

Risk Communication:
Warren K. Sinclair Keynote Lecture
March 8, 2010, Bethesda, Maryland
NCRP Annual Meeting

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Presentation Objective

To review:

the

research and practitioner literature

on

best practice

in

risk communication.

Definition

Risk: “a threat of loss, **real or perceived**, to that which we value.”

Risk Communication: “the exchange of information about risks.”

Risk Communication: Definition

- Is an interactive process of **exchange** of information and opinion among individuals, groups, and institutions
- **Involves multiple messages** about the nature of risk
- **Involves messages not strictly about risk**, such as legal and institutional arrangements for risk management

“Improving Risk Communication,” National Academy of Sciences, 1989

Mental Noise

- **Threats (risks) produce stress**
- **Stress produces emotion**
(e.g., anxiety, worry, fear, anger, outrage)
- **Stress and emotion produce mental noise,**
which changes in the way people **process information**

Risk Communication Goals

- **enhance knowledge and understanding**
- **build trust and credibility**
- **encourage appropriate attitudes, behaviors and beliefs**

Risk Communication Theories

- **Trust Determination Theory**
- **Mental Noise Theory**
- **Negative Dominance Theory**
- **Risk Perception/Outrage Theory**

Radiation and Risk Communication (40th Anniversary): Risk Perception Theory

“Perception equals reality.”

“That which is perceived as real is real in its consequences.”

“When people are stressed and upset, the gap between perceptions and reality often becomes wider.”

Risk Perception Theory

“When people are stressed and upset, the gap between perceptions and reality often becomes wider.”

Risk Perception (Fear) Factors

Lower Concern/Fear

- 1. Trustworthy sources**
- 2. Large benefits**
- 3. Under one's control**
- 4. Voluntary**
- 5. Fair**
- 6. Natural origin**
- 7. Children not victims**

Higher Concern/Fear

- Untrustworthy sources**
- Few or unclear benefits**
- Controlled by others**
- Involuntary**
- Unfair**
- Human origin**
- Children as victims**

Risk Perception (Fear) Factors

Lower Concern/Fear

1. **Trustworthy sources**
2. **Large benefits**
3. **Under one's control**

Higher Concern/Fear

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- Few or unclear benefits**
- Controlled by others**

Risk Perception (Fear) Factors

- **Trust**
 - **Listening/Caring**
 - **Competence/Expertise**
 - **Honesty/Transparency**
- **Benefits/Fairness**
 - **Societal**
 - **Community**
 - **Personal**
- **Control/Voluntariness**
 - **Choice**
 - **Voice**
 - **Knowledge**

<u>Cause of death</u>	<u>Annual risk</u>	<u>Lifetime risk</u>
Motor vehicle accident	1 in 6700	1 in 88
Lightning	1 in 3,000,000	1 in 39,000
Shark Attack	1 in 280,000,000	1 in 3,700,000

Risk Communication:

Key Messages

- Risk communication is a **science-based discipline**
- High concern situations change the rules of communication
- The key to risk communication success is anticipation, preparation, and practice

Risk Communication Literature

- **Over 8000 Articles in Peer Reviewed Scientific Journals**
- **2000 Books**
- **Over 20 Percent Deal with Radiation Issues**

Risk Communication Literature: Example

Dr. R. Hyer and Dr. V. Covello

“Effective Media Communication During Public Health Emergencies:

A World Health Organization Handbook”

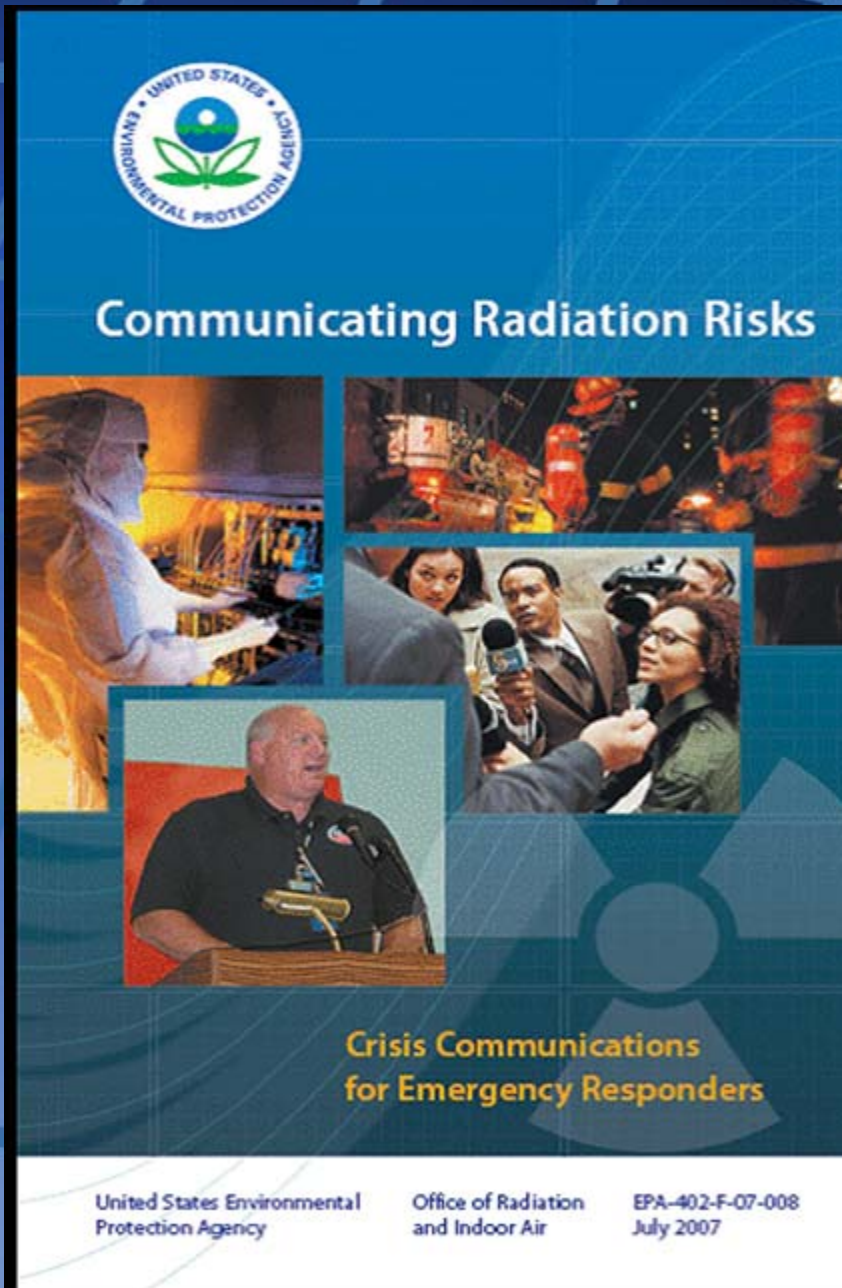
World Health Organization, United Nations:
Geneva, April 2007

www.amazon.com or www.who.int/bookorders)

Risk Communications Literature

“Communicating Radiation Risks”

- Sample scenarios
- Pre-approved messages
- Lessons learned



The cover of the report "Communicating Radiation Risks" features the United States Environmental Protection Agency logo at the top left. The title "Communicating Radiation Risks" is prominently displayed in the center. Below the title are three photographs: a person in a white hazmat suit, a press conference with several people and microphones, and a man in a dark shirt speaking at a podium. A large radiation symbol is visible in the bottom right corner. The text "Crisis Communications for Emergency Responders" is located at the bottom right of the cover. At the very bottom, the United States Environmental Protection Agency logo, the Office of Radiation and Indoor Air, and the report number EPA-402-F-07-008 dated July 2007 are listed.

United States Environmental Protection Agency

Office of Radiation and Indoor Air

EPA-402-F-07-008
July 2007

Risk Communication Literature: Example

“Five Essential Elements of Immediate and Mid-Term Mass Trauma Intervention: Empirical Evidence,” ***Psychiatry, 70(4): 2007***

Authors: Steven Hobfoll et. al.

Conclusion of Research

Provide people a sense of:

- Hope
- Self- and community efficacy
- Safety
- Calm
- Connectedness

Risk Communication: Resources

- M. Gladwell, “*Blink*”
- J. Lehrer, “How We Decide”
- S. Bok, “Lying”
- R. Fisher, “Getting to Yes”
- P. Ekman, “*Telling Lies: Clues to Deception*” (see also P. Ekman, “Emotions Revealed”)
- D. Morris, “*Body Talk: A Dictionary of Human Gestures*”
- E. Tufte, “Visual Explanations”

Risk Communication:

Key Messages

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Risk Communication: Core Concepts

**When people are stressed or concerned,
they typically:**

- **...have difficulty, hearing, understanding, and remembering information**
- **...want to know that you care before they care what you know.**
- **...focus most on what they hear first and last.**

Risk Communication: Core Concepts - continued

When people are stressed or concerned:

- ...the gap between reason and emotion (risk perceptions) often becomes wider.
- ...they typically focus much more on negative information than positive information.
- ...they typically process information at four grades below their education level.
- ...they typically seek out additional third party sources of credible information.

Risk Communication:

Key Messages

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Seven Step Risk Communication Strategy

- 1. Identify a risk communication issue or scenario**
- 2. Identify the primary stakeholders/target audience**
- 3. Identify potential questions or concerns**
- 4. Develop key messages using message mapping**
- 5. Develop supporting information for key messages**
- 6. Test and practice messages**
- 7. Deliver messages through appropriate communication channels**

Risk Communication:

Core Principles

“Most of the concerns and questions of upset or concerned people can be predicted and prepared for in advance.”

Mark Twain

“It takes me an average of two weeks to prepare an impromptu speech.”

Mark Twain

Stakeholder Predictability

**“50 Most Frequently Asked Questions
by Terminally Ill Patients”**

Stakeholder Predictability

- **“77 Most Frequently Asked Questions by Journalists in a Disaster” (handout)**

Stakeholder Predictability

**“65 Most Frequently Asked Questions about
Pandemic Influenza”**

(www.pandemicflu.gov)

**“ 205 Most Frequently Asked Questions
Following a Water Security or Water
Contamination Event”**

**(USEPA, Effective Risk Communication
during Water Security Emergencies”
EPA/600/R-07/027)**

Radiological Emergency Research

Finding:

(NUREG) Radiological Events

- *Over 450 questions anticipated from the media and the public*
- *14 categories of questions*
(for example, questions about evacuation, sheltering in place, health and safety, KI, and economic impacts)

Risk Communication:

Key Messages

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Risk Communication Literature: Example

“The Magic Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information”

George A. Miller (Department of Psychology, Princeton University)

***The Psychological Review*, 1956, vol. 63, pp. 81-97**

Message Map

Stakeholder
Question or
Concern:

Key Message

9 words on
average

Key Message

9 words on
average

Key Message

9 words on
average

Support-
ing Info.
1.1

Support-
ing
Info. 2.1

Support-
ing Info.
3.1

Support-
ing Info..
1.2

Support-
ing Info.
2.2

Support-
ing Info.
3.2

Support-
ing Info.
1.3

Support-
ing Info.
2.3

Support-
ing Info.
3.3

Risk Communication Templates (see handout)

- **CCO**
- **Rule of 3**
- **27/9/3**
- **Primacy/Recency**
- **AGL-4**
- **1N=3P**
- **IDK**

Risk Communication/Message Mapping Templates

- CCO

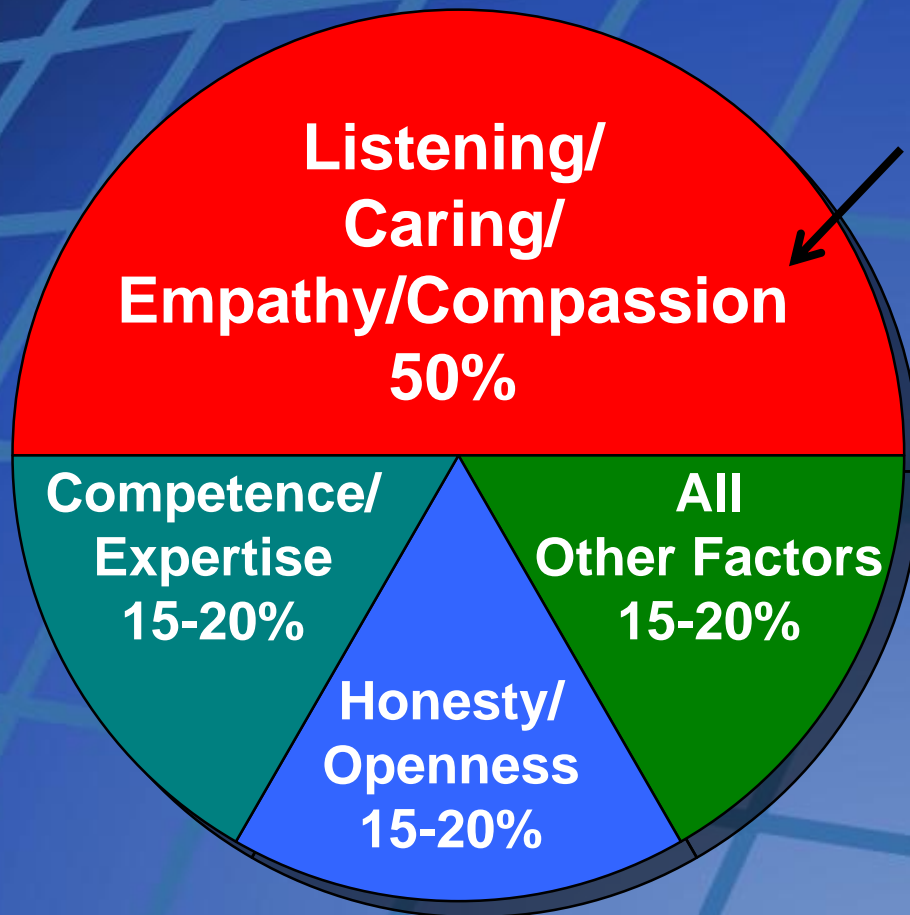
Caring/Empathy Principle

“When people are stressed and upset, they want to know that you care before they care what you know.”

The CCO Template

- **Compassion**
- **Conviction**
- **Optimism**

Trust Factors in High Stress Situations



**Assessed
in first 9-30
seconds**

Templates

- **CCO**
- **Rule of 3**
- **27/9/3**
- **Primacy/Recency**

Mental Noise (Attention Span)



Mental noise can
reduce
the ability to
process
communication up
to 80%

Contact: CenterforRiskCommunication.org

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Templates

- **Rule of 3**
- **27/9/3**
- **Primacy/Recency**

Mental Noise: The Rule of 3

Everything in Threes

- Three Key Messages**
- Repeat Messages Three Times (e.g., Triple T Model)**
- Key Messages Supported by Three Supporting Messages or Three Credible Sources**

Templates

- CCO
- Rule of 3
- **27/9/3**
- Primacy/Recency

The 27/9/3 Template

- 27 words
- 9 seconds
- 3 messages

Templates

- CCO
- Rule of 3
- 27/9/3
- **Primacy/Recency**

Primacy/Recency

“When people are stressed and upset, they typically focus most on that which is said first (primacy) and last (recency).”

Primacy/Recency Template

- Low Stress Situations:

Brain processes information based on **linear order** (e.g., 1, 2, 3)

- High Stress Situations:

Brain processes information based on **primacy/recency** (e.g., 1, 3, 2)

TBC Template

(Trust, Benefits, Control)

Key Message 1: Trust Message

**Key Message 2: Benefits/Fairness
Message**

Key Message 3: Control Message

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