

# Do Cigarette Warnings Warn? Understanding What It Will Take to Develop More Effective Warnings

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*Warnings in cigarette advertisements have been the principal method mandated by the federal government to educate consumers about the risks of smoking. Warnings have been required in all cigarette ads for 30 years and have remained largely unchanged during this time.*

*The current warning program was neither developed nor implemented with specific communication goals in mind. Instead, it was negotiated by the government and tobacco industry representatives. The warning program has served the tobacco industry well by providing it with a key argument in tobacco litigation: "We warned you." It has, however, failed as a public health strategy, since much research has shown that the current warnings are ineffective communication devices.*

*If Congress is to be effective in its efforts to educate consumers about the risks of smoking, it needs to rethink the warning strategy while making use of knowledge regarding how warnings work. The paper draws from current studies in order to develop realistic cigarette warning objectives and points out the considerations necessary to create such warnings. To be effective, warnings must be developed, targeted, tested, and revised over time.*

Cigarette warnings represent one of the oldest and most widely used disclosures mandated by federal policy. Since 1965 cigarette warnings have played a central role in the government's policy to alert consumers to the dangers of smoking. The general appearance of the warnings in cigarette packaging and advertising has remained the same for more than three decades, and the efficacy of the warnings has not been crucial to the policy. Warnings still consist of a box, bordered in black with black letters on white space, located on the side of the package or periphery of the ad.

The recent settlement in November 1998 between 46 states and 5 territories with major cigarette producers Phillip Morris Companies, R.J. Reynolds Tobacco, Lorillard Tobacco, and Brown and Williamson places some restrictions on product

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marketing, yet does not deal with the issue of cigarette warnings. Because the agreement is between the states and territories, it does not need the approval of Congress. The 46 states and 5 territories will collect \$206 billion over 25 years to settle lawsuits against cigarette makers to recover Medicaid money spent on treating diseases related to smoking (Meier, 1998). The agreement prohibits the direct or indirect targeting of youth. In part, the settlement calls for the elimination of outdoor advertising that is not at retail establishment, transit advertising, cartoons (in any tobacco advertising, marketing, or packaging), product placement in the media, and tobacco merchandising (brand names cannot appear on any non-tobacco item). However, other forms of sales promotion and advertising are unaffected or only partially addressed. Tobacco companies can keep human figures such as the Marlboro man, and each tobacco company can keep one sponsorship with restrictions. The agreement does not address magazine advertising or in-store displays and allows signs up to 14 square feet at retail establishments (Meier, 1998; Master Settlement Agreement Summary, 1998). Clearly, the agreement is not comprehensive and is characterized by some as a starting point toward a national policy (Gibson, 1998). A comprehensive policy would require congressional approval and should provide for a more thorough warning program.

Prior to the recent agreement, four states, Florida, Minnesota, Mississippi, and Texas, settled their Medicaid suits for a total of \$40 billion to be paid over 25 years (Meier, 1998). Portions of these agreements include changes in the way products are marketed. However, none of the agreements include a provision to change the warnings. In fact, one tobacco industry lawyer specifically pointed out that the Florida agreement did *not* require new, highly visible warnings (Meier, 1997). Although Florida had initially sought to have warnings as part of the agreement, they concluded that only a national standard would work (Geyelin & Hwang, 1997).

A failed initiative that did provide for a different national standard of warnings was negotiated in June 1997 by a group of states attorneys general and the tobacco companies. The initiative required Congressional approval that was not granted. Like its successors, the initiative sought the recovery of monies spent for the treatment of tobacco-related diseases and for the future protection of minors. However, the initiative also included provisions for new warnings similar to the current Canadian standard: nine separate black-on-white cigarette (or white-on-black) warnings, and four separate smokeless tobacco warnings, to be rotated on both packages and advertising. The warnings would occupy 25% of the front panel of the package (including packs and cartons) and would appear in the upper portions thereof. Currently the warnings are located on the side of the package. The size and placement of the warnings in print advertising would include one of the rotated warnings and, where relevant, tar and nicotine (or other constituent) yield information, totaling 20% of the ad. In the context of print advertising, the proposed warnings are different from the existing warnings in three major respects: they are substantially larger (the current rotated warnings consist of approximately 4% of an ad); they do not use the words "Surgeon General's Warning" to precede the specific message; and some will be white on black, rather than black on white. However, the proposed warnings are similar to the existing warnings in that text-only, colorless formats are used to communicate the dangers of smoking. In one instance, "Quitting smoking now greatly reduces serious risks to your health," the wording is almost exactly the same.

At the time of this writing, Congress not been able to agree on a comprehensive national policy. Although there has been a great deal of discussion on marketing

methods, taxation, and revenues, it is disappointing that so little focus has been given to the efficacy of cigarette warnings. The remainder of this paper provides an overview of cigarette warnings, discusses what warnings can realistically accomplish, and offers considerations for developing and measuring warning effectiveness.

## Overview of Cigarette Warnings

The Federal Cigarette Labeling and Advertising Act of 1965 mandated cigarette warnings for all packages that read, “Caution: Cigarette Smoking May be Hazardous to Your Health” (Federal Cigarette Labeling and Advertising Act, 1965). Although the act is titled the Labeling and Advertising Act, it did not extend to advertising. In an attempt to strengthen the warning, the Public Health Cigarette Smoking Act of 1969 changed the wording to “Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous To Your Health.”

In 1972 the Federal Trade Commission (FTC), following lengthy negotiations, obtained consent orders from six major cigarette companies, “requiring all cigarette advertising to display clearly and conspicuously the same warning that Congress already had required on cigarette packages.” At that time, little was known about the way that people would respond to mandated cigarette warnings, and there were really no specific criteria for assessing warning effectiveness and, hence, no monitoring of warning impact.

Based on the findings of national surveys and focus groups, a 1981 FTC staff report stated that a substantial portion of the public remained uninformed about the hazards of smoking and that the warning was neither noticed nor read by the vast majority of people (Federal Trade Commission, 1981). The FTC staff concluded that although most of the public generally was aware that smoking was hazardous, many were not aware of the specific dangers. Illuminating the difference between a general awareness and specific understanding of the consequences of smoking is important, because it points out the limitations of the current system of warnings. Ultimately, the report argued that the existing mandated warning was likely to be ineffective because it 1) is overexposed and worn out, 2) lacks novelty, 3) is too abstract, and 4) lacks personal relevance.

In 1984, Congress passed the Comprehensive Smoking Education Act (Comprehensive Smoking Education Act, 1984) mandating the system of four rotated warnings for cigarette packages and print ads. The act adopted a cognitive, learning-oriented goal with respect to informing consumers:

It is the purpose of this Act to provide a new strategy for *making Americans more aware of any adverse health effects of smoking*, to assure timely and widespread dissemination of research findings and to *enable individuals to make informed decisions* about smoking. [Emphasis ours.]

## Understanding Cigarette Warnings

The cigarette industry focuses on the four rotated warnings as a major defense in separate lawsuits filed by state attorneys general. For example, in *Minnesota v. American Tobacco Company*, the first state case to actually come to trial before it settled, an attorney for Lorillard Tobacco argued that the existing warnings were “specific and forceful.” He argued the warnings were meant to allow people to understand the risks of smoking (Putman, 1998). In spite of the claims made by

tobacco companies, it is clear that the warning messages are inadequate in communicating the dangers of smoking.

Stewart and Martin (1994) concluded that it is important to understand how consumers think about risk and, subsequently, how to communicate risk in the context of consumer products. One fundamental point must be underscored. It is not enough to mandate messages and expect them to work. There is a genuine difference between information provision and information impact. Current studies using a variety of social-science research methods indicate that the mandated warnings are very limited in terms of communicating the dangers of smoking. A study using eye tracking and follow-up masked recall tests to determine how much warning information people remembered concluded that people often cut short attention to the mandated warnings. Although people are aware of the existence of a warning, they do not understand the specific dangers contained in the warning (Krugman, Fox, Fletcher, & Rojas, 1994). Another study using a tachistoscope, which determines the exposure time necessary to comprehend a message, in conjunction with masked recall tests also found that people are aware of the existence of mandated warnings but do not remember the specific dangers of smoking (Fischer, Krugman, Fletcher, Fox, & Rojas, 1993).

Furthermore, there is evidence of consequences of warnings that may not have been anticipated or intended. An experiment conducted on British versions of mandated cigarette warnings that had been in place since 1971 noted that a “boomerang” effect may occur, making cigarettes more desirable among smokers (Hyland & Birrell, 1979). For example, some people regard the warned product as “forbidden fruit,” whereas other people bristle at the thought of a government edict (Parker-Pope, 1997). A major reason for testing communication efforts is to reduce uncertainty and to compare performance with objectives (Churchill, 1988). Such testing can uncover unintended or unexpected effects.

### ***What Are Warnings Supposed to Accomplish?***

Public policy makers need to have a better understanding of how warnings work and what the limits are to warnings. To date, warning development has largely been a product of negotiations between the industry and government, rather than a process that incorporates the fundamentals of both social science and the art of communication. The social science of communication provides the tools to 1) understand what motivates people to smoke and how warnings may work to counter such motivations, 2) understand that different warning approaches may be needed to reach separate groups, 3) examine the potential impact of various creative approaches, 4) set baselines for what constitutes an effective set of warnings, and 5) measure whether warnings are meeting those baselines.

The art of communication entails the creation of effective messages. Message construction is in the creative domain, because it uses rhetorical and illustrative techniques that often fall into irregular and unknown patterns that are not easily reconstructed. In other words, when it comes to design, there is no “formula” for success. Although the communication sciences till the soil and gauge effectiveness, the art of communication brings the programs to life by developing messages that are creative and on target.

Policy makers must determine what they want to achieve prior to developing warning systems and measuring effectiveness. Logically, the measure of a warning’s effectiveness should flow from specific communication program objectives. Although

the 1984 Comprehensive Smoking Education Act set a cognitive, learning-oriented strategy for making Americans aware of smoking's adverse effects, thus enabling individuals to make informed decisions, there has been little guidance and/or monitoring as to what establishes and constitutes an effective program of cigarette warning.

Cigarette warning effectiveness must also be evaluated in the context of cigarette advertising, promotion, and product use. People have the opportunity to encounter warnings in at least three settings: when looking at an advertisement or other form of promotion, on the package or carton during product purchase, and on the package prior to product use. Recent research has focused on how well warnings serve as a countermeasure during the exposure to tobacco advertising. Although people generally may be aware of the dangers of smoking, they do not pay attention to the specific content of warnings within the context of advertising (Krugman, Fox, et al., 1994; Fischer et al., 1993). Warnings such as the Surgeon General's, which are confined to text-only, black-and-white formats, simply cannot compete with imagery such as the Marlboro Man created by the tobacco companies.

Three broad criteria- cognitive, affective, and conative- are useful for creating and evaluating cigarette warnings. These criteria commonly are applied to advertising and other forms of persuasive communication (Krugman, Reid, et al., 1994). Cognitive (learning) criteria are oriented to awareness, knowledge, and comprehension. Affective (feeling) criteria are oriented to an image, attitude, or feeling about smoking based on seeing and reading the cigarette warning. Conative (doing) criteria relate to such actions as not initiating, lowering, or discontinuing use of tobacco products.

### **Cognitive Criteria**

Cognitive criteria represent the most straightforward objectives with respect to both implementation and measurement. Cognitive criteria vary in levels from low-level awareness that a warning exists to detailed knowledge and comprehension of a warning's message. Most warning research has focused in this area. Cognition includes a wide range of concepts from visibility to knowledge. Initial levels of cognition include being visible or gaining notice. Cohen (1990) expressed a concern over the visibility of cigarette warnings. Scammon, Mayer, and Smith (1991) concluded that alcohol warnings had been "noticed," but that perception of risk or behavioral change had not yet occurred. Fischer et al. (1989) used eye tracking to determine that adolescents pay only limited attention to cigarette warnings. Eye tracking has also been used to determine the amount of time subjects attend to mandated cigarette warnings compared to new cigarette warnings (Krugman, Fox, et al., 1994).

Time spent reading the warnings has been related to higher level cognitive constructs. Friedmann (1988) and Wogalter, Brelsford, Desaulniers, and Laugherty (1991) each found a positive relationship between the reading of warnings and the perception of risk. Two studies demonstrated a positive relationship between time spent attending to cigarette warnings and recalling the contents of a warning (Fischer et al., 1993; Krugman, Fox, et al., 1994).

### **Affective Criteria**

Less consideration has been given to understanding the impact of cigarette warnings on affective components such as attitude, belief, preference, conviction, desire, and image. A review of experimental research on several types of warnings

between 1976 and 1986 reveals that constructs, such as belief and preference, are far less apt to be measured than cognition (Smith, 1990). Affective standards dealing with attitude and image are more difficult to have as warning goals, because they go beyond learning.

Communicating risk is likely to be the most reasonable affective goal, because it is straightforward and measurable. Perception of hazard and risk are considered in the affective domain because they deal with mental reactions to the warnings. Hazard perception was related to the willingness to read and comply with a warning (Friedmann, 1988). For example, Mazzis, Morris and Swasy (1991) found a slight increase in the public's perception of the risk level associated with consuming alcohol after warnings were introduced in 1989.

### **Conative Criteria**

Beltramini (1988) stated the need to assess wear-out in cigarette warnings and their ultimate impact on smoking behavior. However, like other advertising and persuasive communication campaigns, it is difficult to relate messages precisely to behavior because too many other factors intervene between the message and the action. As a result, there are few warning studies that examine the conative domain. In their review of warning literature for several products, including cigarettes, Mazis, Morris, and Swasy (1991) concluded that sales measures typically fail to produce an accurate assessment of effectiveness, because of the difficulty in separating the impact of the warning from other intervening variables.

Wogalter et al. (1991) stated that field tests provide the strongest test for the ultimate criterion of warning effectiveness- behavioral change in a real-world setting. Field experiments are utilized to examine the overall impact of programs related to smoking prevention. However, few, if any, have been conducted that examine the behavioral impact of cigarette warnings. As would be expected, conative goals remain the most difficult to implement and assess.

### ***Health Policy Implications—What Warnings Can Accomplish***

Policy makers need to decide what they expect warnings to accomplish. Are cigarette warnings designed to work in the cognitive area by providing specific risk information or creating levels of cognition? Are cigarette warnings designed to work in the area of affect- for example, by creating and strengthening attitudes about the negative consequences of smoking and/or countering the positive cigarette images and messages contained in advertising? Are cigarette warnings designed to work at the conative level by lowering, stopping, or preventing initiation of smoking?

Cognitive goals are realistic, because warnings are informational by nature. If done properly, cigarette warnings can communicate meaningful risk information at reasonably high levels of cognition- knowledge and comprehension. Mandated cigarette warnings should attract the attention of a target audience, hold attention long enough to be considered, and then be remembered well enough to have a chance to influence behavior. In separate test conditions, studies have found that adolescents will spend no more than two to three seconds looking at the warning in the context of a print ad. This is enough time to convey a simple, clear, and direct concept, such as "Smokers Inhale Carbon Monoxide," but not enough time to communicate lengthy messages (Krugman, Fox, et al., 1994).

Strengthening attitudes about the negative consequences of smoking also

appears realistic. However, development of negative attitudes is too ambitious for a warning policy because of limited space and exposure. Cigarette warnings designed to work at the conative level by lowering, stopping, or preventing initiation will probably not reach that goal without first achieving cognitive and affective goals.

## **Consideration for Developing and Testing Warnings**

### ***Take a Consumer Perspective—Warning Programs Need to Be Developed, Not Negotiated***

Warnings can miss the mark, because they do not have a consumer perspective. It is critical to understand how consumers think about risk and how to communicate risk in the context of consumer products (Parker-Pope, 1997). There has been only a limited effort to understand how mandated cigarette warnings work and virtually no effort to develop a targeted set of warnings and monitor their effectiveness.

Warning messages should be part of future interventions. Public policy uses negotiation to resolve issues; however, future warnings should be developed, not negotiated. Negotiations may be employed to frame warning issues, but communication research needs to be implemented to determine how warning programs are designed, implemented, and monitored.

Providing information is not enough. Rotated black-and-white warnings, either on the package or in the ads, are not an effective long term solution. The focus should change from “mandated warnings” to “mandated warning programs,” which means ongoing research, development, and monitoring. For example, one of the proposed warnings on packages and in advertising would read, “WARNING: Cigarettes are addictive.” Although it may be a laudable goal to warn people of addiction, previous work shows that it is not enough to make such statements and expect that people will be warned (Fischer et al., 1993; Krugman, Fox, et al., 1994). Consideration needs to be given on how to communicate the concept of addiction and as well as how to ensure that the concept is communicated in a meaningful way. It is important to employ the appropriate message and graphic design tools necessary to capture, guide, and hold the reader’s attention to the warning. This means treating the warning like an ad campaign that is tested and monitored.

### ***Warnings Need to Be Part of a Larger Communication Program***

Warnings are only a piece of the puzzle. Advertisers understand that messages that are integrated with larger communications programs are more effective than isolated messages. A synergy takes place between encountering messages in the media, on packages, in stores, on promotional items, at sponsored events, and on other promotional material disseminated by an organization.

Current warnings are at a disadvantage relative to positive brand messages, because the former have fewer cues to rely on at the time of purchase. The in-store information environment provides brand cues that can stimulate and aid retrieval of brand information, yet the current warnings have few, if any, cues to assist in spontaneous recall of the message at the time of purchase (Cohen & Srull, 1980). Therefore, warnings will be more effective if they are part of other antismoking efforts, rather than remaining as a stand-alone program. As part of an overall antismoking campaign, warnings have an opportunity to reinforce and build on broader campaigns.

### ***Understand Different Target Groups***

It may not be realistic to assume a general set of cigarette warnings will appeal equally to diverse groups- adolescents, young adults, adults, males, or females. For example, adolescents are not at all future oriented and are not likely to respond to messages communicating long-term or ambiguous effects, such as “WARNING: Quitting smoking now greatly reduces serious risks to your health.” Long-term negative consequences are simply not a concern to adolescents and generally are not effective warning concepts (Krugman et al., 1994). Finally, it is possible that older smokers, who are closer to encountering the health problems associated with smoking, will respond to a different set of warnings than adolescents.

We recognize that it may not be possible to develop a program in which the warning is directed to only one precise group. However, it may be possible to target select groups in certain contexts. For example, although Marlboro ranks first in overall market share with 23.5% of the market, 60% of adolescent smokers between the ages of 12 and 18 smoke Marlboro. Additionally, Camel and Newport each have about 13% of the adolescent market (*Morbidity and Mortality Weekly Report*, 1994). Therefore, it is logical that warnings oriented to adolescent smokers be placed on those packages.

### ***Warnings Will Wear Out***

Most people know that cigarettes contain health warnings, yet they do not possess much knowledge regarding the concepts stated in the warnings. In part, this is because people are apt to learn not to look. People know that a warning is present in an ad but do not pay any attention to the warning’s content. Basically, people know a warning is present but often do not attend to it long enough to consider the concept being communicated.

Creativity and imagination counts when it comes to communicating ideas. People attend to a fraction of the messages they encounter. Moreover, attending to a message does not guarantee understanding or reaction to the proposition. Howard Gossage, a well-respected advertising professional, once remarked, “Nobody reads advertising. People read what interests them; and sometimes it’s an ad” (Mussey, 1995). Making warning messages interesting and meaningful is not an easy task. Just like the creation of effective advertising campaigns, the “creation” of effective warning messages is more an art than a social science. It is critical that marketing communication research techniques be used to examine target markets, assist designers in the development of creative concepts prior to dissemination, and assess warning effectiveness in the context of predetermined objectives. Warnings also need to be examined and modified on a regular basis in order to avoid wear-out. For example, those individuals exposed to the newly designed warnings were significantly more likely to remember the concept of the warnings than those individuals exposed to the mandated warning (Fischer et al., 1993; Krugman, Fox, et al., 1994).

### ***Shooting at a Moving Target***

Public policy has to acknowledge and account for the ingenuity displayed by people who are paid to communicate. As policy makers restricted traditional tobacco advertising on television, the tobacco industry moved away from traditional adver-

tising to event promotions (e.g., the Winston Cup Series). The tobacco industry has been effective in promoting its products in media vehicles where advertising is banned. For example, following the ban on television advertising the tobacco companies began sponsorship of sporting events that garner extensive television coverage, thus enabling products such as Virginia Slims (Virginia Slims Tennis Tournament), Winston (Winston Cup series), and Marlboro (Marlboro Grand Prix) to have active and positive images on television.

The industry likely will take advantage of the Internet and other emerging media. As computer-mediated communication and other new media evolve, it is important to have a set of policies that acknowledge and respond to the change. Any new warning program should provide for a review of how well the warnings are working within the context of the ever-changing industry marketing practices, with a goal to provide meaningful and up-to-date messages.

## Summary

Warnings will not work if they are an afterthought in the public policy process. There has been little public policy discussion of how warnings work, what warnings can realistically accomplish, and how warnings fit into the larger scheme of reducing the death and disease caused by smoking. To date, warning policy has not been thoughtfully conceived or executed. To be effective, cigarette warnings need to be developed, tested, and revised over time. Ironically, the presence of warnings provides a defense for the tobacco companies who argue that the warnings are specific and forceful. The American public deserves a tobacco education program, which includes effective warnings, that can begin to compete with the well-managed images produced by the tobacco industry.

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