would lead to rewards would be unlikely to participate in a weight control program if he does not feel in control of his eating. Self-efficacy shares much in common with the TPB construct of perceived behavioral control.

Success is also shaped by a person's quality of *self-control*. One's self-control can be enhanced with specific definitions of the target behavior (e.g., "I will consume no more than 1200 calories a day"), consistent self-observation of one's behavior (e.g., regular "weigh-ins"), and a clear performance criterion (e.g., loss of two pounds per week). Also facilitating success is effective management of emotional arousal, which can interfere with learning and performance.

The SLT model identifies several important considerations for the effective design of social marketing campaigns, and also offers a process for understanding the impact of such efforts. For instance, SLT tells us that we need to consider how the environment can be shaped to increase the probability of success. If our goal is to lower the intake of dietary fat by members of our target audience, we would want to make sure that low-fat and fat-free foods are readily available in local groceries and work site cafeterias. We might also consider improving the social environment by working with all family members, especially those who are involved in food purchases and preparations. Strategies for changing people's definitions of the situation in ways that will promote the campaign's goals might also be examined. If stress is found to be an impetus for the consumption of fatty foods, stress management courses might be offered.

SLT also tells us that we need to change a person's expectancies to prompt adoption of the target behavior. Great efforts should be made to ensure that the benefits of behavioral change are well understood and fully appreciated. Well-founded expectancies are often cultivated in campaigns through the use of social models. A public service announcement can show a person who has adopted recommended behaviors and has benefited immensely from

doing so. However, dissemination of knowledge alone is inadequate. People need knowledge, to be sure, but they also need to master the skills necessary to succeed. Instruction in low-fat cooking, calorie estimation, and shopping strategies would need to be offered. Providing repetitive practice in these skills would also be useful.

Information-Processing Paradigm

In an influential essay titled, “Theoretical Foundations of Campaigns,” social psychologist William McGuire advances a very practical model of information-processing that has received considerable attention from campaign practitioners. The model is based on the Yale University framework for studying persuasion, which was developed during the 1940s and 1950s (Hovland, Janis, & Kelley, 1953).

This approach suggests that the impact of a persuasive communication is mediated by three message processing phases: *attention* to the message, *comprehension* of its propositions, and *acceptance* of that content. Variations in communication sources, messages, channels, receivers, and target behaviors impact the persuasion process by affecting attention, comprehension, and/or message acceptance. Thus, if one wished to understand the effects of variables such as communicator trustworthiness, fear appeals, and receiver intelligence, one would need to explore how each of these variables affect, for better or worse, attention, comprehension, and message acceptance.

McGuire built upon this simple idea in a series of essays (e.g., McGuire, 1968, 1972). As shown in Figure 4, McGuire has identified twelve discernable steps in the processing of persuasive communications. A person must be exposed to a message, attend to it, take enough interest to process it further, comprehend the message (learning what), acquire taught skills (learning how), yield to the message (attitude change), store the message content and/or the new attitudinal position in memory,

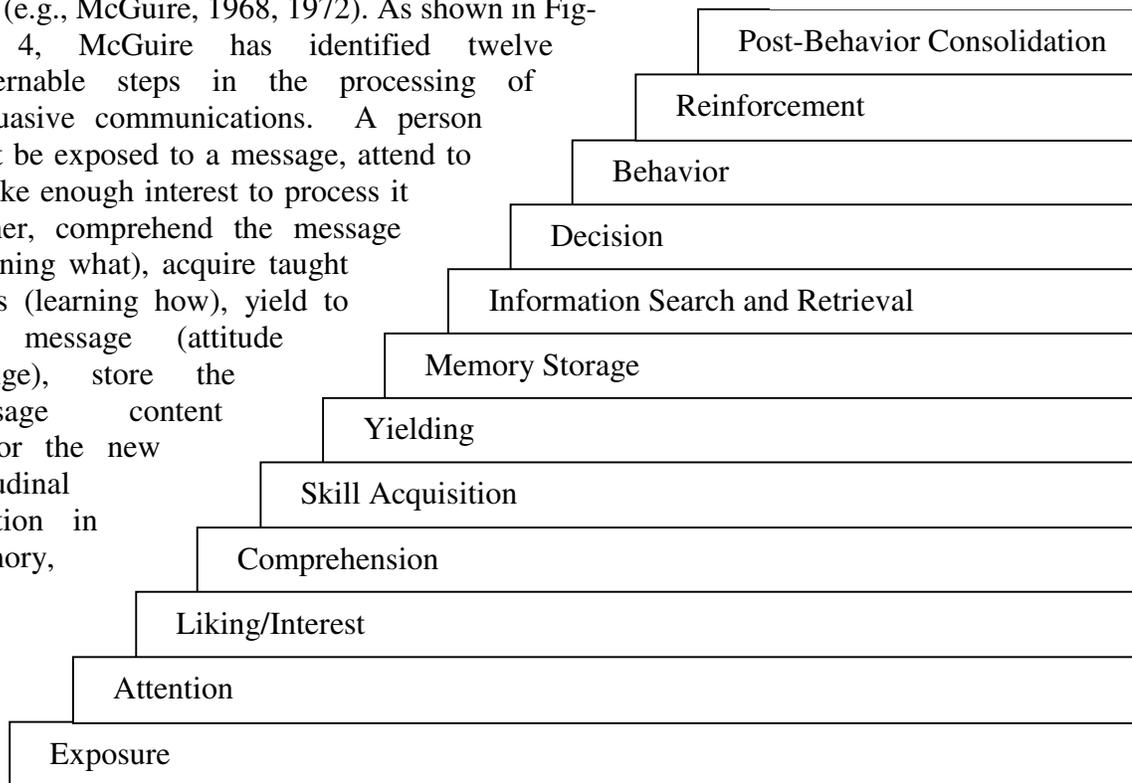


Figure 4: The Information-Processing Paradigm

retrieve that information at later times, make decisions based on the retrieved information, behave in accordance with that decision, receive positive reinforcement for so behaving, and make the new position a part of self by integrating it into his or her cognitive structures and habit patterns. Reaching any of these twelve steps is contingent upon success at all prior steps. We have depicted this notion by portraying the process as a staircase. For instance, attention cannot be given to a message to which one has not been exposed. This model shows us that we should expect campaigns to have attenuated persuasion effects. For example, if the conditional probability of success at each step were .80, only 7 percent of one's target audience would make it through step 12 ($.80^{12} = .069$). Of course, it would be unreasonable to expect any information campaign to achieve an 80% success rate at every information processing step. As such, most campaigns will have attenuated effects on their audiences.

The model also tells us that a campaign will fail if we are unable to succeed with the audience at any one step. For instance, a splashy, extensive campaign that grabs the attention of everyone will fail if the message is incomprehensible. A campaign that gains attention and can be easily comprehended may still fail if the position advocated is too extreme to prompt yielding. In other words, a campaign is like a chain. It cannot be stronger than its weakest link.

The Information-Processing Paradigm also makes it clear that the evaluation of a campaign must be conducted with regard to the processing step one wishes to achieve. In most cases, social marketers are interested in bringing about permanent lifestyle modifications. As such, a step 12 criterion should be used when evaluating a campaign. It would be absurd to conclude that one's campaign was successful because most people were exposed to its messages (step 1) or because most people claimed to agree with the positions advanced (step 6). Sadly, such questionable conclusions have been drawn all too often in social marketing evaluations.

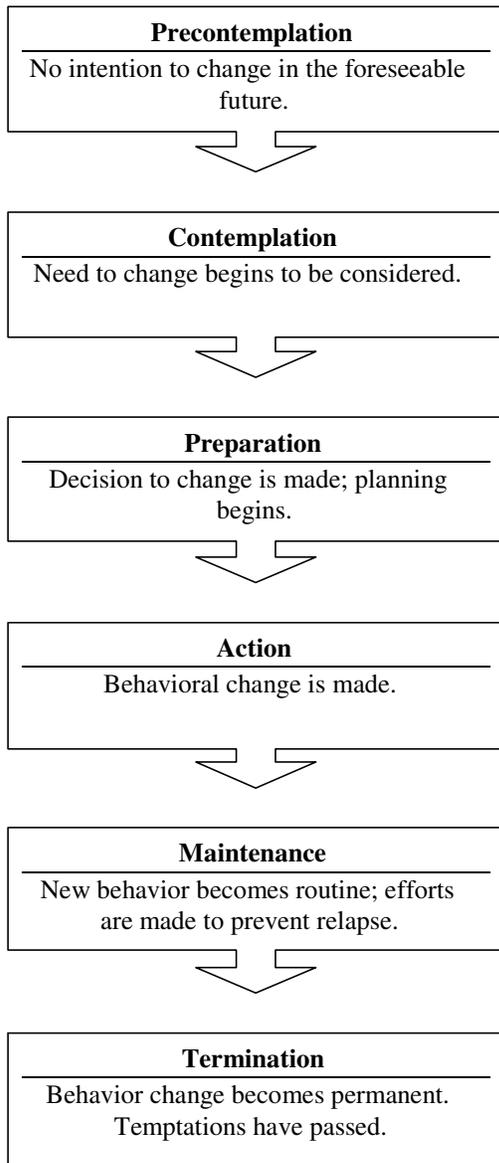
The model can guide message design by giving us a way to think about how our decisions regarding spokespersons, message strategies, communication channels, and the like, may affect the outcomes of the campaign. True, the model will not tell us if we should use fear appeals, to use one example, but it does tell us to consider how fear appeals might affect each phase of information processing. Such "input variables" may facilitate success at some steps of the process, but interfere with success at other steps. For example, a person might be more likely to attend to a message which attempts to arouse fear, but be hesitant to accept that message out of defensiveness.

Transtheoretical Model

Prochaska and DiClemente (1983, 1984, 1985) advanced the Transtheoretical Model (TM), also widely known as "stages of change theory," in the early 1980s to describe the discrete phases people move through in efforts to adopt healthier lifestyles. The model has been applied to a number of health issues, including smoking cessation, drug abuse treatment and prevention, weight control, and adoption of safer sex practices. The "transtheoretical" in the model's name reflects the authors' efforts to draw upon the strengths of other theories of change.

As shown in Figure 5, the model identifies six phases of change through which individuals progress. In the first stage, *precontemplation*, the person does not intend to take action in

Figure 5: Transtheoretical Model



the near term, often defined operationally as within the following six months. This absence of an intention to change may reflect the person's lack of knowledge of the consequences of a particular behavior, demoralization as a result of past failures to change, and a perceived or actual inability to adopt recommended behavioral changes. Thus, among the group of individuals at this stage, some are uninformed, others are informed but unmotivated, and still others may be actively resistant to health promotion efforts.

Contemplation commences when the person begins to reflect upon the pros and cons of changing. The HBM construct "cues to action" is useful in accounting for a person's move from precontemplation to contemplation. However, the person's consideration of the negative consequences of changing may keep that individual at this stage for some time. When the person's valuation of the benefits of change exceeds the value placed upon adverse consequences of action, an intention to change may begin to emerge. Both the HBM and TRA offer concepts and tools that allow us to account for this cost-benefit analysis.

At this point, the person moves into the third stage of change, *preparation*. Operationally, a person has typically been considered to have reached this stage if there is an intention to change within the following thirty days. The person begins to collect relevant information about the change with which a plan for action is formulated.

In the fourth phase, *action*, modifications in lifestyle are made. It is useful to contrast the TM conceptualization of change with that which has dominated the health promotion literature. Behavioral change is often conceived of as a discrete event in much research. Prochaska and DiClemente consider such change to be an extended process that can take weeks, months, or years to complete.

Anyone who has ever attempted to adopt healthier eating habits, lose weight, or adopt an exercise program knows that making such lifestyle changes is not easy. Prevention of relapse requires an extended phase of *maintenance*, in which the new behaviors become a routinized part of one's life. Prochaska and DiClemente have noted that maintenance can require

anywhere from six months of consistent performance to more than five years for more difficult changes, such as smoking cessation.

Termination is the final stage. At this point in the change process, the person experiences no temptation to revisit the prior lifestyle and feels complete self-efficacy with regard to performance of the new behavior. For many behavioral changes, especially challenging ones such as smoking cessation, weight control, and temperance, the termination stage may never be reached.

The TM also identifies a number of *processes of change* that differ in their relevance across the stages of change, as noted in Table 1. *Consciousness-raising* involves the dissemination of information about the problem that a lifestyle change addresses, as well as the recommended change itself. Such information may be critical in moving a person from Precontemplation to the Contemplation stage of change. *Dramatic relief* encompasses compelling emotional tactics to underscore the need for change. These tactics may include dramatic stories about individuals who changed with life-affirming results or perhaps testimonials from individuals who failed to change and paid a severe price as a result. *Environmental re-*

Table 1: Transtheoretical Model Change Processes

Process of Change	Stage of Change			
	Precontemplation → Contemplation	Contemplation	Preparation	Action
Consciousness-Raising	×			
Dramatic Relief	×			
Environmental Reevaluation	×			
Self-Reevaluation		×		
Self-Liberation			×	
Contingency Management				×
Helping Relationship				×
Counter-Conditioning				×
Stimulus Control				×

evaluation encourages contemplation by attempting to get target persons to consider how their lifestyle decisions affect others.

Self-reevaluation can be useful at the contemplation stage by inducing people to consider how their self-image or values are at odds with their current unhealthy behaviors. Once a person transitions to the preparation stage, the process of *self-liberation* can be used to motivate change. This process category incorporates various commitment tactics, including resolutions to change and personal testimonials on the need to change. Such efforts may instigate the planning needed to bring about action.

Several processes of change may be useful at the action phase. The strategy of *contingency management* involves giving rewards for successful completion of an action or punishments for failure to succeed. *Helpful relationships* can provide the social and emotional support needed for adopting a healthier lifestyle. Such assistance can be provided through counseling, alliances with others attempting change, or one's friends and family. *Counter-conditioning* involves mastering constructive behaviors that can counter less healthy ones. For instance, a person could learn relaxation techniques to counter stress or could be taught to exercise in lieu of eating when under stress. *Stimulus control* entails taking control of the cues that lead one to engage in unhealthy behaviors. If sitting at the dinner table leads to eating, the table's use could be reserved for dining situations only.

The process of *social liberation* (not included in Table 1) includes efforts to create opportunities for change for individuals in the target audience. Such opportunities can be provided through advocacy, policy changes, private sector initiatives, and other means. Social liberation tactics have value throughout the entire change process.

The TM offers important insights into the social marketing process (Maibach & Cotton, 1995). First, it suggests that target populations should be segmented according to their *readiness to change* – that is, the stage of change at which individuals are located. Second, the model reminds us that the optimal message strategy depends on the stage these target audiences have achieved. For instance, a traditional health education approach may be useful for individuals at the precontemplation stage, more overtly persuasive strategies may be suitable for individuals at the contemplation stage, “how to” information should dominate at the preparation stage, behavioral rehearsal may be suitable at the action stage, and commitment and internalization strategies should have the greatest impact for people at the maintenance stage. Third, the TM makes it clear that the objectives of a health promotion endeavor may take a very long time to achieve. People do not change quickly, and many do not change readily. A lengthy, continuous effort may be required to move people through the entire process of change. Fourth, the model recognizes that a campaign does not end with behavior change. Rather, an extensive effort may be necessary to promote sustained change.

Community Organization Model

The Community Organization Model (COM) is a process that public health and health communication professionals use to help communities identify common problems and goals, and then plan and execute strategies to reach those goals (Minkler, 1990). Because health-related problems occur in community settings, the community should be involved in finding solutions (Labonte, 1990).

Rothman and Tropman (1987) identified three methods of community organization. *Social Planning* is a task-oriented method that stresses rational problem-solving, usually by an outside expert, to address community problems. Experts gather facts about a community problem, such as prevalence of obesity and a lack of available physical activity resources. Recommendations for the most effective course of action are then developed. Community organizations are usually directly involved in helping to solve problems, and the health educator-communicator serves as fact-gatherer, implements the program, and facilitates dialogue.

Locality Development is a process-oriented approach that tries to build a sense of group identity and community. For example, health educators could organize a broad cross-section of people into small task-oriented groups to identify and resolve the key barriers to better nutrition in the community. This approach stresses cooperation, and the health educator assumes the role of coordinator or enabler, teaching values and problem-solving skills.

Social Action is a task- and process-oriented approach that attempts to increase the problem-solving abilities of community members. With better problem-solving skills, communities can make concrete changes and correct the imbalance of power between disadvantaged groups (e.g. mothers on welfare) and the larger society. Social action usually takes the form of mass organizations and political protests: groups of people organized to take action on a specific issue. A health educator involved in social action projects serves as an activist, advocate, agitator, broker, negotiator and partisan. The social action approach has been widely used by grassroots change groups, such as environmentalists, peace activists, and the women's rights movement.

Mechanisms for effective community organization stress the involvement of community members in all phases of the program. Participation of as many community members as possible is sought. Efforts are also made to ensure that the entire community knows about the program and to train community citizens to participate effectively. Finally, an emphasis is placed on working with community groups and local organizations to develop healthier social environments for sustained improvements in the health status of the community (Hyndman et al., 1993).

Community organizations can be used for many different purposes. Numerous heart disease, smoking control and prevention programs have used community organizations to plan interventions, change behaviors, train volunteers, and encourage healthy policies. The Community Organization Model places great value on transferring ownership of project activities to the community by recruiting and training community leaders, adapting program initiatives based on input from the community, and recruiting organizational sponsors to sustain the program's activities.

The Social-Ecological Approach

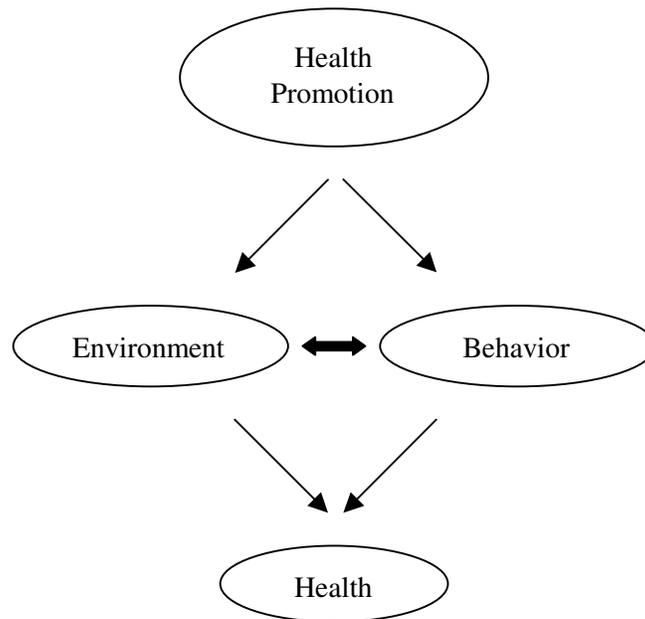
The Social-Ecological Approach (SEA) provides a way of thinking about the planning of health promotion interventions that places a spotlight on the relationship between environmental and behavioral determinants of health. This relationship is reciprocal; the environment affects health-related behaviors, and people can, through their actions, affect the environment (see Figure 6). The interdisciplinary scope of this perspective is truly remarkable. In a recent review, Green and Kreuter trace the development of the social-ecological approach to well-established concepts in public health, including the proceed-precede model,

epidemiology, sociology, psychology, education, geography, and anthropology (Green & Kreuter, 1999).

This approach assumes that our health is shaped by many environmental subsystems, including our family, community, workplace, cultural beliefs and traditions, economics, the physical world, and our web of social relationships. Health promotion efforts must thus be comprehensive, addressing those systems that adversely affect the person's capacity for living healthily. For instance, nutrition education cannot succeed if the environment does not provide people with the resources and opportunity required to obtain healthy foods.

Green and Kreuter detail several important lessons of this approach for health promotion professionals. First, they note that practitioners need to consider how changes in one system may affect changes in other systems, for better or worse. For instance, changes in larger systems brought about by legislative action may affect families' capacities for pursuing healthy lifestyles. An increase in the minimum wage, for instance, can affect a family's discretion in food purchases, for better or worse.

Figure 6: The Social Ecological Model



Second, the model reminds us that behavior and environment have transactional influences. People's actions are affected by the environment, to be sure, but the environment can also be shaped by the actions of individuals and communities.

Third, these scholars note that people should be expected to behave differently in varying environments. An individual's behavioral predispositions may vary with situation because the situation is partially responsible for those predispositions. In addition, people have different capacities for action in varying environments because environments differ in the resources they provide to individuals. Furthermore, the reinforcements we receive for a particular action may be quite different across contexts – even potentially being positive in one environment and negative in another. As such, the effectiveness of any nutritional or physical activity intervention must be judged with regard to its impact in specific environments.

Fourth, given that interventions must be adapted to specific environments, health promotion is most likely to be effective when developed and implemented at the community level.

Community efforts can be more easily tailored to local concerns, traditions, needs, and constraints. As such, the Social-Ecological and Community Organization Models share an affinity.

Fifth, efforts must be targeted at multiple levels of the social-ecological systems in which people live. An initiative could, for instance, integrate social marketing and media advocacy campaigns. Another example would be a multi-faceted campaign that seeks to convince target audiences of the need to change (A_B , attitude toward performing the behavior); cultivates social norms supportive of change (SN, Subjective Norms); and creates community structures that provide resources needed to carry out the change (enhanced Perceived Behavioral Control or Self-Efficacy).

The EA has not gone without critique. Green and Kreuter (1999) have noted, for instance, that the approach has been criticized as lacking a depiction of social-ecological systems that is commensurate with the complexity of those systems. The EA has also been challenged as being untestable, at least through traditional experimental means. Proponents have begun to address such concerns.

Research Questions

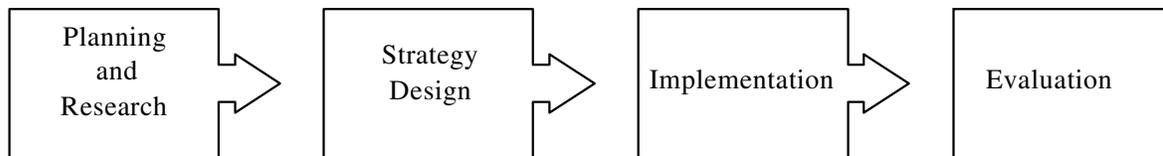
Social Marketing Process Elements

When reviewing the literature on the social marketing of dietary and physical activity modifications, it is useful to have an organizing framework. A number of models of the social marketing process have been advanced over the years. Our task is to synthesize social marketing interventions that have employed a variety of strategies to achieve a diverse set of goals. We thus need to base this review on a model broad enough to encompass the elements and tactics employed across the available studies. Also required is a framework that is descriptive, not prescriptive with regard to any one theoretical predilection.

Such a model is described in Figure 7. For our purposes, its strengths include its focus on the specific steps found to be of critical importance in successful campaigns and its agnosticism regarding theoretical perspectives often employed in campaign development. The model identifies four stages in campaign development and evaluation: *planning and research*, *strategy design*, *implementation*, and *evaluation*.

Each phase of the social marketing process will now be reviewed. Our focus is on the activities found to be associated with campaign success, based on the writings of experienced social marketers. For each activity, we specify research questions regarding past practices in nutrition and physical activity promotion campaigns.

Figure 7: A Process Model of Social Marketing Elements



Research and Planning

Setting Goals

The social marketer's first planning task is to specify a set of goals for the intervention. Campaign goals provide the foundation upon which strategy is built and outcomes are evaluated. These goals must be realistic and measurable, and should also draw upon relevant literature. For instance, "motivate all members of the community to adopt a regular program of exercise" is not a realistic aim. The goal, "get people in the community to exercise more" lacks specificity. The objective, "get 10% of individuals in the community who are not presently exercising to walk 30 minutes a day" is both realistic and measurable.

The following research questions were posed:

RQ1: What goals have been established in nutrition/activity campaigns to date?

RQ2: How often have nutrition/activity campaigns promoted both dietary modifications and increased physical activity as part of the same intervention?

RQ3: How often have campaign designers reported objectives in a measurable format?

RQ4: How often have each of the following methods been used to established goals: analysis of existing data, literature review, original needs assessment, focus groups, consultation with community leaders?

Goals can also be derived from behavioral models of change. One could, for example, formulate goals in the language of the Health Belief Model or propose goals that reflect the stages of change depicted in the Transtheoretical Model. We thus examined the extent to which campaign objectives have been grounded in the theories outlined earlier.

RQ5: How often have behavioral theories have been used to guide the formulation of objectives and which theories have been most often utilized?

Audience Segmentation

Williams and Flora (1995) define audience segmentation as “a campaign planning strategy that divides people into homogeneous subgroups based on certain defining characteristics.” Segmentation allows the campaign planners to develop health messages uniquely tailored to each group’s behavior, attitudes, preferred media, language, and so forth. Grunig (1989) has offered a nested model of these segmentation principles. He notes that in the perfect world, we would have as many segments as individuals in the target audience, with a unique campaign being devised for every person. Such a personalized, micro-segmentation approach is impractical, of course.

Segments should be identified based on similarities along one or more concepts related to the campaign’s goals. Campaign planners can form target audiences based on a number of principles. The most common segmentation strategies involve formulating target audiences based upon principles of community, shared beliefs and/or lifestyle, and demographics:

- *Community*: treating as a group a body of people who live in the same circumscribed area (e.g., the same neighborhood, city, county, region, or state).
- *Psychographics/Lifestyles*: treating as a group those individuals who share similarities in their activities, attitudes, beliefs, interests, preferences, and/or values; or who can be reached through one or more shared channels of communication (e.g., worksites, churches, social clubs).
- *Demographics*: treating as a group those individuals who belong to the same racial, ethnic, social-economic, or gender social category.

These three segmentation principles are not mutually exclusive. A campaign planner could target audiences based upon geographic residence (i.e., established communities), and then segment these communities further on the basis of psychographics/lifestyle or demographic categories. By definition, only those campaigns that targeted communities were included in our review; our concerns were thus focused upon the use of psychographics/lifestyle and demographic principles in segmentation decisions. The following research questions were examined:

RQ6: How often have target audiences been identified and defined in nutrition/activity campaigns?

RQ7: When target audiences have been identified, how often has segmentation been based on the concepts of psychographics/lifestyle and demographics?

RQ8: When target audiences have been identified, how often have these audiences been further defined as primary and secondary?

Focus of Change

The nutrition/activity campaign can target one or more levels of society for change. Campaign planners can attempt to alter individual behavior, the diet and exercise practices of entire families, the norms of the community in which families are nested, and/or policy institutions. For instance, in an initiative to lower fat consumption, posters could be placed in worksite and school cafeterias to motivate people to select healthier foods (individual level). Low-fat cooking classes could be taught for the family homemaker to reduce the fat content of meals served at home (family level). Media and community events could be used to cultivate expectations that low-fat fare should be available in the locale's restaurants and grocery stores (community level). Policymakers could be encouraged to require more extensive food labeling to provide individuals with the information they need to avoid high-fat foods (policy level). In our discussion of the social-ecological model, it was noted that campaign effectiveness can be enhanced by attempting to modify all levels of the social systems in which we live. We thus posed the following research question:

RQ9: Which of the following entities have been the focus of change in nutrition/activity campaigns: individual behavior, family practices, community norms and activities, and policy?

Environmental Analysis

The analysis of the social marketing environment is an important aspect of planning and research. Campaign planners need to understand those features of the environment that support and that interfere with the adoption of recommendations. For instance, the "resource environment" must make available the material resources required to adopt recommendations. An initiative to encourage people to switch to reduced-fat dairy products cannot affect behavior if local groceries do not carry ample supplies of these items. A campaign encouraging citizens to know their cholesterol levels will fail if local health institutions do not support such testing and make the procedure available at little or no cost.

The "information environment" can also facilitate or hinder people's acceptance of the campaign's messages. A campaign encouraging a reduction in dietary fat competes directly with the advertising of fast-food restaurants. Conflicting health news reports may create a cluttered media environment in which specific campaign recommendations get lost. For instance, the recommendation that people cut their intake of sugar must compete with reports about the health benefits of antioxidants in chocolate. The environment can present barriers to success in other ways, as well. For instance, efforts to encourage people to adopt a regular program of walking will surely fail if people do not feel that they can safely walk about in their community.

Of course, communities offer immense resources that campaign planners should inventory and use. For instance, even the poorest communities may include long-established and thoroughly entrenched organizations and institutions that can be utilized in the campaign.

These resources include churches, citizens groups, law enforcement institutions, and schools. Three research questions addressed environmental analyses in the planning/research stage:

RQ10: How often have nutrition/activity campaigns reported undertaking analyses of the target audience environment to identify supportive and unsupportive elements?

RQ11: In those campaigns that have carried out environmental analyses, which of the following methods have been employed: ethnographic observation, focus groups, consultations with community leaders, survey research, use of existing data?

RQ12: How often have environmental changes been included as objectives for the intervention?

Community Participation

The value of involving community members in the planning phase of campaigns was outlined in our examination of the Community Organization Model. We thus examined the extent to which such participation has been incorporated in nutrition/activity campaigns to date:

RQ13: How frequently have campaign designers involved community citizens and community leaders in the planning and research phase of the campaign?

RQ14: In those campaigns in which community participation is a component, which of the following strategies have been employed to foster involvement: focus groups, citizen advisory committees, staff members hired from the community, local consultants?

Consumer Research

Another basic planning task is the conduct of consumer research to identify target audiences' nutrition-related practices, motivations, knowledge, beliefs, and behaviors. Individual barriers to change must also be identified through such research. Target audiences' perceptions of the campaign's recommendations, the costs and benefits attributed to recommended changes, and the ease of adopting the recommendations need to be assessed. Finally, research should be carried out to identify the channels most suitable for reaching members of the target audience. The following research questions were posed concerning the use of formative research in nutrition and physical activity campaigns.

RQ15: How often have nutrition/activity interventions carried out formative consumer research prior to the design of campaign strategy?

RQ16: How often have survey methods and focus groups been used in formative research in nutrition/activity campaigns?

RQ17: How often have campaign designers obtained information from target audiences about their communication channel use?

Strategy Design

The activities of the Research/Planning phase provide a foundation for strategizing. Campaign designers need to translate what they have learned about the consumers' percep-

tions of the product, including its costs, benefits, and availability, into specific promotional activities.

Message Design and Pretesting

The design of campaign messages can be based on a variety of information sources, including the input obtained through focus groups, surveys, intuition, prior research, or any number of other information sources. The concepts and messages that emerge from the planning and research phase need to be pretested for their acceptability, understandability, and cultural relevance. While it may be tempting for campaign planners to trust their own judgments about the suitability of messages and concepts, doing so is fraught with peril. Pretesting should always be carried out using appropriate qualitative and quantitative means. Members of target groups can be brought together in focus groups, for instance, to comment upon materials developed and offer suggestions for improvements. Surveys can be conducted with a representative sample of members of the community as well. Different versions of materials can be assessed using experimental designs. The following questions were examined:

- RQ18: How often have nutrition/activity campaign officials pretested key concepts and messages?
- RQ19: When message/concept pretesting has been carried out, what methods have been employed?
- RQ20: How often have nutrition/activity interventions been pilot tested in their entirety?

Marketing Mix

The “5Ps” of product, price, place, promotion, and positioning are central to the process of strategy design. We thus examined a set of issues pertaining to the products produced for nutrition/activity campaigns, the price and promotion strategies employed, place, and the positioning of the product.

- RQ21: Which of the following products have been produced in nutrition/activity campaigns: educational/behavioral/ideational, services, and material products?
- RQ22: How often have nutrition/activity campaigns made an attempt to make adoption of the recommendation(s) less costly (or perceived to be less costly) to target audiences?
- RQ23: How often have each of the following types of incentives been used to overcome the costs of recommendation adoption: monetary, material reward, social recognition, personal reinforcement?
- RQ24: Which of the following selling points are reported to have been used in nutrition/activity campaigns: improved energy, physical attractiveness, athletic prowess, longevity, psychological well-being, better performance, enhanced sexuality, professional advancement, fulfillment of family obligations?
- RQ25: Through which of the following distribution mechanisms was the product distributed: schools, workplace, community events, outreach, health providers, commercial outlets?

RQ26: Through which of the following mediated distribution mechanism was the product distributed: broadcast media and print media?

Implementation

The mass audience has been segmented into meaningful groups, strategies have been designed for each segment, and the materials have been tested for appropriateness and impact. The campaign is now ready for implementation.

Community Collaboration

During the implementation phase, community collaborators need to be recruited and trained to carry out the campaign. These colleagues can come from a variety of sources, including established groups within the community, the health care system, employers, and schools. Community collaborators can help to bring about a successful implementation in so many ways. For example, their local connections can facilitate access to key resources for dissemination. As members of the community, they can add to the trustworthiness of recommendations and can help target audiences to feel a sense of ownership of the campaign.

RQ27: How often have community members been recruited as collaborators for the purpose of campaign implementation?

RQ28: Which of the following strategies have been used for participation at this stage: community groups, health care providers, employers, and schools?

Sustainability

Funding for social marketing campaigns is all too often made available on a short-term basis for the purpose of demonstration. Even so, campaign planners can attempt to create local structures to give permanence to the campaign. In addition, efforts can be made to give the community psychological “ownership” of the program. The following question was addressed:

RQ29: How often have campaigns identified maintenance of the intervention as a long-term goal?

Evaluation

“Evaluation” is used here to refer to studies of the impact of the intervention on target audiences’ knowledge, attitudes, beliefs, behaviors, and health status. We examined three sets of issues pertaining to campaign evaluation: the research designs employed in past evaluations, the outcomes measured, and the extent to which assessments of cost-effectiveness have been attempted.

Evaluation Design

Flay and Cook (1989) have described three models of summative evaluation in health campaigns: the advertising model, the impact monitoring model, and the experimental model. The *Advertising Model* of evaluation is most suitable to those campaigns that include a media component. Audience surveys are used to assess the reach of the campaign within the target audience, the ability of target audiences to recall key aspects of the campaign’s communications, the audience’s liking of the campaign materials, and audience members’ intentions to act upon the information conveyed. Analyses are typically description (e.g., what percentage

of the target audience is aware of the campaign?) or correlational (e.g., are people who have been exposed to campaign materials more likely to have formed a behavioral intention to change?).

This approach is relatively easy to execute. Data can be obtained quickly and on an ongoing basis. However, the cross-sectional nature of these data do not allow for strong inferences about cause and effect. For instance, people who intend to make positive changes in their diets and activity levels could be more sensitive to campaign information. One might be tempted to conclude that the campaign “caused” these intentions, when in fact the intentions preceded campaign exposure.

The *Impact Monitoring Model* of evaluation attempts to gauge the impact of an intervention through secondary analysis of data collected for other purposes. A campaign promoting the consumption of more fruits and vegetables to enhance health could draw upon sales data from food outlets in participating communities to determine if more fruits and vegetables are being purchased. An intervention promoting weight control could make a study of changes in body weight, as assessed by the community’s primary care physicians during patients’ routine medical appointments. An exercise-promotion campaign could monitor changes in the attendance patterns of fitness club members, increases in memberships at those clubs, purchases of fitness equipment, and so forth.

Impact-monitoring measurements have the advantage of being unobtrusive. It is unlikely that these data are contaminated by social desirability concerns, for instance. This form of evaluation also offers the advantage of being relatively inexpensive because the data needed are usually collected by other institutions to satisfy their information needs. However, impact-monitoring is quite insensitive to intervention effects. This is especially the case for the long-term outcomes of a campaign. For instance, changes in fruit and vegetable consumption may be detected shortly after the commencement of a campaign, but changes in mortality and morbidity may not be noticeable for many years, if at all. In addition, the absence of a control group in impact-monitoring studies makes inferences about cause and effect difficult. Changes in fruit and vegetable purchases, for example, could be the result of forces other than the campaign, including pricing, availability, and seasonality effects on consumption.

The *Experimental Model* provides the best foundation for causal inference about campaign effects. The strongest experimental design is one in which a treatment group (e.g., one or more communities exposed to the intervention) is compared to a no-treatment control group (e.g., one or more communities that are not exposed to the intervention). Ideally, communities are assigned to the treatment or no-treatment condition based on random assignment. When the treatment and no-treatment conditions differ only with regard to exposure to the intervention, cause-effect inferences can be more confidently made. Flay and Cook remind us that when we are dealing with a small number of communities, random assignment of communities to the treatment or no-treatment condition does not guarantee that these two conditions will be equivalent. As such, it is often preferable to match communities based on similarities prior to random assignment to the treatment or no-treatment condition.

In reality, random assignment of sampling elements to experimental conditions is impossible in field research. The effects of social marketing campaigns are thus often assessed by comparing communities that have been assigned to the treatment or no-treatment condition

based on nonrandom procedures. In such instances, this approach is best dubbed “quasi-experimental.” For instance, we might wish to assess the effects of a campaign that has already been planned for a community by strategically selecting a similar community that could serve as a comparison community. In this case, events beyond our control have assigned the first community to the treatment condition, requiring that the second community be assigned nonrandomly to the control condition. This type of design is referred to as a nonequivalent control group quasi-experimental design.

Resource constraints may make it impossible to include a control community altogether. In such instances, investigators may attempt to examine changes in a single community over time. Measurements of key outcome variables could be made at several time points before and after the introduction of the campaign, with changes that take place upon introduction of the intervention being attributed to the intervention. For simplicity, we will refer to such evaluation designs as single-group designs. In essence, the community serves as its own control group. The internal validity of this type of design is threatened in several ways. Most notably, the absence of a true control condition makes it difficult to rule out the possibility that an effect credited to the intervention is actually due to some other event that has taken place during the intervention. Two research questions related to evaluation and design were posed:

RQ30: How often have nutrition/activity campaigns conduct a summative evaluation of the intervention’s impact?

RQ31: When an evaluation has been conducted, how often have each of the following evaluation models been employed: the advertising model, the impact monitoring model, and the quasi-experimental model?

Outcome Measures

Ultimately, nutrition/activity campaigns seek to change relevant health behaviors. The Advertising and Experimental Models of evaluation offer the possibility of assessing changes in *individual* behaviors. (The impact-monitoring approach is typically restricted to assessing behavioral effects for aggregates of people.) These behavioral effects can be assessed through people’s self-reports of their own actions and/or their intentions to behave in particular ways in the future.

A more valid approach would be to assess people’s behaviors directly through observation. Unfortunately, such assessments are costly and intrusive. Also possible are direct assessments of the medical consequences of nutrition/activity modifications. Campaign evaluators could in theory evaluate campaign effectiveness through objective medical tests. The health status of representative samples of members of the community could be assessed with regard to their cholesterol levels, blood pressure, or body mass index, for example. Given the central importance attributed to self-efficacy (a.k.a., “perceived behavioral control”) in several behavioral theories, we also examined the extent to which self-efficacy enhancements have been assessed in the evaluation phase of nutrition/activity campaigns.

RQ32: Which of the following outcomes have been measured in the evaluation components of nutrition/activity campaigns: knowledge gains, attitude change, self-reported behaviors, intention to change, observed behavior change, measured clinical (medical) changes, self-efficacy, morbidity reduction, mortality reduction?

Cost-Effectiveness Evaluations

The impact of a campaign must be judged with reference to the costs required to obtain those effects. Of course, cost-effectiveness assessments can be problematic. Quantifying the effects of the campaign and the financial costs of the unhealthy behavior the campaign has attempted to change is never easy. Furthermore, the latency between behavioral change and lowered rates of mortality and morbidity is measured in years, making cost-effectiveness evaluation all the more challenging. In addition, diet- and physical activity-related diseases are multifactorial, making it difficult to link a specific behavioral change to improved health.

Even so, the value of campaign evaluation in policymaking is enhanced considerably by cost-effectiveness studies.

RQ33: How often have efforts been made to assess campaign cost-effectiveness?

Review Methodology

Criteria for Inclusion in Review

Potential interventions for inclusion in this review were identified through searches of computer databases (primarily PsychLit and Medline) and by perusing important public health journals. Examinations of these studies' references often led to yet other social marketing campaigns. Interventions were included in the review if they were reported in published works and met each of the following criteria:

- *Focus*: The campaign had to promote changes in people's nutritional practices and/or physical activity patterns.
- *Multiple Activities*: The intervention had to employ multiple health promotion activities to be considered a "campaign."
- *Multiple Communication Channels*: The intervention had to make use of more than one channel of communication to disseminate its product(s). These channels include, but are not limited to, broadcast media, newspapers, magazines, brochures, interpersonal outreach, worksite, and school educational efforts. An intervention did not need to make use of a channel of mass communication to be considered "social marketing."
- *Community-Based*: The intervention had to target one or more communities of people, considered as a whole for the purpose of campaign design. Materials needed to be altered or adapted to the unique features of the group(s) targeted. A group of individuals could be treated as a community by virtue of shared geography; common interests, circumstances, or traits; or similar origins.

The first criterion acknowledges that a campaign need not address both nutrition and physical activity efforts to be included in the review. An intervention was considered to involve a nutrition-related issue if it gave attention to the foods people eat, how much they eat, and/or food supplements. An exception was the campaign focusing exclusively on alcohol consumption. A campaign did not need to advocate "rigorous exercise" to be considered a physical activity intervention. Campaigns that promoted more leisurely forms of activity, such as walking, were included.

The second and third criteria together excluded from consideration initiatives that were too narrow in scope to be considered a "campaign." These criteria are consistent with the common usage of the term "campaign" in the social marketing literature, as well as with the dictionary meaning of "campaign," defined by the *Oxford American Dictionary* as "a similar series of planned activities." These criteria together exclude from examination single-activity interventions based at a single site (e.g., most school and worksite health education programs).

The last criteria excludes from the review those health promotion efforts in which specific activities are formulated for specific individuals. Examples would be clinical interventions by one's physician, individual-based dietary counseling, and personal physical fitness training. "Communities" can be defined in terms of geography (e.g., the community of

Tracy, California), setting (e.g., a worksite or school), interests (e.g., the community of joggers), circumstances (e.g., the community of disabled individuals), traits (e.g., the obese), and origins (e.g., the Hispanic community).

Campaigns Reviewed

A total of 50 campaigns were found to satisfy the four criteria presented above. These campaigns are listed in Appendix A. Published sources used to assess each intervention are also listed in this appendix. Thirty-eight of these campaigns were carried out in the United States and twelve were implemented in foreign nations. The nations represented are listed in Table 2. It was not always possible to determine the precise start and finish date of the campaigns reviewed due to incomplete reporting. The earliest campaign reviewed began in 1972; the latest was initiated in 1996 (there is a lag between the completion of a campaign and its reporting in the academic literature, of course.) Fifty-six percent of the campaigns were initiated during the 1972-1990 era, while 44% had commencement dates of 1991 or later. This suggests that the use of social marketing has increased considerably in recent years.

Coding of Interventions

The unit of analysis was the *intervention*, as defined by the article(s) in which it was described. A coding form was developed to parallel each research question (see Appendix B). Coding was based exclusively upon author(s) reports of their campaign activities.

Data Analysis

We summarize the results of our coding of interventions using descriptive statistics. Inferential statistics were not employed because these data violate the independence of observations assumption that such tests require. This is because virtually all of these campaigns are extensions of earlier campaigns. For instance, most borrow heavily from materials developed in other campaigns and employ the same planning or intervention strategies.

Table 2

Nations Represented

Nation	No. of Campaigns
United States.	38
Australia	2
Indonesia	2
Netherlands.....	2
Canada.....	1
Finland.....	1
Germany.....	1
Norway	1
Sweden	1
United Kingdom.....	1
Total: 50	

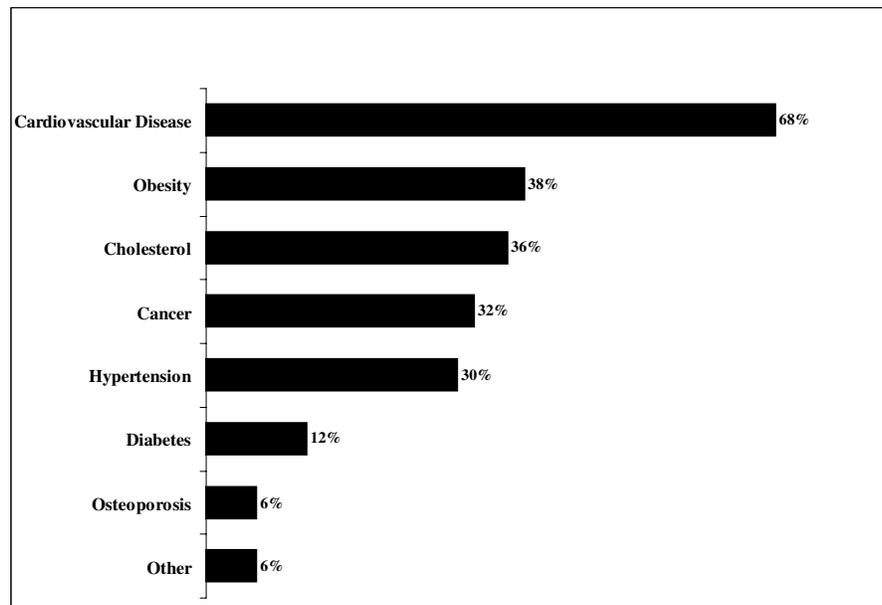
Results

Research and Planning

Setting Goals (RQ1 – RQ5)

We first asked about the goals that have been established in nutrition/activity campaigns published to date. Virtually all campaigns identify “wellness” or “improved health” as objectives, of course. Our focus, however, was on providing an inventory of the specific health issues and conditions targeted by the campaign. The results are reported in Figure 8. The reader is reminded that a campaign could, and often did, identify more than one goal. The most common problem targeted was cardiovascular disease prevention, followed by obesity, high cholesterol, cancer, hypertension, diabetes, and osteoporosis. Goals within the “other” category include the reduction of depression through physical activity, and reduced medical utilization and absenteeism through better health.

Figure 8: Campaign Goals



All interventions identified at least one specific objective for achieving stated goals. In particular, 32% of campaigns reported one specific objective, 22% gave two or three such objectives, 22% reported four or five objectives, and 24% identified six or more objectives. Figure 9 reports the percentage of campaigns making each of 18 specific objectives. The most frequently mentioned objectives were reduced intake of dietary fat, regular physical activity, consumption of more fruits and vegetables, smoking cessation, reductions in caloric intake, and health screening (e.g., cholesterol testing).

Table 3 describes the objectives most frequently advanced for achieving each goal. Specifically, the table lists those objectives defined in at least one-half of the interventions identifying each medical condition as a target of the intervention. For instance, in those cam-

paings identifying cancer prevention as a goal, cuts in dietary fat and increased intake of fruits and vegetables were the only objectives identified at least half the time (81% and 69% of interventions, respectively).

We also asked how often nutrition/activity campaigns promoted both dietary modifications and increased physical activity as part of the same intervention. As shown in Figure 10, the majority of campaigns reviewed addressed both nutrition and physical activity. Goals were stated in quantitative form in only 32% of campaigns.

The methods employed to establish campaign goals are reported in Figure 11. By far, the most common basis of goals was the literature review (70% of campaigns). The other methods examined (original needs assessments, analysis of existing data, consultations with community leaders, and focus groups) were explicitly mentioned in less than half of campaigns.

An accounting of the behavioral theories have been used to guide the formulation of goals and the planning of campaign strategy is provided in Figure 12. This figure displays the percent of campaigns making reference to each of the nine theories described at the outset of this report. Social Learning Theory, the Community Organization Model, and the Social-Ecological Model were most often employed in these interventions. A total of 28% of campaigns mention no theory whatsoever, 20% draw upon one of the theories examined, 26% mention two theories, and 26% relied upon three or more theories.

Audience Segmentation (RQ6–8)

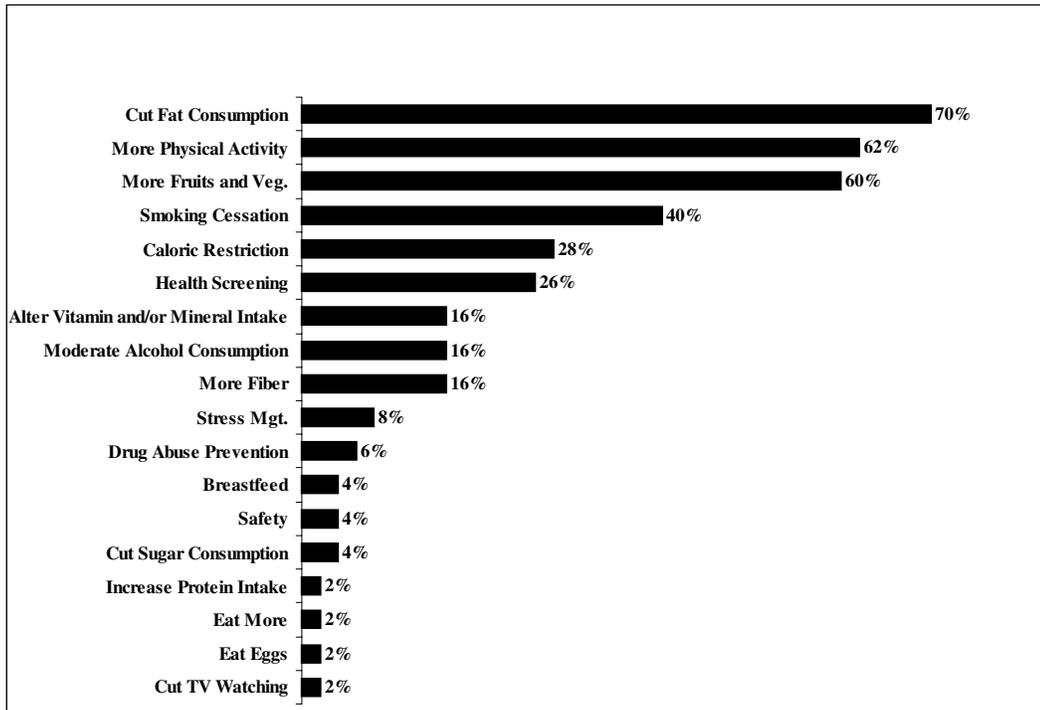
Target audiences were identified and defined in 80% of the nutrition/activity campaigns we examined. In the 40 campaigns that did identify target audiences, psychological/lifestyle

Table 3

Objectives for Achieving Each of Seven Health Goals (>50% of Campaigns)

Goal	Most Common Objectives	%
Cardiovascular Disease Risk Reduction	Cut Fat	77
	Physical Activity	74
	Eat More F&V	53
	Quit Smoking	50
Obesity Risk Reduction	Cut Fat	90
	Eat More F&V	84
	Caloric Restriction	63
	Quit Smoking	58
	Health Screening	53
Lower Cholesterol	Cut Fat	90
	Physical Activity	83
	Eat More F&V	78
	Quit Smoking	72
	Eat Less	67
	Health Screening	56
Cancer Prevention	Cut Fat	81
	Eat More F&V	69
Reduction in Hypertension	Physical Activity	87
	Eat More F&V	80
	Cut Fat	80
	Eat Less	73
	Health Screening	67
	Tobacco Cessation	67
Diabetes Control	Eat More F&V	67
	Physical Activity	67
	Cut Fat	50
Osteoporosis Prevention	All < 50%	

Figure 9: Specific Objectives



principles were used for segmentation 25% of the time (10 campaigns) and demographic categories were found 75% of the time (30 campaigns). Surprisingly, ethnicity was used as a basis for segmentation in only 12 of the 30 campaigns that segmented on the basis of demographics. In most instances, multiple ethnic groups were targeted in such campaigns.

Figure 10: Focus on Nutrition and Physical Activity

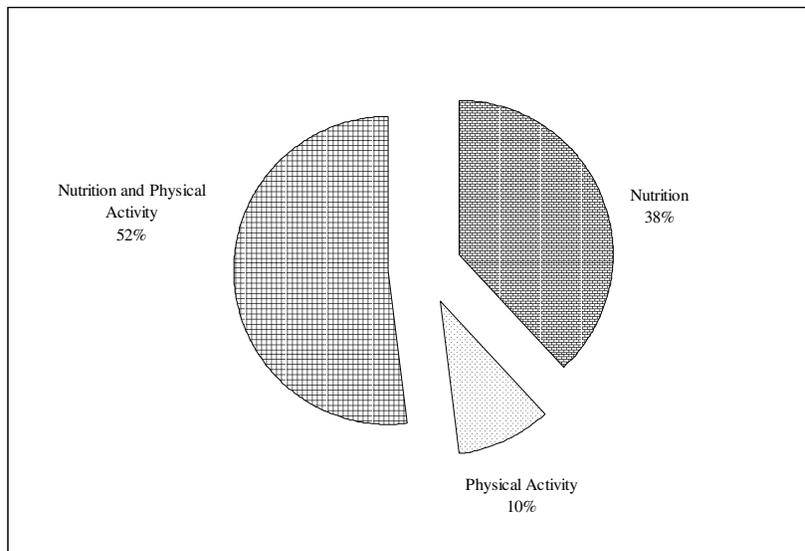
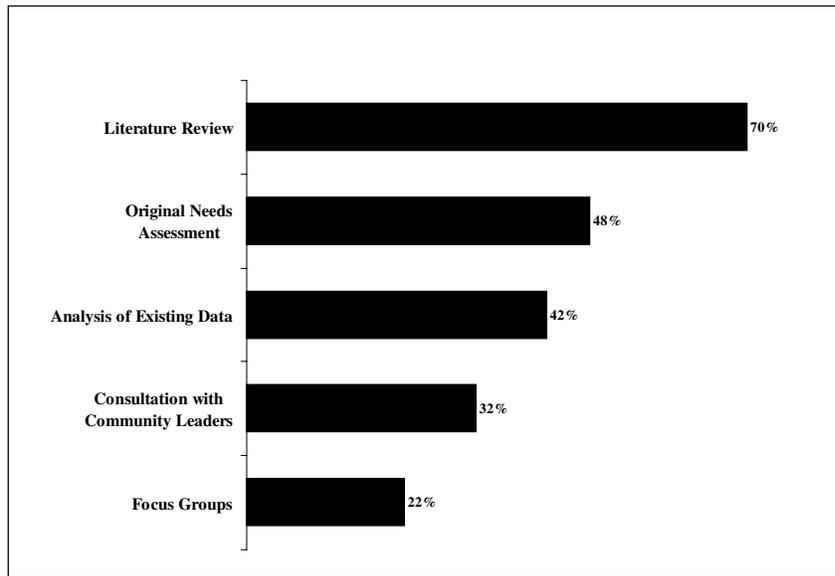
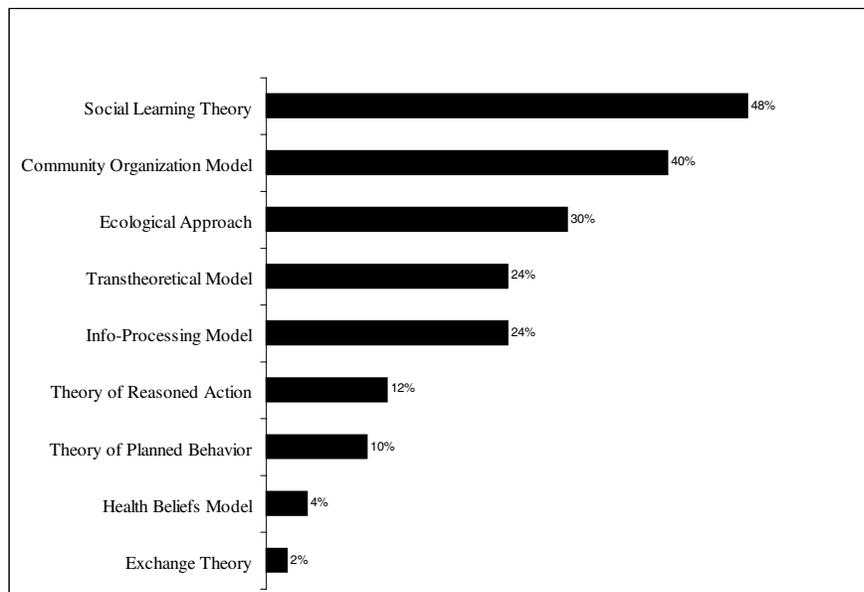


Figure 11: Methods for Establishing Campaign Goals and Objectives



Age appeared to a ubiquitous basis for segmentation. Children (grades 6 and under) and Adolescent (grades 7 through 12) groups were targeted in 30% of the campaigns, Adults (ages 18-54) were the focus in 66% of campaigns, and Senior Adults (age 55 and over) were targeted in 48% of campaigns. Finally, when target audiences were identified, these audiences were further defined as primary and secondary in 18 of 40 (45%) of campaigns.

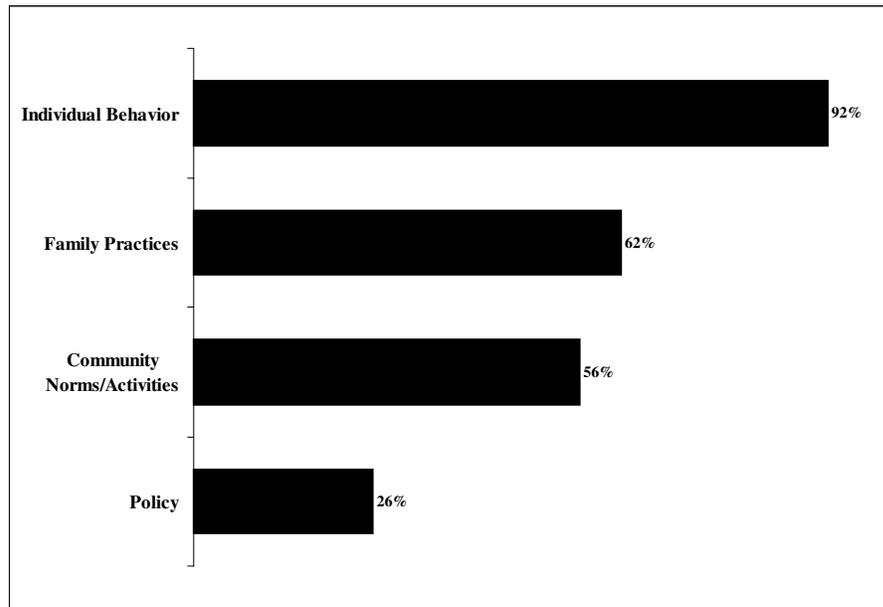
Figure 12: Theories Referenced



Focus of Change (RQ9)

As shown in Figure 13, *individual behavior* was most likely to be targeted (92% of campaigns), followed by *family practices, community norms and activities*, and *policy*. Media advocacy methods were employed in only two of the 13 campaigns that attempted to have an impact on policy.

Figure 13: Focus of Change



Environmental Analysis (RQ10–RQ12)

A total of 48% of nutrition/activity campaigns reported undertaking analyses of the target audience environment to identify supportive (e.g., more informative food labeling on restaurant labels) and unsupportive elements (e.g., lack of safe walking pathways). In those campaigns that have carried out such analyses, consultations with community leaders were used in a majority of interventions, followed by reliance upon focus groups and existing data, survey research, and ethnographic observation (see Figure 14). Environmental changes, however modest, were attempted in 58% of the campaigns.

Community Participation (RQ13–RQ14)

We posed the question of how frequently campaign designers have involved community citizens and community leaders in the planning and research phase of the campaign. A total of 76% did so. A variety of mechanisms are available for bringing about such involvement (see Figure 15). Some form of the citizen advisory group was used in most of those campaigns that attempted to promote such involvement. Other mechanisms, including reliance upon project staff from the community, employment of local consultants, input from established community organizations, and focus group research were used less often.

Figure 14: Approaches to Environmental Analysis

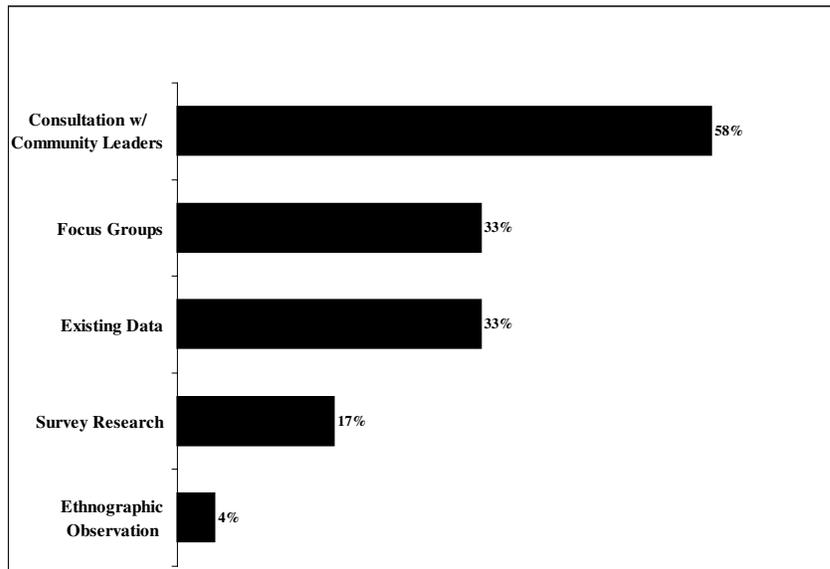
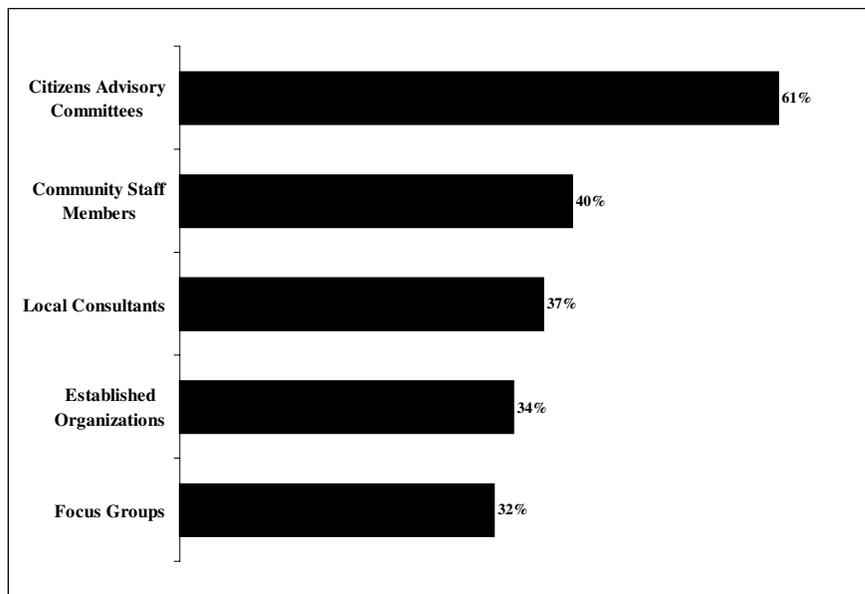


Figure 15: Mechanisms for Fostering Community Participation in Planning and Research



Consumer Research (RQ15–RQ17)

By our count, 48% of nutrition/activity campaigns have carried out formative consumer research prior to the design of campaign strategy. In those campaigns that have made use of consumer research, focus groups were mentioned 58% of the time and survey research approaches were used in 38% of campaigns. In a number of campaigns, no details were given

as to the nature of the consumer research obtained. Across all campaigns, an attempt was made to obtain information on the intervention population's communication channel use only 24% of the time.

Strategy Design

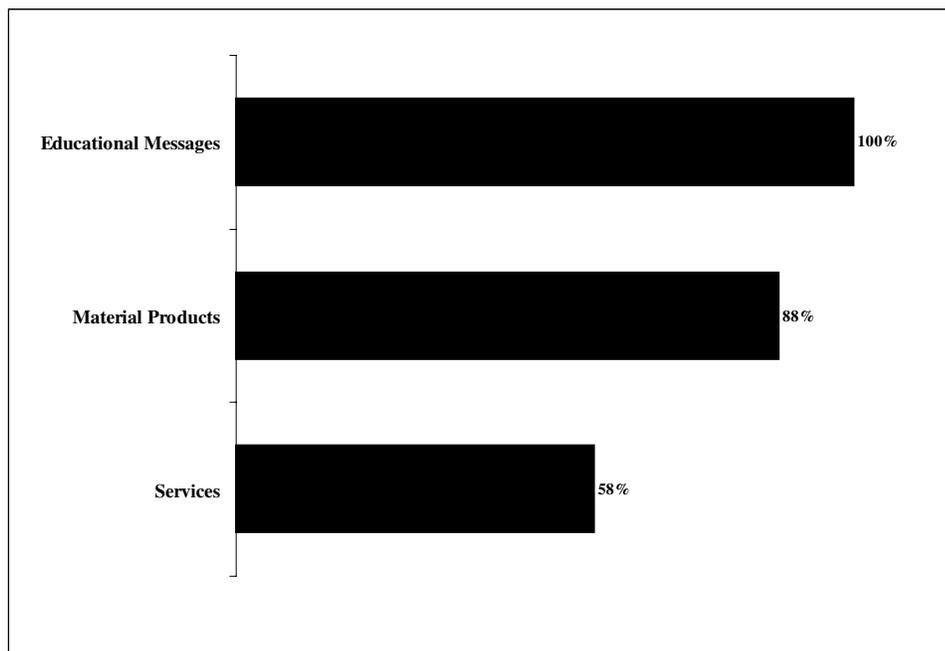
Pretesting (RQ18–RQ20)

Nutrition/activity campaign officials pretested key concepts and messages in 40% of campaigns. When such pretesting was carried out, specific procedures employed were not reported by the authors on a number of occasions. Methods most often mentioned were: focus group research (65% of campaigns that reported pretesting materials), informal consultation with community leaders through interviews (45%), experimental testing of materials (15%), and survey methods (10%). Pretesting of the campaign itself was reported for 22% of interventions.

Marketing Mix (RQ21–26)

Educational Messages were produced in all campaigns examined. *Material products* were created in 88% of campaigns; examples include training manuals, low fat cookbooks, brochures, and newsletters. *Services* were provided in 58% of the interventions; examples include in-home nutritional instruction and health screening (see Figure 16). Attempts to make adoption of intervention recommendations less costly to target audiences were reported in 52% of the campaigns. Examples include easier access to exercise equipment, reduced fees for athletic club memberships, and in-home nutritional education.

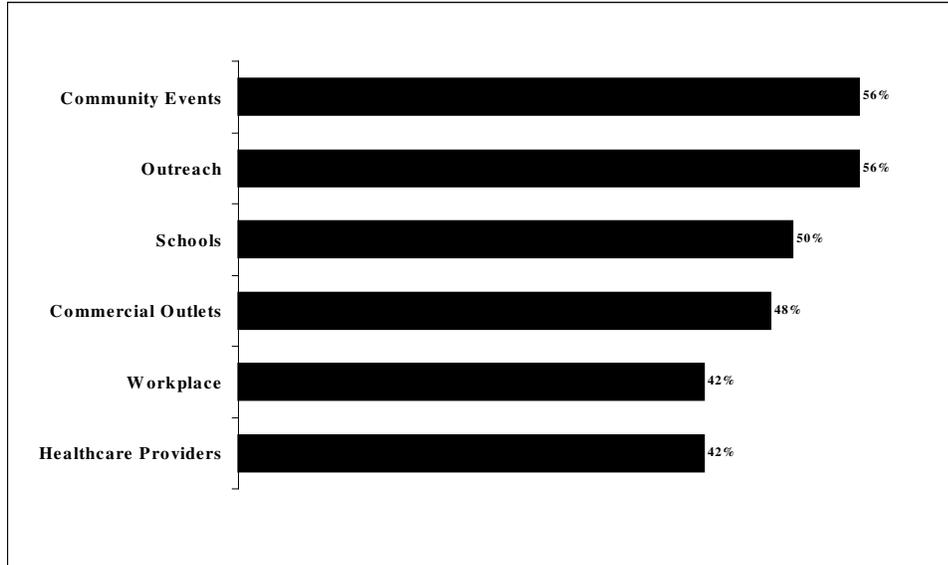
Figure 16: Social Marketing Products



We also asked about the types of incentives used to overcome the costs of recommendation (monetary, social, etc.) and the selling points used as incentives (improved energy, increased lifespan, etc.). These questions could not be answered because few intervention reports provided the level of detail about campaign products to make assessments of incentives and selling points possible.

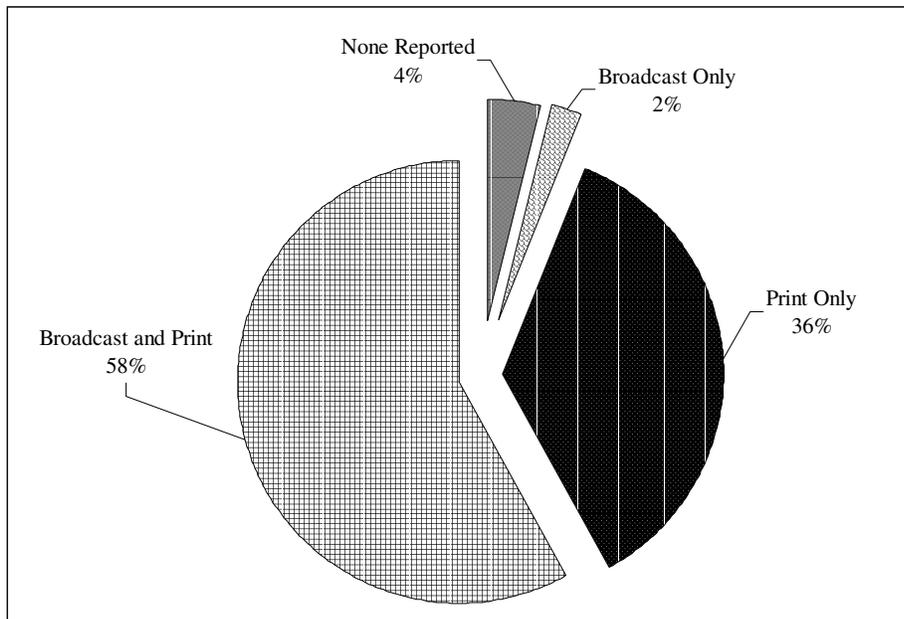
Figure 17 reports the interpersonal channels through which campaign products were distributed. The most common distribution channels were community events and outreach, followed by schools, commercial establishments, the workplace, and health care providers.

Figure 17: Product Distribution (Interpersonal Channels)



Results for our analysis of mediated distribution mechanisms are reported in Figure 18. Most campaigns made use of both broadcast and print channels.

Figure 18: Product Distribution (Media Channels)

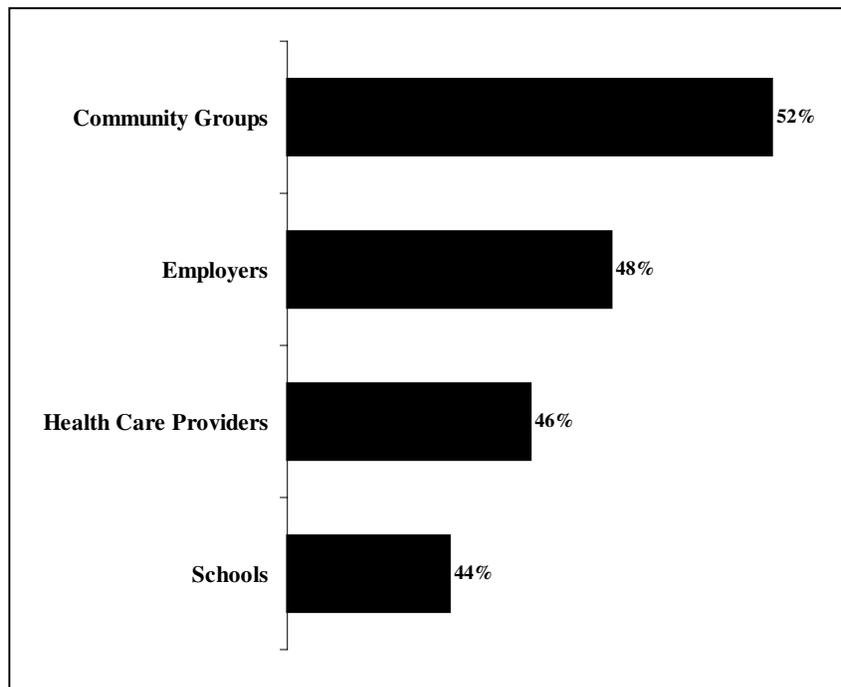


Implementation

Community Collaboration (RQ27–RQ29)

Community members were reported to have been recruited as collaborators for the purpose of campaign implementation in 82% of campaigns. Mechanisms by which community member involvement was encouraged in the implementation phase are reported in Figure 19. *Community groups, employers, health care providers, and school personnel* were relied upon in roughly the same proportion of campaigns. *Sustainability* was mentioned as a long-term goal for 54% of the campaigns.

Figure 19: Mechanisms for Community Collaboration During Implementation

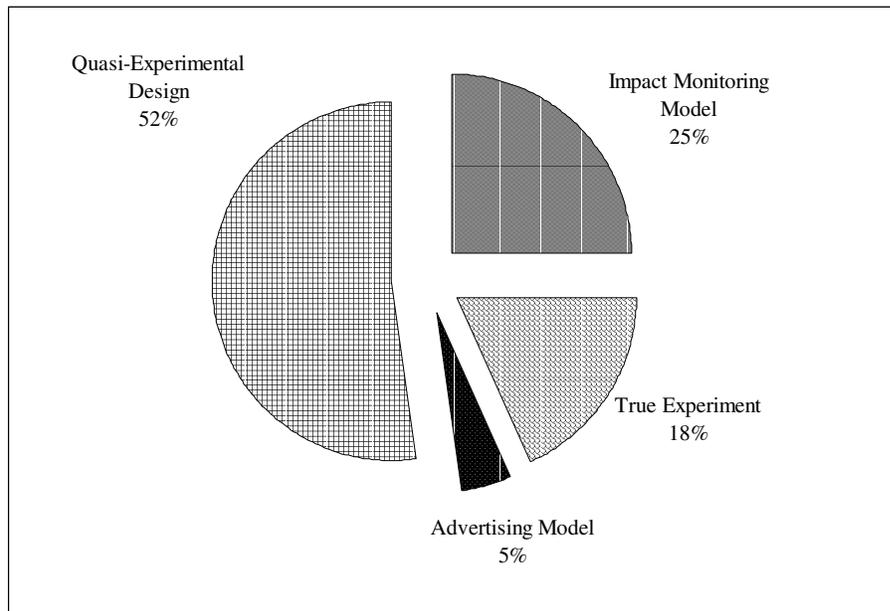


Evaluation

Evaluation Design (RQ30–RQ31)

A summative evaluation, however modest, was reported in 44 of the 50 campaigns (88%), an ongoing evaluation was described in one campaign (2%), and five campaigns reported no attempt to evaluate outcomes. As reported in Figure 20, the majority of these evaluations employed a quasi-experimental approach.

Figure 20: Evaluation Designs



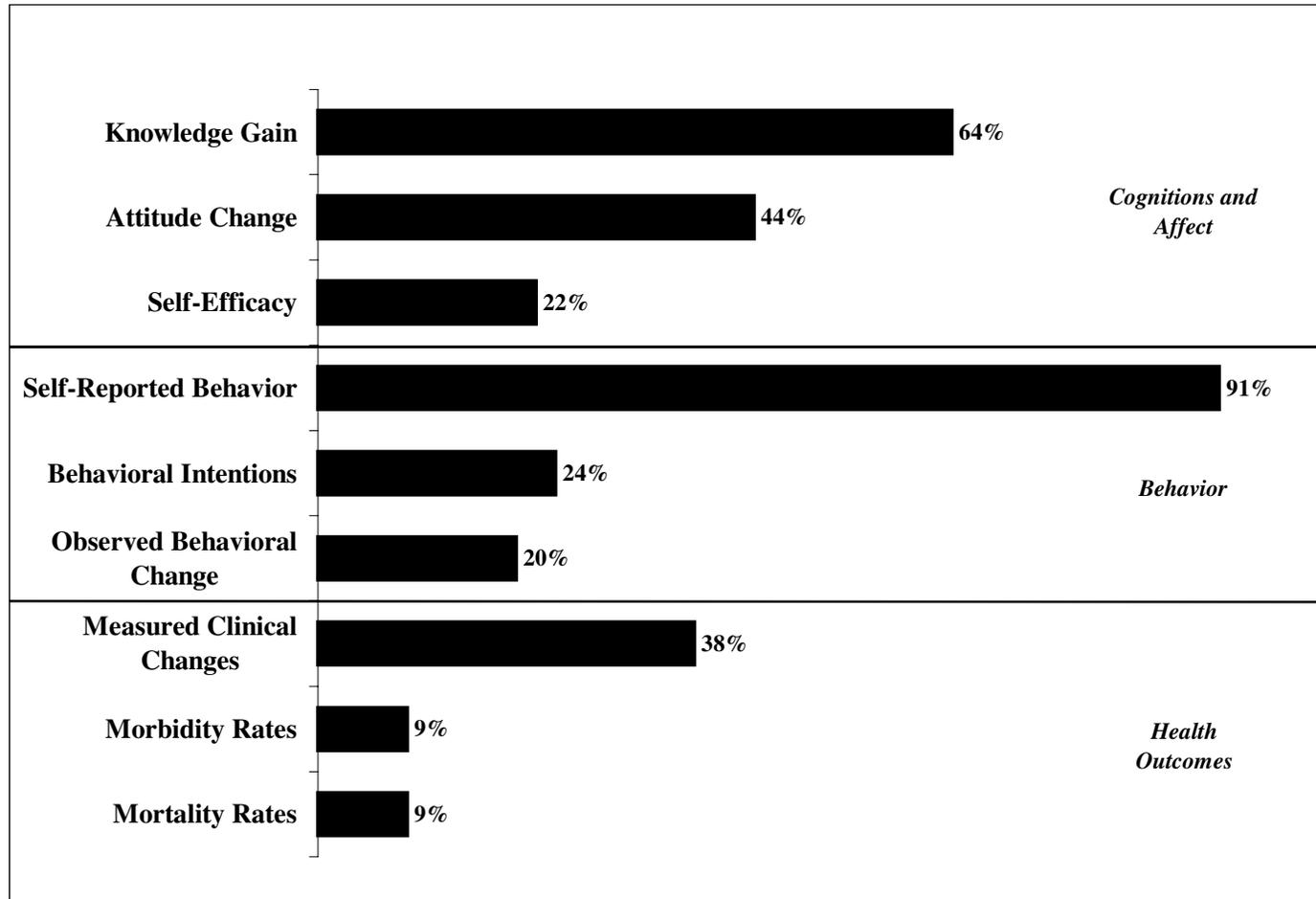
Outcome Measures (RQ32)

Figure 21 describes the nature of the outcome criteria employed in these evaluations. These outcome measures have been grouped into three broader categories: cognitions and affect, behavior, and health outcomes. Knowledge gain among intervention targets was the most frequently employed cognitive/affect outcome, self-reported behavior was the most common behavioral outcome, and measured clinical changes (e.g., cholesterol levels, body weight, fitness) was the most frequent health outcome measure. Attempts to assess morbidity and mortality, arguably the best indicator of campaign impact, were reported in only four campaigns.

Cost-Effectiveness Evaluations (RQ33)

Attempts to assess the cost-effectiveness of campaigns were rarely reported. Cost-benefit analyses, typically very modest in nature and scope, were attempted in only nine campaigns (18%).

Figure 21: Outcome Measures



Conclusions and Recommendations

Thirty years have been added to life expectancy in the United States since the turn of the century. Twenty-five of these years can be attributed to population-based public health measures while the remaining five years have been added through medical advances (Kroger et al., 1997). It is thus not surprising that a variety of approaches to health promotion, including the social marketing perspective, have been developed to improve the public's health. We have reviewed the practices of community-based nutrition and physical activity promotion programs that have drawn upon social marketing principles. In this section, we summarize critically these practices and offer recommendations for improving future interventions.

Objectionable Objectives

Overall, the goals of most campaigns were not explicitly stated. In other instances, goals were expressed in general, untestable terms (e.g., “improved nutritional status,” “enhanced well-being,” “improved health”). In addition, even when objectives were specified, this was not usually done in a measurable (quantifiable) format that lent itself to evaluation. In fact, fewer than one in three interventions were based on measurable objectives. Furthermore, in most instances, objectives were taken from a review of literature, not a data-based evaluation of the specific needs and concerns of target audiences. In other cases, objectives were “borrowed” from other campaigns, handed down by funding sources, or even set by national health policy rather than local needs. A basic tenet of social marketing is that an understanding of one's audience requires an original needs assessment or an analysis of existing data concerning the targeted communities' practices, values, and beliefs. This principle was seldom applied in the studies reviewed.

This discussion leads to our initial recommendations:

- Rec 1. Campaign objectives should be stated in measurable terms so that the effects of the campaign can be objectively assessed.*
- Rec 2. Campaign objectives should be formulated on the basis of original or secondary data analyses descriptive of target audience(s) needs.*

There is Nothing More Practical Than a Good Theory

Kurt Lewin (1951) reminded us that theory should provide the foundation of practice. Social-behavioral theories can serve as valuable guides in all stages of the social marketing process. Furthermore, theories make it unnecessary to “reinvent the wheel” with every new intervention. A theory summarizes lessons from prior interventions, is modified over time to reflect new insights, and offers the promise of even better interventions in the future. The capacity of theory to serve as an evolving, abstract synopsis of knowledge is perhaps what Karl Popper had in mind when he observed that “theories are nets cast to catch what we call ‘the world’” (Popper, 1959).

Metaphorically speaking, theory and practice should be thought of as two participants in an ongoing conversation; each builds upon the contributions of the other. Sadly, this conversation is often like a monologue in much of the social marketing literature on nutrition and physical activity. While a majority of studies did reference at least one social-behavioral theory, nearly three in ten made no reference to theory whatsoever. We suspect that a number of campaign practitioners falsely think of social marketing as a theory unto itself. To be sure, the social marketing perspective does provide a useful organizational scheme for thinking about campaigns and for developing, implementing, and evaluating health promotion programs. However, it does not provide a theoretical explanation for shaping behavior change strategies.

When theories were invoked in these campaigns, they were often used as little more than adornments in the rationale section. With only occasional exception, one would be hard pressed to find evidence of theory being used as a thread to bind all phases of the campaign process, from the formulation of objectives to the evaluation of outcomes. Stated differently, behavior-change theories were often mentioned in passing, but seldom used to integrate the intervention. For instance, the elements of theories have rarely been translated into specific components of interventions. Rather, theories seemed to be used for legitimacy to satisfy an academic publication ritual rather than employed as models to guide planning, implementation and evaluation.

Rec 3. Campaigns should be theoretically grounded, with theories selected thoughtfully to reflect the intellectual and practical considerations of the intervention. The concepts of the theory or theories selected should guide and integrate all phases of the intervention.

Putting “Marketing” Back Into Social Marketing

As we whittled down our original list of candidate interventions for review to a set of *social marketing* campaigns, it became clear that the “social marketing” label has often been overused and even abused. Most campaigns, although claiming a social marketing framework, seldom referred to any of the key social marketing concepts and components.

Value: A Priceless Concept

A majority of the articles reviewed did not include any discussion of issues related to *value*, a key social marketing concept in the creation of incentives for behavior change. Specifically, these interventions rarely addressed in explicit terms the value of the behavioral changes being promoted, from the perspective of targeted audiences; the manner in which these benefits were offered; the advantages of promoted changes, relative to the current behaviors of the target audience; and ways of minimizing the costs of adopting new behaviors.

The 5 P’s

The fundamental social marketing concepts of product, price, place, promotion, and positioning were also seldom mentioned, and descriptions of their application in the interventions were invariably lacking. Furthermore, the language of social marketing was seldom invoked in the reporting of campaign activities. Likewise, intervention activities were only rarely organized in terms of the 5 P’s. It was thus difficult to assess if and how these concepts were guiding the research and intervention activities of the campaigns examined.

Different Strokes for Different Folks

Another core social marketing concept, *audience segmentation*, also received limited attention and use. The social marketing perspective calls upon campaign planners to customize the social marketing product to fit the needs, beliefs, values, and cultural assumptions of defined communities (Cirksena & Flora, 1995; Fine, 1980; Maibach et al., 1996; Slater & Flora, 1991). Nutrition and physical activity campaigns, by definition, are lifestyle modification interventions (Williams & Flora, 1995). Even so, very few campaign reports described efforts to modify their message and strategies to reflect the life circumstances of their audiences. Segmentation based on principles of psychographics or lifestyle were found in only one-fifth of campaigns. Targeting based on ethnicity and acculturation, an important strategy in the arsenal of the health communication professional (Bell & Alcalay, 1997), was also an uncommon practice.

Media and Messages

Messages and how they are disseminated are key components of social marketing. It is thus critical to understand target audiences' preferences for communication strategies, spokespersons and other message features. Even when the basic ideas may be the same for all audiences – e.g., exercise more, eat less fat, consume more fruits and vegetables – the messages need to be designed and positioned differently for various groups. In some projects reviewed, these requirements were met more by hunches about the nature of the target audience than objective research. In others, too few details were provided to allow us to characterize the message strategies and formats utilized. For example, our plan to code the appeals and incentives incorporated into the campaigns' products had to be abandoned due to a lack of specificity in the reports we examined.

Communication channel selection is a critically important decision in the planning and execution of social marketing campaigns (Schooler et al., 1998; Melville et al., 1992-1993). Even so, detailed discussions of communication channels were rare. For instance, few interventions reported efforts to document the media preferences of audiences and the criteria used to choose one form of print and/or broadcast media over another. The typical practice was to list the interpersonal or mediated channels employed in message dissemination without providing a rationale for why one set of channels was selected in lieu of other available means of communicating with target audiences. Furthermore, planning research on the media preferences of audiences was almost always lacking. More attention also needs to be given to tracking the effects of campaign activities *during* the communication process. We found little evidence that such tracking has routinely been incorporated into nutrition and physical activity campaigns to date.

There is a burgeoning new array of communication technologies for reaching people. However, we found little evidence that these technologies are being used by social marketers, even in more recent campaigns. New technologies may currently be less available to underserved populations, but these are increasingly being introduced into school systems. Given their emerging importance, it is worth the effort to help disadvantaged youth become familiar with these technologies. Outstanding examples of the use of such technologies in other arenas of health communication are easy to find.

Recommendations for putting marketing back into the social marketing of better nutritional practices and increased physical activity follow:

- Rec 4. Segmentation of target audiences needs to be made more explicit. In particular, psychographic and lifestyle profiling, assessment of preferred communication channels, and cultural influences on relevant behaviors need to be routinely investigated in the planning process of campaigns.*
- Rec 5. Social marketing research should employ more systematic message construction and channel selection procedures.*
- Rec 6. The basic marketing concepts of product, price, place, promotion, and positioning should be more central in interventions.*
- Rec 7. Public health professionals need to develop mechanisms for making the social marketing products developed in interventions more available to other campaign planners. These materials, of course, will usually need to be adapted to local community needs and circumstances.*
- Rec 8. Campaign effects need to be tracked as a matter of routine and modifications to campaign strategy need to be made based on the feedback received.*

Reporting Standards

Our attempts to synthesize the literature were frustrated by the tendency of basic campaign activities to be poorly documented. Social marketing researchers ought to develop and enforce minimum reporting standards to ensure that planners can learn from existing intervention experiences. Rigorous reporting is requisite for the construction of a body of scientific knowledge about social marketing.

- Rec 9. Reports of social marketing campaigns should describe the research, planning, strategizing, implementation, and evaluation of the campaign in the language of social marketing. At minimum, this entails an integrated discussion of the concepts of target audience, audience segmentation, product, price, place, promotion, and positioning.*
- Rec 10. These minimal reporting standards should be encouraged and even enforced by public health scholars when they assume the role of reviewing social marketing manuscripts for publication in referred journals.*

Cost-Effectiveness

Social marketing is just one of many available strategies for improving the health of the public. Alternative strategies compete, at least in theory, for healthcare resources. For this reason, social marketing professionals need to make efforts to quantify the costs and benefits of their campaigns. Such analyses are exceedingly difficult and entail making assumptions about the economic costs of people's lifestyle choices and the financial benefits accrued through modification of those lifestyles. To date, few nutrition/physical activity campaigns have attempted to undertake careful cost-benefit analyses; with rare exception, these analyses have been superficial.

- Rec 11. Cost-effectiveness research studies need to be funded to advance this area of measurement.*

Low Impact

Although social marketing has proven to be an effective means of altering some kinds of behaviors, the overall impact of nutrition and physical activity campaigns has been quite unimpressive. This disappointment may be due in part to poor social marketing design, strategy, and implementation. These interventions typically increased the knowledge of study subjects, but seldom, if ever, had meaningful behavioral effects. Furthermore, when statistically significant behavioral changes were documented in treatment communities, those effects were typically small and short-lived.

Only four of the fifty campaigns assessed made an attempt to determine the effects of the campaign on morbidity and mortality. These very important studies do not support a conclusion that social marketing by itself can improve the dietary practices and increase the physical activity of Americans in any substantial way. We cannot know how successful such campaigns would have been if only the practices advanced in this report had been followed. We feel compelled to acknowledge that lowered rates of morbidity or mortality may be an inappropriate criterion in social marketing campaign evaluation. It would take years to demonstrate an impact on disease and death for even the most effective of campaigns. Furthermore, such evaluations may be prohibitively expensive. For the time being, the focus of campaign evaluation must continue to be on behavioral changes presumed to bring about improved health on the basis of epidemiological data.

Research-Based Arguments

In their recent examination of the Stanford, Minnesota, and Pawtucket campaigns, Winkleby and colleagues (Winkleby, Feldman, & Murray, 1997) have speculated on why intervention effects have been so modest. For instance, they suggest that the effects of campaigns may have been masked by national efforts to promote improved nutritional status. In essence, other health promotion efforts independent of these campaigns may have contaminated evaluation designs by “diffusing” treatment messages to control communities. Winkleby et al. also suggest that *a priori* hypotheses were optimistic for change at the community level, thus leading to evaluation designs with low statistical power. In hindsight, hypothesized reductions in risk factors of 10-20% may be appropriate for clinical interventions involving focused, individual attention. However, such expectations are probably too optimistic for community interventions. Design modifications could be incorporated into future campaigns to identify as statistically significant smaller effect sizes. However, nutrition and physical activity campaigns must ultimately be judged by their capacity to bring desired changes to a large percentage of target populations.

The Funding Argument

It is true that the limited success of nutrition and physical activity campaigns to date is due in part to poor funding. Indeed, all nutrition and physical activity campaigns have been poorly funded when their budgets are considered in light of the billions of dollars spent each year by the food industry to market foods of questionable nutritional value. Nevertheless, it is unlikely that high impact could be achieved simply by funneling more money into current practices. Our doubt is based on the disappointing experience of superbly designed, skillfully executed, well funded interventions, which failed to affect their targeted communities as intended. For instance, the limited effectiveness of the “big three” interventions in the U.S.

(the Stanford, Pawtucket, and Minnesota trials) suggests that better funding for interventions by itself is unlikely to lead to substantially healthier communities.

The Public Skepticism Argument

Surveys indicate that one-half of Americans mistrust nutrition experts. A Tufts University School of Medicine researcher attributes this lack of respect to various factors (Rippe, 1996). For example, many people perceive, perhaps unfairly, a lack of consensus among experts on most nutrition issues, leaving them wondering why they should listen to “experts” who disagree among themselves about how we should eat. (For instance, should we avoid fat or switch to olive oil? Should we drink wine to promote a healthy heart or avoid it? Do we eat a high-carbohydrate diet to lose weight or a high-protein diet?) Second, advice often seems to be transient. For example, some of us go to bed “normal weight,” and wake up the next morning “overweight” because of changes in weight guidelines. The effect is that the public may perceive nutritional advice to be of poor quality or still “under construction.” The nutrition and public health fields need to use social marketing tools to sell the quality of its research and to build its credibility in the eyes of the public.

The Complexity Argument

At most, our review calls into question the difficulties of implementing social marketing for nutrition promotion, *not* the intrinsic merit of the social marketing approach. It may be instructive to consider how the social marketing of nutrition differs from other areas in which substantial success has been achieved (e.g., oral rehydration therapy, family planning, and smoking prevention). Three distinctions are notable. First, success has typically been found for campaigns that have promoted a single, simple behavior (e.g., abstaining from smoking, using a specific formula or product for diarrhea control, or using a specific mode of birth control). In contrast, nutrition and physical activity promotion requires the active selection of multiple, complex behaviors on an ongoing basis. Second, success has usually been found in situations in which the promoted behavior brings about immediate benefit. However, the benefits of nutrition and physical activity modifications are long term. Third, the link between adoption and benefit are clearer for some of the issues in which social marketing has been successful. In contrast, the linkage between health improvement and dietary change or increased physical activities can be ambiguous.

A Glimmer of Hope

One area in which social marketing may in fact prove to be effective is the development of healthy eating patterns in younger individuals. There was little evidence in the campaigns reviewed that social marketing have induced adults with well-established eating patterns and activity routines to alter those habits dramatically. However, we are encouraged by the effectiveness of the CATCH program (Child and Adolescent Trial for Cardiovascular Health) in modifying the behavior of children and adolescents (Lytle, 1998), apparently for the long-run (Nader et al., 1999). Public campaigns may be more effective at preventing the adoption of unhealthy patterns of behavior than modifying ingrained practices of adults.

Despite the limited effectiveness of most of these interventions, it is important to credit them for the innovative educational products they have developed and the impact they have had in the design of other interventions. Even when outcomes have been disappointing, these studies have shed light on important aspects of health behaviors; shown the potential of the

media to inform large segments of the population; advanced the public stature of the field of public health; and offered innovative models, methods, and strategies for community-based interventions.

Rethinking the Purpose of Social Marketing

Given the limited effectiveness of nutrition/physical activity campaigns to date, where should we go from here? We will answer this question with a set of specific recommendations for future intervention activities. Before doing so, however, we will offer a preliminary model of the promise and limitations of social marketing. Our model, which is provided as Figure 22, will be enlarged later in our discussion. It identifies the three most likely effects of social marketing within the realm of nutrition/physical activity promotion:

- *Informed Self-Destruction:* A nutrition/physical activity campaign can create a greater realization that one's lifestyle may be unhealthy, with no resultant behavior change. Most at-risk members of the target audience will continue to eat and live unhealthily, but will be better informed about what they are doing to themselves.
- *Health Screening:* A campaign can improve health indirectly by promoting screening that induces people most at-risk (primarily adults) to seek clinical, one-on-one clinical interventions. Of course, targeting such individuals for personalized intervention is only a partial solution because a majority of Americans need to modify their eating and activity behaviors.
- *Healthy Lifestyle Formation:* A campaign can have a direct, lasting impact on the behavior of younger members of target audiences by facilitating the formation of healthy lifestyles.

Each of these effects will be discussed in turn.

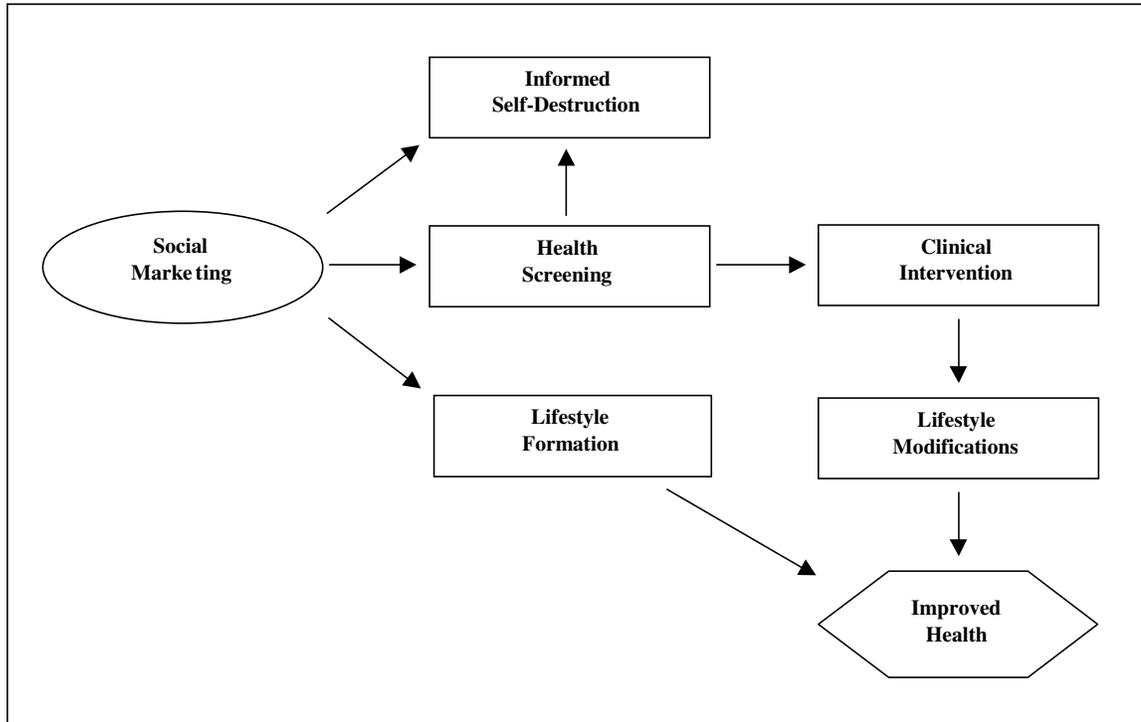
Informed Self-Destruction

For the vast majority of targeted audiences, the most we can expect from social marketing campaigns is *informed self-destruction*. Many individuals, especially adults, will become aware through a social marketing campaign that their eating choices and inactive lifestyles may be putting them at risk. They may elect to continue down the path disease and premature death, but that decision will at least be an informed one. There may be value in helping individuals to make educated lifestyle decisions, even if they elect to ignore campaign guidance and maintain a nutritionally deficient and sedentary lifestyle.

Health Screening

Other individuals may be very motivated to leave their unhealthy lifestyles behind. Despite their willingness to change, it is unreasonable to expect campaign information by itself to instill in individuals most at risk the capacity to change. Eating habits are so deeply rooted that intensive personal counseling and intervention may be required for lasting behavioral modification. For this reason, campaigns targeting adults most at risk benefit from including screening as a core social marketing product. Screening can also capitalize upon other factors that lay the foundation for success, including the support of a spouse, partner, or other family members; initial success in treatment; and ongoing monitoring of progress (Harvey et al, 1998).

Figure 22: Three Most Likely Outcomes of Social Marketing



Social marketing appears to be an effective means for emphasizing health screenings, and directing adults to appropriate health care systems. Such screenings can be used as a gateway through which high-risk individuals enter into the personal lifestyle counseling and/or medical treatment that they require. Interventions should include affordable and accessible treatment for adults. The tools of social marketing are ideal for promoting a simple behavior like health screening by highlighting its benefits, minimizing its costs, and positioning screening in culturally appropriate ways. While the “treatment model” is often shunned by the public health establishment, coordinated action between the public health and medical establishments may be required for complex behavior changes, such as those related to nutrition and physical activity. Social marketing can have value in reinforcing messages that adults receive in one-on-one treatment programs. Figure 22 acknowledges that individuals who undergo health screening may not elect to make needed changes in their lifestyles.

Lifestyle Formation

We believe that the social marketing of active, nutritionally sound lifestyles will prove to be beneficial primarily in target audiences for whom unhealthy lifestyles are not yet ingrained – namely, children and adolescents. From this point of view, the role of social marketing is to cultivate a new generation of active, healthy eaters. Our position is in line with the oft-made observation that social marketing is most effectively used to promote *prevention* to individuals who have not yet formed unhealthy habits. Efforts to put young people into healthy lifestyles have worked best when interventions have included family education com-

ponents (e.g., the CATCH program). It is an interesting hypothesis that adults who are not inclined to change unhealthy patterns for themselves may do so to be good role models to their children.

This discussion of the appropriate uses of social marketing can be summarized in the following recommendations.

- Rec 12. For most individuals, social marketing should be framed as a tool for advancing awareness and knowledge, not as a means for bringing about complex behavioral changes.*
- Rec 13. The direct promotion of nutrition and physical activity through social marketing is likely to be most effective when targeted to children and adolescents.*
- Rec 14. Nutrition/physical activity campaigns should use marketing concepts to sell health screening to high-risk adults. Such campaigns should focus upon bringing individuals at risk into the healthcare system for individualized treatment and/or nutritional counseling.*

The Ecology of Eating and Exercise

Wallack and his colleagues (1993) possibly foretold our conclusion about the limited capacity of social marketing to promote nutritional eating and active lifestyles when they made the following observation:

“Social Marketing tends to reduce serious health problems to individual risk factors and ignore the proven importance of the social and economic environment as major determinants of health. In the long run, this risk factor approach that forms the basis for social marketing *may contribute relatively little to reducing the incidence of disease in a population.*” (p 23, emphasis added)

For behavior change to occur, the whole environment must be engaged (Contento et al., 1995). Attention must be given, for instance, to the activation of the support of family and friends and to making healthy foods available at an affordable cost in the workplace, at restaurants, and school cafeterias. Also important is ensuring that the physical environment provides convenient and enjoyable “sites” for physical activity, such as scenic and safe walking paths, affordable athletic clubs, and places for more organized sports (tennis, basketball, and handball courts, for instance). A few of the campaigns we reviewed did make efforts to modify the physical environment (e.g., the 5-a-Day campaigns).

Without question, the Social-Ecological Model has become more important among health promotion researchers. The ecological model was, in fact, the third most frequently referenced theoretical model in the intervention review. Thus, while there is still too much emphasis on individual behavior, it is encouraging that environmental influences on people’s actions are increasingly being taken seriously.

Media Advocacy

The kinds of environmental changes required for substantial improvements in the nutritional practices and activity routines of Americans are likely to require a commitment of governmental resources, partnerships with the food industry, changes in regulations, and alterations of public opinions. Bringing about such policy changes requires a strong media ad-

vocacy component. If we accept the basic premise of the ecological model that health behaviors are shaped more by environmental pressures and constraints than by individual decisions and preferences, then some of the resources committed to community interventions should be funneled into media advocacy efforts designed to change the practices of the food and leisure industries and the laws governing these industries' practices; the food service policies of schools and employers; and perhaps even taxation policies that affect the relative costs of healthy and unhealthy foods.

We qualify this position by noting that media advocacy is best conceived of as a tool to be used along side social marketing, not as a replacement of it (Wallack & Sciandra, 1990-1991). Furthermore, we believe that the skills required to undertake effective social marketing campaigns are quite compatible with those needed to make effective use of media advocacy – namely, an understanding of communication theory and a command of the principles of strategic communication, public relations, and marketing. The “skill sets” of the social marketer and media advocate overlap considerably.

Of course, media advocacy has become a widely accepted approach for influencing public policy (Chapman, 1994; Wallack, 1990; Wallack & Dorfman, 1996) and empowering communities (Wallack, 1994). Agitators who have used this method have codified the lessons learned from their experiences (Jernigan & Wright, 1996) and have documented the methods and strategies at our disposal (Treno & Holder, 1997; Woodruff, 1995). This perspective has been used to encourage news stories with the intent of affecting a variety of health-related policies. These include issues regarding tobacco control (McKenna, 1994), the advertising of tobacco products (Rogers et al., 1995), drinking and driving (DeJong, 1996; Holder & Treno, 1997; Russell et al., 1995; Treno et al., 1996), and other aspect of alcohol policy (Stewart & Casswell, 1993; Woodruff, 1996). Surprisingly, this approach was used only occasionally in the nutrition campaigns reviewed (Schooler, Sundar, & Flora, 1996). (We are aware of several instances of its use by consumer groups in initiatives that have not been reported in the academic public health literature.) It would appear that the media advocacy perspective has been much more likely to be considered in efforts to stem offensive behaviors (e.g., smoking and drinking) than risky but less controversial behaviors such as unhealthy eating and sedentary living. The potential of media advocacy to reshape those facets of the environment that affect adversely people's nutritional and activity-related behaviors has not yet been fully tapped.

Environmental Targets

If social marketing were to be used to promote environments more conducive to eating healthily and exercising regularly, what would be the targets of advocacy efforts? The answer to this question would probably vary dramatically from community to community. Even so, we can identify six facets of the environment that the media advocate would need to investigate.

- *The Physical Environment (Availability).* Where high quality fruits and vegetables, low fat foods, and other healthy choices are not easily available, barriers to availability need to be targeted. For instance, media advocacy could be used to pressure schools to force food service vendors to make healthy food choices available to kids; encourage employers to place fruits

and vegetables in vending machines; and shame grocery chains into opening stores in poor, inadequately served communities.

- *The Social Environment (Acceptability)*. When social norms do not support healthy lifestyles, efforts could be made to target those norms. For this facet, media advocacy and social marketing tools may need to be tightly integrated. Social marketing could be used to shape public attitudes through direct communication with the community and media advocacy could be relied upon to reinforce healthy norms through the manufacture of supportive news stories. Social marketing could also be used to increase demand in the marketplace for healthy foods and physical activity programs.
- *The Political Environment (Agenda-Setting)*. Media advocacy is ideal for placing upon the public's agenda those issues that affect people's capacity to live healthily. For instance, the practice of turning over school food services to fast-food chains could be framed as an attack on the health of vulnerable children by greedy corporate moguls who only care about making a buck.
- *The Media Environment (Information)*. Through cooperation with the media industry, the messages presented to the public can be made more healthy. The media could partner with health establishments, for instance, to ensure that characters in fictional television programs are shown snacking on vegetables, not candy bars – a strategy known as “infotainment” (Biddle, Conte, & Diamond, 1993; Chapman et al., 1990). Through regulation, the practice of advertising food products (and other products, for that matter) in children's programming could be banned.
- *Economic Environment (Costs)*. Imagine a scenario in which low-fat foods and fresh produce are less expensive than fatty fare and sweets. Through its capacity to reallocate resources, the government could make such a hypothetical scenario come true. For instance, “value added” taxes could be applied to fats and sugars to make unhealthy foods more expensive and to subsidize the cost of healthy alternatives. While some of these ideas may seem to be politically unpalatable, media advocacy techniques could be used in theory to make them politically acceptable. Less extreme measures could also be taken. Free breakfast and lunch programs could be offered to all students in which only healthy foods are served, for instance.
- *Policy Environment (Legislation)*. Legislation may often be the strategy of last resort. For instance, if the food industry refuses to desist from advertising unhealthy foods to children, the practice could be outlawed. If schools continue to turn over their cafeterias to fast-food chains, the practice could be forbidden by State legislatures. For other matters, legislation may be the preferred objective of the media advocate from the start. For instance, the media advocate could push to improve the food labeling practices of the food industry and restaurants.

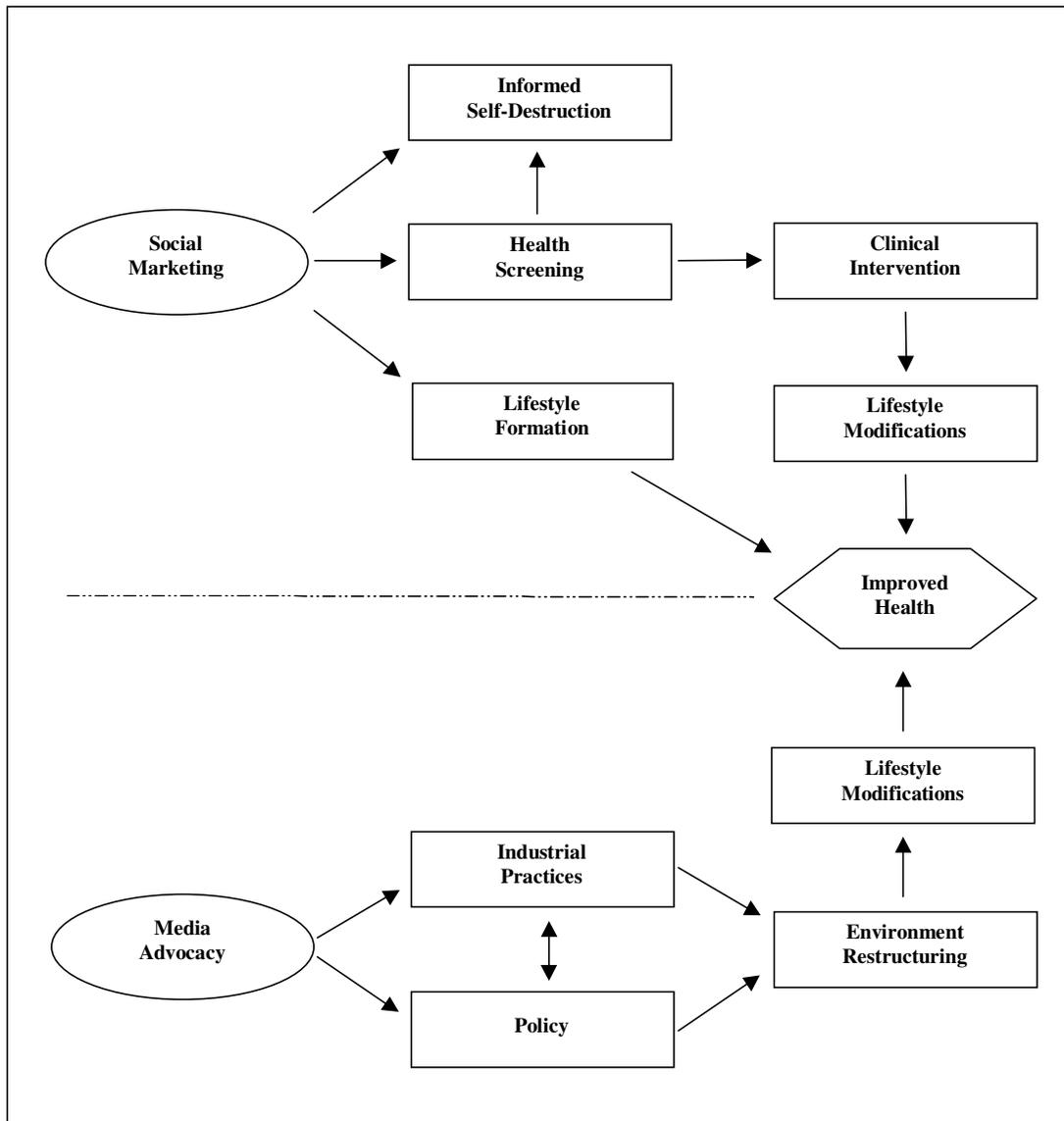
At this point, we offer a modified version of Figure 22 that depicts the role we envision for media advocacy vis-à-vis the social marketing approach (see Figure 23). Whereas social marketing can work directly upon the individual to promote healthy behaviors, media advo-

cacy can be used to change individual behavior by cultivating an environment more conducive to health via changes in industrial practices and policy.

Rec 15. Social marketers should make greater use of media advocacy techniques, where appropriate, to rectify those aspects of the environment that promote unhealthy eating and inactivity.

Figure 23

Change Processes Underlying Social Marketing and Media Advocacy



Our Culture of Gluttony

The dietary practices and sedentary lifestyles that are killing countless Americans every year are reflections of the culture of gluttony in which we live – a way of living that has been actively promoted by commercial interests. In order to succeed in improving Americans' nutritional patterns, many layers of the environment must be modified and societal values must be changed. Social marketing interventions can have only a limited effect in offsetting such powerful cultural trends. On the other hand, social marketing, when integrated with media advocacy and other approaches that target long-term environmental changes, offers the hope of impacting positively the nation's approach to nutrition and physical activity.

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Appendices

Appendix A: Reviewed Interventions

Action Heart

Baxter A.; Milner P; Wilson K; Leaf M; Nicholl J; Freeman J; Cooper N. A cost effective, community based heart health promotion project in England: Prospective comparative study. *Bmj (Clinical Research Ed.)*, 1997; 315(7108): 582-5.

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A Su Salud En Acción

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CANDI: Cancer and Diet Intervention Project

Potter, John D.; Graves, Karen L.; Finnegan, John R.; Mullis, Rebecca M.; and others. The Cancer and Diet Intervention Project: A community-based intervention to reduce nutrition-related risk of cancer. *Health Education Research*, 1990; 5:489-503.

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CANFit: California Adolescent Nutrition and Fitness Program

Hinkle, Arnell J. Community-based nutrition interventions: Reaching adolescents from low-income communities. IN: *Adolescent nutritional disorders: Prevention and treatment* (pp. 83-93). Marc S. Jacobson, Ed; Jane M. Rees, Ed; et al. New York Academy of Sciences, New York, NY. 1997.

CATCH: Child and Adolescent Trial for Cardiovascular Health

Edmundson, E. et al. The effects of the child and adolescent trial for cardiovascular health intervention on psycho-social determinants of cardiovascular disease risk behavior among third-grade students. *American Journal of Health Promotion*, 1996; 10:217-25.

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Eat Well, Keep Moving

Gortmaker, S.L. et al. Impact of a school-based interdisciplinary intervention on diet and physical activity among urban primary school children. *Archives of Pediatric and Adolescent Medicine*, 1999; 153:975-983.

Fat Watch

Van Wechem SN; Brug J; van Assema P; Kistemaker C; Riedstra M; Lowik MR. Fat Watch: a nationwide campaign in The Netherlands to reduce fat intake--effect evaluation. *Nutrition and Health*, 1998; 12:119-30.

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Five-a-Day Power Play (California)

Foerster, S.B. et al. The California Children's 5 a Day-Power Play! Campaign: evaluation of a large-scale social marketing initiative. *Family & Community Health*, 1998; 21:46-64.

Five-A-Day (Maryland)

Havas, S. et al. The Maryland WIC 5 a day promotion program pilot study: rationale, results, and lessons learned. *Society for Nutrition Education*, 1997; 29:343-350.

Five-A-Day (Seattle)

Thompson, B. et al. Implementation aspects of the Seattle “5 a Day” intervention project: Strategies to help employees make dietary changes. *Topics in Clinical Nutrition*, 1995; 11:58-75.

Five-a-Day Power Plus (Minnesota)

Eldridge AL; Smith-Warner SA; Lytle LA; Murray DM. Comparison of 3 methods for counting fruits and vegetables for fourth-grade students in the Minnesota 5 A Day Power Plus Program. *Journal of the American Dietetic Association*, 1998; 98:777-82; quiz 783-4.

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Five a Day – for Better Health! (California)

Foerster, S.B. et al. California’s “5 a Day – for Better Health!” Campaign: an innovative population based effort to effect large-scale dietary change. *American Journal of Preventive Medicine*, 1995; 11:124-131.

Five a Day for Better Health (Kansas)

Harris, K.J. Formative, process, and intermediate outcome evaluation of a pilot school-based 5 A Day for Better Health Project. *Health Promotion*, 1998; 12:378-381.

Five a Day (Wisconsin)

Moreau-Stodola, D. Vegetables, fruit, and cancer prevention: The Wisconsin 5 a Day for Better Health initiative. *Wisconsin Medical Journal*, 1997; 39-41.

Five a Day for Better Health (National Campaign)

Heimendinger J. Community nutrition intervention strategies for cancer risk reduction. *Cancer*, 1993; 72:1019-23.

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RQ4:	How often have each of the following methods been used to established goals...
<i>Check all that apply:</i>	
<input type="checkbox"/> analysis of existing data	<input type="checkbox"/> focus groups
<input type="checkbox"/> literature review	<input type="checkbox"/> consultation with community leaders
<input type="checkbox"/> original needs assessment	
RQ5:	How often have behavioral theories have been used to guide the formulation of objectives? Which theories have been most often utilized.
<i>Check all that apply:</i>	
<input type="checkbox"/> Exchange Theory (1)	<input type="checkbox"/> Information-Processing Paradigm (McGuire) (6)
<input type="checkbox"/> Health Belief Model (2)	<input type="checkbox"/> Transtheoretical Model (7)
<input type="checkbox"/> Theory of Reasoned Action (3)	<input type="checkbox"/> Community Organization Model (8)
<input type="checkbox"/> Theory of Planned Behavior (4)	<input type="checkbox"/> The Social-Ecological Approach (9)
<input type="checkbox"/> Social Learning Theory (5)	
RQ6:	How often have target audiences been identified and defined in diet/exercise campaigns?
<i>Did this campaign do so?</i>	
<input type="checkbox"/> No	<input type="checkbox"/> Yes
<i>Which age groups were targeted in at least on campaign component? (Check all that apply.)</i>	
<input type="checkbox"/> children (grade 6 and under)	
<input type="checkbox"/> adolescents (grades 7 through 12)	
<input type="checkbox"/> adults (18 years of age and older)	
<input type="checkbox"/> adult seniors (55 and older)	
RQ7:	When target audiences have been identified, how often has segmentation been based on the concepts of psychographics/lifestyle and demographics?
<i>Check all that apply:</i>	
<input type="checkbox"/> psychographics/lifestyle	
<input type="checkbox"/> demographics...	
...based on ethnicity? [group(s)]: _____	
RQ8:	When target audiences have been identified, how often have these audiences been further defined as primary and secondary?
<i>Did this campaign do so?</i>	
<input type="checkbox"/> no	<input type="checkbox"/> yes
RQ9:	Which of the following entities have been the focus of change in diet/exercise campaigns: the individual behavior, family practices, community norms and activities, and policy.
<i>Check all that apply to this campaign:</i>	
<input type="checkbox"/> individual behavior	
<input type="checkbox"/> family practices	
<input type="checkbox"/> community norms and activities	
<input type="checkbox"/> policy ... Media advocacy component included? <input type="checkbox"/> no <input type="checkbox"/> yes	
RQ10:	How often have diet/exercise campaigns reported undertaking analyses of the target audience environment to identify supportive and unsupportive elements?
<i>Did this campaign do so?</i>	
<input type="checkbox"/> no	<input type="checkbox"/> yes

<p>RQ11: In those campaigns that have carried out environmental analyses, which of the following methods have been employed ...</p> <p><i>Check all that apply:</i></p> <p><input type="checkbox"/> ethnographic observation</p> <p><input type="checkbox"/> focus groups</p> <p><input type="checkbox"/> consultations with community leaders</p> <p><input type="checkbox"/> survey research</p> <p><input type="checkbox"/> use of existing data.</p>
<p>RQ12: How often have environmental changes been included as objectives for the intervention?</p> <p><i>Did this campaign do so?</i> <input type="checkbox"/> no <input type="checkbox"/> yes (Explain: _____ _____</p>
<p>RQ13: How frequently have campaign designers involved community citizens and community leaders in the planning and research phase of the campaign?</p> <p><i>Did this campaign do so?</i></p> <p><input type="checkbox"/> no <input type="checkbox"/> yes</p>
<p>RQ14: In those campaigns in which community participation is a component, which of the following strategies have been employed to foster involvement:</p> <p><i>Check all that apply:</i></p> <p><input type="checkbox"/> focus groups</p> <p><input type="checkbox"/> citizen advisory committees</p> <p><input type="checkbox"/> staff members hired from the community</p> <p><input type="checkbox"/> local consultants</p> <p><input type="checkbox"/> Other: _____</p>
<p>RQ15: How often have diet/exercise interventions carried out formative consumer research prior to the design of campaign strategy?</p> <p><i>Did this campaign do so?</i></p> <p><input type="checkbox"/> no (skip to RQ 17) <input type="checkbox"/> yes</p>
<p>RQ16: How often have survey methods and focus groups been used in formative research in diet/exercise campaigns?</p> <p><i>Check all that apply:</i> <input type="checkbox"/> focus groups <input type="checkbox"/> survey methods</p>
<p>RQ17: How often have campaign designers obtained information from target audiences about their communication channel use?</p> <p><i>Did this campaign do so?</i> <input type="checkbox"/> no <input type="checkbox"/> yes</p>
<p>RQ18: How often have diet/exercise campaign officials pretested key concepts and messages?</p> <p><i>Did this campaign do so?</i></p> <p><input type="checkbox"/> no <input type="checkbox"/> yes</p>

<p>RQ28: Which of the following strategies have been used for participation at this stage...</p> <p><i>Check all that apply:</i></p> <p><input type="checkbox"/> community groups <input type="checkbox"/> health care providers <input type="checkbox"/> employers <input type="checkbox"/> schools</p>
<p>RQ29: How often have campaigns identified maintenance of the intervention as a long-term goal?</p> <p><i>Did this campaign do so?</i> <input type="checkbox"/> no <input type="checkbox"/> yes</p>
<p>RQ30: How often have diet/exercise campaigns conduct a summative evaluation of the intervention's impact?</p> <p><i>Did this campaign do so?</i> <input type="checkbox"/> no <input type="checkbox"/> yes</p>
<p>RQ31: When an evaluation has been conducted, how often have each of the following evaluation models been employed...</p> <p><i>Check one:</i></p> <p><input type="checkbox"/> advertising model <input type="checkbox"/> impact monitoring model <input type="checkbox"/> quasi-experimental model <input type="checkbox"/> true experiment</p>
<p>RQ32: Which of the following outcomes have been measured in the evaluation components of diet/exercise campaigns:</p> <p><i>Check all that apply:</i></p> <p><input type="checkbox"/> knowledge gains <input type="checkbox"/> self-reported behaviors <input type="checkbox"/> measured clinical (medical) changes <input type="checkbox"/> attitude change <input type="checkbox"/> intention to change <input type="checkbox"/> morbidity reduction <input type="checkbox"/> self-efficacy <input type="checkbox"/> observed behavior change <input type="checkbox"/> mortality reduction</p>
<p>RQ33: How often have efforts been made to assess campaign cost-effectiveness?</p> <p><i>Did this campaign do so?</i> <input type="checkbox"/> no <input type="checkbox"/> yes</p>

About the Authors *

Dr. Rina Alcalay is an Associate Professor in the Department of Communication at the University of California, Davis; an Affiliate Faculty member at the Center for Health Services Research in Primary Care, UC Davis School of Medicine; and a member of the program faculty at the UC Davis Center for Advanced Studies in Nutrition and Social Marketing. Dr. Alcalay earned her Ph.D. in Communication from Stanford University. She also holds a BA in Sociology from the Catholic University of Santiago, Chile, her country of origin. Professor Alcalay has served on the faculty at the UCLA School of Public Health. For the past eight years Prof. Alcalay has been an active member of the National Heart, Lung and Blood Institute (NHLBI) Ad Hoc Committee for Minority Populations. She has recently been invited by the Secretary of Health to be a member of the NHLBI Advisory Committee for the next four years. Her areas of expertise are in health communication and social marketing, especially in cross-cultural settings.

Dr. Alcalay has conducted numerous health promotion media campaigns with U.S. multi-cultural populations, particularly with Latinos. She has published extensively on areas such as heart disease prevention, smoking prevention and cessation, perinatal care, and family planning. In her capacity as a health communication expert, Dr. Alcalay has served in committees for agencies such as the National Heart, Lung and Blood Institute; National Cancer Institute; National Institute of Aging; American Cancer Society; National Red Cross; International Union Against Smoking; the Carnegie Foundation, the California Wellness Foundation. She also does extensive international work in Latin America (research, training , and consulting) for the Pan American Health Organization (PAHO), the Agency of International Development(AID), the International Union Against Cancer, and the Academy of Educational Development (AED).

Dr. Robert A. Bell is Professor in the Department of Communication at the University of California, Davis. Professor Bell is also an Affiliate Faculty member at the Center for Health Services Research in Primary Care, UC Davis School of Medicine and serves on the program faculty of the UC Davis Center for Advanced Studies in Nutrition and Social Marketing. Dr. Bell earned his Ph.D. in Communication from the University of Texas, Austin. He was on the faculties at Northwestern University and the University of Pittsburgh before going to UC Davis in 1987. He has expertise in communication theories and models for social and behavioral change. Among his recent projects are studies of social influence strategies for health promotion and investigations of the content and impact of direct-to-consumer drug advertising. He has worked with the Sacramento AIDS Foundation to develop strategies to overcome resistance to HIV testing among high-risk populations. He has been involved in evaluation research, including an evaluation of a social marketing intervention sponsored by The California Wellness Foundation and an evaluation of a physician-targeted medical education seminar on managed care. He is working in the role of co-PI/analyst as part of an interdisciplinary team studying patients' requests, a project funded by the Robert Wood John-

* Order of authorship for this report was alphabetical. The authors contributed equally to the preparation of this manuscript

son Foundation. Dr. Bell has served on the editorial board of several journals, and regularly reviews submissions for many other publications. His research has appeared in a variety of journals in public health, medicine, and communication.

