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order of their names is arbitrary.*

The Case for Letting Information Speak for Itself

“A healthy tan is the first sign of skin cancer”

“Early warning signs of colon cancer: You feel great. You have a healthy appetite. You’re only 50.”

Some health messages, like those in **Figure 1**, use fear to persuade people to do the “right” thing to stay healthy. These messages are motivated by the belief that if more people adopted specific healthy behaviors (e.g., had mammograms, ate more fruits and vegetables, stayed out of the sun), they would live longer, healthier lives. While some persuasive messages encourage people to adopt a recommended behavior by making them feel good (e.g., “do something healthy, eat 5 fruits a day”), many use fear to promote change (e.g., “do this or else...”). The messages in **Figure 1** say that “if you feel well, you may still be sick—you may even have cancer.” Are these messages fair? Do they promote health? The purpose of this essay is to consider different types of health messages, to highlight some problems with persuasive messages (particularly scary ones), and to make recommendations about when persuasion might be justified and when we should let the information speak for itself.

Different Kinds of Health Messages


Many persuasive messages adopt an aggressive approach to increase a person’s fear about a particular outcome. Consider the March of Dimes public service announcement in the left panel of **Figure 2**. This message suggests that a pregnant woman not taking folic acid is as negligent as if she had allowed her baby to crawl into oncoming traffic. The purpose of the announcement, of course, is to promote the use of supplementary folic acid early in pregnancy because there is good evidence that this safe, simple intervention can reduce the risk for potentially devastating neural tube defects.

Another way to get the same message across would be to present people with information about folate supplementation, which they could then interpret and use as they see fit. In the right panel of **Figure 2**, we revised the March of Dimes message to let the information speak for itself. Comparing the two versions highlights the difficulty involved in communicating an important message. The original presentation is compelling but exaggerated. (Of note, the March of Dimes has recently abandoned this scary approach.) The informative version is balanced but boring; readers might take away a more realistic understanding of the benefit of folate, but they might be less likely to use it. Which approach is more effective is unknown.

While some persuasive messages use flagrant scare tactics, others are more subtle. For example, a simple message like “Mammograms: The chance of a lifetime” becomes scary when it appears over the picture of a mother with her young children. For many people, the message now evokes images of young women dying from breast cancer and leaving their kids behind. Regardless of whether persuasion is overt or subtle, persuasive messages are commonly used to promote specific health behaviors.


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A HEALTHY
TAN IS THE
FIRST SIGN
OF SKIN
CANCER.



**IRONIC,
ISN'T IT?**

Examine yourself regularly and
see your dermatologist.



www.aad.org

The early warning signs
of colon cancer:

You feel great.

You have a healthy appetite.

You're only 50.

You look healthy. You feel fine. Nothing seems to be the matter. Unfortunately, those are the same symptoms thousands of Americans had last year before they were diagnosed with colon cancer. Colon cancer is the second leading cancer killer among men and women. Yet, as deadly as it can be when diagnosed late, when diagnosed early it's one of the most curable cancers. 90% curable. That's why we're urging everyone over fifty to be tested. It's simple. Fast. Accurate. Of course, studies have shown you can also reduce your risk of colon cancer by following a low-fat diet high in fruits, vegetables and fiber, by limiting your intake of alcohol, and by exercising regularly. Remember, the best way to beat colon cancer is early detection. So please, even if you feel fine, call your doctor or the Memorial Sloan-Kettering Cancer Prevention and Wellness Program at 1-888-MSK-WELL.

— Take the test. Not the chance. —



Memorial Sloan-Kettering Cancer Center
The Best Cancer Care. Anywhere.
1275 York Avenue • New York, NY 10021 • <http://www.mskcc.org>

FIGURE 1. Message: “Even if you feel well, you may be sick.”

Problems with Persuasive Messages

They May Not Work

Whether persuasive messages actually lead to changes in behavior is the subject of debate.¹ Some have expressed concern that persuasive messages may be misinterpreted by the target audience. For example, a scary message about lung cancer might lead a long-time smoker to continue smoking under the belief that is too late to do anything about his risk. Alternatively, persuasive messages might lead to denial (i.e., if smoking hasn't killed me by now it's not going to) or to discounting the problem because the claims are perceived as obviously exaggerated.

They Ignore That People Have Different Values

Persuasion implies that there is a right choice (and thus a wrong one) for everybody in the target audience. Not only can you take action—you should. But how do message writers know which choice is right? Even if we had definitive data supporting the effectiveness of a particular intervention or behavior—which is of course rarely

the case—it does not follow that everyone would see the benefit as worth pursuing. Consider interventions that involve forgoing a pleasure (e.g., giving up ice cream), submitting to some unpleasantness (e.g., undergoing colonoscopy), or taking a chance to lower a risk (e.g., risking an unnecessary thoracotomy as a result of lung cancer screening with computed tomography [CT]). For some people, it just isn't worth it. Is it fair to scare them into thinking differently? Many would argue that a fundamental respect for individuals requires that we tolerate informed decisions even if we think they are “bad.”

They Have Important Side Effects

There is a tension inherent in the use of persuasive messages, especially those meant to be scary. These messages work by making people feel anxious and vulnerable and therefore more likely to adopt some risk-reducing behavior. Thus, scary messages may result in net harm by falsely elevating anxiety about an outcome a person is unlikely to experience (e.g., a nonsmoker who learns that lung cancer is “the number one cause of cancer death” may pursue spiral CT lung cancer screening).

A HEALTHY
TAN IS THE
FIRST SIGN
OF SKIN
CANCER.



If you are a woman of child-bearing age, you should know that

Folate can lower your chance of having a baby with neural tube problems from...

2 in 1000 to 1 in 1000

Folate is a safe tablet that you take once a day

All major physician organizations recommend that you take folate if you are pregnant or planning to become pregnant

FIGURE 2. Persuasive (*left*) and informative (*right*) messages about pregnant women taking folic acid to prevent neural tube defects.

Ironically, the persuasive approach often attempts to promote health by worsening a person's sense of well-being. What is the net effect of such a "fight-the-war-to-save-the-peace" approach? For example, cigarette manufacturers in Canada are now required to place photos of cancerous lungs or other gruesome images on cigarette packs. Will these images put off new smokers or simply heighten fear among current smokers (most of whom are already trying to quit)?² Whether they do any good, scary messages scare people. These messages can also cause harm by creating unrealistic expectations about the benefit of intervention, leading people who get sick to blame themselves. For example, messages may imply that we know more than we really do about disease prevention. A message produced by the California Prune Board states, "If you're over 40 you need a mammogram. If you're younger, you need a healthy diet to help make 40 worry free. California Prunes. Helping prune the risk of cancer every day."³ Although prunes may lower cancer risk, even people who eat a lot of prunes get cancer. In fact, there is no compelling evidence to suggest otherwise. Nonetheless, someone diagnosed with cancer may blame themselves for not adopt-

ing the healthy behavior (if only I'd eaten more fiber, if only I'd had a mammogram, if only I'd had a mammogram 6 months ago instead of 14 months ago). Others may blame them as well (she didn't take care of herself, it's her own fault).

When Persuasion Is Justified

Would we be better off abandoning persuasive messages altogether? In spite of the foregoing problems, we think persuasive messages are reasonable when the health of the public is clearly at stake (Table 1). That is, in cases where one person's health behavior can jeopardize the health of others. Messages about drunk driving, tuberculosis screening, or polio vaccination, for example, represent the sort of public health issues that might justify the use of persuasive messages.

In addition, persuasive messages intended to encourage healthy behavior in children may make sense. In this context, the paternalistic model of persuasion is appropriate: Children need to learn what constitutes risky behavior, many are not able to make truly informed decisions, and most face an onslaught of per-

TABLE 1

Settings for Persuasive and Informative Messages

TYPE OF HEALTH MESSAGE	APPROPRIATE SETTING
Persuasive	Individual health decisions affect the health of others Infectious disease transmission (e.g., tuberculosis screening, polio vaccination, venereal disease reporting) Endangering others (e.g., drunk driving, loaded guns in the house)
	Promotion of children's health Discouraging risky behaviors like smoking, using drugs or alcohol, or having unprotected sex
Informative	Benefit of intervention is controversial (e.g., prostate cancer screening)
	Intervention has serious potential harms (e.g., false-positive results on thoracotomy after lung cancer screening with spiral computed tomography)
	Communicator has a financial interest in behavior

sualation inviting them to indulge in risky behaviors. There is certainly a clear public interest in having children avoid smoking, drugs and alcohol, and unprotected sex as well as in encouraging them to participate in healthy behaviors, such as regular exercise. While we would agree that persuading children to be healthy seems like a good idea, we still find the idea of scaring them into doing so disturbing. In fact, there is reason to believe that the use of fear is unnecessary. For example, messages challenging the social acceptability of smoking (portraying smokers as foolish and nonsmokers as cool) seem to be more effective than those that focus on the adverse health effects of smoking.⁴

When Persuasion Is Not Justified

If the benefit of an intervention is equivocal or if the intervention has a high potential to cause harm, persuasion seems inappropriate. Messages about lung cancer screening using spiral CT, for example, are increasingly common.⁵ These messages invariably use persuasive techniques (e.g., they couch the argument for screening in terms of the almost 200,000 lung cancer deaths expected this year, and the benefit of screening in terms of improved 5-year survival). In this case, we would argue for informative messages (and not persuasion), since there is no evidence that screening saves lives, and there are reasons to suspect it might even cause harm.

Finally, the increasing commercialization of medicine adds another dimension to be considered: Does the communicator have secondary reasons for promoting health? A growing number of Internet sites, for example, promote (and facilitate) screening brain magnetic resonance imaging or total-body CT scans. When the communicator has a financial interest in the desired

behavior, health promotion becomes commercial advertising instead of a public health message.

Wherever possible, people should be given the opportunity to participate meaningfully in medical decision making. We are concerned that the use of persuasive (even if well-meaning) messages often undermines this process, can create anxiety, and may result in net harm. Although there are certain circumstances under which it is probably justified, we encourage communicators to think twice before using persuasion, and instead, focus on creating clear, accessible messages that let the information speak for itself.

References

1. Aspinwall LG. Persuasion for the purpose of cancer risk reduction: understanding responses to risk communications. *J Natl Cancer Inst Monogr.* 1999;25:88-93.
2. Cigarette smoking among adults—United States, 1995. *MMWR Morb Mortal Wkly Rep.* 1997;46:1217-20.
3. <http://www.prunes.org>. [California Prune Board].
4. Siegel M. Mass media antismoking campaigns: a powerful tool for health promotion. *Ann Intern Med.* 1998;129:128-32.
5. Finn R. Hospital marketing practices: when is it appropriate to advertise new technology? *J Natl Cancer Inst.* 2001;93:6-7.

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