

Risky Business: Risk Communication Strategies to Reduce Exposures and Improve Health under Disaster Conditions

(It wasn't raining when NOAH built the Ark)

Sharon A Croisant, MS, PhD

Professor

UTMB Department of Preventive Medicine and Population Health

Director, Community Engagement Cores

Gulf Coast Center for Precision Environmental Health

Baylor-Rice Superfund Research Program



When Communication is Complicated

- What constitutes a disaster?
- Role of Social Determinants of Health
 - Disparities, inequities, and justice issues
- Disaster Communication
 - Impacts of disaster on capacity and comprehension
 - Important theories for understanding barriers to communication
 - Strategies for dealing with barriers
 - What can/should you communicate BEFORE a disaster?

What exactly constitutes a disaster?

- A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources.

International Federation of Red Cross and Red Crescent Societies

- Definition holds true for families and individuals as well. . .

Social Determinants of Health

- SDOH: conditions that affect a wide range of health, functioning, and quality-of-life outcomes and risks
- Grouped into five domains



Social Determinants of Health Defined

- Economic Stability: less likely to live in poverty and more likely to be healthy
- Education: children of low SES, with disabilities, and experience discrimination
 - Less likely to get higher education or safe, high-paying jobs
 - More likely to have heart disease, diabetes, and depression
- Health care access and quality: underserved areas or those lacking insurance
 - Lack PCP, poor access to screening, poor control of chronic illness
- Neighborhood or built environment:
 - Violence, unsafe air or water, and other health and safety risks
 - Racial/ethnic minorities and low SES more likely to be at risk
- Social and community context: Social support reduces negative impacts.
At-risk populations include the elderly, children, those isolated

Disparities, Inequities, and Justice: COVID-19

- Devastating for local employment--Non-essential businesses closed:
 - Hotels, short-term rentals, cruise ships, restaurants, bars, gyms, parks, shops and stores, recreational facilities, and many more
- Galveston/Houston area unemployment skyrocketed
 - Unemployment up to 14% with overall loss of 228 K jobs, of which > 89 K jobs (25.7% decrease) were among leisure and recreational businesses
- Many FT workers have been acutely (some chronically) unemployed
 - May have assets (but no income) precluding them from assistance
 - Loss of health insurance
 - Have no experience in accessing resources

Obvious Health and Wellness Inequities

- Disparities in prevalence and severity of COVID-19 in various communities
 - Virus higher or more lethal among communities of color
- Not all neighborhoods created equal
 - Sidewalks (or lack thereof) allow safe exercise opportunities
 - Parks and playgrounds (or lack thereof) allow children to get out of the house and socialize under safe conditions
 - Low crime and effective (and non-threatening) police presence enable residents to spend time out of doors with ability to social distance
 - Proximity to industry or roadways a deterrent to outdoor activities
 - Increased risk if living in areas with higher levels of air pollution

Not so Obvious Inequities

- Service workers at highest risk of layoff/termination
- Many subject to eviction and increased risk of exposure and infection associated with combined (overcrowded) households
- Increased risk from taking higher risk jobs just to be employed
- Stress
- Food insecurity and impact on nutrition
- Lowest SES less likely to be able to work remotely
- Lack of access to reliable internet disproportionately precludes students of lower income households from remote schooling
- Children unable to access school breakfast/lunch programs
- Workers unable to afford testing or afraid to be tested for fear of losing job

Context is Everything

- Many embedded disasters, i.e., social turmoil, heat, cold, environmental pollution, are occurring within the context of COVID-19
- Hospitals and health care system already overloaded due to surges
 - Nowhere to send patients
- Inability to care for vulnerable or ill or even resume activities of daily living (Texas schools!) without risk of overcrowding and exposure
- Mental health and stress
 - Even bare grocery store shelves are a trigger
 - Reminder of vulnerability and lack of autonomy

Effects of Winter Storm and Hurricanes

- Workers unable to report for duty or working for closed businesses subject to:
 - Loss of wages or actual threat to job for failure to show up
 - Forced to use leave to cover missed hours or to go without pay
- Food insecurity (additional): with lack of electricity, food spoiled
 - Unsafe neighborhoods precluded movement of foods to outdoor location for preservation during freeze
 - Food banks decimated, unable to provide even necessities for most needy
- Effects of power outages
 - More well off financially able to stay in hotel or to own/purchase a generator
 - Risk of exposure in overcrowded shelters vs. risk of death from NOT seeking shelter

Risk Communication under Pressure

- What do WE need to be able too do under these circumstances?
 - Inform people of what health risks they face
 - Enable them to make informed decisions and/or actions to protect their own health and that of their families
 - This is critical component of Emergency Response
- Effective Risk Communication is driven by:
 - Building trust and engaging affected populations
 - Integrating ERC into emergency response systems
 - Established, effective ERC practices

WHO. (2017). *Communicating risk in public health emergencies: a WHO guideline for emergency risk communication (ERC) policy and practice*. World Health Organization. <https://apps.who.int/iris/handle/10665/259807>.

Building Trust

- Risk communications should be:
 - Linked to functioning and accessible services
 - Transparent, timely, easy-to-understand, address affected populations, foster self-sufficiency, use multiple dissemination platforms
- Communicating uncertainty: Must include specific information about uncertainties related to risks, events, and interventions
- Community engagement: Must involve trusted members of the community! These individuals should be involved in making decisions and informing communications to ensure that interventions are culturally and contextually appropriate and community-owned.

Effective Practices

- Risk Communication planning must occur well in advance and be a continuous process focused on both preparedness and response
- Must be sensitive to needs and participatory in nature
- Research/evaluation necessary to establish best mechanisms and methods for interventions and incorporate findings and feedback to inform current and future response
- Social media can be an effective tool to engage stakeholders, facilitate communication, raise awareness, monitor and respond to rumors and misinformation, and public concerns during an emergency, and to facilitate local response

Risk Communication Practices

- Risk communication is a science-based discipline
- High concern situations change the rules of communication
- Key to success is anticipation, preparation, and practice
- Risk communications theories include:
 - Trust Determination Theory
 - Mental Noise Theory
 - Negative Dominance Theory
 - Risk Perception/Outrage Theory

WHO. (2005). Effective media communication during public health emergencies : a WHO handbook / Randall N. Hyer, Vincent T. Covello. World Health Organization. <https://apps.who.int/iris/handle/10665/43511>

Covello, VT, and Milligan, PA. (March 11, 2010). *Risk Communication – Principles, Tools,& Techniques*. <https://www.nrc.gov/docs/ML1015/ML101590283.pdf>



Risk Communication: Core Principles

When people are concerned, stressed, or upset:

- They want to know that you care before they care what you know (Trust Determination Theory)
- Have difficulty hearing, understanding, and remembering information (Mental Noise Theory)
- Focus most on what they hear first (Mental Noise Theory)
- They often focus more on the negative than on the positive (Negative Dominance Theory)
- The gaps between risk perceptions and reality often become wider (Risk Perception Theory)

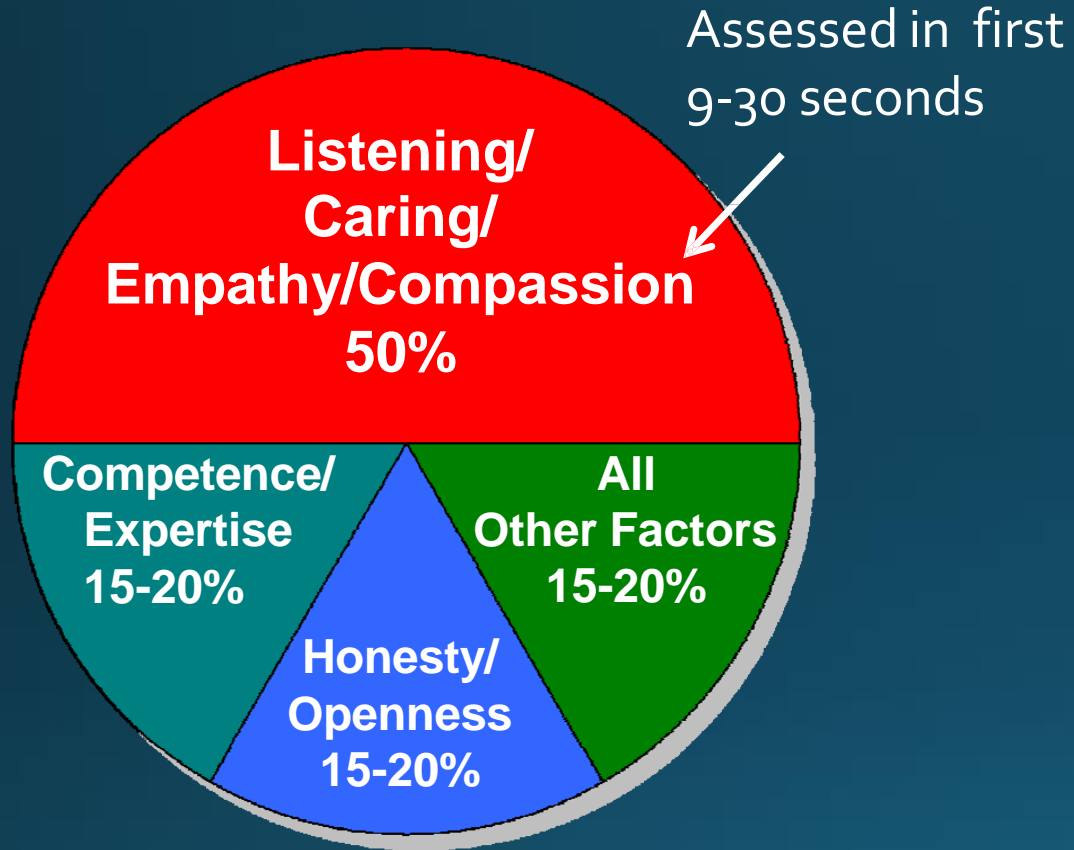
Drawn from Covello, 2010

Risk Communication Guidelines

- CCO: Compassion, conviction, optimism
- Rule of 3: All risk communication messaging in threes
- 27/9/3: Key messages expressed in 27 words, 9 seconds, 3 messages (based upon media analyses)
- AGL-4: (Average Grade Level) Minus 4 (Four Grade Levels)
Template

Drawn from Covello, 2010

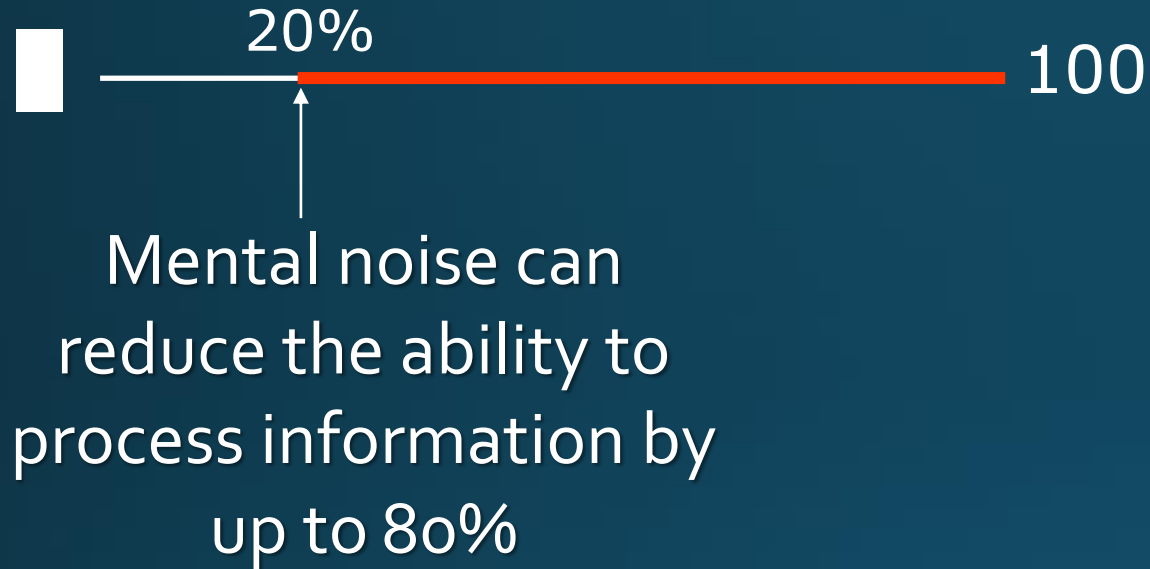
Trust Factors in High Stress Situations



Replicated with permission; Covello, 2010

- People are not only stressed but often tired and afraid
- You, too, are likely to be stressed and tired
- Anticipate needs for information as much as possible (be prepared with paperwork, handouts, checklists, etc.)
- Enables you to be in the moment
- Be kind to yourself!

Risk Communication: Mental Noise



Replicated with permission; Covello, 2010

- Everything in Threes
 - Three key messages
 - Repeat message three times (Triple T Model)
 - Key messages supported by three supporting messages of three credible sources

Risk Communication Strategy Steps

1. Identify a risk-related issue or scenario
2. Identify key stakeholders (audiences)
3. Identify stakeholder questions and concerns
4. Develop key messages consistent with risk communication principles
5. Develop supporting information
6. Conduct testing
7. Plan for delivery

Drawn from Covello, 2010

Questions?

