BREAKING BAD NEWS IN THE HIGH-CONCERN, LOW TRUST SETTING: HOW TO GET YOUR STORY HEARD

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INTRODUCTION

“BREAKING BAD NEWS” or communicating risk information to a worried audience is a challenging yet crucial task. When the chips are down and people are worried, there will be information overload with many sources screaming for attention. In this cacophony, officials must adopt special evidence-based techniques in order for the truth and helpful information to be heard (Hyer and Covello 2007).

The perception of the health risk from radiation consistently produces some of the highest levels of concern by the general public. Exact health risk information is often hard to obtain. Sensational media attention often greatly increases anxiety. Policymakers with little or no specific training or expertise in risk and crisis communication often charge into the arena (Ropeik 2011).

A basic premise of this article is that communicating risk information about radiation—with the reinforcing goals of building or repairing trust, informing and educating people, and gaining agreement about appropriate actions and behaviors—requires a sophisticated scientific approach using best practices of risk communication (Covello 2011a).

Risk and crisis communication are scientific disciplines with over 8,000 peer-reviewed publications and 2,000 books printed, along with reviews of the literature by the National Academy of Sciences and other preeminent bodies. Essentially risk and crisis communication involve connecting with people who have an activated brain limbic system or amygdala (emotional and “fight or flight response”). This natural emotional response makes it very difficult to present detailed information in a logical fashion. Neurological studies using the latest brain-imaging techniques demonstrate a clear effect of emotions on altering risk-based decision-making processes.

Effective risk communication has three primary goals: to build or repair trust, to inform stakeholders about the risk, and to gain agreement (e.g., agreement about what is needed) (Covello et al. 1989). First and foremost is to build and repair trust. In the public eye, the subject of radiation consistently elicits some of the strongest levels of fear and anxiety. Trust is the absolute currency of effective risk communication. Establishing and maintaining trust is, thus, paramount for effectively connecting and delivering useful information about radiation.

To gain trust, one must express true empathy—“people want to know you care before they care what you know.” Studies show that listening, showing compassion, and demonstrating empathy contribute over 50% to people’s perception of trust. What is alarming is that this trust is assessed in as little as 9–30 s. Factors such as one’s competence and expertise contribute a mere 15–20% of perceived trust, with honesty and openness another 15–20%, and all other factors filling in the remainder.† When attempting to connect with people in a high concern, low-trust setting, one must first and foremost demonstrate empathy and compassion before the audience will hear anything else.

NEUROLOGICAL BASIS AND EVIDENCE

In addition to the substantial literature in the psychological and human behavior fields, there is growing radiological and molecular evidence supporting alternated brain functioning during times of stress. Basic neurological studies include classical eye-tracking, pupil dilation, and elevated heart rate. These are indicative of advanced brain imaging and signal processing activities (Bradley et al. 2008).


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More sophisticated brain imaging techniques, such as functional magnetic resonance imaging, measure changes in neural activity and show evidence of emotion on risk processing (Mohr et al. 2010). Computed tomography scanning measures differential absorption of x rays and shows evidence of integration of emotional and cognitive neural architecture (Barbey et al. 2012).

Positron emission tomography measures trace amounts of short-lived radioactive material to map functional processes in the brain and shows evidence for influence on experiential processing by emotions (Lane et al. 1998). Electro-encephalography measures electrical activity of the brain by recording from electrodes placed on the scalp and oscillatory brain activity and shows evidence of the influence of risk perceptions on decision making (Billeke et al. 2012). Magneto-encephalography (MEG) measures the magnetic fields produced by electrical activity in the brain cortical region. MEG studies track specific and independent components of risk in decision making and support the hypothesis that specialized brain circuitry underpins risk perception (Symmons et al. 2013). Near infrared spectroscopy measures blood oxygenation in the brain activation of sensory areas and can help track responses to complex emotional stimuli (Plitchta et al. 2011).

The neuroscience data support and can be assembled into a status, certainty, autonomy, relatedness, and fairness (SCARF) model (Rock 2008). The SCARF model is based on the key concept of minimizing threats and maximizing rewards:

- Status relates to perceptions of importance to others;
- Certainty relates to perceptions regarding predicting the future;
- Autonomy relates to perceptions regarding control of events;
- Relatedness relates to perceptions regarding safety with others; and
- Fairness relates to perceptions regarding equitable and fair relations with others.

A number of institutions are collaborating in the developing field of the neuroscience basis of risk and crisis communication. These include the Center for Risk Communication, France’s Institut Supérieur de l'Aéronautique et de l'Espace (aerospace engineering school), the National Aeronautics and Space Administration’s Ames Research Center, and Japan’s Centre for Information and Neural Networks.

**BREAKING BAD NEWS CONCEPTS**

Decades of behavioral and neuroscience research on how people respond to risk information can be organized into the following “concepts” (Peters et al. 1997):

- The Conviction/Compassion/Optimism Concept;
- The Primary/Recency Concept;
- The Mental Noise/Rule of 3 Concept;
- The Negative Dominance Concept;
- The Trust/Benefits/Control Concept;
- The Know/Don’t Know or Know/Do/Go Concept; and
- The Anticipation/Preparation/Practice Concept.

These concepts can help organize one’s thinking about how to connect with a worried and concerned audience.

According to the Conviction/Compassion/Optimism Concept, one needs to present information that communicates conviction, compassion, and optimism to establish trust. Mayor Rudy Giuliani brilliantly performed this effect at the press conference following the attacks in New York and Washington on 11 September 2001. His remarks were brief, and yet he still managed to convey a sense of conviction, compassion, and optimism through his first words: “The number of casualties is greater than we can bear ultimately” (Powell 2007).

The Primacy/Recency Concept covers the concept that stressed people tend to remember what they heard first and last. People tend to forget what was in the middle. When breaking bad news, it is best to present one’s main points either first or last with the least important or most complex or difficult information in the middle.

Mental Noise is a well-recognized phenomenon. During times of stress, people’s mental capacities are typically reduced by up to 80%. Everyone has experienced mental noise. When breaking bad news one must reduce the complexity of one’s communication to the average grade level-4 (AGL-4). If one assumes a general audience has a high school education, then the eighth-grade level would be appropriate. Most risk communication for the general public is aimed at the sixth- to eighth-grade level.

Mental noise also gives rise to the Rule of 3. Normally people can remember seven discrete pieces of information, such as the original seven-digit telephone numbers. During times of stress this is reduced to three, which is why emergency numbers worldwide have three digits, such as “911.” When drafting messages for one’s overarching message and detailed responses for specific questions, it is best to organize these messages or responses in terms of three key messages. In the competition for your “voice” to be heard above others, it has become even more important to speak succinctly and clearly using the Rule of 3 Concept.

The Negative Dominance Concept is where, during times of stress, people tend to focus on the negative over any positive information. One must balance each piece of negative information with at least three positive (1N = 3P). Sales professionals often claim this ratio is more like one in six.

In times of stress, people actively seek out multiple sources of credible information. Access to such information
has been greatly facilitated by the internet and rapid spread through social media. Helpful overarching messages include the concept of Trust/Benefit/Control. The Trust/Benefit/Control Concept is where the first step is to share information that can build trust (e.g., collaboration among trusted sources), the second step is to identify and demonstrate expected benefits, and the third step is intended to give audience stakeholders a sense of control (e.g., by giving them something helpful to do).

The Know/Don’t Know (KDK) Concept as well as the Know/Do/Go (KDG) Concept are often used to address uncertainty. KDK conveys information about what you know, what you don’t know, and what you are doing to find out. The KDG Concept conveys information about what people should know, what they can do, and where they can go for more information. These simple strategies have been demonstrated to increase people’s awareness and retention of messages regarding bad news.

Finally, there is no substitute for the strategic Anticipation/Preparation/Practice Concept. In most settings, people’s concerns and questions can be anticipated. As a result, draft answers can be prepared in advance. Media response plans can be put together.

In all cases, practice does make perfect. Mayor Giuliani, for example, has written extensively and passionately about the need for “relentless preparation” for crises (Giuliani 2002). Unfortunately, preparation is often neglected until times of crises. Any and all efforts to anticipate, prepare, and practice for crises pay huge dividends.

PRINCIPLES AND PRACTICES OF MESSAGE MAPPING

In the recent Ebola and now Zika crises, the Association of State and Territorial Health Officials sponsored the creation of detailed Message Maps (Covello and Hyer 2014; Hyer and Covello 2016). Top questions were prioritized by the 50+ state and territorial health officials. The documents have proven to be highly popular and useful, as evidenced by large numbers of downloads and more accurate media reporting.

Message Maps are used by a large number of public and private sector organizations. Message Mapping is a science-based message development process by which users can:

- anticipate questions of stakeholders (interested, affected, or influential parties) before they are raised;
- decide what questions they want or need to answer and what questions should be answered by other organizations;
- develop responses to stakeholder questions in a clear, concise, and accessible format;
- promote dialogue about messages both inside and outside the organization;
- provide spokespersons with a user-friendly guide to a set of vetted organizational messages;
- ensure the organization has consistent messages; and
- ensure the organization speaks with a single voice or with many voices in harmony.

As such, "Message Maps" are risk communication tools used to help organize complex information and make it easier to express current knowledge. The development process distills information into easily understood messages written at an approximately sixth- to eighth-grade reading level.

Messages are presented initially in no more than three to five short sentences that convey three to five key messages in as few words as possible. The approach is based on surveys showing that lead or front-page media and broadcast stories usually convey only three key messages in less than 9 s for broadcast media or 27 words for print.

Each key message normally has three to five supporting messages. These can be used when and where appropriate to provide context for the issue being mapped.

Message Map example

The Message Map has three key messages shown below in the example as the “shorter answer.” Each key message in the shorter answers has three supporting details shown below each shorter answer in the “longer answer” format below.

Message Map example—smallpox. Here we show an example of a Message Map for smallpox. This is just a model, and the principles can be applied to any question or concern.

Stakeholder: Public.
Question or concern: How contagious is smallpox?
Shorter Answer:
1. Smallpox spreads slowly compared to other diseases.
2. The slow spread of smallpox allows time to find those infected.
3. People infected with smallpox can be vaccinated to prevent illness.

Longer Answer:
1. Smallpox spreads slowly compared to other diseases. People are only infectious when the rash appears; smallpox typically requires hours of face-to-face contact; and there are no smallpox carriers without symptoms.
2. The slow spread of smallpox allows time to find those infected: The time period before smallpox symptoms appear is 10–14 d; resources are available for finding people who may have become infected with smallpox;

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and finding people who have been exposed to smallpox and vaccinating them has proved successful in the past.  

3. People infected with smallpox can be vaccinated to prevent illness: People who have never been vaccinated are the most important to vaccinate; adults who were vaccinated for smallpox as children may still have some immunity; and adequate smallpox vaccine is on hand.  

**Message mapping and radiation.** Smallpox is just an example. Key stakeholder questions regarding radiation exposure might include the following:  

• Who sets standards for radiation exposure?  
• Is the standard for radiation exposure the same as elsewhere?  
• Where are the most serious risks from radiation?  
• When would the public know about risk from any radiation release?  
• Why must the public be exposed to any radiation?  
• How can the public prevent exposure, and what should the public do if exposed?  

More details on Message Mapping to include the 77 questions most frequently asked by the media in a crisis or emergency are available in *Effective Media Communication During Public Health Emergencies: A WHO Handbook* (Hyer and Covello 2007).  

Here is a sample Message Map for radiation.  

**Stakeholder:** Public.  
**Question or Concern:** What should I do if I think I have been contaminated with radiation?  
**Shorter Answer:**  
1. Stay informed.  
2. Remove your clothes.  
3. Wash yourself and your valuables.  

**Longer Answer:**  
1. Stay informed.  
   • Listen to your local Emergency Alert System and public safety officials on radio or television.  
   • Act promptly on the guidance from local public health officials.  
   • Visit [insert relevant website address] for continued updates.  
2. Remove your clothes.  
   • Place the clothing in a plastic bag and seal it.  
   • Place the bag as far away as possible from humans and animals.  
   • Bagged clothing can be examined later to determine if you were contaminated.  
3. Wash yourself and your valuables.  
   • Take a long shower or clean yourself thoroughly using lots of soap and water.  
   • Be careful not to scratch or irritate your skin while washing.  
   • Gently blow your nose and wash out your eyes, ears, and mouth.  
   • Wash valuables and identification that may have been contaminated; wash your hands again.  

For more details including sample Message Maps on radiation, please see *Guidance on Developing Effective Radiological Risk Communication Messages: Effective Message Mapping and Risk Communication with the Public in Nuclear Plant Emergency Planning Zones* (Covello 2011b).  

**Ten principles of message mapping**  
1. Limiting the number of key messages to a maximum of three to five using as few words as possible, ideally no more than 9 s or 27 words to express the necessary information.  
2. Constructing messages that can be easily understood by an adult with a sixth- to eighth-grade education. This can be tested using the “readability” utility in word-processing programs.  
3. Adhering to the “primacy/recency” or “first/last” principle. This principle states that the most important messages should occupy the first and last position in a list.  
4. Citing third parties or sources that would be perceived as credible by the receiving audience.  
5. Providing a preamble to the Message Map that indicates genuine empathy, listening, caring, and compassion—crucial factors in establishing trust in high-concern, high-stress situations.  
6. Developing graphics, visual aids, analogies, and narratives (such as personal stories), which can increase an individual’s ability to hear, understand, and recall a message by more than 50%.  
7. Constructing messages while recognizing the dominant role of negative thinking in high-concern situations. Examples include: avoiding unnecessary, indefensible, or nonproductive uses of absolutes, and of the words “no,” “not,” “never,” “nothing,” and “none;” balancing or countering a negative key message with positive, constructive, or solution-oriented key messages; and providing three or more positive points to counter a single negative point or bad news.  
8. Presenting the full Message Map using the repetitive structure found in the “Tell me, Tell me more, Tell me again model” (the “Triple T Model”): telling people...
the information in summary form (i.e., the three key messages), telling people more (i.e., the supporting information), and telling people again what was told in summary form (i.e., repeat the three key messages).

9. Developing key messages and supporting information that address important risk perception, outrage, and fear factors such as: trust, benefits, control, voluntariness, dread, fairness, reversibility, catastrophic potential, effects on children, morality, origin, and familiarity.

10. Ideally, each message should be able to stand alone for purposes of quotation without reference to other messages in the Map.

Additional details and helpful resources in responding to questions and effective risk and crisis communication are available at www.crisiscommunication.net (2016).

CONCLUSION

Despite the multiple challenges and hazards to individuals and organizations, breaking bad news about radiation risks through effective risk and crisis communication can be learned and done well. Preparation is vital. Such advance planning greatly increases the likelihood that the audience will hear the truth and that one’s effort will contribute positively to mutual interests. It is all too easy to be caught unprepared, especially for short-notice or demanding media interviews.

Message Mapping is a key strategy in effective radiation risk and crisis communication. It will help organize one’s thoughts and key points. In the high-concern, low-trust setting, peoples’ ability to process information is altered. The proper use of Message Mapping helps overcome this obstacle enabling one to connect. One can then inform and calm a worried public, reduce misinformation, garner support, and be heard.

Communicate badly about radiation and one may be perceived as incompetent, uncaring, or dishonest. Communicate well and one can reach more people with a timely, accurate, clear, and credible message.

REFERENCES


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