Carnegie Mellon

Department of Social & Decision Sciences
Department of Engineering & Public Policy

Strategic Risk Communication

Baruch Fischhoff

Carbon Capture & Storage Public Perception and Law
Kings College London
June 12, 2009

People face many decisions where they need trusted, comprehensible information about risks and benefits.

People face many decisions where they need trusted, comprehensible information about risks and benefits.

What they get is often disappointing.

PATIENT'S INSTRUCTIONS FOR USE

WARNING: Contains trichloromonofluoromethane, dichlorotetrafluoroethane, and dichlorodifluoromethane, substances which harm the environment by destroying ozone in the upper atmosphere. Your physician has determined that this product is likely to help your personal health. USE THIS PRODUCT AS DIRECTED, UNLESS INSTRUCTED TO DO OTHERWISE BY YOUR PHYSICIAN. If you have any questions about alternatives, consult with your physician.

N.B.

Follow your doctor's directions and do not use Rhinocort Nasal Inhaler more often than prescribed. Contact your doctor if you find the effect strongly reduced.

Rhinocort Nasal Inhaler does not give immediate relief. Generally it will take a few days to achieve full effect. It is therefore very important that Rhinocort is used regularly.

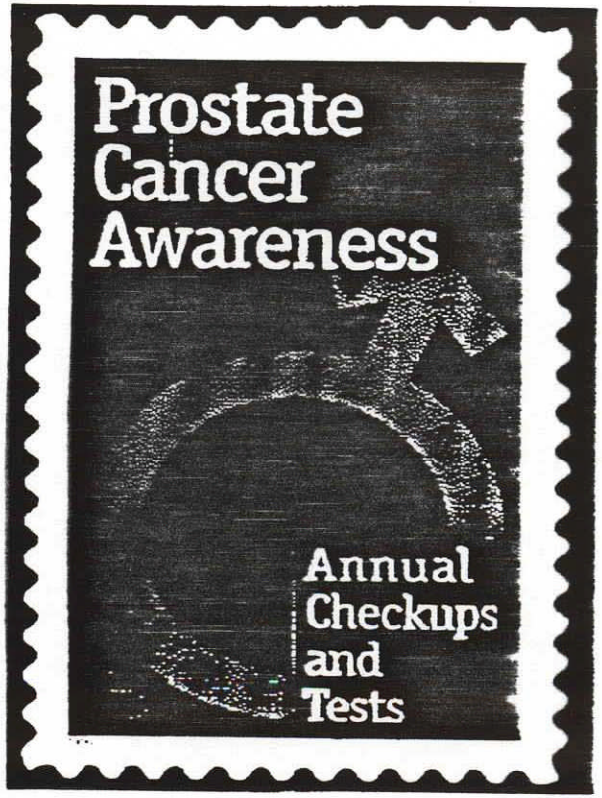
To be used within 6 months after the aluminium pouch has been opened. After opening the pouch, avoid storage in areas of high humidity.

Cleaning: Remove the aerosol container and wash the plastic parts regularly in warm—not hot—water with addition of mild detergent if necessary. Allow the plastic parts to dry completely and then replace the container.

- Contents under pressure. Do not puncture or throw container into incinerator. Using or storing near open flame or heating above 120°F (50°C) may cause container to burst.

Manufactured for Astra USA, Inc., Westborough, MA 01581
1900753R00 (1/96)


FUND THE FIGHT
FIND A CURE
USA


Prostate
Cancer
Awareness
Annual
Checkups
and
Tests

BE INFORMED

NUCLEAR BLAST

1. Take cover immediately, below ground if possible, though any shield or shelter will help protect you from the immediate effects of the blast and the pressure wave.

2. Consider if you can get out of the area;

3. Or if it would be better to go inside a building and follow your plan to "shelter-in-place".

(http://www.ready.gov/america/_downloads/nuclear.pdf
)

A Disclaimer

We are not responsible if information that we make available on this site is not accurate, complete or current. The materials on this site are provided for general information only, and any reliance upon the material found on this site will be at your own risk. We reserve the right to modify the contents of the site at any time, but we have no obligation to update any information on this site. You agree that it is your responsibility to monitor changes to the site http://www.ready.gov/america/other/notices.html

Failure, despite good intentions, suggests flawed management.

Strategic Management Requires

Philosophy
Leadership
Staffing
Methodology

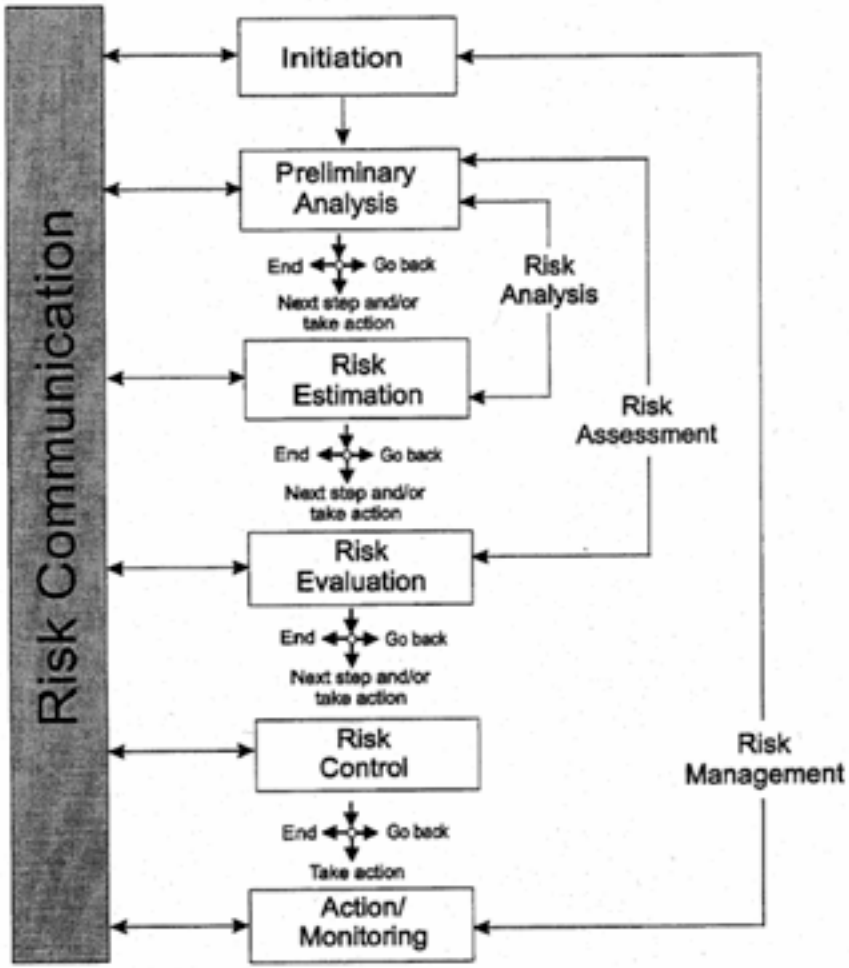
Strategic Management Requires

Philosophy
Staffing
Leadership
Methodology

CAN/CSA-Q850-97

Risk Management: Guideline for Decision-Makers

A National Standard of Canada



Note: *Risk communication with stakeholders is an important part of each step in the decision process.*

Figure 2
Steps in the Q850 Risk Management Decision-Making Process — Simple Model

Strategic Management Requires

Philosophy
Leadership
Staffing
Methodology

Strategic Plan for Risk Communication at the Food and Drug Administration

Draft: April 15, 2009

Principles: Risk Communication

is multi-faceted
conveys potential for good and bad outcomes
is a two-way street
is science based
provides context
is tailored to audience needs

Strategic Goals

Strengthen the *science* that supports effective risk communication

Expand FDA's *capacity* to generate, disseminate, and oversee effective risk communication

Optimize FDA's *policies* on communicating product risks and benefits

Perspective
JUNE 11, 2009

The FDA as a Public Health Agency

Margaret A. Hamburg, M.D., and Joshua M. Sharfstein, M.D.

A little more than a century ago, concerned about the potential dangers of food preservatives such as formaldehyde, Congress passed, and President Theodore Roosevelt signed, the Pure Food and Drug Act. The act sought to prevent the "manufacture, sale, or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicines, and liquors." The office initially charged with this responsibility was the Bureau of Chemistry of the Department of Agriculture.

Since that time, the bureau has grown into the Food and Drug Administration (FDA), an agency in the Department of Health and Human Services (DHHS) responsible for oversight of more than $2 trillion in medical products, food, and other consumer goods. What has remained constant is the agency's "overriding purpose," in the words of the Supreme Court, of protecting the public health.[1] As the new commissioner and principal deputy commissioner of the FDA chosen by President Barack Obama, we would like to provide a broad overview of how we intend to embrace this role.

The Institute of Medicine has defined the mission of public health as "fulfilling society's interest in assuring the conditions in which people can be healthy." To be healthy, people need access to a safe and nutritious food supply and to innovative, safe, and effective medical products. The FDA's job is to support this access and, in doing so, to promote health, prevent illness, and prolong life. The ultimate measures of the FDA's success should reflect its fundamental goals and go beyond such intermediate measures as the number of facilities inspected or drugs approved.

The urgent need to develop and produce a vaccine against H1N1 influenza virus provides an illustration of the agency's public health role. Laboratory scientists at the FDA are growing the virus and will make reagents for vaccine-potency testing, reviewers will help to design and oversee the clinical trials, and inspectors will oversee the quality of the production process. The agency's success will be determined by the nation's access to a safe and effective vaccine.

The traditional tools of a regulatory agency are regulation, approval or disapproval of applications, and enforcement. As a public health agency, the FDA should always ask whether delays

The FDA's job is to minimize risks through education, regulation, and enforcement. To be credible …, the agency must communicate frequently and clearly about risks and benefits...

For these communications to have credibility, the public must trust the agency to base its decisions on science. [That] requires a culture that encourages scientific exchange and respects alternative viewpoints.

Transparency is a potent element … to enhance the work of the FDA and its credibility ... Whenever possible, the FDA should provide the data on which it bases its regulatory decisions … and explain its decision-making process to the public.

Strategic Management Requires

Philosophy
Leadership
Staffing
Methodology

Staffing Needs

Domain specialists, for representing the science relevant to the decisions

Decision analysts, for identifying the information critical to choices

Social scientists, for designing and evaluating human engagement

System specialists, for creating and maintaining engagement channels

Staffing Needs

Domain specialists, for representing the science relevant to the decisions

Decision analysts, for identifying the information critical to choices

Social scientists, for designing and evaluating human engagement

System specialists, for creating and maintaining engagement channels

All working on their own tasks

Supply-Side Barriers

separation of analytical, descriptive, intervention researchers

isolation of researchers from practitioners

sweeping claims about competence

predisposition toward manipulation

…

Demand-Side Barriers

institutional inertia
inappropriate staffing
isolation from lay concerns
indifference to lay concerns
incentive for lay confusion
…

Political Aversion to Evidence: Claims of Public Competence

Political predisposition: Behavioral assumption:	“liberal”	“conservative”
hyper-rational public	popular democracy	free markets
irrational public	paternalistic regulation	technocratic control

Strategic Management Requires

Philosophy
Leadership
Staffing
Methodology

A Complex Working Hypothesis

People usually do sensible things if they

- get relevant information in a concise, credible, comprehensible form
- are judged by their own goals.
- have control over their environment
- have basic decision-making competence

Downs, J. S., Bruine de Bruin, W., & Fischhoff, B. (2008). Patients' vaccination comprehension and decisions, *Vaccine, 26*, 1595-1607.
Eggers, S.L., & Fischhoff, B. (2004). A defensible claim? Behaviorally realistic evaluation standards. *Journal of Public Policy and Marketing, 23*, 14-27.
Fischhoff, B. (1992). Giving advice: Decision theory perspectives on sexual assault. *American Psychologist*, 47, 577-588.
Fischhoff, B. (1994). What forecasts (seem to) mean. *International Journal of Forecasting, 10*, 387-403.
Fischhoff, B. (1995). Risk perception and communication unplugged. *Risk Analysis*, 15, 137-145.
Fischhoff, B. (2005). Cognitive processes in stated preference methods. In K-G. Mäler & J. Vincent (Eds.), *Handbook of Environmental Economics* (pp. 937-968). Amsterdam: Elsevier
Fischhoff, B. (2005). Decision research strategies. *Health Psychology*, 24(4), 1-8.
Fischhoff, B. (2006, May). Communication: Getting straight talk right. *Harvard Business Review*, 8.
Fischhoff, B. (2007). Non-persuasive communication about matters of greatest urgency: Climate change. *Environmental Science & Technology, 41*, 7204-7208.
Fischhoff, B. (2009). The nuclear energy industry's communication problem. *Bulletin of the Atomic Scientists*. http://www.thebulletin.org/web-edition/features/the-nuclear-energy-industrys-communication-problem
Fischhoff, B. (2009). Risk perception and communication. In R.Detels, R.Beaglehole, M.A. Lansang, and M. Gulliford (eds), *Oxford Textbook of Public Health, Fifth Edition*. Oxford: OUP.
Fischhoff, B., Atran, S., & Fischhoff, N. (2007). Counting casualties: A framework for respectful, useful records. *Journal of Risk and Uncertainty*, 34, 1-19
Fischhoff, B., Bruine de Bruin, W., Guvenc, U., Caruso, D., & Brilliant, L. (2006). Analyzing disaster risks and plans: An avian flu example. *Journal of Risk and Uncertainty*, 33, 133-151,
Krishnamurti, T.P., Eggers, S.L., & Fischhoff, B. (2008). The effects of OTC availability of Plan B on teens' contraceptive decision-making. *Social Science and Medicine, 67*, 618-627.
Morgan, M.G., Fischhoff, B., Bostrom, A., & Atman, C. (2001). *Risk communication: The mental models approach*. New York: Cambridge University Press.

Center for Risk Perception and Communication: http://sds.hss.cmu.edu/risk/
Center for Behavioral Decision Research http://cbdr.cmu.edu/