



衛生防護中心
Centre for Health Protection

Risk Communication Advisory Group (RCAG)

Background Paper on Risk Communication

Purpose

1. The paper aims to develop consistent definition for risk communication and its related concepts among members of the Risk Communication Advisory Group, to facilitate their future work and the interface with other parties.

The Concepts and Definitions

2. The field of risk communication was developed in the West in the late 1980s, largely in response to environmental controversies in which the danger was often low and uncertain. As the discipline evolved in different fields, the lack of consensus in terminologies has been a problem faced by many workers.

3. To deal with the problem, the WHO had a two-year joint project with OECD to harmonise the hazard/risk assessment terminology¹. The definitions and the inter-relationship of some specific concepts are illustrated in *Box 1* and *Figure 1* respectively:



衛生防護中心乃衛生署
轄下執行疾病預防
及控制的專業架構
*The Centre for Health
Protection is a
professional arm of the
Department of Health for
disease prevention and
control*

Box 1. Definitions of terms

Terms	Definitions
Hazard	Inherent property of an agent or situation having the potential to cause adverse effects when an organism, system or (sub) population is exposed to that agent.
Risk	The probability of an adverse effect in an organism, system or (sub) population caused under specified circumstances by exposure to an agent.
Risk Analysis	A process for controlling situations where an organism, system or (sub) population could be exposed to a hazard. The Risk Analysis process consists of three components: (i) risk assessment, (ii) risk management and (iii) risk communication.
i. Risk Assessment	A process intended to calculate or estimate the risk to a given target organism, system or (sub)population , including the identification of attendant uncertainties, following exposure to a particular agent, taking into account the inherent characteristics of the agent of concern as well as the characteristics of the specific target system.
ii. Risk Management	Decision-making process involving considerations of political, social, economic, and technical factors with relevant risk assessment information relating to a hazard so as to develop, analyse, and compare regulatory and non-regulatory options and to select and implement appropriate regulatory response to that hazard.
iii. Risk Communication	Interactive exchange of information about (health or environmental) risks among risk assessors, managers, news media, interested groups and the general public.

Figure 1. Risk Analysis Framework



4. Risk communication is an interactive process. It has been observed that an unintended disclosure of risk can cause public alarm totally disproportional to the probability to cause harm. Two questions are to be dealt with in the ensuing paragraphs, the first one focuses on public perception on “why some risks cause more alarm or anxiety than others”, and the second is about factors affecting media attention on “why some stories trigger the media more readily than the others”.

Risk Perception

5. From the angle of the public perception, the degree of risk (or the probability of the hazard causing harm) is far from the sole factor causing public alarm. This is a well-researched area^{2,3}, and some established ‘fright factors’ are summarized in *Box 2*.

Box 2. Fright factors

Risks are generally more worrying (and less acceptable) if perceived:

1. to be **involuntary** (e.g. exposure to pollution) rather than voluntary (e.g. dangerous sports or smoking)
2. as **inequitably distributed** (some benefit while others suffer the consequences)
3. as **inescapable** by taking personal precautions.
4. to arise from an **unfamiliar or novel** source
5. to result from **man-made, rather than natural** sources
6. to cause **hidden and irreversible** damage, e.g. through onset of illness many years after exposure
7. to pose some particular danger to **small children or pregnant women** or more generally to **future generations**
8. to threaten a form of death (or illness/injury) arousing **particular dread**
9. to damage **identifiable rather than anonymous victims**
10. to be **poorly understood by science**
11. as subject to **contradictory statements** from responsible sources (or, even worse, from the same source).

Media Triggers

6. There are also researches on why some particular stories about health risks “take off” spectacularly^{2,3}. Alongside the aforementioned fright factors, the media triggers shown in *Box 3* provide additional indicators.

Box 3. Media triggers

A possible risk to public health is more likely to become a major story if the following are prominent or can readily be made to become so:

1. Questions of **blame**
2. Alleged **secrets and attempted "cover-ups"**
3. **"Human interest"** through identifiable heroes, villains, dupes, etc. (as well as victims)
4. Links with **existing high-profile issues or personalities**
5. **Conflict**
6. **Signal value**: the story as a portent of further ills ("*What next?*")
7. **Many people exposed** to the risk, even if at low levels ("*It could be you!*").
8. Strong **visual impact** (e.g. pictures of suffering)
9. Links to **sex** and/or **crime**

7. Guidelines on good practices for risk communication have been produced by different authorities. Among them, the U.S. Environmental Protection Agency has published seven cardinal rules of risk communication⁴, which has been widely quoted. It is recapitulated in *Box 4*.

Box 4. Seven Cardinal Rules of Risk Communication

Seven Cardinal Rules of Risk Communication
by Vincent T. Covello and Frederick W. Allen

1. Accept and involve the public as a partner.

Your goal is to produce an informed public, not to defuse public concerns or replace actions.

2. Plan carefully and evaluate your efforts.

Different goals, audiences, and media require different actions.

3. Listen to the public's specific concerns.

People often care more about trust, credibility, competence, fairness, and empathy than about statistics and details.

4. Be honest, frank, and open.

Trust and credibility are difficult to obtain; once lost, they are almost impossible to regain.

5. Work with other credible sources.

Conflicts and disagreements among organizations make communication with the public much more difficult.

6. Meet the needs of the media.

The media are usually more interested in politics than risk, simplicity than complexity, danger than safety.

7. Speak clearly and with compassion.

Never let your efforts prevent your acknowledging the tragedy of an illness, injury, or death. People can understand risk information, but they may still not agree with you; some people will not be satisfied.

Risk Communication Structure within CHP

8. The Risk Communication Advisory Group is part and parcel of the CHP's initiatives to engage professionals and experts in its advisory structure, and members will facilitate channels for risk communication to the public. It is advisable that the Group reaches consensus over key concepts and definitions in relation to risk communication.

9. Related to the consensus-building with other relevant stakeholders, the Group will work closely with other parties with a special relevance to risk communication. Examples of the related parties within the Department of Health are Information and Public Relations Unit, Emergency Response and Information Branch and the Programme Management and Professional Development Branch under CHP, and some newly-formed working groups including CHP Publicity Working Group, and the Emergencies Preparedness Planning Committee. Another

paper will be presented in the next meeting of the RCAG to describe how risk communication is currently undertaken by the CHP.

10. Members are requested to note the content of this paper, and to comment on the relevance of the risk communication concepts to the local scenario.

Reference

¹ International Programme on Chemical Safety, Joint Project with OECD on the Harmonisation of Hazard/Risk Assessment Terminology, WHO, 1998. *Descriptions of Selected Key Generic Terms Used in Chemical Hazard/Risk Assessment*. Accessed on internet http://www.who.int/ipcs/publications/methods/harmonization/en/terminol_part-II.pdf on 21 September 2004.

² The Civil Contingencies Secretariat, UK, 2004. *Communicating Risk, Tool-kit*. Accessed on <http://www.ukresilience.info/risk/toolkit/> on 23 September 2004

³ The Department of Health, UK, 1997. *Communicating About Risks to Public Health; Pointers to Good Practice*. Accessed at <http://www.dh.gov.uk/assetRoot/04/03/96/70/04039670.pdf> on 22 September 2004.

⁴ Covello, V.T. and Allen, F.W. *Seven Cardinal Rules of Risk Communication* (1988) US Environmental Protection Agency, Washington, D.C. (leaflet) OPA-87-020.

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