

#### Introduction to Risk Communication

"...the major public health challenges since 9/11 were not just clinical, epidemiological, technical, issues. **The major challenges were communication**. In fact, as we move into the 21st century, communication may well become the **central science** of public health practice."

-Edward Baker, MD, MPH, Assistant US Surgeon General







## **Understanding Risk**

Risk perception is:

#### Risk = Hazard + Outrage

- Perceptions based on combination of:
  - Understanding the hazard (e.g., mortality, morbidity)
  - How an event upsets people emotionally
  - Knowledge of both essential for effective risk communication
- Levels of public outrage are affected by:
  - Perceptions of familiarity
  - Level of control
  - Amount of uncertainty associated with the event

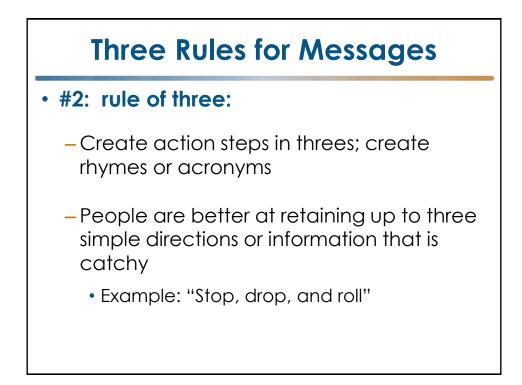
#### Understanding Risk: Public Outrage

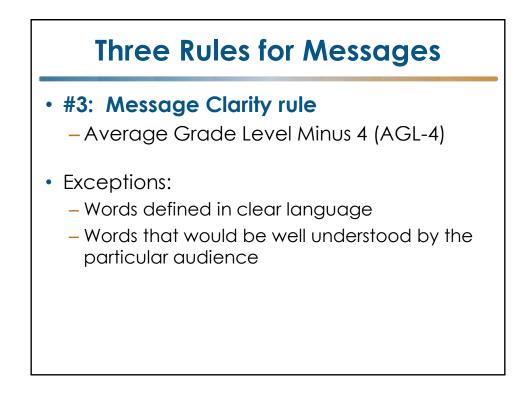
- The more outrage people feel, the more likely they are to perceive the risk as being greater than it is
- Low outrage events usually are familiar, naturally occurring, & distributed "fairly" among the population
  - Measles outbreaks, earthquakes, Norovirus outbreaks
- **High outrage** events tend to be perceived as caused by others, unknown, and affecting one group more than another:
  - Food poisoning of children from school cafeteria
  - Contamination of the water supply by a toxic spill
  - Terrorist attacks

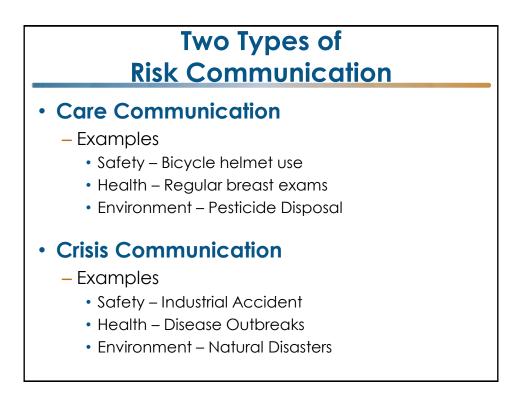
# **Effective Risk Communication**

- Like everything else in public health, communication is an art and a science
- Know your audiences
- Be careful about comparing one risk to another
  - If you try to reassure the public that a high-outrage, low-hazard risk such as bioterrorism is less likely than a low-outrage, high-hazard car accident, it probably won't have much meaning for people
- Help the public prepare
  - For specific disasters and crises before they happen









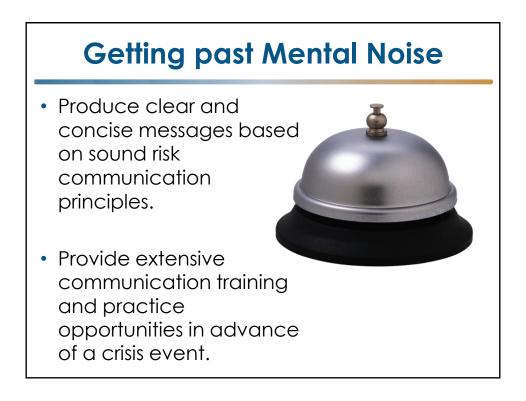
#### Challenges for Risk Communication

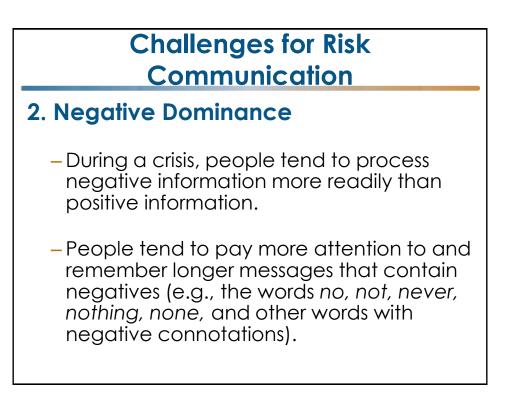
- Mental Noise
- Negative Dominance
- Literacy Levels
- Reaction to Crisis

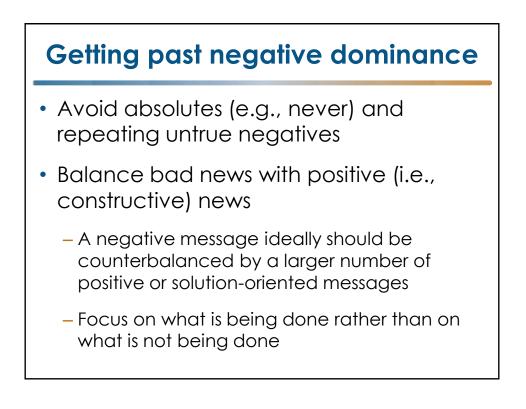
### Challenges for Risk Communication

#### 1. Mental Noise

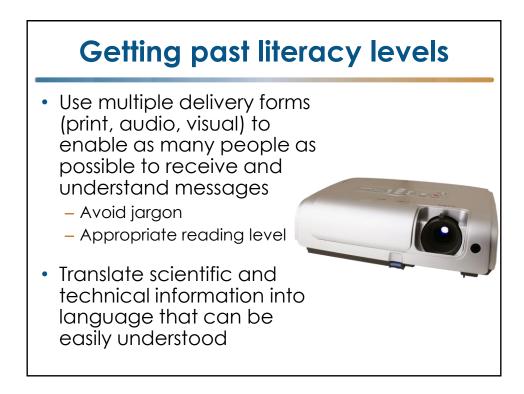
- Ability to process information is severely impaired when a significant threat is perceived
- High levels of emotional arousal or mental agitation create mental noise, and people may be unable to hear, understand, or remember information



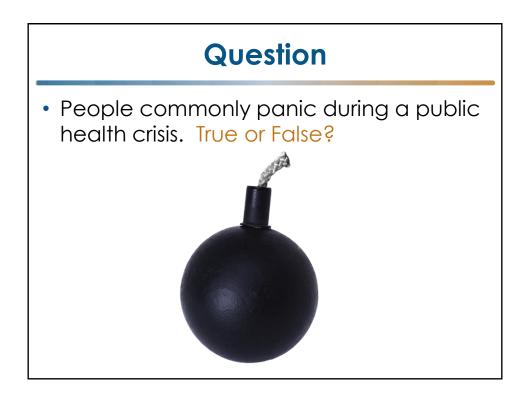


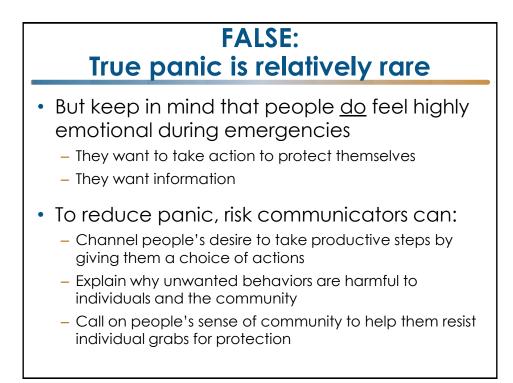


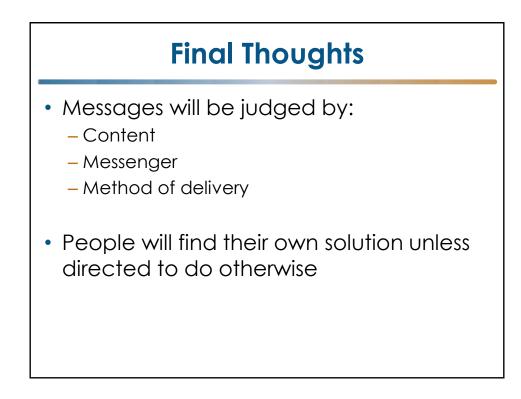
#### **Challenges for Risk** Communication 3. Literacy levels - People's ability to understand risk 655 communications depends on their ability to process M- M+ ÷ MRC written messages 8 9 RATE SET 5 4 6 Ability to comprehend 2 3 numerical data 0 Level of scientific literacy











## References

Covello, V. T. (2003). Risk and media communication. Retrieved from http://www.ecy.wa.gov/programs/tcp/tools/risk\_communication. pdf

Cragin, D. W., & Parvanta, C. (2011). Risk and emergency risk communication: A primer. In C. Parvanta, D. E. Nelson, S. A. Parvanta & R. N. Harner (Eds.), *Essentials of public health communication* (pp. 327-362). Sudburry, MA: Jones & Bartlett Learning, LLC.