

Communicating About Risk: Implications for Dental Public Health

National Oral Health Conference

May 3, 2006

Little Rock, AR

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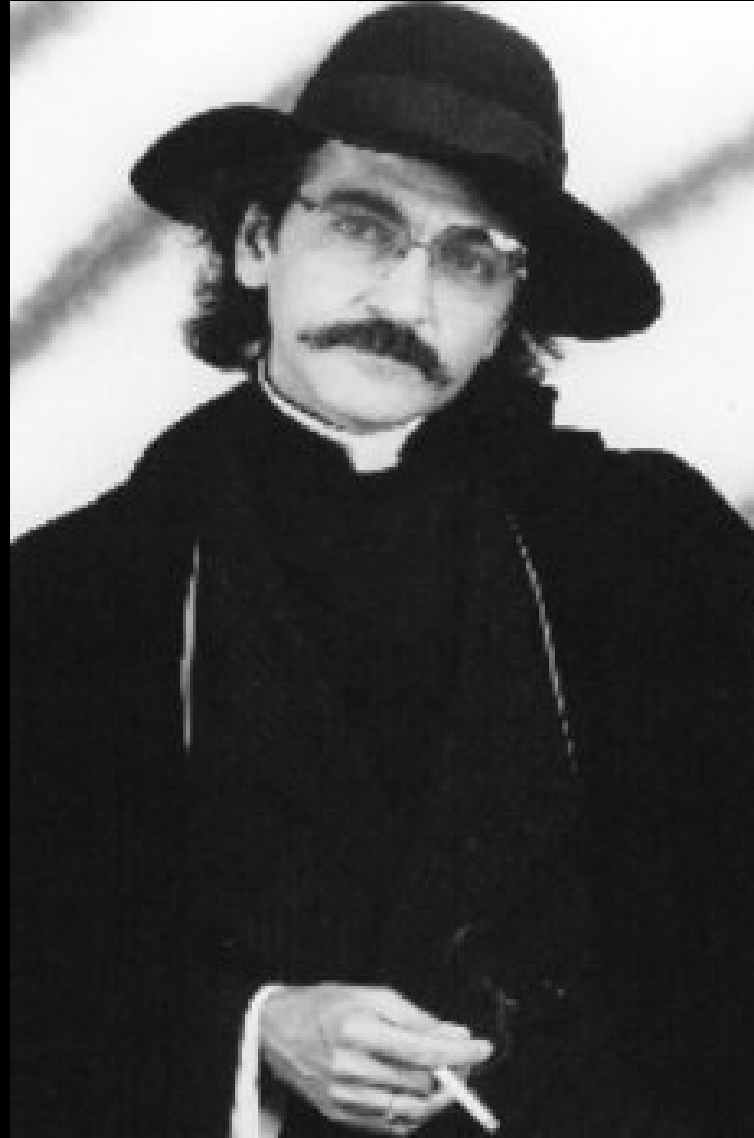
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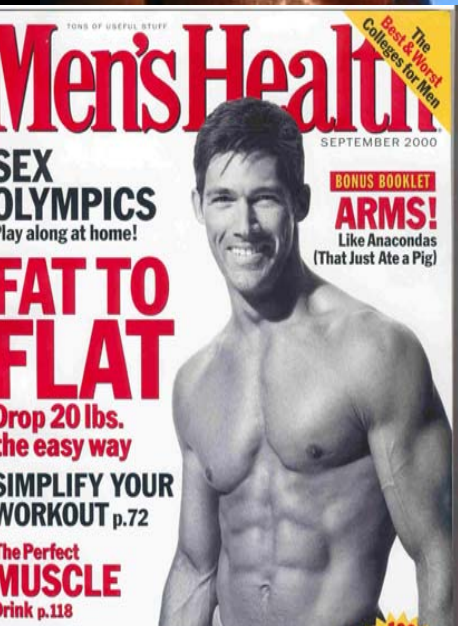


Don Novello A.K.A. *Fr. Guido Sarducci*

Topics to be covered:

- **The role of communication as a determinant of health behavior**
- **Fundamentals of health and risk communication**
- **How people perceive and understand risk**
- **Implications for public health practice.**

Behavioral Change



Behavior change mantra

The chain of logic:

Knowledge (& skills)--->Attitudes & Beliefs--->
-----> Behaviors--->Health Outcomes

Key point: *There is almost no evidence that this model works.*

Determinants of human behavior-**Personal Internal**

- ❖ **Attitudes**
 - ❖ dissatisfaction with status quo
 - ❖ Value the outcome
- ❖ **Personal efficacy**
- ❖ **Skills**
- ❖ **Cultural, political, historical beliefs**
- ❖ **External barriers better (cost, social sanctioning etc.)**
- ❖ **Positive re-enforcement (feel better)**
- ❖ **Knowledge (understanding of the consequences of behaviors)**

Goals of successful behavioral interventions

- ❖ **Motivate (explain the benefits of change)**
- ❖ **Educate**
 - ❖ **make people conscious of the importance of a behavior**
 - ❖ **skills**
- ❖ **Empowerment**
- ❖ **Assist/enable people to take action**
- ❖ **Reward**
- ❖ **Re-enforce**

Key Take Home Message: KADNAB

**Knowledge
Alone
Does
Not
Alter
Behavior**

Key point: Knowledge is some times necessary but rarely if ever sufficient.

What is risk Communication?



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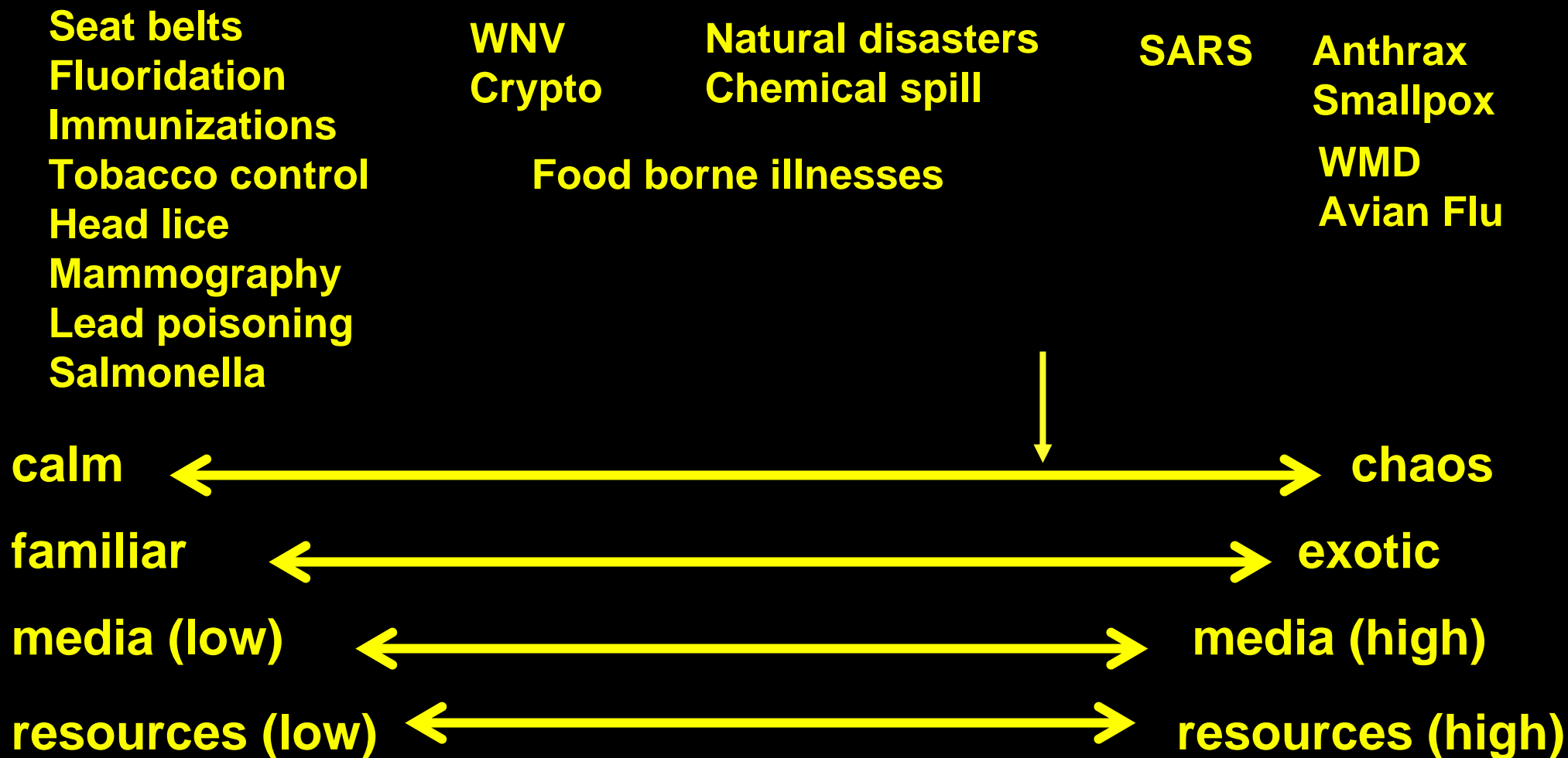
Risk Communication

The science and practice of how people process and act in response to health and technical/scientific information.

**Historically grew out of the environmental movement:
The Silent Spring by Rachel Carson often said to be first seminal risk communication work.**

Risk Communication in Public Health Practice

From Calm to Chaos



One Definition of Communication

A transactional process involving the exchange of mutually understood symbols conveying information or understanding to another.

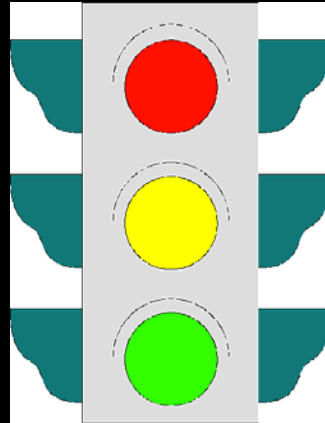
Symbols/Iconography

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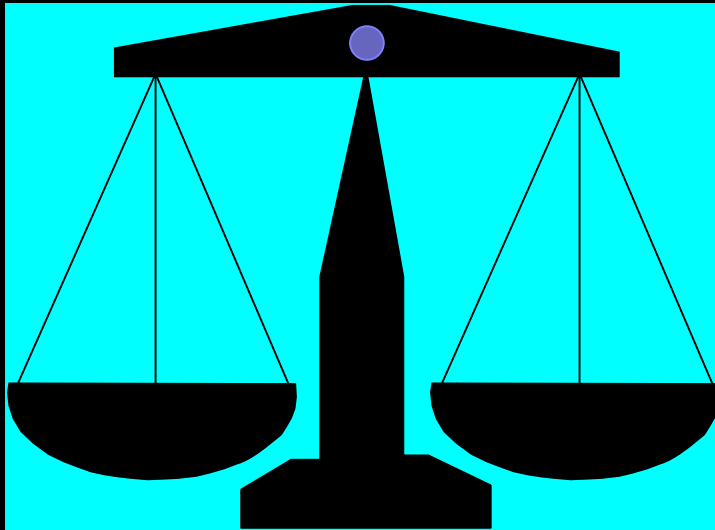
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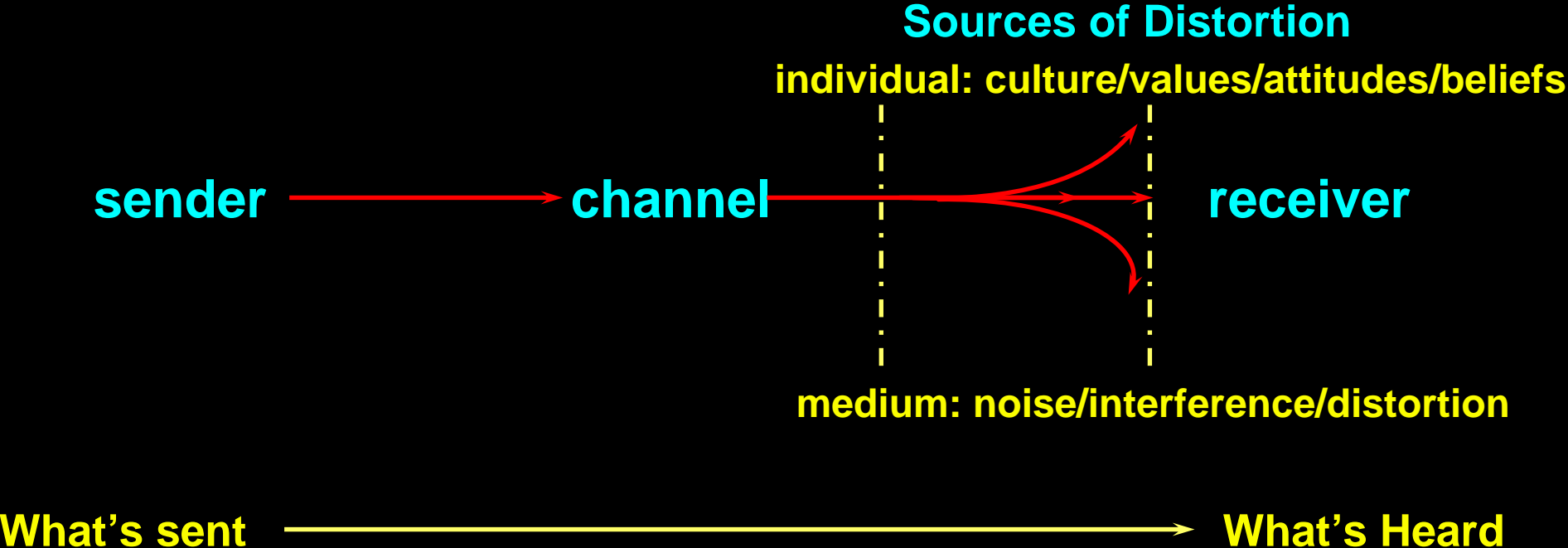


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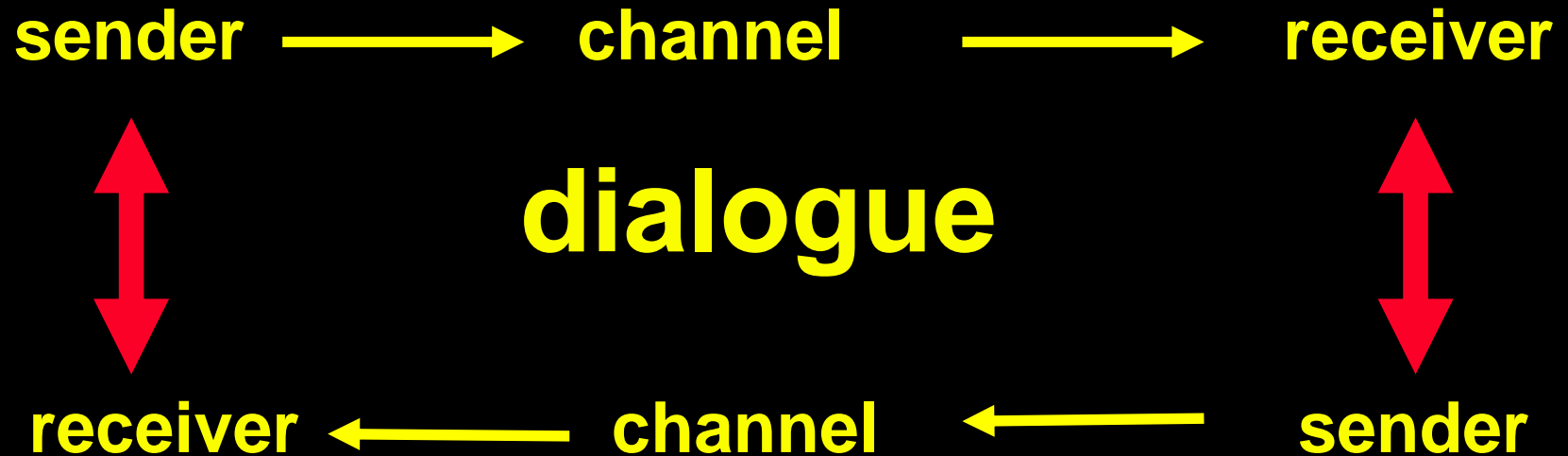


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Communication model



Communication paradigm (two-way)



Note: Dialogue involves listening

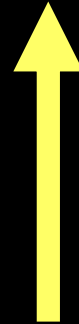
Communication Key Points

- ✓ involves dialogue and interaction
- ✓ involves oral written word and non-verbal
- ✓ requires common understanding of symbols or language
- ✓ takes place in a political, economic, and cultural context
- ✓ irreversibility “once spoken words can never be returned”
- ✓ imperfect rarely 100% correspondence between parties

The Challenge of Risk Communication

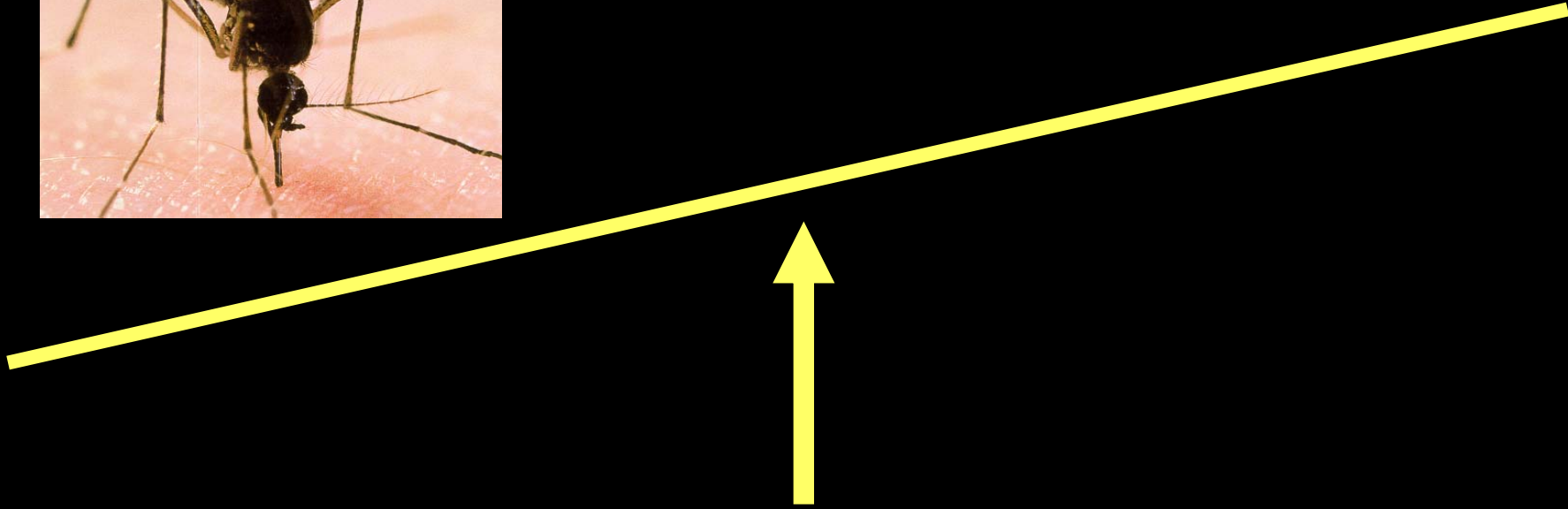
“There is virtually no correlation between the ranking of a threat or hazard by experts and the ranking of those same hazards by the public”

Consider two risks

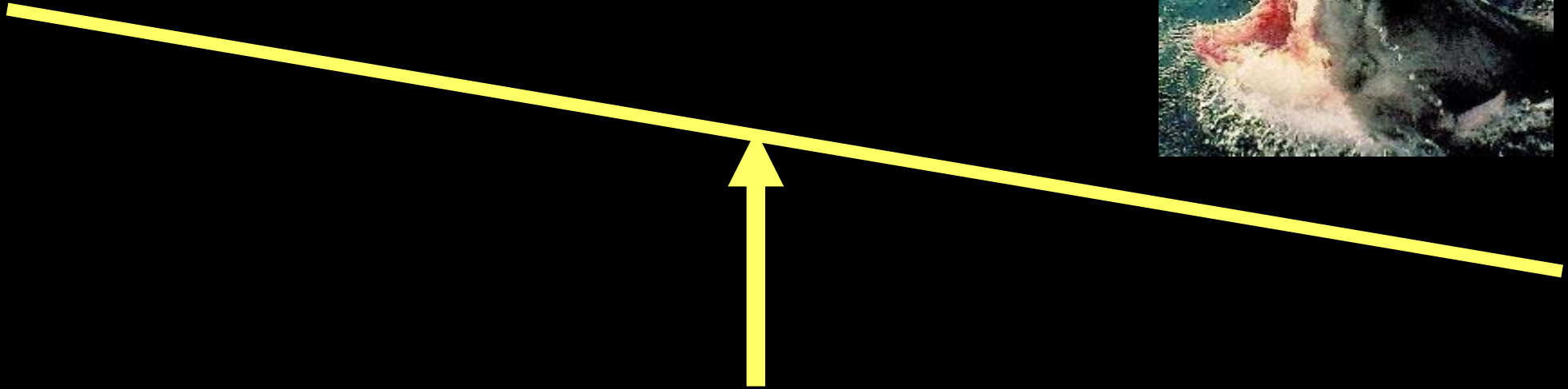


Weighing the Risks

The Expert



Weighing the Risks The Non-Expert



**What accounts for the difference
in how two different groups of people
view these risks?**





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SHARK ATTACKS

Destin

Cape San Blas

FLORIDA

Atlantic
Ocean

Gulf Of Mexico



Risk Perception

Risk perception is a function of the presence of a hazard, the level of exposure and, most importantly, the degree to which the individual feels threatened and or powerless to effect a change in their exposure or outcome status.

Risk Equation

Risk= Actual Risk Level + Perception

Note: Risk is a weighted average of these elements

Actual Risk is the result of hazard and exposure analysis:

- Epidemiology: patterns of disease in human populations.
- Toxicology: Study of the effects of exposures in animal populations.
- Exposure analysis.

Key Point: Actual risk is a function of hazard analysis and exposure analysis. High hazard with minimal exposure = low risk.

Perception

How do people experience risk?

(“experts” vs “non-experts”)

Experts

- **Sources:** science-based; objective
- **Perspective:** population-based
- **Decision making:** based on objective assessment of options

Non-Experts

- **Sources:** anecdote, news media, friends & family
- **Perspective:** individual-based
- **Decision making:** based on myth, popular culture, cultural tradition, anecdote

Key point: Most people are non-experts. They do not think the way Experts do about science or data.

How people experience risk:

Expert

Non-Expert

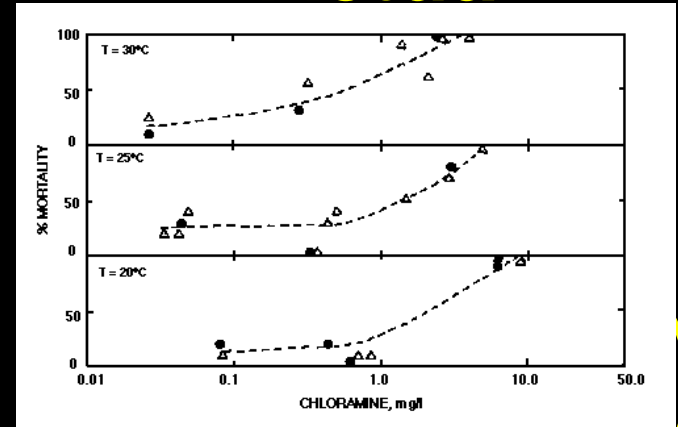
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Perceived



Actual

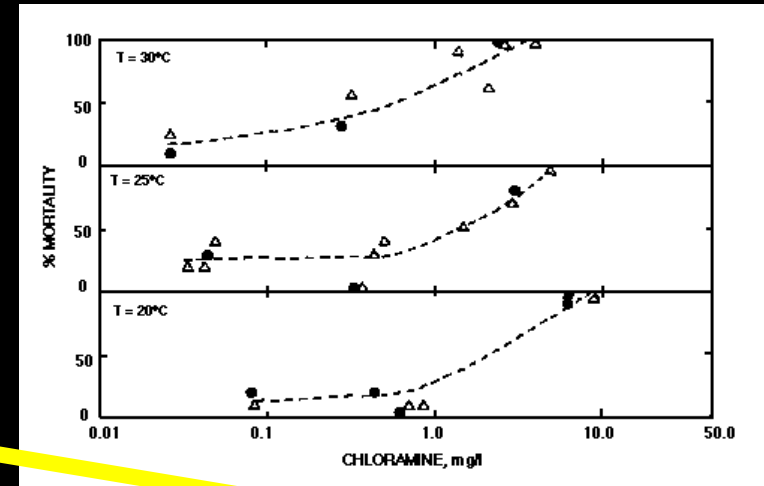


Balancing Perceived and Actual Risk

Perceived



Actual



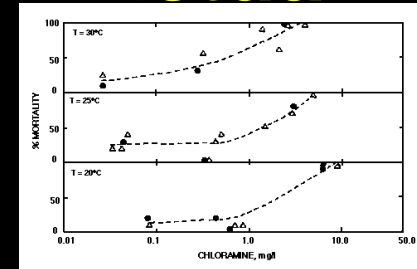
'The Expert'

Balancing Perceived and Actual Risk

Perceived



Actual



“The non-expert”

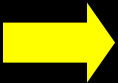


Factors that shape risk perception and perceived hazard level

- Personal experience
- Cultural attitudes and beliefs
- General distrust of science and technology
- Distrust/cynicism about political and corporate sectors
- Low levels of health and science literacy
- Media portrayals
- Other “amplifying” factors

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Factors that affect people's "worry agenda"

Less Likely

- Voluntary
- Natural
- Familiar
- Common
- Chronic
- Morally neutral
- Benefits
- Detectable
- Non-lethal

More Likely

- Involuntary
- "Man-made"
- Exotic
- Dreaded
- Acute
- Immoral
- No-Benefits
- Not detectable
- Lethal

So what!

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Ultimate Goal

Risk Communication

To motivate people to adopt behaviors that will have a positive effect on their health e.g. boil their water, run the tap, add fluoride to the water, have a flu shot etc.

Care Communication- Strategies

- **Fear** “this could happen to you”
- **Rational/cognitive** “consider the consequences”
- **Normative** “be like others”
- **Moral imperative** “protect others”
- **Self interest** “protect yourself”

! WARNING



Beyond this point:
Radio frequency fields
exceed the FCC rules for
exposure.

Failure to obey all posted signs
and guidelines for working in radio

! WARNING

Wire rope WILL FAIL if worn-out, overloaded, misused, damaged, improperly maintained or abused.

Wire rope failure may cause serious injury or death!

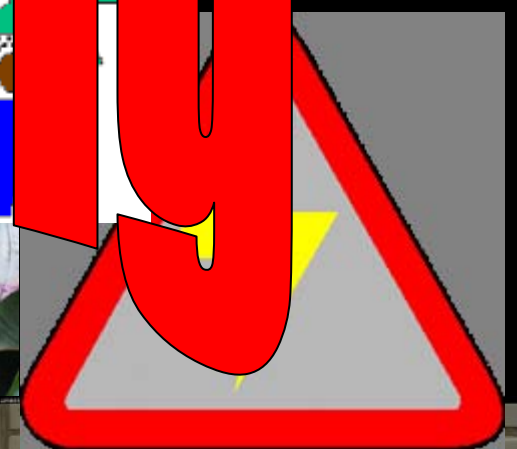
Protect yourself and others:

- ALWAYS INSPECT wire rope for WEAR, DAMAGE or ABUSE BEFORE USE.
- NEVER USE wire rope that is WORN-OUT, DAMAGED or ABUSED.
- NEVER OVERLOAD a wire rope.

- INFORM YOURSELF: Read and understand the manufacturer's literature or "Wire Rope and Use" Rope Safety Bulletin B-100 or "Wire Rope and Use" Rope Safety Bulletin B-100 or "Wire Rope and Use" Rope Safety Bulletin B-100



Warning



Barriers to Effective Risk Communication

- Literacy (science, print, health)
- History (government fumbled the ball)
- Competing messages
- Resources
- Politics
- Skills and expertise
- Failure to listen to target audience

So How Do We Initially Communicate in a Crisis?

Simple

Timely

Accurate

Repeatedly

Credibly

Consistently



First messages are critical. Get it wrong, you just keep playing catch-up for the remainder of the crisis.

Summary

- Perception is a key element in how people experience risk not necessarily science
- Recognize that risk communication is used for many purposes including advocacy
- Planning risk communication campaigns requires:
 - understanding of factors that amplify risk
 - understanding how your audience experiences risk
 - choosing the appropriate channels
 - being clear about your goals and objectives
- Never allow anything to erode your credibility