REVIEW OF THE LITERATURE
FOR DEVELOPING
EFFECTIVE PSA PRODUCTION GUIDELINES

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I. INTRODUCTION

Public service announcements (PSAs) are seen as important and credible sources of health and medical information by the public. A 1973 survey by Louis Harris and Associates (1974) indicated that following the doctor or clinic where treatment is received, television PSAs are seen as the next most important source of health information. Freimuth and Marron (1978) found that the public also perceives television PSAs as highly reliable sources of health information.

Most major government and voluntary agency-sponsored health education campaigns in the United States use radio and television PSAs to communicate important information to the public. While PSAs have the advantages of reaching mass audiences economically, health planners use them as only one component in an overall communications program mix. And, as such, they are most often designed with the following objectives: to create or increase public awareness about health subjects; to affect public attitudes and beliefs; and to reinforce existing health behaviors.

Mass media campaigns have major shortcomings. Among these is a lack of adequate pretesting. Campaigns often are developed without prior assessment of target audience needs and perceptions; audiences are not segmented into subgroups indicated by these characteristics; and message and materials development proceeds without pretesting the effect of such factors as message clarity, appeals, or presenters with target audiences. Thus, many mass media campaigns run the risk of misdirecting or alienating their target audiences (Bloom and Novelli, 1981).

In order to advance the state of the art in health PSA production several agencies of the U.S. Department of Health and Human Services* have cooperated to establish the Health Message Testing Service. This service has tested about 100 radio and television PSAs. In addition to testing individual messages on a routine basis, the service has been established to provide message producers with direction for improving the PSAs prior to final production. The service has also been concerned with determining what characteristics of a PSA can increase its effectiveness.

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This position paper reviews the research on mass media campaigns as described in the communication, health education and behavioral research literature. The paper defines the role of the PSA in health education and examines those factors that appear to contribute to effective PSA production.

II. ROLE OF THE PSA IN HEALTH EDUCATION

PSAs usually are produced as part of an overall campaign that includes print media, interpersonal communication and other publicity. There is little evidence to suggest that PSAs directly affect behavior change. One study, conducted by researchers at Stanford University, demonstrated that people did reduce their susceptibility to heart disease as a result of a program that utilized intensive interpersonal instruction in conjunction with a mass media campaign (Maccoby, 1975). Occasionally, PSAs are designed to alert the public to a problem quickly. The National Cancer Institute's (NCI) 1978 Asbestos Awareness Campaign is an example of an effort to inform workers and others at risk about the hazards associated with asbestos exposure. The serious diseases associated with asbestos take a long time to develop but studies indicate workers exposed in the past may just now be facing immediate, serious health threats. The NCI campaign used PSAs to create awareness among target audiences and to advocate that those at risk see a doctor immediately (Freimuth and Van Nevel, 1981).

PSAs can play a role in increasing awareness of a subject by achieving the intermediate goal of informing the public (MeAllister, 1980). A majority of Americans surveyed report that TV PSAs rank second to health care professionals as the most important source of health information (Ward & Haines, 1981). To a limited degree, PSAs can function to improve knowledge, change attitudes and beliefs, and motivate or reinforce behavior change. Although the mass media can provide instruction and improve skills, this capacity is limited in PSAs because most messages are 60 seconds or less.

PSAs are considered a way to disseminate information to large segments of the population simultaneously. Early communication theories assumed messages reached audiences by having a direct hit or "bullet" effect. Modern communications theorists, however, believe that mass media messages reach an audience like an aerosol spray, ultimately with minimal penetration (Butler & Paisley, 1976). The PSA's ability to penetrate is limited by several other factors.
PSA air time is provided free of charge and placement is determined by station personnel. Placement is important to ensure that messages reach desired target audiences, however, PSA producers have no control over placement unless they have funds available to pay for air time. There is no guarantee that a PSA will ever be aired or that the PSA will be shown during the time a particular target population is part of the audience. Generally, station personnel fill empty or unsold time with PSAs, usually during early morning or late night hours (Green, 1978).

PSAs frequently are created without regard to planning and implementing an overall communication strategy (Bloom & Novelli, 1981). PSAs often are poorly produced; some messages are too complex to comprehend or too dull to attract attention. Furthermore, the 30 or 60-second PSA does not allow for a detailed discussion of the subject matter.

A great many messages compete for the public's attention as technology offers more information channels. In addition, individuals selectively attend to and perceive messages, and health issues have low salience for many people (Gerbner, et. al. 1981). Health messages are distributed in a television environment that in itself could be considered "anti-health," e.g., watching TV is a passive behavior that often involves overeating, over drinking or smoking. In addition, role models and advertisers on television demonstrate or promote negative health behavior (Gerbner, et. al 1981).

Many of the behaviors PSAs address are resistant habitual practices. A major study measuring the impact of a seat belt campaign did not show any measurable behavior change (Robertson, 1974). While the lack of results is unfortunate, far more intrusive efforts such as buzzers, lights and interlocking systems have not been successful either in increasing seat belt use (Atkin, 1979).

These factors tend to limit the ultimate impact PSAs may have on their intended audiences. Given these limitations, utilizing effective message production techniques becomes even more important for campaign producers. The literature describes effective production techniques in terms of four categories -- source, message, channel and receiver (audience) factors. These factors stem from the basic model of the communication process which posits that a source originates a message through a specific channel to reach its receivers (Berlo, 1960).
III. SOURCE FACTORS IN INCREASING MESSAGE IMPACT

The source or origin of a message can determine its impact on the audience. Message credibility, defined by the receiver, is an important factor (Atkin, 1979; Flay, DiTecco & Schlegel, 1980; Alexander, 1980). Credibility is demonstrated by trustworthiness, competence or expertise, and dynamism or attractiveness of the source (Atkin, 1979). Adolescents and adults have different criteria for interpreting credibility. Research suggests that trust is the most important aspect of credibility, especially for teenagers (Atkin, 1979), for adolescents and for adults. Celebrities, because they attract attention, may be good message sources if they do not detract from the message (Atkin, 1981). A classic example of a campaign that succeeded largely on the impact of its source is Kate Smith's war bond drive in the 1940's (Atkin, 1979). The campaign raised millions of dollars with a radio marathon. This accomplishment was attributed to the characteristics of the celebrity and the favorable predispositions of the wartime audiences (Cartwright, 1971).

If the sources use similar language, give evidence of shared values, and resemble the receiver in personal and social characteristics, the message is more likely to be accepted (Rogers, 1971). Peers, as sources, can be as effective as experts, especially if the source acknowledges his or her intent to persuade. Disinterested second parties are not perceived as credible (McGuire, 1981).

Source credibility also depends on the subject matter of the message and how the public perceives individual stereotypes. There has been a general decline in public confidence in many social institutions. Physicians, however, are still regarded as highly credible sources for health issues (McQuire, 1981).

IV. MESSAGE FACTORS IN INCREASING MESSAGE IMPACT

Short, simple messages can play an important part in an effective campaign. The content, type of appeal, style, and exposure of a message are factors that should be directed to real or felt needs of the audience (Atkin, 1981).

A. Message Content

When the message contains specific information, there is an increased likelihood message goals will be met (Alexander, 1976; Butler and Paisley,
Lack of specificity can directly relate to campaign outcome. For example, in a family planning campaign that focused on unwanted births, the researchers reported that vague slogans may have restricted implementation of birth control practices (studies by Udry 1972).

Messages that offer free information, behavior alternatives (e.g., "eat fruit not junk food"), step-by-step instruction (e.g., breast self-examination), or a demonstration of recommended behaviors are likely to be more effective (Alexander, 1980). Several authors agree that when a member of the target audience takes time to call and/or write for more information, this behavior and the subsequent publication or phone conversation will act to reinforce the original message (Alexander, 1976; Butler and Paisley, 1977; Robertson and Wortzel, 1977; and Green, 1978).

B. **Message Appeal**

Fear appeals have been used often in PSA campaigns, however, research has not determined precisely what level of fear should be used when, or if at all (Atkin, 1979; Sternthal, et. al. 1974). As vulnerability to a threat increases, persuasion decreases due to a defense-avoidance reaction. In other words, at a certain level of fear, an individual will simply stop listening to avoid the discomfort of apprehension. For instance, encouraging women to examine their breasts regularly is an example of a campaign that should avoid high fear arousal, because women report fear of finding cancer as one reason they do not practice breast self-examination (BSE). Messages that reduce rather than increase this fear would be more effective in persuading women to approach learning and adoption of BSE.

Fear appeals work well if the fear or threat can be reduced or eliminated by taking a simple action (e.g., immunize your child). For some people, fear of social disapproval may be more effective than fear of negative physical consequences (Burnett and Wilkes, 1980; Burnett and Oliver, 1979).

Two-sided appeals that present evidence for one argument and also refute or negate this argument are an effective strategy when the audience is
likely to be exposed to other persuasive messages (Robertson and Wortzel, 1977). It is important that the audience retains the counter argument intended by the message producer and that the initial argument be successfully refuted. Interpersonal channels have better control over this factor than do mass media channels (McAlister, 1980).

In general, all appeals that reduce anxiety, that are positive, and that give the individual a sense of control are better received (Alexander, 1976). Negative appeals do not appear to be as effective as positive ones in regard to message retention and compliance (Paisley, 1981). An example of a positive, versus a negative, appeal is a campaign statement that stresses the beauty of a forest rather than the tragedy of a fire (Paisley, 1981).

C. **Message Style**

Messages that are novel, that arouse interest, and that focus on specific subject matter have a greater probability of affecting the audience (Flay, DiTecco & Schlegel, 1980). The difficulty of communicating a message in a competitive, cluttered information environment is best addressed by well-defined, personally relevant messages. High quality production, equal to private sector commercial advertising, will improve message effectiveness and the likelihood that the message will be chosen by a television station to be aired (Flay, DiTecco, and Schlegel, 1980).

Humor, entertainment, and drama will attract attention and will increase retention (Flay, DiTecco, & Schlegel, 1980). The quiz format apparently attracts attention and facilitates learning even with a dry subject. The involving nature of both the "National Drivers Test" and "The National Citizenship Test" yielded positive response from indifferent publics (Mendelsohn, 1973). Although this program is not a PSA "The National Drivers Test" is an example of the use of innovative format to attract attention.

Research evidence suggests that "rapid-fire delivery" of a message produces more attitude change than normal speaking pace and that the "fast talking" source is perceived as more knowledgeable and trustworthy (Paisley, 1981). Empirical data have shown a message delivered at normal speech rate, 100 words per minute, is much less persuasive than when the identical message is delivered at a rate of 200 words per minute (Paisley,
1981). These factors work with a particular message but may not be as effective for certain other kinds of messages.

D. Exposure

Messages of all types will be more effective if they are presented to the audience frequently and in a concentrated schedule. Message redundancy increases retention and positive attitudes toward the message. There is limited evidence that favorable audience attitudes will peak after a certain number of exposures and that repeated exposure may saturate the audience to reverse the positive effect (Atkin, 1979; Robertson and Wortzel, 1977; Flay, DiTecco, and Schlegel, 1980).

Limited impact due to lack of exposure is responsible for the disappointing results of a health-oriented television series on public broadcasting. The series, "Feeling Good," changed its viewers' knowledge and attitudes and altered simple behavior patterns (Atkin, 1981). However, very few individuals were exposed to the programs possibly due to self selection of the audience.

The first position in a "commercial string" will increase attention and recall. The worst position is in the middle (Webb and Ray, 1979). Currently, PSA producers have little or no control over the target audience they will reach because on-air time is donated at the stations' discretion.

V. CHANNEL FACTORS FOR INCREASING IMPACT

Broadcast media channels are effective means for reaching large segments of the population. Television has a great capacity to attract audience and has been identified in a national study as the most influential advertising medium (Harris, 1974). Television producers should take special advantage of the visual broadcast medium. The spots should creatively use visual effects and "dynamic, personal presenters" (Atkin, 1979). If the number of repetitions and placements of PSAs could be controlled by message producers, television could be an even more influential medium (Atkin, 1979).

Radio is a far more segmented medium than television. Radio stations usually appeal to specific audiences that differ by age, income, race and psychographic
factors. Sound effects and humor are techniques that maximize the impact of radio messages (Toran, 1977).

Campaign planners can control the geographic reach of their messages by distributing messages only to those stations whose audiences they want to reach. The extensive growth of cable and public television programming in the last five years may offer greater exposure to audience segments for health program planners.

Special subsets of particular populations may be more vulnerable to certain messages on radio or television. Older persons in rural communities may be interested in subject matter such as cancer, and black urban youths may be interested in messages concerning drug abuse topics (Miller & Cantor, 1980).

Whites tend to watch television more than they listen to radio. Blacks watch television as much as they listen to radio. There is evidence to suggest more blacks will hear a radio health message than whites (Miller & Cantor, 1980). The elderly and black populations have less access to cable TV than youth or middle class populations who can afford this service (Toran, 1977).

VI. AUDIENCE FACTORS FOR INCREASING IMPACT

Messages should be based on a clear definition and assessment of the knowledge, attitudes and behaviors of the target audience.

A. Segmentation
Audience segmentation is the process of breaking down the audience into a small number of homogeneous subgroups. Audiences should be segmented by demographic, geographic, socioeconomic, psychological, and behavioral characteristics. Any campaign that promises to reach everyone is unrealistic as it will not be able to achieve that goal. These groups should be as distinct from each other as possible. Planners then can choose groups with highest priority or those most susceptible to the message. Planners can also aim to meet the needs of each particular group (Alexander, 1976 and Solomon, 1981); for example, a campaign to reach teenage alcohol abusers would be different from a campaign to reach pregnant women. Audience segmentation will increase the likelihood that the audience will
comprehend and perceive the message as relevant, believable, and appropriate (Atkin, 1979).

B. Pretesting

Messages should be pretested prior to final production to assess audience comprehension and reactions. The Health Message Testing Service was developed precisely to allow message producers to pretest their PSAs with specific target audiences. Focus group interviews and individual interviews with target audience respondents are additional ways of gathering information about message strengths and weaknesses prior to final production. Focus groups are usually conducted with 8 to 10 respondents; however, when the issue is particularly sensitive, a smaller group of 3 to 5 respondents is often more appropriate. Each session is conducted by an experienced moderator who follows a discussion outline to keep the session on track in a non-directive manner. Individual in-depth interviews are appropriate when an issue must be probed more deeply than a group session would allow, or when individual response rather than group response is desired. Then interviewer follows a discussion outline or a structured questionnaire.

C. Audience Factors In Relation to Particular Message Appeals

Various types of individuals react differently to fear arousing, logical, or emotional appeals. Research suggests audiences should be segmented based on reaction to appeals (Lovelock, 1976). Although message producers cannot segment the audience by placing particular spots on the air, the type of appeal, the music used, the graphics and source or character portrayed can be developed to attract and persuade those individuals selected as a target audience on the basis of high risk or possibility of influence (Horton, 1979). Emotional appeals tend to arouse, drive, and motivate those individuals already convinced and persons previously indifferent or unaware. Logical or factual appeals tend to persuade intelligent, sophisticated audiences (Atkin, 1979).

When the message is targeted to a particular population, it is important that the population share the same preconception of themselves and the topic as do message producers. For instance, messages targeted to women drug abusers had little effect in changing attitudes because although the women were abusing pills and/or alcohol alone at home, they did not
perceive themselves as stereotypical "drug abusers" (Schmeling and Wotring, 1976).

Research suggests that the degree of ego involvement or personal experience the audience has with the subject matter may also affect perceived credibility of the source (McGarey & Hendrick, 1974). Several studies conducted with adolescents have shown that students who use or have used marihuana were not influenced by anti-drug abuse PSAs. In one case study, the PSAs stimulated counterargument among older teenagers. In another study, the PSAs led to a boomerang effect by creating interest in drug use (Atkin, 1981). However, when teenagers did not have personal experience with a drug presented as dangerous they did find the PSA credible, and as a result of exposure to the message, negatively evaluated the drug.

Children are a special audience subset, most easily persuaded around age 9 or 10, when they are able to perceive messages but before their critical skills are well-developed (Palmer, 1981). When the parent's role concept is one of "child trainer," parents can mediate negative health messages and reinforce positive health behaviors (Gerbner, 1981). Some audience members will be unreachable because their belief in external forces controlling their lives is so great they do not see possibility for change or control of their environment (Lynn, 1974).

D. **Health Beliefs and Attitudes**

Previous attitudes toward health behaviors significantly affect the meaning of the message content. Social norms, reinforcement expectations (how the individual thinks others will react) and intentions to perform certain behaviors will influence response effectiveness; i.e., if an individual intends to stop smoking, exposure to information provided at that particular time may increase the likelihood that she or he will do so (Jaccard, 1975). The degree of personal susceptibility, perception of severity of the disease, psychological barriers, motivation, and cues to action will impact on an individual's reaction to a message (Jaccard, 1975). Messages will have greater impact when an individual is ready to act and/or motivated to make desired changes (Flay, DiTecco, and Schlegal, 1980; Alexander, 1976).
VII. CONCLUSIONS: GUIDELINES FOR EFFECTIVE PSA PRODUCTION

Based on the literature reviewed in the previous sections, the following guidelines for effective PSA production appear to emerge:

A. Source Guidelines
   o Credibility, trustworthiness, competence and attractiveness are important source factors for increasing impact.
   o Celebrities may be good message sources, if they do not detract from the message.
   o The message will more likely be accepted when sources are perceived as similar to the receiver.
   o Physicians are considered highly credible sources.

B. Message Guidelines
   o Specific content information increases the likelihood message goals will be met i.e., free information, behavioral alternatives, step-by-step instruction.
   o As audience vulnerability to a threat increases, persuasion decreases due to defense-avoidance reaction.
   o Fear appeals are useful if the fear or threat can be reduced or eliminated by taking one simple action.
   o Two-sided appeals are effective when the audience is likely to be exposed to other persuasive messages.
o Negative appeals do not appear to be as effective as positive ones.

o Novel, interesting, and content-specific messages have a greater chance of affecting the audience.

o High quality production will improve message effectiveness.

o Humor, entertainment, and drama attract attention and increase retention.

o Message redundancy increases retention and positive attitudes.

C. **Channel Guidelines**

o Campaign planners can control the geographic reach of their messages by distributing messages only to those stations whose audiences they want to reach.

o Television producers should take special advantage of the visual broadcast medium and use dynamic, personal presenters.

o Radio message producers should utilize sound effects and humor to adapt messages to the qualities of the medium.

o Radio provides the most opportunities for audience segmentation.

D. **Audience Guidelines**

o Audiences should be segmented by demographic, geographic, socio-economic, psychological, and behavioral characteristics.
Messages should be pretested prior to final production to assess audience comprehension and reactions.

Type of appeal, music, graphics, and character or source portrayed can be developed to attract and persuade individuals selected as a target audience.

Emotional appeals tend to arouse, drive, and motivate those individuals already convinced and persons previously indifferent or unaware.

Logical or factual appeals tend to persuade intelligent, sophisticated audiences.

When a message is targeted to a particular population the population should share the same self concept of themselves as message producers.

Children are a special audience subset, most vulnerable to persuasion at age 9 or 10.

Parents can mediate broadcast messages and reinforce health behaviors in their children.

A certain segment will be unreachable due to strong beliefs or attitudes that prevent them from perceiving the possibility of change.

Degree of personal susceptibility, perception of severity of the disease, psychological barriers, motivation, and cues to
action will impact on an individual's reaction to a message.

- Messages will have greater impact when an individual is ready to act.

In summary, PSAs can contribute to health information campaigns by increasing knowledge and awareness. There are significant constraints involved in using PSAs, however, campaigns that incorporate source, message, receiver, and channel guidelines suggested in the literature combined with other components of public education campaigns will best use the PSA.
References


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