

Food Safety Issues and Communicating Risk

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Many people believe the world in which we live is getting more dangerous—that is, riskier. With the outbreak of *E. coli* O157:H7 earlier in 1993 in the Pacific Northwest, it is not surprising that many people have an even greater fear of the food they consume, and this is puzzling. Individuals in this country have never lived longer or consumed better or safer food, yet people perceive that they are more at risk today than ever before.

There are several possible reasons why risk perception has been heightened:

- Food safety risks have received more attention from the media and government officials than in the past.
- People are increasingly concerned about new technologies and the potential impact on their own health.
- Experts and the public differ in their understanding of relative risk related to new technologies or food safety enhancements.

It is well documented that American consumers have one of the safest food supplies in the world; however, many people still lack confidence in the U.S. food production system. As a result, the mass media attempt to provide information to a public that has little knowledge or direct experience about how food is produced.

Risk Perception

Scientists, educators and public policy-makers have become increasingly interested in how the public perceives and understands risks. Risk assessment and management are very complex issues because such decisions must be made with appropriate information about potential benefits and risks. However, most people seek a risk-free world, and this was demonstrated vividly during the January 1993 *E. coli* O157:H7 outbreak in the Northwest. People—mothers and fathers, consumers of all types—wanted to be assured by government, as well as by food manufacturers, that the food, especially the meat, they would eat was free of all bacteria. Here was a prime example of people seeking no risk without proper information of the realities of their demands.

Public concerns about risks appears to be a relatively recent phenomenon, just as many of the food safety technologies themselves. So, risk perception and communications must be addressed in their appropriate social and cultural context.

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Even the concept of a risk-free environment is often localized, given heightened awareness of a foodborne illness outbreak, for example. Risk perception also tends to be very personal, related to an individual's own experiences, beliefs and values. One's level of knowledge about a given subject, level of education, social circumstances and personality all can affect risk perception.

Risk Definition

A gap of understanding between scientists and the public often creates problems for both sides when it comes to understanding, defining and managing risk. The technical experts think the public does not understand the true nature of different risks, and while people do minimize important risks (wearing seatbelts, not smoking) and exaggerate less important risks (pesticide levels in vegetables, *E. coli* O157:H7 in ground beef), the experts are counterproductive in thinking they are right and the public is wrong.

The public is often angered by the scientist who appears impersonal in his presentation of complex data. Most people rely on intuitive risk judgements—called risk perceptions—and these perceptions pitted against technical language without emotion do not create a common understanding of risk.

Technical experts define risk with two factors: the hazard potential (the likelihood that something will cause harm in the future) and the probability of exposure (how likely it is that certain people will be exposed to a hazard). On the other hand, the general public's definition of risk includes a variety of qualitative and subjective factors such as ethics, personal control or involuntary exposure. Many of the challenges associated with risk communications result from the differences in these two definitions.

Risk Communication and Education

According to the National Research Council (1989), risk communication is an interactive process of exchange of information and opinion among individuals, groups and institutions. Risk communication often involves multiple messages about the nature of risk or expressing concerns, opinions, or reactions to risk messages or to legal and institutional arrangements for risk management. It must also be noted that:

- Successful risk communication does not always lead to better decisions because risk communication is only one part of risk management.
- Successful risk communication need not result in consensus about controversial issues or in uniform personal behavior.
- Risk communication is successful if it raises the level of

understanding of an issue and informs those involved with available knowledge on the issue.

Many people have lost confidence in political and scientific establishments; overall, industry and government officials are not knights in shining armor in the eyes of the public. People have a tendency to remember past situations related to foodborne illnesses and food contamination; government failure to immediately disclose information; failure for government or industry to disclose uncertainties or inadequacies.

Some objectives of good food safety risk communication, then, are to reassure people that the food industry has a commitment to assuring the public's safety; that technologies have been and continue to be developed to enhance food safety; and that everyone—from farm to fork—has a role in assuring a safe food supply.

Risk Education Survey

Many groups educate the public on risks associated with various issues. Risk education, in turn, is defined as any effort to reach the public with information about risk. A survey, conducted in 1992 by the University of Nebraska, attempted to determine how risk education was viewed by a group of educators.

The respondents agreed with the following "process" and "substance" statements about risk education:

The Process

- In explaining risks to the public, it is wise to offer a range of estimates from a variety of sources, even if some of the estimates do not conform to your own view of risk.
- It is reasonable for the public to be concerned about the effect of environmental controversies on property values and similar economic issues.
- In explaining risks to the public, it is wise to give as high a priority to listening to people's concerns as to providing technical information.
- The public mostly wants to know the bottom line: is it safe or is it dangerous?
- In explaining risks to the public, it is wise to pay as much attention to how you deal with people as to what you say about risk.

The Substance

- It is wrong for today's society to leave behind risks that must be faced by future generations.

The survey found, in general, that there was more agreement among educators with the process of risk communication, and more disagreement between educators about the substance of risk communication. To reflect more balanced views, educators must be more responsive in getting people involved, allowing others to participate and communicate.

The survey's results paint a picture of an education model, where part of the picture implies that a risk communicator's orientation—gender, interest, environment—does affect risk perception, as well as risk messages and educational pro-

grams. The results also suggest some simple action steps. First, educators must recognize that personal orientation does and can limit risk perception. Given this, educators must overtly identify biases, accounting for them when planning and delivering programs. Secondly, educators must incorporate a sense of equilibrium in developing risk communication strategies by diversifying planning groups, making sure to include gender, population and interest differences, as well as diversity of age, race and experience. Educators should also consider including potential audience members as part of planning and implementation teams.

Risk Communication Guidelines

The following are some general guidelines that can improve risk communication skills (National Research Council, 1989):

1. Accept and involve the public as a legitimate partner in risk management. People have a right to participate in decisions that affect their lives. Motivated and educated people can understand and accept complex information. If groups are ignored, they will often seek information, perhaps misinformation, from other sources.
2. Listen carefully to the interests and concerns of the public. Communication is a two-way process. Find out what people are thinking through surveys, interviews or focus groups. Realize there are many segments of the public; different messages, media and spokespeople may be appropriate for each segment.
3. Plan communication carefully and evaluate effectiveness. Begin the communication plan with clear objectives and with methods to measure the outcome. Put risk in terms that are meaningful to the audience.
4. Coordinate and collaborate with other credible sources. Determine who the public is most likely to believe, and if there is an opportunity for strategic alliances, join with those groups to issue joint messages. Avoid public disagreement with other information sources.
5. Speak clearly and with compassion. Technical language and jargon may be appropriate when communicating with professionals, but they are barriers to successful risk communication with the public. Demonstrate respect, sincerity, compassion, integrity, as well as any vulnerability, when communicating risk to the public.
6. Work to overcome barriers to effective risk communication. Learn to recognize and avoid some common myths of risk communication, such as: "We don't have enough time or resources for risk communication," "If we could explain risks with enough fact and science, people would understand," or "Risk communication is not my job."

References

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