15.2: Risk Communication

Risk Communication

Risk communication is the exchange of information about risks.

Rules for Communicating Risk

Much information about how risks could be communicated is available. Some key points about risk communication are identified in the "Seven Cardinal Rules for Communicating Risk" from the work of Dr. Vincent Covello and used by U.S. EPA and others:

- Accept and involve the public as a legitimate partner.
- Listen to the public's specific concerns.
- Be honest, frank, and open.
- Coordinate and collaborate with other credible sources.
- Meet the needs of the media.
- Speak clearly and with compassion.
- Plan carefully and evaluate your efforts.

Lessons Learned About Communicating Risk

Some of the lessons that organizations have learned about communicating exposure and health effects information to study subjects, the community, and the public include:

- Communication is not a "cheap add-on" to a study. It must be planned and budgeted at the start. The researcher must know the community and establish relationships early in the project. Communications should be tailored to the project and should contain what people really need to know. The study results that are most significant for the community should be emphasized. Moreover, results should be communicated in a format and a manner that subjects can readily understand. Researchers should evaluate and learn from each study.
- Ignoring communication may lead to legal problems.
- Communicating risk is part of societal accountability.
- Principles and guidelines, including proper terminology, are needed.
- Guidelines should be enforceable.
- Communication requires resources.
- It should be determined early in the project who has control of the release of results, and whether results will be presented in stages or all at once.
- A professional's credibility is at risk when decisions about communication of study results are being made.
- Mechanisms may be needed to proactively consider communication.
- The role of Institutional Review Boards (IRBs) must be considered in developing communication.

Learn more about communicating risk

Lessons Learned from a Crisis and Emergency

Six principles of effective crisis and risk communication are:

1. Be first
2. Be right
3. Be credible
4. Express empathy
5. Promote action
6. Show respect

"The CDC acknowledges that less-than-clear communication about what was known and not known about the possible health effects of the Elk River spill may have affected communities' trust in government." Learn more

Figure 15.2.1. Charleston, West Virginia viewed from across the Kanawha River, of which the Elk River is a tributary
(Image Source: iStock Photos, ©)

Uncertainty

Uncertainty is defined as "imperfect knowledge concerning the present or future state of an organism, system, or (sub)population under consideration." In other sources (EFSA, 2018), "uncertainty is defined as referring to all types of limitations in the knowledge available to assessors at the time an assessment is conducted and within the time and resources available for the assessment." There are different types of uncertainty, some quantifiable and others not, some reducible and others not.

Due to lack of knowledge, variability adds to the overall uncertainty. Ignoring uncertainty may lead to incomplete risk assessments, poor decision-making, and poor risk communication (European Commission, 2015). The degree to which characterization of uncertainty (and variability) is needed will depend on the risk assessment and risk management contexts as determined in the questions asked (problem formulation).

Figure 15.2.1. Uncertainty
(Image Source: Adapted from iStock Photos, ©)

Uncertainty should be acknowledged and described, such as outlining any data gaps or issues relating to methodology. What is being done to address the areas of uncertainty is also important. In its guideline When Food Is Cooking Up a Storm, the European Food Safety Authority provides a framework to assist decision-making about appropriate communications approaches in a wide variety of situations that can occur when assessing and communicating on risks related to food safety in Europe. It is directed towards governmental agencies that regulate the food sector.

EFSA has developed a harmonized approach to assessing and taking account of uncertainties in food safety, and animal and plant health. In 2018, EFSA published its Guidance on Uncertainty Analysis in Scientific Assessment which offers a diverse toolbox of scientific methods and technical tools for uncertainty analysis. It is sufficiently flexible to be implemented in such diverse areas as plant pests, microbiological hazards and chemical substances. Further, in a separate document EFSA (2018) describes the principles and methods behind its guidance. It provides a flexible framework within which different methods may be selected, according to the needs of each risk assessment. It is recommended that assessors should systematically identify sources of uncertainty, checking each part of their assessment to minimize the risk of overlooking important uncertainties.

Figure 15.2.3 Uncertainty
(Image Source: Adapted from iStock Photos, ©)

By late 2018, EFSA is expected to have a practical guidance for communication specialists on how to communicate the results of uncertainty analysis to different target audiences, including the public. The document aims to help EFSA to communicate scientific uncertainties to its different audiences by using more accessible language tailored to their needs.

Learn more about uncertainty and communicating about it

- U.S. FDA: "Elemental Analysis Manual for Food and Related Products" - https://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm2006954.htm
- U.S. FDA: "Best Practices in Risk Communication and Communicating Uncertainty: Applications to FDA-Regulated Products" - https://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/RiskCommunicationAdvisoryCommittee/UCM486965.pdf
- EFSA: "Risk, Precautionary Principle and Uncertainty. European Commission Uncertainty assessment"
- EFSA: Workshop on the trial of the EFSA guidance document on uncertainty analysis in scientific assessments, 22 - 23 June 2017, Parma, Italy. https://www.efsa.europa.eu/en/supporting/pub/en-1313
- EFSA: Member State multilingual online survey on communicating uncertainty to different target audiences. European Food Safety Authority - http://www.efsa.europa.eu/en/supporting/pub/en-1413
- EFSA: "Communicating uncertainty: some applications of indicators and their validity" [PDF]
- EFSA: "When Food Is Cooking Up a Storm – Proven Recipes for Risk Communications"

Knowledge Check

1) Which of the following is not true about communicating risk to a community about exposures and health effects?

a) Results should be communicated in a format and a manner that subjects can readily understand
b) Results do not need to be communicated in a format and a manner that subjects can readily understand
c) Communications should be tailored to the project and should contain what people really need to know
d) Researchers and others can learn from studying good and bad risk communication efforts

Answer

Results do not need to be communicated in a format and a manner that subjects can readily understand - **This is the correct answer.**

2) According to the European Commission, ignoring uncertainty may lead to:

a) Great decision-making
b) Poor decision-making
c) Effective risk communication
d) Use of the most accurate knowledge available

Answer

Poor decision-making - **This is the correct answer.**
According to the European Commission, ignoring uncertainty may lead to poor decision-making.