Risk communication

TRAINING FOR THE HEALTH SECTOR

Introduction to risk communication

Children's Health and the Environment

CHEST Training Package for the Health Sector

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First version drafted by Peter van den Hazel, INCHES

Overview

Risk communication:

- What is it? What is it used for?
- What should be done?
- What should be known?
- Tools for consultants

This presentation will cover several definitions of risk communication, how it may be used to improve the provider-patient relationship, and the priority that it now has within environmental medicine.

What is risk communication?

An interactive process of exchange of information and opinion among individuals, groups and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risk, that express concern, opinions or reactions to risk messages or to legal and institutional arrangements for risk managers.

In the United States the National Research Council's Committee on Risk Perception and Communication developed this definition of risk communication. It recognizes that risk communication involves considerably more information than just technical risk. It also involves values, trust, credibility, and caring because, especially in a clinical setting, it focuses on the patients brightest hopes and darkest fears about the future. **National Research Council, Committee on Risk Perception and Communication; 1989**

Reference:Committee on Risk Perception and Communication, National Research Council. Improving risk communication. Washington, DC; National Academics Press. 1989.

In "Environmental risk communication for the clinician" Mark Miller defines risk communication as "the exchange of information about the nature, magnitude, significance, and control of a risk. Miller M, Solomon G. Pediatrics vol 112 no.1 July 2003, 211-217

What is risk communication?

Building and maintaining relationships based on the effective exchange of technical and/or scientific information between concerned stakeholders about an actual or perceived risk

Another definition of risk communication begins, not with risk, but with building and maintaining relationships. It is the relationships that make communication about risk possible. Source: Risk Communication Team, USA CHPPM (Center for Health Promotion and Preventive Medicine, U.S. Army)

What is risk communication?

A *science-based approach* for communicating effectively in situations in which there is:

- High concern
- Low trust
- Sensitivity
- Controversy

Finally, Vincent Covello offers this definition. He stresses that this is a "science-based" approach to communication in that it is backed by empirical research. The definition is focused on situations of high concern, low trust and that are sensitive or controversial. These are generally emotionally charged and the first task of the communicator is to build a relationship of trust and credibility.

A working definition of risk communication is "the method by which the public can be informed as to the potential risks and benefits of specific projects and programs." Reference: A Primer on Perceptions of Risk, Risk Communication and Building Trust

Ref. : Peter S. Adler, Ph.D. Jeremy L. Kranowitz, M.P.A., M.S. The Keystone Center February 2005; Accessed: http://www.netl.doe.gov/publications/carbon_seq/reg-issues/TKC%20Risk%20Paper.fin.pdf

Risk communication goals

- Create a communication environment based on trust and credibility
- Produce an informed audience that is involved, interested, reasonable, thoughtful, solution-oriented and collaborative
- Build confidence in your agency's professionalism, commitment and expertise

Risk communication is commonly used to build a bridge between authorities and an audience. <<Read slide>>.

Ref.: McCallum DB, Hammond SL, Covello VT. Communicating about environmental risks: how the public uses and perceives information sources. Health Education Q. 1991;18:349-361

Who uses risk communication?

Risk communication can be used as a discipline by:

- Government experts
- Industry experts

Risk communication is commonly used by governmental agents and by spokespersons of industry. This happened as they realised scientific knowledge of risk is not enough to overcome public mistrust.

Ref.: McCallum DB, Hammond SL, Covello VT. Communicating about environmental risks: how the public uses and perceives information sources. Health Education Q. 1991;18:349-361

Who else should use risk communication?

Risk communication is an important tool for health professionals, as they are:

- Trusted advisers
- Educators
- Identifiers of unrecognized hazards
- Intermediaries

There are of course other persons using risk communication. Clinicians emerge from studies as one of the most trusted and credible sources of information about occupational and environmental health risks.

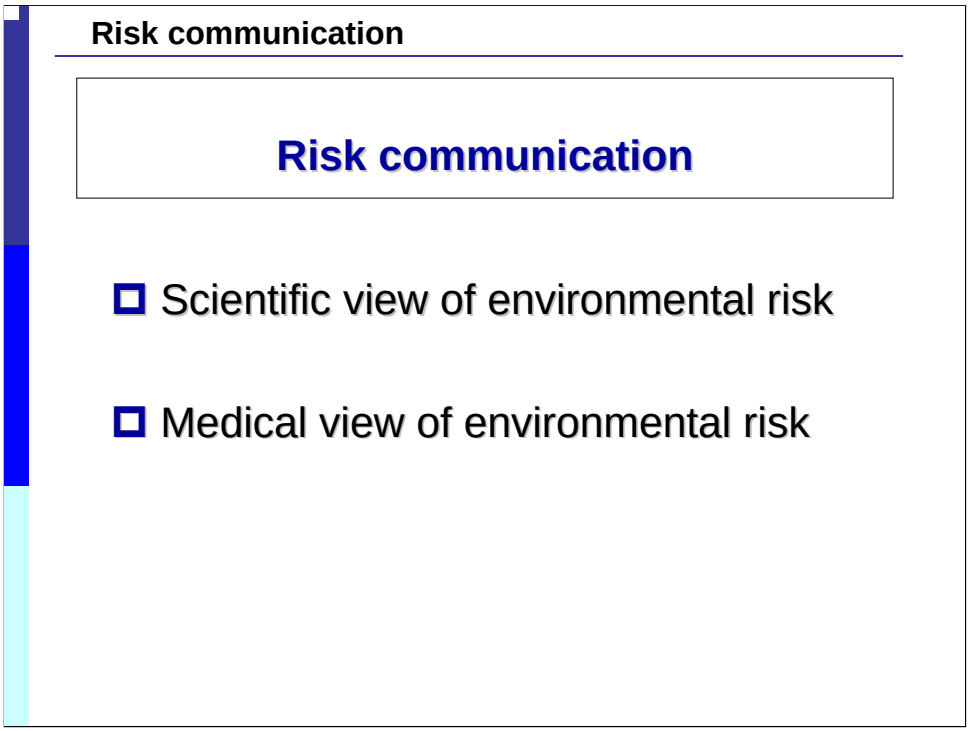
Reference: Covello VT. Risk communication and occupational medicine. Journal Occup Med. 1993;35:18-19

Clinicians fulfill several roles in communicating environmental risk. They are trusted advisors to an individual, a family or a community. They can act as interpreter of information, or directing to additional reliable information.

An alert clinician may identify a significant unrecognised hazard or epidemic.

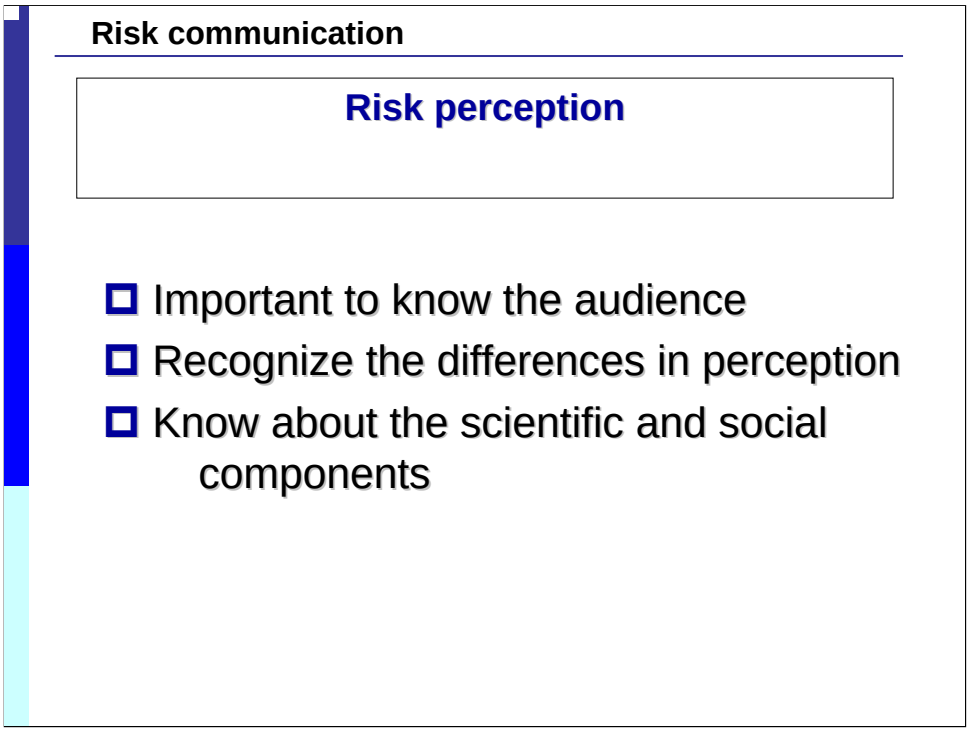
A clinician can be an intermediary among government, citizens' groups, scientists, and the public health community.

Public health specialists in environmental health may play a similar role as clinicians in risk communication.



Scientific view: quantative risk assessment; use of regulatory limits (eg. Reference dose, maximum risk level) to determine whether a chemical exposure is relevant.

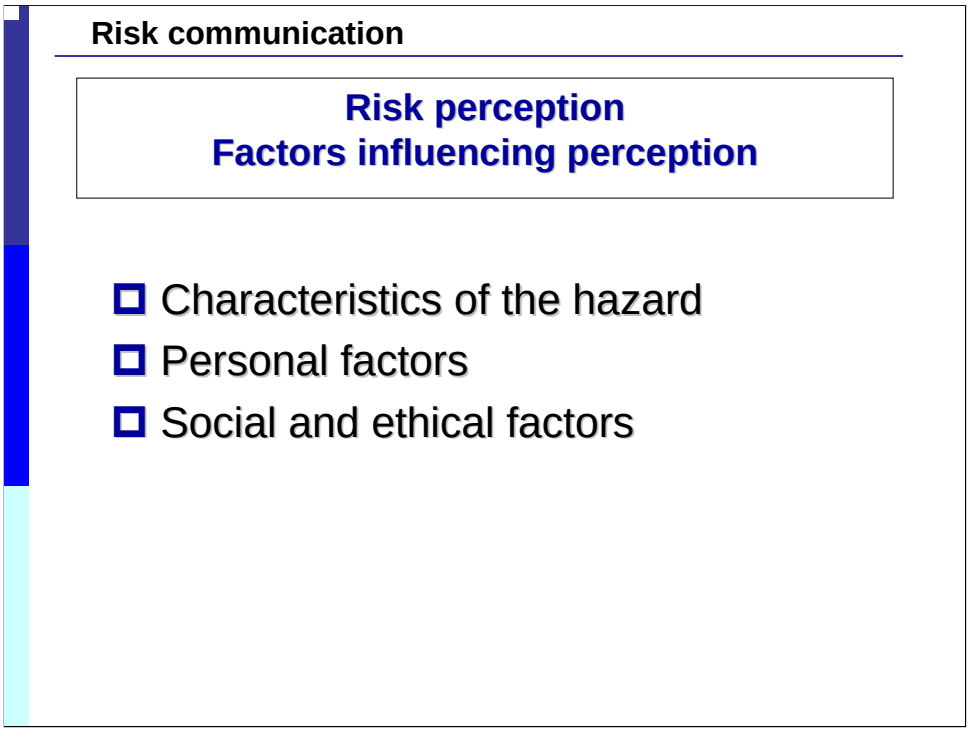
Medical view: qualitative risk assessment. Exposure assessment without actual measurements or mathematical modelling. Medical history and questions about frequency and duration of exposure are the clinicians approach.



Miller: scientific basis of risk assessment is affected by uncertainties of research or by inconsistencies in scientific literature. Social context, ethical issues may increase some risks relative to others. Scientist's perception of risk is not necessarily "CORRECT". A lay's person's perception is not necessarily "INCORRECT".

Reference: Miller M, Solomon G. Pediatrics vol 112 no.1 July 2003, 211-217

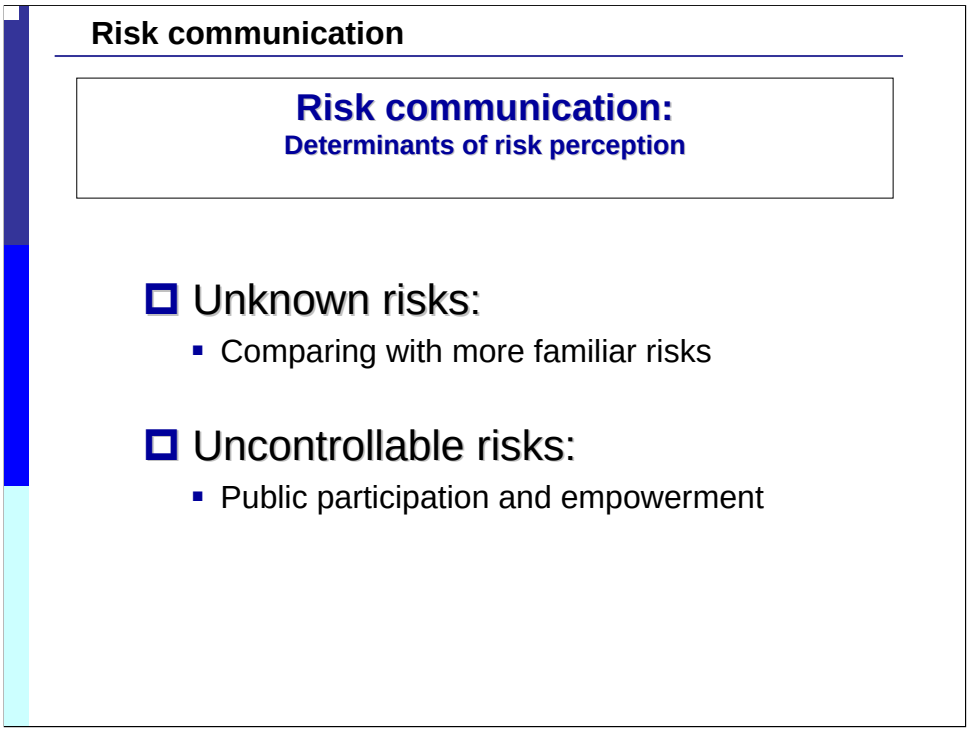
There are other concerns that play a role in society. Vincent Covello gives a summing up of different kinds of risk, concern or threats. Such as Technical concerns (e.g., who, what, when, why, how issues), Administrative concerns (e.g., Who is in charge? How will things get done?), Communication concerns (e.g., How will I be informed? Will I be given information? When will I be given information?), Information concerns (e.g., who, what, where, when, why, how concerns), Responsibility concerns (e.g., Who is responsible? Who is to blame?), Historical concerns (e.g., Has this happened before? What has been learned? Are lessons from the past being applied?), Ethical concerns and Religious concerns.



These factors represent three groups of factors which are related to increased or decreased perception of risk.These issus can be discussed witht the audience, by asking for examples they know themselves.
Hazard factors:
Familiar versus unfamiliar
Not catastrophic versus catastrophic potential
Natural versus synthetic
Adults affected versus fetuses or children affected
Nondreaded effects versus dreaded effect (Cancer, birth defects)
Voluntary versus involuntary

Personal factors:
Male gender decreases perceived factor versus female gender increases perceived risk; only seen in white individuals
White race versus nonwhite race; black men, black women and white women rate risks similarly while white men rate risks as less serious.

Social and ethical factors:
Trust in the risk communicator versus mistrust
Trust in the risk imposer (polluter) versus mistrust
Equal distribution of risks and benefits versus unfair or unequal distribution of risks and benefits
No perception of preexisting problem versus perception of unfair burden of cumulative risk in the community.



Miller: comparison of risks associated with skiing or drinking alcohol with risks from a hazardous waste incinerator will not be seen as equivalent, because the former are voluntary and under control of the individual, wheras the later are imposed from outside and not controlled by the individual. Reference: Miller M, Solomon G. Pediatrics vol 112 no.1 July 2003, 211-217

Additional items on risk perception:

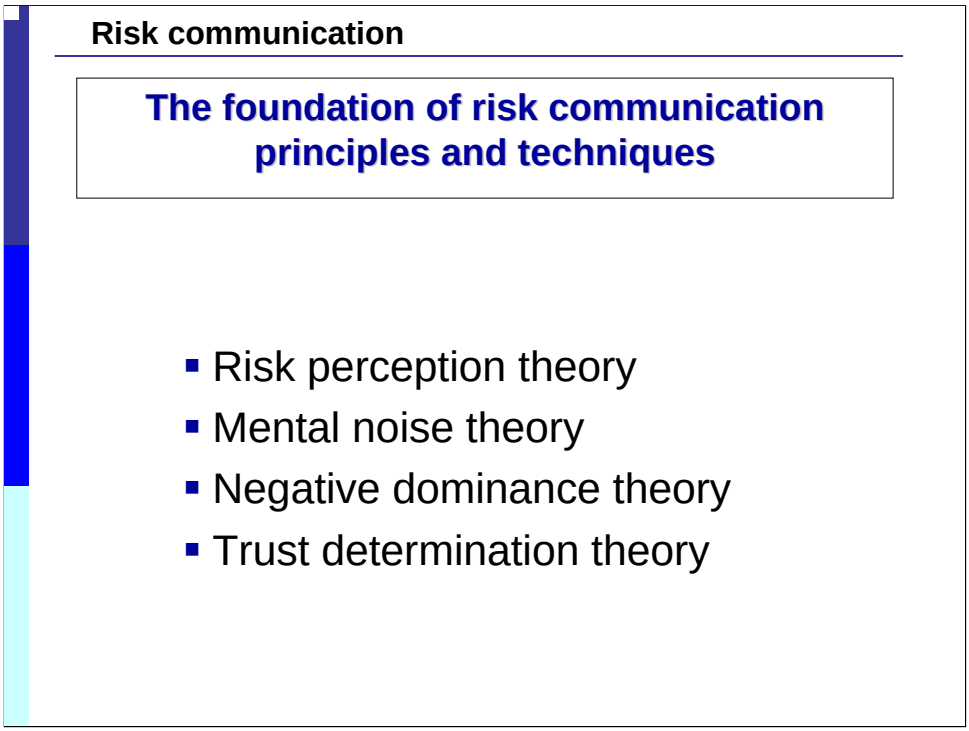
Anchoring is the estimation of frequency of an event on the basis of the numbers presented for other events. Example: a person is told that the risk to die of botulism is 3 persons per year, then that person's estimate of annual influenze deaths is likely to be lower than if the person was first told that there are 300,000 annual deaths from cancer. The tendency is to anchor one's estimate on the first number.

Compression refers to the tendency to overestimate the frequency of risks that are rare and undersestimate those that are common.

Availability refers to the tendency to base the expected likelihood of an event on the ability to recall instances of a similar event. As a result, events that draw media attention tend to be perceived as more likely.

All terms are mentioned in Miller, 2003.

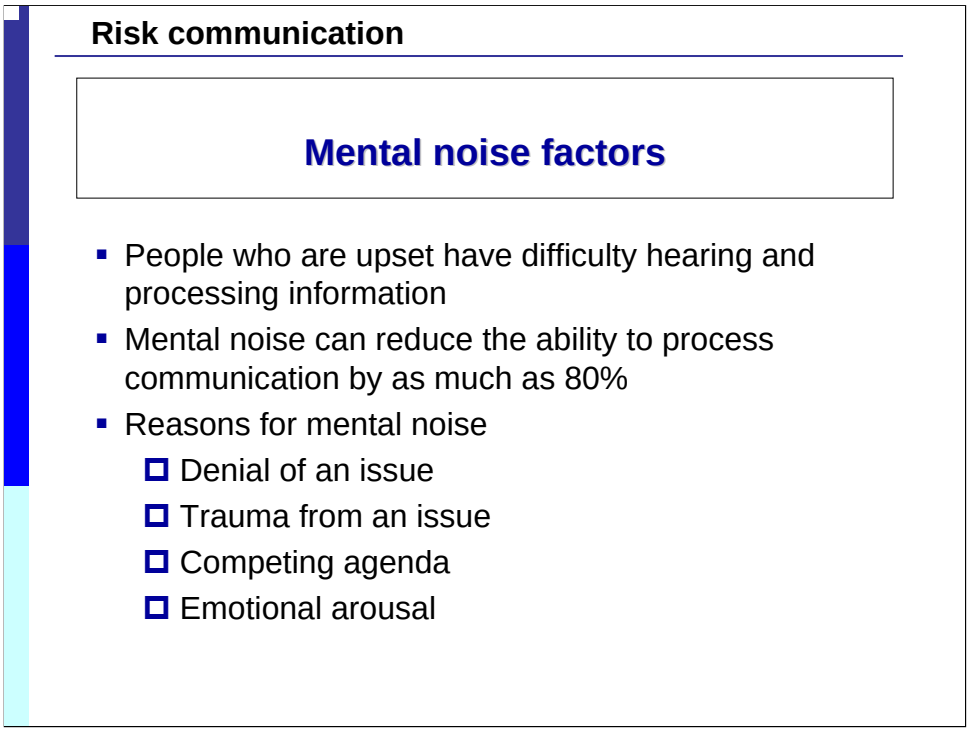
Reference: Miller M, Solomon G. Pediatrics vol 112 no.1 July 2003, 211-217



These four theories represent the communication challenges that must be appropriately addressed to effectively build understanding along with trust and credibility among all stakeholders.

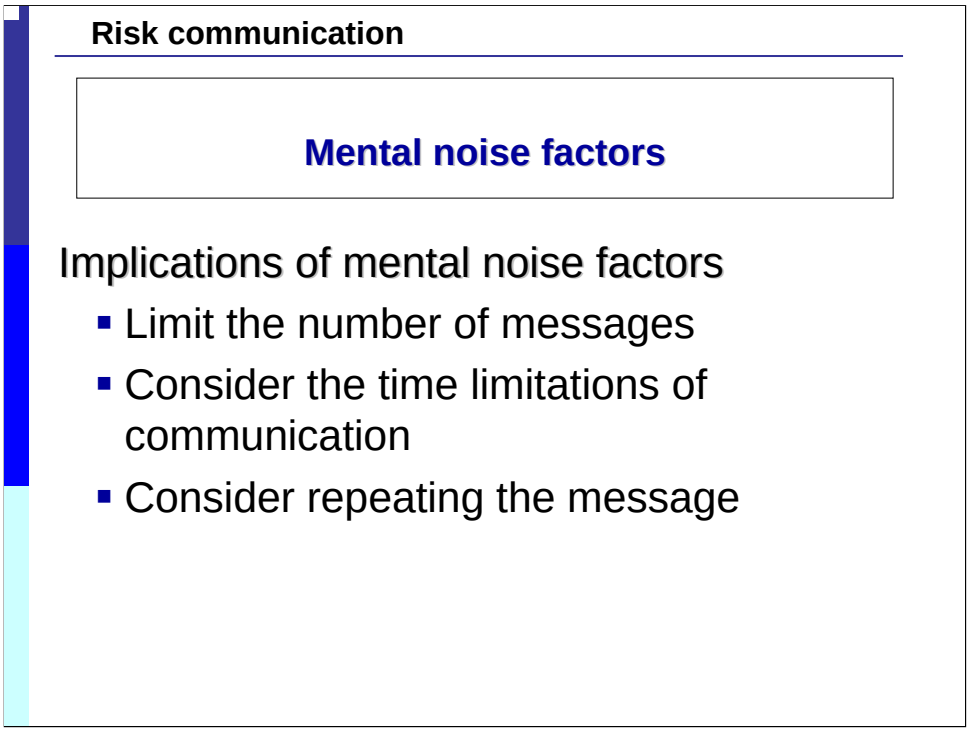
Recognizing these elements in the communications environment is critical for communication success.

Reference: Covello, Director Center for Risk Communication; source: http://www.epa.gov/safewater/dwa/electronic/presentations/genint/introsdwarisk.ppt



On of the theories on risk communication describes the mental noise factors

Reference: Dr. Covello, Director Center for Risk Communication; source: http://www.epa.gov/safewater/dwa/electronic/presentations/genint/introsdwarisk.ppt



To transcend mental noise barriers the messenger and the message must keep information simple and concise.

People generally have short attention spans and are primarily able to retain only three key messages.

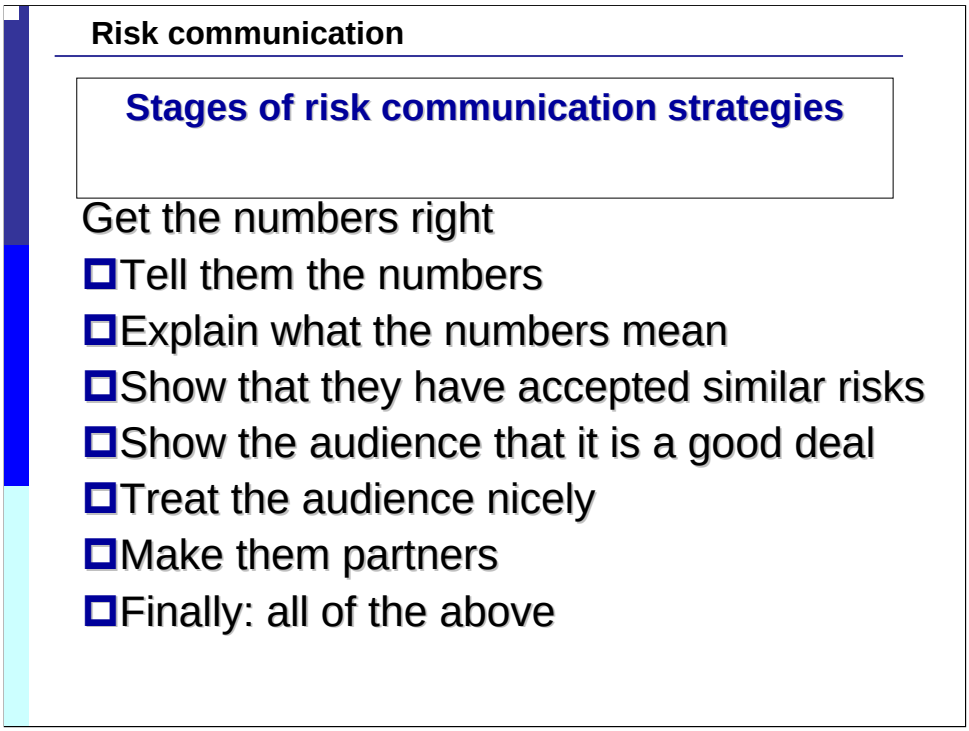
> Keep presentations and media interviews to no more than 15 minutes. Less is better still.
>
> Keep each key message and its supporting facts to a 15 to 45 second statement.

Accessed source:
http://www.epa.gov/safewater/dwa/electronic/presentations/genint/introsdwarisk.ppt

Risk communication: rules of thumb

- Take concerns and emotions seriously
- Involve all partners in decision-making
- Be trustworthy and credible
- Keep messages focused, simple and clear
- Inform involved groups before the mass media
- Risk explanation: as good and rapidly as possible

To actually perform risk communication for an audience there are some rules of thumb to remember in preparing. They all have to do with the way the risk communicator is making contact with the audience. These skills can be trained by frequent performance or by training in small role-model groups.



The change in belief about how to communicate risk to the public is well illustrated by Fischhoff (1995) who distinguishes the following developmental changes:

- All we have to do is get the numbers right (assessment)
- All we have to do is tell them the numbers (dissemination)
- All we have to do is explain what we mean by the numbers (knowledge)
- All that we have to do is show them that they have accepted similar risks in the past (comparison)
- All we have to do is show them that it is a good deal for them (benefits)
- All we have to do is treat them nice (public relations)
- All we have to do is make them partners (consultation)
- All of the above

Ref.: Fischhoff, B. (1995). "Risk perception and communication unplugged: twenty years of process." Risk Anal 15(2): 137-45.

Read slide:

In addition consider to mention the following aspects:

Repetition of a negative usually occurs in responding to a negatively phrased questions or statement.

For example, did you enjoy beating your dog yesterday? No, I did not beat my dog yesterday. Responding with denial or repeating the negative phrase reinforces the negative.

A proper response would be: I love my dog and have several pets that I enjoy taking very good care.

Accessed source:
http://www.epa.gov/safewater/dwa/electronic/presentations/genint/introsdwarisk.ppt

Risk perception
Qualitative determinants

- No voluntary choice (telephone transmission towers)
- Lack of control (industrial emissions)
- Unfair distribution of benefits and hazards (transport routes)
- Catastrophic potential (nuclear disaster)
- Dreaded health effects (cancer and birth defects)

Different examples can be given according to the regional settings. There are many potential examples. Reference: Blake ER. Understanding outrage: how scientists can help bridge the risk perception gap.

Ref.: Blake ER. Understanding outrage: how scientists can help bridge the risk perception gap. Environmental Health Perspectives 1995; 103 (suppl6): 123-5.

Risk communication

Risk perception (2)
Qualitative determinants

- Technical or human-made origin (radiation)
- Uncertainties about risks (electromagnetic fields)
- Unfamiliarity of risks (bovine spongiform encephalopathy or genetically modified food)
- Morally or socially unacceptable risks (children)
- Lack of trust in authorities

Different examples can be given according to the regional settings.

EMF= Electromagnetic Fields

BSE= Bovine Spongiform Encephalopathy or mad cow disease is a fatal disease
affecting cattle and has been transmitted to humans.

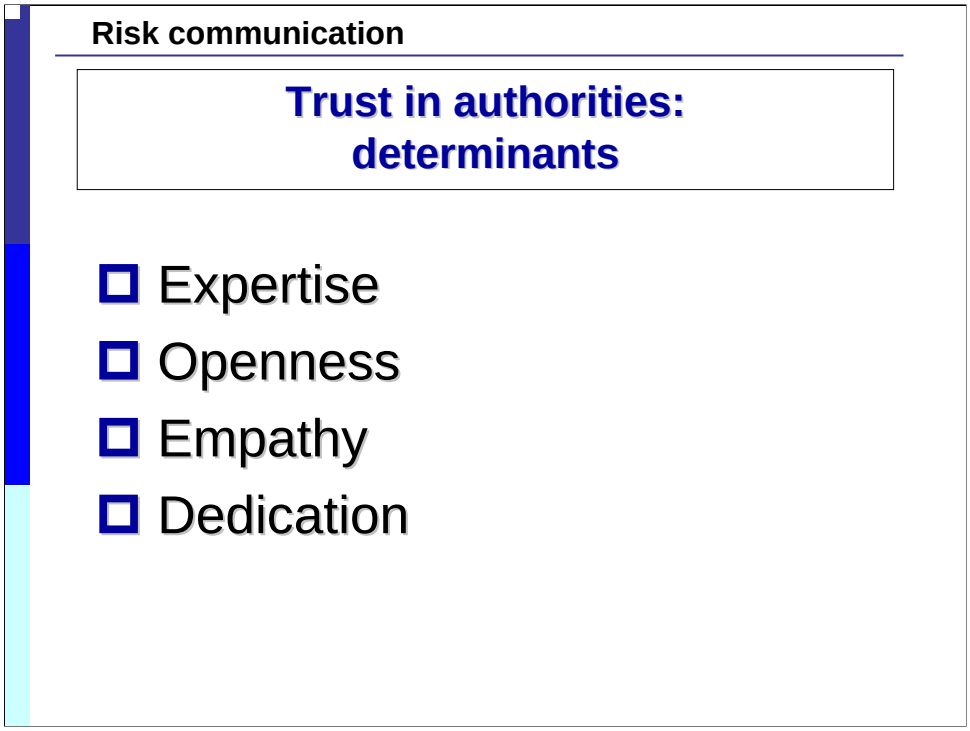
Reference: Blake ER. Understanding outrage: how scientists can help bridge the risk perception gap. Environmental Health Perspectives 1995; 103 (suppl6): 123-5.

Trust and credibility

- Situations with low trust and high concern
  - Communication skills essential
  - Mistakes are amplified
  - Negatives are amplified
- Risk communication is helpful in all situations with high concern, even if trust is high

Gaining trust and credibility is essential for effective communication. Low trust and high concern lead people to amplify mistakes and negative feelings about the communicator. Even in high-concern situations where trust and credibility are already high, the techniques of risk communication can be useful to maintain that high level of trust.

An important point is that when trust is high, communication skills are almost supplemental; however when trust is low, communication skills make or break the person or group doing the communicating.



Read slide. These determinants are related to gaining trust in authorities.

Competence and expertise:

State your academic preparation and practical experience with the specific subject matter
Do not lord your expertise over stakeholders, use it to help them understand at their level
Show high level of organization in handling information
Limit use of notes

Establish your qualifications to speak on an issue, but don't act superior or pedantic. Use your information to help people, not to make them feel small.

Openness and honesty can be provided as follows:

Bring the audience inside your operations. Give them contact information and explain your decision process. Don't have a hidden agenda. Explain openly and honestly what you know. Don't hedge or caveat the information you are providing. It's fine to admit that you don't know, but very important to follow up and provide the answer. Be patient and explain your responses so that everyone can understand. Don't be condescending. Tell them what you do know and do not use hedging information that could be revealed later. Admit it if you do not know the answer to their question. Always respond as if there is no such thing as a bad or unimportant question.

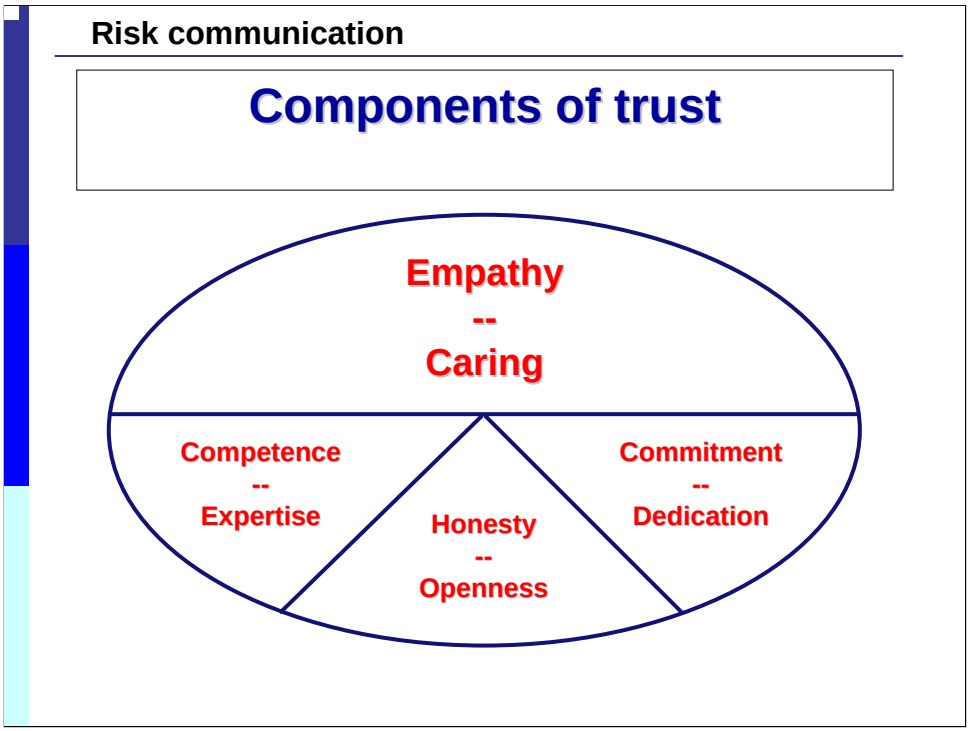
Caring and empathy can be expressed by:

State why this issue is important to you on a personal level
Acknowledge importance of the issue for all stakeholders
Relate how the issue also affects your life and sense of community

Dedication and commitment are shown by:

Arrive early and stay late for meetings
Reveal level of resources directed toward the issue
Let them know you will stay on task until the issue is resolved
Offer follow-up, keep the promise and stay on schedule

Greet people when they arrive and stay until the last person is gone.
Follow up and always keep your promises.
Give people a direct telephone number or home number.



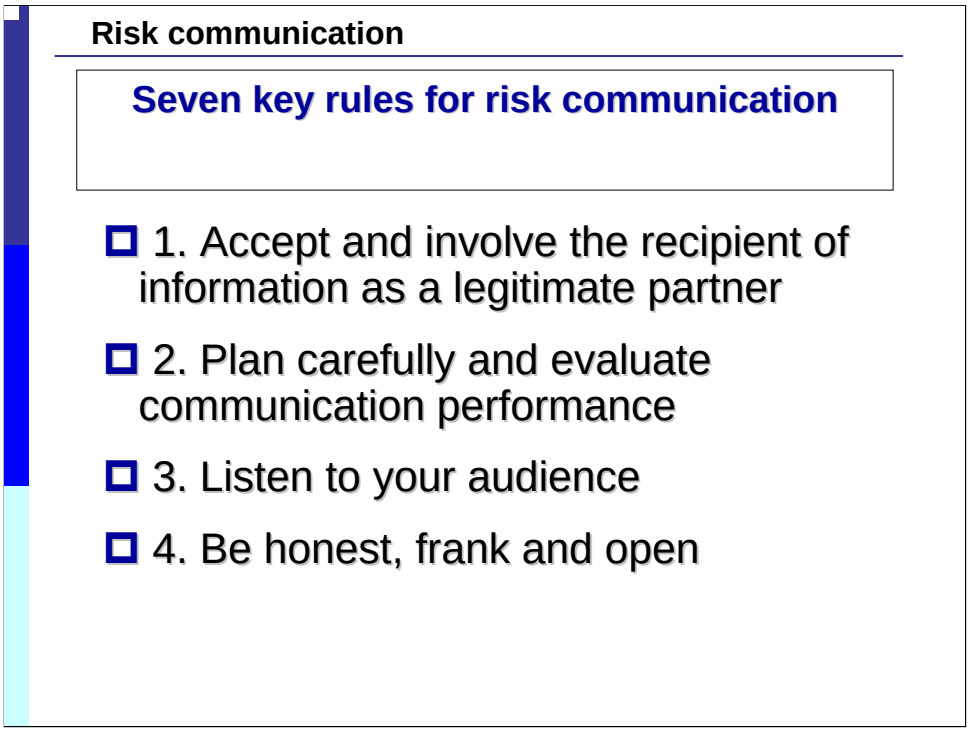
Research has shown that empathy and caring account for about half of gaining trust and credibility, with the other factors making up roughly equal parts of gaining the other half.

It is usually considered that the empathy is assessed by the audience in the first 30 seconds of risk communication.

One can discuss with the participants if a male or female communicator would be better to gain trust by empathy. Men must emphasize upfront caring and empathy and spend less time making competence and expertise statements. Women automatically gain all caring and empathy points and must emphasize competence and expertise up front.

Aristotle opined that the following pairs of elements were preconditions of trust: (1) knowledge and expertise; (2) openness and honesty; and, (3) concern and care.

Reference: Covello, V. T., et al., eds. 1989. *Effective Risk Communication.* New York: Plenum.



Seven cardinal rules of risk communication were written for representatives of government. They were developed by Covello and Allen (Covello VT, Allen FW. Seven Cardinal Rules of Risk Communication. Washington,DC; US Environmental Protection Agency, Office of Policy Analysis, 1992).

It is helpful for clinicians to be aware of these rules because they have similarities to the process of communication in their own profession.

There is no magic way to communicate that will ensure success. Nevertheless, experts in the field of risk communication have devised these guidelines to help overcome the concern and distrust that many feel toward messages from those in authority. These rules for effective risk communication may seem obvious, but they are constantly violated in practice.

These principles were formulated with a focus on a group setting, such as a work or public communication environment, but the same principles may be applied to individual situations such as those in the health care practice setting.

Rule 1. In a democracy, people have the right to participate in decisions that affect their lives. The goal of risk communication is not necessarily to diffuse concern or to avoid action. Instead, it is to produce an involved, informed recipient of information that is interested, thoughtful, solution-oriented, and collaborative.

Rule 2. Different goals, audiences, and media require different communication strategies. It might be helpful to pretest messages on office staff, family, or others. Define explicit objectives, such as providing information, contributing to the resolution of conflict, or motivation to act.

Rule 3. People are usually more concerned about trust, credibility, control, voluntariness, fairness, caring and compassion than about technical details. To identify real concerns, a communicator must listen and understand.

Rule 4. Trust and credibility are the most valuable assets. They are difficult to obtain and, once lost, are almost impossible to regain. Maybe a clinician is not an expert on specific environmental hazards, but will be recognised as an expert on children's health or medicine in general.

Don't use jargon, but use familiar and understandable language.

Seven key rules for risk communication (continued)

- 5. Coordinate and collaborate with other credible sources
- 6. Plan for media influence
- 7. Speak clearly and with compassion

Rule 5. Credible, neutral sources of information can help communicate effectively. Few things hurt credibility more than conflicts and disagreements among information sources or communicators. Use specialised consultants to tackle environmental health problems you are not familiar with.

Rule 6. The media plays a major role in transmitting information and play a critical role in setting agendas and forming mind-sets. In that sense, it is important to know what messages are being delivered by the media to the audiences you wish to reach as well as to participate in formulating messages for delivery through the media on topics of interest to your audiences.

Rule 7. Technical language and jargon are barriers to communication. Distant, abstract, unfeeling language putts most people off. Acknowledging emotions such as anxiety, fear, anger, outrage, and helplessness is far more effective. Always acknowledge the tragedy of an illness, injury, or death. Scientific information alone does not hold a solution to a risk problem. Consider the social, cultural, and community values and beliefs of the people involved.

Reference: Covello VT, Allen FW. Seven Cardinal Rules of Risk Communication. Washington,DC; US Environmental Protection Agency, Office of Policy Analysis, 1992

Practical issues

- Languages
- Translations
- Jargon
- Field testing
- Use of symbols

Find out if the language you speak is understood by everyone in the audience.

Seek the best solutions for translations in accordance with representatives of the audience.

Avoid the use of jargon

Do some pretesting of your risk communication.

Try to look for symbols you can use in your presentation. But be aware of the different meaning of those symbols in different communities. So best to avoid symbols when doing risk communication for an audience from a different cultural background than that of the risk communicator.

Covello uses the following principle: The higher the stress, the greater the need to reduce the size of the audience.

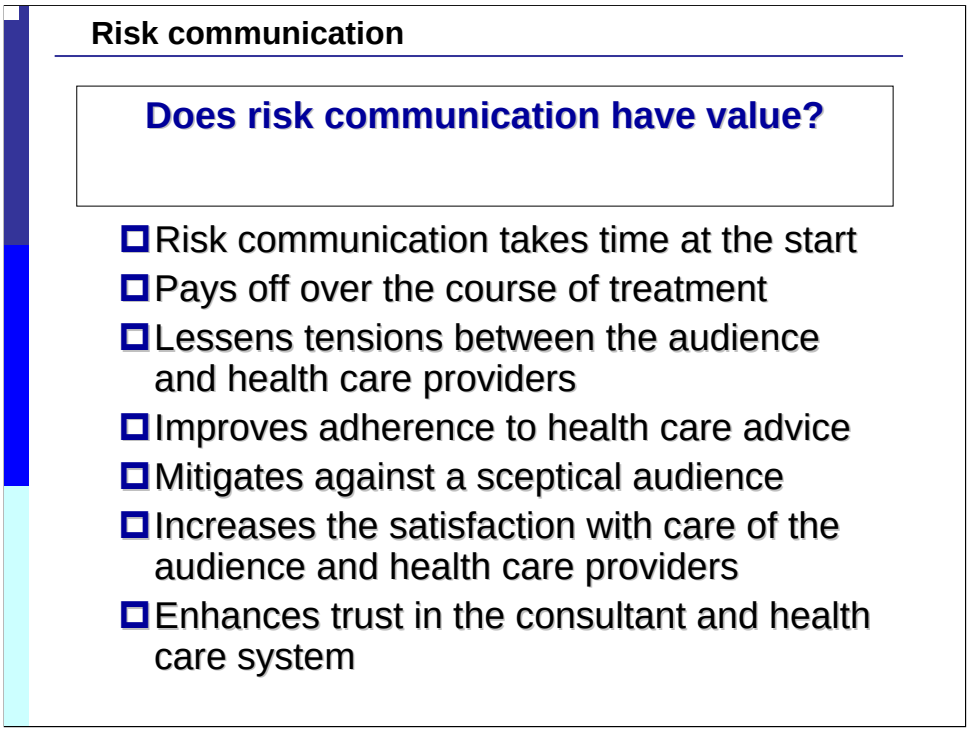
Non-verbal communication provides up to 50-75 percent of message content. Non-verbal communication is noticed intensely by audience. It is easily interpreted negatively. Non-verbal communication overrides verbal communication.

Environmental health

What risks concern people?

- Risk of various illnesses
- Risk of death
- Risks associated with medical tests and treatments
- Risks and causes of medically unexplained symptoms
- Risk in different settings
- Risk from unknown types of exposure

In environmental health there are similar concerns as mentioned before. Patients come to their health care providers with many concerns about risk. Usually those concerns revolve around illness and death. In addition, virtually every medical procedure involves some degree of risk to the patient.



Using these risk communication techniques takes more time at the beginning but the results are worth it in terms of the health care provider-audience or medical professional-patient relationship. Ultimately, taking more time at the beginning of client treatment may save time over the course of the care. You can see this for more patients within a public health setting also. One would speak about clients or audience instead of patients in this case. By building the audience's trust and enhancing the provider's credibility with the audience, the use of risk communication principles can lessen the tensions and occasional battles of will and conflicts between providers and audience. The result is a smoother course of treatment with the provider and audience in a partnership. In similarity it works in the medical professional and patient's relationship to improve the patient's health and quality of life.

Risk communication can bring the client into a willing partnership with the health care provider and make the client more willing to carry out a prescribed medical program of care or a public health strategy. It can also lead to an improved satisfaction with the care received and improved confidence in the provider and the public health care system because the audience was an active and willing participant in all of it.

Risk communication summary

Theory	Effect	Solution
Mental noise	Blocks communication	Use clear, concise messages and active listening
Trust determination	Enhances or detracts from message	Show that you care – empathy
Risk perception	Frustration and outrage	Recognize and respond to risk perception factors
Negative dominance	Distorts communication	Develop positive messages

The “theory” represents barriers and challenges to effective communication, trust and credibility for the messenger (individual and organization), the message, and the medium for communication.

The “effect” describes exactly how the theory is applied to communication as a barrier and challenge to effective communication and attaining the goal of trust and credibility.

The “solution” describes the action steps necessary to eliminate, minimize or overcome barriers and challenges to effective communication and the establishment of trust and credibility.

After Covello accessed source: http://www.epa.gov/safewater/dwa/electronic/presentations/genint/introsdwarisk.ppt

Summary

- Risk communication involves situations with low trust and high concern
- Trust and credibility are the heart of relationships and risk communication
- Value your clients' views and beliefs
- Use the tools developed to help you

In summary, risk communication can be very useful to communicate with an audience in low trust-high concern situations. Building trust and credibility between provider and client is the very heart of the risk communication process; and this is achieved by valuing the audience's views and beliefs about its medical or public health condition.