

Resource Guide

Risk and Crisis Communications

Best Practices for Government Agencies
and Non-Profit Organizations



Booz | Allen | Hamilton

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Introduction

“Effective risk and crisis communication relies on strategies, or best practices, that at first glance appear to be common-sense recommendations. Actually, these best practices are often counter-intuitive. When pressure to present accurate, timely information is high, the tendencies to guard information, over-reassure the public, and deny responsibility often increase. When spokespersons rely on their intuition for constructing and delivering messages, they are bound to make these same type of mistakes.”

— Steven Venette, associate director of the Risk+Crisis Communication Project at the North Dakota State University, in “Special Section Introduction: Best Practices in Risk and Crisis Communication,” *Journal of Applied Communications Research*, 34:3 (2006), pgs. 229-231.

The Concept of Best Practices

Three recent developments have benefitted contemporary guidance on best practices for risk and crisis communication: rapidly growing scientific literature; analysis and consolidation of practitioners' cumulative experiences; and the allocation of significant resources by government agencies and the private sector to improve communication.

Many sources offer practical guidance on developing communication strategies that lay the foundation for successful risk and crisis communication or management while supporting organizational goals. Consensus is growing about which principles increase desirable outcomes, although the prioritization of some recommendations is still being debated.

The most recent sources for best practices incorporate lessons learned from events such as: H1N1 outbreak of 2009; Hurricane Katrina in 2005; the transportation system bombings in London (2005) and Madrid (2004); the tsunami tragedy in 2004; the SARS outbreaks of 2003; the terrorist acts of September 11, 2001; the anthrax episode of 2001; ongoing contamination and safety issues regarding common food products; and periodic local and global infectious disease outbreaks. While missteps, successes, and adaptation during these events strengthened the validity of certain longstanding advice regarding best practices, they also revealed that some guidelines in popular sources had become outdated, unhelpful, or obsolete.

Evolving Principles

In the field of risk and crisis communication and management, the term "best practices" refers to a set of principles and guidance about the process and content of communication. The criteria used in the past to judge legitimate best practices included a high degree of consensus among practitioners and scholars, supportive scientific evidence, generalized values, and specific processes that would enhance effectiveness.

The best practices framework is practice-driven and seeks to blend the experiences of those who implement or engage in risk and crisis communication across a variety of circumstances and populations. However, scientific theories and strong evidence derived from systematic inquiry should also inform best practices.

Moreover, best practices should be considered a work-in-progress because new evidence is forthcoming and lessons learned from real-world events are ongoing. Events can instantly alter communication strategy priorities.

The most useful sources for best practices acknowledge their tentative nature. They caution that many of the principles will be refined as events and evidence dictate and as new or emerging risks present opportunities for learning.

Distinction Between Risk Communication and Crisis Communication

Risk communication is defined as "the exchange of information about health risks caused by environmental, natural, technological, agricultural, or industrial processes, products, or policies" whereas crisis communication is a narrower concept that involves "the exchange of risk-relevant and safety information during an emergency situation."¹ Top scholars in risk and crisis communication emphasize that the context of and goals for communication are different for more routine or longstanding risk events than for crises that have a time urgency and extremely dynamic component.²

Crises are dynamic, unexpected events that involve a significant threat, ongoing uncertainty, and usually greater intensity than longer-term risk situations. Crises require immediate and effective actions to lessen harm. Peter Sandman explains that risk communication deals with what might happen (or has already occurred), whereas crisis communication addresses what is currently happening.³ Moreover, during a crisis, less time than what is prescribed in many models is available for consensus-building, collaborative decision-making, and interactions with potentially affected communities.

¹ Glik, Deborah, "Risk Communication for Public Health Emergencies," *Annual Review of Public Health*, 2007.

² Sellnow, Timothy, Robert Ulmer, Matthew Seeger, and Robert Littlefield, *Effective Risk Communication: A Message Centered Approach*, 2009.

³ Peter Sandman's Web site, www.psandman.com

When considering and planning for a crisis situation, even more emphasis should be placed on those practices that involve:

- Establishing relationships in the pre-crisis period
- Reinforcing and building trust quickly once an event has occurred
- Communicating ongoing uncertainty effectively
- Fostering self-efficacy in a timely fashion
- Rapidly adjusting communication strategies based on feedback about the effectiveness of ongoing communications and good crisis communications principles.

Depending on the intensity of the circumstances during a crisis, decision-making, risk perceptions, and information processing styles are often modified; thus, it is even more important than usual to not only get the information right, but also get the right information into concise, focused messages.

The difference between risk and crisis communication is meaningful and should be kept in mind when reviewing sources for best practices and making distinctions between risk communication and crisis communication. Leading experts are careful to underscore this distinction and its meaning for best practices guidelines.⁴

Many of the best practices sources listed in this guide are relevant to both risk and crisis communication, but some are more crucial to communicating during an imminent, emerging, or ongoing crisis.

Omissions in Contemporary Best Practices Sources

Even the best sources have gaps in recommendations and advice about effective risk and crisis communication. The producers of high-quality best practices models acknowledge these omissions and identify those areas that require more thought and evidence to improve the recommendations.

After an extensive review of these commentaries, recent scientific evidence on successes and failures

of risk and crisis communications, and summaries of lessons learned from recent risk events (primarily in the United States), it is clear that many risk and crisis communications best practices sources currently underemphasize seven important areas:

- The emergence of new technologies and modes of communication (e.g., mobile phones and social media) that have the potential to advance, radically change, or complicate risk and crisis communication planning.
- A “culture-centered” approach.
- Preparedness for dynamic risk incidents in which cascading or unexpected events increase the chances of communication failures or missteps.
- The interconnectedness and interdependence of agencies and partners during a crisis and their influence on effective communication—more often than not, a single voice is unavoidably lacking across agencies or organizations during an event, particularly when information is uncertain, emerging, or contradictory.
- The implications of organizational culture and policies that regularly impede effective communication during a crisis or unexpected event.
- Preparing for unexpected or unplanned events that impact communication or affect the chances of policy failures and recovery from missteps.
- The need for communication best practices that reflect the coordination of efforts to identify, respond to, and recover from risk events (e.g., maximize use of new communication technologies to partner with entities outside a country’s borders and consider possibly contradictory risk messages originating from multiple international sources and received in real time as a crisis is developing).

Experts agree that good communication cannot substitute for bad policies, ineffective decision-making, or inadequate planning in other areas.

⁴ Sellnow, Timothy, Robert Ulmer, Matthew Seeger, and Robert Littlefield, *Effective Risk Communication: A Message Centered Approach*, 2009.

Booz Allen Hamilton, in partnership with Dr. Elaine Vaughn of the University of California at Irvine, developed this guide as a resource for communicators and policy makers in developing and implementing science-based risk communications research, policy, strategies, and practice.

How Sources Were Chosen

Two systematic approaches were used to identify quality sources for inclusion in this guide:

- Interviews with and/or Web site reviews of leading risk and crisis communication experts who have been involved in developing or providing critiques of best practices guidance
- Multiple searches of scientific databases, archives of government documents and reports, and Internet Google searches using key phrases and terms

Expert Interviews and Web Site Reviews

Experts from academia, government, and the private sector were sampled, and several were interviewed to identify and confirm high-quality sources. Additionally, selected individuals were interviewed or their Web sites were reviewed for source recommendations.

Experts responded during a brief telephone interview or via e-mail to three questions about best practices models. Experts' Web sites or recent relevant writings were reviewed for those individuals who could not be interviewed or did not respond in time.

The selected individuals fulfilled at least two of the following criteria:

- Cited most in recent articles, documents, or training curriculum on best practices
- Appointed to prominent state or national advisory boards as an expert on risk communication practices (e.g., service on the new Food and Drug Administration's Advisory Board on Risk Communication)
- Appointed to recent National Academy of Sciences committees involving risk and crisis management or communication

- Cited by government agencies as a main source for preparation of communication best practices materials, seminars, or training
- Serves as a participating scholar with one of the national centers sponsored by the Department of Homeland Security (DHS) that are producing and disseminating current information on best practices
- Identified in transcripts from recent congressional hearings on lessons learned regarding strategic risk communication and response to a significant risk event (e.g., Hurricane Katrina)
- Is an employee of a government public health agency (local, state, or federal, including the Centers for Disease Control and Prevention [CDC]) and is identified as a key figure in planning, designing, or implementing risk and crisis communication strategies

Based on these criteria, 21 individuals were identified. They had developed a national and international reputation on best practices in risk or crisis communication. Of those, 15 eventually provided input (via interviews, e-mail responses, or information from individual Web sites). The sample of 15 included four practicing professionals from public health agencies (including the CDC), and 11 communication experts who currently hold or previously held a position in academia. Government agencies and the private sector frequently consult the latter on risk and crisis communication practices.

Academic Literature

Several extensive searches were conducted of databases containing scientific articles on risk and crisis communication in relevant public health and social science journals, and general searches of two Google databases were conducted on the Internet. The search for scientific evidence on communication best practices was conducted using three large publication databases:

- **The Web of Science.** A multidisciplinary database containing links to articles from more than

10,000 journals in the social sciences, medicine, risk analysis, public health, and other fields related to risk and crisis communication

- **PubMed.** A service of the US National Library of Medicine that contains access to more than 16 million citations from Medline and other life sciences journals
- **Psycinfo.** Contains summaries of and links to journal articles and book chapters in fields including psychology, communication, and sociology that contain discussions of risk and crisis communication

Internet Research on Government and Other Sources

More general searches through Google and Google-Uncle Sam were conducted to identify sources from government documents, reports from the private sector, seminar offerings, and training curricula related to best practices. The same search terms used for the scientific databases were used for these searches.

International Perspectives

Virtually all of the sources summarized in this guide originated in the United States. However, sources from other countries that have dealt with risk and crisis problems that have not occurred within the United States—BSE or Mad Cow Disease, terrorist attacks on subways and other transportation systems, SARS outbreaks, some cases of avian influenza—may also provide valuable lessons learned.

Australia and several countries in Europe, South America, and Africa, as well as international public health and security organizations, have produced best practices recommendations for risk or crisis communication. Although some best practices frameworks used in these countries are heavily

influenced by the CERC framework principles or are based on Vincent Covello's and Peter Sandman's work, some significant departures from the US models are worth noting. The top international sources for best communication practices are included in this guide.

Source Selection Process

The initial interviews with experts and the results of multiple database searches identified more than 1,000 possible sources for inclusion in this guide. After eliminating redundancies, insufficient presentations, and other sources that merely summarized ideas from identified primary sources, 250 articles, Web sites, and documents were extensively reviewed for quality, accessibility, and practicality.

The final stage of the selection process included an examination of each source in light of the expert interviews, a thorough review of recent scientific evidence, and discussions on lessons learned from past risk and crisis communication successes or failures. To qualify for inclusion, a source that presented a best practices perspective also had to be consistent with the recent lessons learned from real-world applications of risk and crisis communication principles. Moreover, sources had to be easily accessible. Sites that were difficult to access—for example, those that charged a fee, required membership in a certain professional group, or were secured sites—were not included. However, the information from such sites was not lost because much of it was available in other documents or on Internet sites.

This extensive review resulted in over 50 high-quality sources (Web sites, publications, and agencies) for best practices in risk and crisis communication that provide the latest information on best practices, lessons learned, and emerging issues.

How to Use this Guide

Sources of best practices should be selected based on an organization or agency's goals. Risk and crisis events are dynamic; therefore, messaging needs to be adapted and updated as the situation changes or worsens. The local context of a risk may require modifying strategies, even if they are based on excellent general principles of risk and crisis communication. In addition, sources may not consistently prioritize best practices in the same way; therefore, several complementary sources should be used.

The guide is divided into five chapters: Introduction; Risk Domains; Specific Populations; Social Media; and Additional Resources. Each chapter is divided into categories that list resources specific to that category.

Risk Domains

“Remember, an organization can compound its problems during an emergency if it has neglected sound crisis and emergency risk communication principles. In a crisis, the right message at the right time is a ‘resource multiplier’—it helps response officials get the job done and it can save lives.”

—Barbara Reynolds, CDC crisis communication specialist, from the podcast, “Crisis and Emergency Risk Communications: Best Practices,” May 14, 2009, available at www2a.cdc.gov/podcasts/player.asp?f=11509



General Principles

From food and water safety incidents and natural disasters to disease outbreaks and industrial accidents, this chapter contains resources for applying best practices to all areas of risk and crisis communication and management.

Best Practices in Crisis Communication: An Expert Panel Process

By Matthew W. Seeger

The author summarizes the results of extensive deliberations by an expert panel, which considered the latest scientific evidence on risk and crisis communication and the perspectives of health and crisis communicators, scholars, and consultants. The panel listed 10 best practices in crisis communication, emphasizing the need for networks and partnerships to achieve effective and credible communication at various stages of a crisis.

Although much of the advice and best practices from this source are quite useful and well supported, the panelists acknowledged some barriers to implementing the 10 best practices, including:

- A need for more specificity in how to implement general principles (e.g., understanding the audience in order to design communications should refer explicitly to risk perceptions, values, and information processing styles affecting interpretation of information)
- Neglect of the role of emotions in influencing response to risk and crisis communication
- Under-emphasis on the difficulty of implementing some best practices
- Neglect of the significant role of cultural values, beliefs, and past experiences as contributors to audience receptivity.

Publication date: August 2006

Seeger, M. "Best Practices in Crisis Communication: An Expert Panel Process," *Journal of Applied Communication Research*, 34:3 (2006): 232-244.

Summary of Best Practices:
www.ncfpd.umn.edu/docs/NCFPDRiskCommBestPractices.pdf

Best Practices in Public Health Risk and Crisis Communication

By Dr. Vincent Covello

In this article appearing in the *Journal of Health Communication*, the author summarizes his set of best practices, which has been used by leading public health organizations (including the Centers for Disease Control and Prevention [CDC] and World Health Organization [WHO]) and applied across a range of risk circumstances. Based on scientific evidence and tested in real-world situations, Covello's best practices focus on common behaviors that communicators should exhibit during a crisis, as well as the mindsets and questions they may encounter from the media and the public. He also offers suggestions for keeping the messaging specific and easy to remember.

Covello briefly touches on other aspects of risk and crisis communication, such as (1) the influence of culture on the interpretation and application of messages; (2) dynamic situations in which there might be a disagreement about the facts or where current, accurate information is not available; and (3) the political context of risk and crisis communications and how it affects the feasibility and effectiveness of some communication strategies employed during a public health emergency.

Publication date: 2003

Covello, Vincent. "Best Practices in Public Health Risk and Crisis Communication," *Journal of Health Communication*, 8:3 (2003): 5-8.

Editor's Note: This article cannot be accessed via the Internet because of copyright restrictions, but can be found through libraries or download services that carry the *Journal of Health Communication*.

Summary of Covello's Best Practices:
www.gchd.us/ReportsAndData/Presentations/PublicHealthWeek2007/Dr_Covello_Risk_Communication_Presentation.pdf

Collaboration and Communication During Emergency Response

Produced by the US Centers for Disease Control and Prevention (CDC)

Aimed at emergency risk communicators, The Risk Communicator presents brief informational articles on lessons learned and evidence-based guidance regarding emergency and risk communication across a variety of crisis or risk incidents. This article in Issue 2 examines crucial collaborations required during a natural disaster between risk communicators and emergency response coordinators—at all levels of government, and between the private sector and public agencies.

Publication date: December 2008

Available at: <http://emergency.cdc.gov/ercn/02/index.asp>

Also see “Social Media and Your Emergency Communication Efforts” under Social Media and New Communication Technologies in the Social Media chapter.

Crisis and Emergency Risk Communication

Developed by the US Centers for Disease Control and Prevention (CDC)

This educational document serves as a crisis and emergency risk communication (CERC) primer for risk communicators and policymakers charged with planning and implementing CERC strategies. It draws on the work of Dr. Peter Sandman, Dr. Vincent Covello, and many other professionals in risk communication, issues management, and crisis and disaster communication, as well as scientific studies and the practical experiences of health communicators at the CDC. It introduces the basics of particular disciplines and covers a number of best practices that are critical to achieving successful public, partner, and stakeholder communication during an emergency situation. It also highlights the dynamic nature of risk communications from the pre-crisis to the recovery stage, and touches on the changing context for communication when a new, uncertain, or unfamiliar threat emerges.

The CERC model is widely used in the United States and internationally (the World Health Organization [WHO] has incorporated some of these principles in its risk communication guidelines).

A recent updated version of the document includes best practices that increase the priority given to the dynamic and uncertain aspects of crisis or emergency events (where ongoing feedback from communities and other partners requires adjustments in communication strategies), and the importance of increasing the self-efficacy of potentially affected populations.

Originally published in 2002

Available at: <http://emergency.cdc.gov/cerc/pdf/CERC-SEPT02.pdf>

See Additional Resources chapter for more CERC-related information.

Crisis Communication: Guidelines for Action

**Planning What to Say When Terrorists,
Epidemics, or Other Emergencies Strike**

By Peter M. Sandman, PhD, and Jody Lanard, MD

Recognized as an example of thought leadership in the risk and crisis communication space, Sandman's work has been incorporated into many best practices models, and is referenced in many best practices training curricula, implementation plans, and frameworks. This series of seminar handouts provides principles for and discussion of risk and crisis communication. The content is divided into four key topics: evaluating a crisis situation; coping with the emotional component; how to involve the public; and communication errors, misimpressions, and half-truths. This information is best applied after the initial stages of a crisis (for example, at the point where blame for the incident has been assigned).

Sandman's unique perspective allows him to anticipate situations in which errors in communication must be addressed in real time, and he provides strategies for doing so. He also applies

his principles to organizational culture, specifically, companies and industries that may face unique challenges, such as a threatened reputation or unusual crisis situation (e.g., the recent peanut butter products contamination).

The Web site also provides discussions of contemporary risk events and the role that communication played in response, resolution, and recovery. Although this Web site does not usually cite the relevant scientific references, many of his best practices can be supported by evidence and the experiences of practitioners.

Publication date: 2004

Available at: www.psandman.com/handouts/AIHA-DVD.htm

Effective Risk Communication:

A Message-Centered Approach

By Timothy L. Sellnow, Robert R. Ulmer, Matthew W. Seeger, and Robert Littlefield

This book provides details on the best practices model that resulted from an expert panel deliberation process (see “Best Practices in Crisis Communication: An Expert Panel Process” in this section). The chapters include an analysis of various case studies (e.g., Hurricane Katrina, E. coli food contamination in natural juice product, cryptosporidium in Milwaukee’s water supplies), and an examination of where communication failed or was successful. The authors use the best practices model to examine communication strategies and decisions. The conclusions about lessons learned and the implications for effective crisis or risk communication could be applied to similar situations in the future.

The book also contains a comprehensive discussion of, and updated perspectives on, the communication needs of culturally diverse populations. The authors present additional views on crisis communications based on their extensive work on organizational responses to crisis management, circumstances

that may threaten a company’s reputation, and ethical considerations in risk communication.

Publication date: 2009

T.L. Sellnow, R.R. Ulmer, M.W. Seeger, and R.S. Littlefield, Effective Risk Communication: Message-Centered Approach. New York: Springer, 2009.

Also see entry under Natural Disasters in this chapter.

Food or Water Safety Incidents

Food and water—two of humankind’s most precious resources. With the globalization of food trade and advancements in food technology, the public concern over food safety is growing. Shortage of clean water is still a daily struggle for too many countries. Many governments and food and water industry officials recognize the need for effective risk communication when a food- or water-related incident occurs. Although risk communication in this industry is still in its infancy, risk communicators and other spokespeople can learn from past experiences.

The following best practices resources provide recommendations and case studies regarding this important topic.

Lessons Learned About Protecting America’s Food Supply: Case Studies in Crisis Communication

Edited by Timothy L. Sellnow and Robert S. Littlefield

Part of the North Dakota State University Risk+Crisis Communication Project, this publication presents case studies of several well-known, food-related contamination incidents. The authors use best practices derived from empirical evidence and previous successful crisis communication or management occurrences to evaluate the communication practices used in each incident, as well as lessons learned in cases where best practices were not applied. The authors also



relay how companies recovered from threats to reputation and difficult crisis management situations through various communication strategies and policy decisions.

The case studies include incidents that occurred in the United States, such as the 1993 E.coli contamination at a popular fast food chain, the nation's largest outbreak of salmonella enteritidis, the Tylenol poisonings in the 1980s.

The publication is written in a style that is useful to practitioners and managers of the food supply.

Publication date: 2005

Available at: www.ncfpd.umn.edu/docs/RC_Lessons_Learned_2005.pdf

National Center for Food Protection and Defense

Funded by DHS and based at the University of Minnesota, the scholars associated with the National Center for Food Protection and Defense (NCFPD) conduct ongoing research on best practices for risk and crisis communication. They take a “farm-to-table view” of the nation's food system, from primary production through transportation and food processing to retail and food service. Findings are presented in the form of publications, presentations, and training modules.

The NCFPD Web site also includes a link to an online risk communication training program, Food Defense Preparedness, Response & Recovery. These training modules focus on the concepts and skills necessary for effective risk communication implementation at every stage of an intentional attack on the food system. Communicators involved in a risk situation (primarily a potentially catastrophic foodborne illness of natural, accidental, or intentional origin) can follow a guide to design a plan and formulate targeted messages that support organizational goals.

The guide and other materials are based on research and activities of the NCFPD, the CDCynergy framework, and the best practices guide summary

by Matthew Seeger (see “Best Practices in Crisis Communication: An Expert Panel Process,” under the General Principles section of this chapter).

Available at: www.ncfpd.umn.edu/research/risk.cfm

Additional Online Training (at FoodInsight.org): www.foodinsight.org/Resources/Detail.aspx?topic=Risk_Communicator_Training_for_Food_Defense_Preparedness_Response_Recovery

National Water Security Risk Communication Symposium US Environmental Protection Agency

Using a case study approach, this report summarizes information presented at the National Water Security Risk Communication Symposium, which was organized by the US Environmental Protection Agency (EPA) in 2004. The symposium focused on risk communication issues related to drinking and waste water systems. Individuals responsible for risk management and crisis communication presented new lessons learned from using current best practices. The report also offers insights and recommendations on planning for future crises or emergencies.

Publication date: 2004

Available at: www.epa.gov/nhsrc/pubs/600c05006.pdf

Also see the Additional Resources chapter for more information on water security risk management best practices.

Risk Communication Center Foodshield.org

Sponsored by the National Center for Food Protection and Defense, and one of the National Centers for Excellence funded by DHS, the Risk Communication Center (RCC) provides access to various podcasts, webinars, and interviews with experts regarding crisis and risk communication as it relates to food safety issues, including food recalls. The organization's Web site content is updated periodically to provide new insights on how general principles of best practices can be applied specifically to threats to food safety. RCC also

focuses on risk and crisis communication with culturally diverse populations.

Available at: www.foodshield.org/education/riskcomm.cfm

Homeland Security, Military, and Defense Domains

Several situations and risk events associated with military or defense activities require effective risk or crisis communication. These situations include deployment activities that involve some level of environmental, combat, or other risks; preventive vaccinations that might raise concerns among troops and their families; training activities that might impact surrounding communities; and unexplained medical symptoms that develop post-deployment. Although general best practices for risk or crisis communication are relevant to and effective in these situations, the application of these principles within a military context may require additional guidance.

Deployment Health Clinical Center Web Site

This Web site offers guidance to clinicians and communicators regarding deployment-related risk communications. The principles are based mostly on Dr. Vincent Covello's models of risk or crisis communication; however, they are framed in terms of health or medical issues in a military health setting (and community settings) when deployment-related risk concerns are relevant beyond the individual patient context.

Available at: www.pdhealth.mil/clinicians/risk_comm.asp#RCHS

Health Risk Communication Tools and Best Practices Guidance US Army Center for Health Promotion and Preventive Medicine

This Web site contains links to abbreviated best practices principles, communication planning tools, and other resources.

General risk communication information from USACHPPM: <http://chppm-www.apgea.army.mil/documents/FACT/39-001-0701.pdf>

Military Risk Communication in a Changing World

This presentation gives an overview of the communication challenges and risk communication issues in the military domain, and includes recommendations within the framework of accepted best practices sources.

Publication date: 2002

Editor's Note: At the time of this writing, this presentation was no longer available on the CHPPM Web site, and the organization was being transitioned to the US Army Public Health Command.

General risk communication information from USACHPPM: <http://chppm-www.apgea.army.mil/documents/FACT/39-001-0701.pdf>

Rebranded CHPPM Web site: <http://phc.amedd.army.mil/home/>

Infectious Disease Outbreaks

Many of the general principles for best practices in risk and crisis communication also apply specifically to infectious disease outbreaks. However, the following resources provide additional considerations.

This section includes resources used in the US and internationally.

Avian Influenza Emergency Risk Communication Guide

Prepared by the Academy for Educational Development (AED) for the USAID Avian Influenza Program

This guide provides practical operational advice about managing the risk of avian influenza, and the crucial role of communication in risk management and mitigation during early and later stages of an avian flu emergency. It provides facts about avian influenza, as well as exercises, checklists, and templates for reasonable messages about self-protection.

Although not explicitly referenced, the principles are based on accepted best practices (foster trust,

admit uncertainties) and scientific evidence. The author(s) refers to practices in other countries or territories that could be useful to local and state public health departments, businesses, and other private sector organizations in the United States, which may need to communicate about the risk of transmission and various vulnerabilities regarding exposure (through food, close human-to-human or animal-to-human contact).

The author(s) also suggests working with an avian influenza emergency risk communication facilitator who is trained in planning and communications when developing a communication plan.

Available at: <http://avianflu.aed.org/docs/avianriskguide.pdf>

Creating a Communication Strategy for Avian/Pandemic Influenza

Pan American Health Organization

Geared toward the practitioner or risk communicator in the public health domain, this document provides best practices for planning, organizing, and implementing a communication strategy in a pandemic flu outbreak. The guidelines stress how good communication practices can increase the likelihood of positive social and economic outcomes. The format is easy to follow, and the information presented is specific to the intended audience.

Publication date: 2005

Available at: www.influenzaresources.org/files/PAHO_CommStrategy_Eng.pdf

Crisis and Emergency Communication: Pandemic Influenza

By Barbara Reynolds, MA

As stated by the author, the purpose of this book is “to provide the reader with vital communication concepts and tools to assist in preparing for and responding to a severe influenza pandemic in the United States. The focus ... is on the possibility of a severe pandemic. Although the concepts do apply to

less intense public health challenges, they may not need to be executed at the same level of intensity.”

Updated in 2007, this book contains information about effective communication before and during a pandemic influenza episode and applies the CERC framework (see “Crisis and Emergency Risk Communication” in this section) to such a situation. The author considers a pandemic’s dynamic and changing nature, and how this influences the demands on the communication process. She describes the likely communication challenges and builds on the CERC model to address them.

In Module 5, the author addresses how to communicate with specific populations, and provides guidance on when messages need to be culturally tailored—advice that is not often given in other best practices guides. The discussion describes the risks and benefits of culturally tailored outreach and communication efforts to different populations during a pandemic.

Publication dates: 2006 (original); 2007 (revised)

Available at: <http://emergency.cdc.gov/cerc/pdf/CERC-PandemicFlu-OCT07.pdf>

Further reading:

US Government Pandemic Flu Web site
www.pandemicflu.gov

Also see entry under *Culturally Diverse Populations and Vulnerable Groups in the Specific Populations chapter.*

HHS Pandemic Influenza Plan: Public Health Communications

US Department of Health and Human Services

This source uses many of the same principles and best practices as the CERC document (see “Crisis and Emergency Risk Communication” in this section), but spells out more detailed and step-by-step communication strategies for the interpandemic and pandemic alert stages.

Available at: www.hhs.gov/pandemicflu/plan/sup10.html

Outbreak Communication: Best Practices for Communicating with the Public During an Outbreak

World Health Organization (WHO)

This report is largely based on principles from the CERC framework (see “Crisis and Emergency Risk Communication” in this section), and also anticipates where risk communicators and planners may encounter difficulties when implementing the best practices advice; for example, building trust relies on counterintuitive actions, such as admitting uncertainty.

Leaders and communicators may be reluctant to carry out such a practice without some persuasion. Moreover, the report directly addresses the important role of political leadership in communication strategies, and the reluctance, in some cases, to follow best practices advice, such as announcing a possible outbreak early on. This document includes practical implementation questions that are not always obvious in US best practices resources. Several chapters offer

examples of communication challenges for recent risk events and provide lessons learned that could benefit US organizations and agencies.

Publication date: 2004

Available at: www.who.int/csr/resources/publications/WHO_CDS_2005_32web.pdf

Quick Reference Guide:

www.who.int/infectious-disease-news/IDdocs/whocds200528/whocds200528en.pdf

Risk Communication During a Pandemic

Flu.gov

As the title suggests, this US government Web site provides links to various resources regarding best practices in risk and crisis communication during an influenza pandemic, and includes guidance on communication planning and outreach.

Available at: www.pandemicflu.gov/news/rcommunication.html

[Editor's Note: Some sources are somewhat dated.]



Industrial, Chemical, or Technological Risks

Elements of an effective risk communication strategy developed for an industrial, chemical, or technological risk event include understanding: (1) how information disseminated from scientists or risk communicators will get translated in the media; (2) the public's potential perception of the risk; and how well public health official will be able to adapt their messages as the event unfolds.

The resources in this section will help risk and crisis communicators and managers prepare an appropriate plan of action for these types of risk events.

OECD Guidance Document on Risk Communication for Chemical Risk Management

Organisation de Coopération et de Développement Economiques (Organization for Economic Cooperation and Development)

The Organization for Economic Cooperation and Development (OECD) is an intergovernmental organization consisting of representatives from 30 industrialized countries in North America, Europe, and the Pacific, as well as the European Commission, who meet to coordinate policies, discuss common issues, and work together to respond to international problems. The organization has published several other works relating to risk management in the environmental and health and safety fields.

This document focuses on chemical risk management. The authors describe the characteristics of incidents involving hazardous chemical agents that may drive the risk perceptions and concerns of potentially affected populations. They draw a distinction between communication during routine risks and communication during more extreme or emergency situations, which is useful for communication planning and implementation. They also provide advice about presenting the type of

formal risk information (quantitative estimates of likelihood and severity of outcomes) associated with extreme events involving chemical substances such as industrial accidents, intentional acts, and natural disasters that release chemical substances into the environment.

In addition, the document makes distinctions among different groups, from individuals to institutional stakeholders, with whom communication may be necessary. This information is rarely presented in US best practices resources.

The complexity of associations between chemical exposures and health outcomes has presented problems for risk communication situations; guidance on this topic is presented in Annex III of the document, which deals with risk situations that are ambiguous, complex, or uncertain.

Regarding the influence of culture on individual and community response to risk or crisis communications, the authors suggest that culture plays a minor role; however, this is inconsistent with existing evidence and information.

Publication date: 2002

Available at: [www.oecd.org/olis/2002doc.nsf/LinkTo/NT00002D5A/\\$FILE/JT00129938.PDF](http://www.oecd.org/olis/2002doc.nsf/LinkTo/NT00002D5A/$FILE/JT00129938.PDF)

US Nuclear Regulatory Commission's Guidelines for Risk Communication

The quick reference guide reflects many of the best practices recommendations supported by scientific evidence and the accumulated experiences of practitioners. It includes rarely seen guidance for communicating technical information to the public (and other non-science partners) using plain and concise language.

Available at: www.nrc.gov/reading-rm/doc-collections/nuregs/brochures/br0318/quick-ref-guide.pdf

Intentional Risk Events (Terrorism, School Violence)

Keeping the public informed during an intentional attack is crucial for minimizing confusion and dispelling rumors. In fact, the messages relayed during first few hours of an event can set the tone for communications disseminated throughout the rest of the event.

The resources in the section have been used in the US and internationally and cover various types of intentional risks and guidance for how to share information to those affected by the event.

Communicating in the First Hours: Initial Communication with the Public During a Potential Terrorism Event

This resource provides examples of brief and extended messages when a biological attack is suspected or confirmed. It is aimed at state and local officials, and is designed for use with CERC (see “Crisis and Emergency Risk Communication” in this section) or other best practices models to place the disturbing information within some context.

Additional information for such messages should be guided by the principles of crisis communication from the general sources in this guide, such as the CERC guidelines or Sandman’s insights about communication under conditions of strong emotion.

Modifications might include more expression of empathy, more reference to the agency’s monitoring of the situation, greater emphasis on actions that might increase self-efficacy, or greater communication of compassion. Such modifications would be important in the event of a deliberate release of a harmful or deadly bacterial or viral agent because of the severity of exposure consequences and the greater likelihood of intense emotion.

On the other hand, the content of the messages on this Web site is appropriate because messages do acknowledge uncertainty, present disturbing information in plain and clear language, give

concise instructions about self-protective behaviors, and convey a sense of honesty and trustworthiness. These proven, effective principles of communication are more appropriate in the context of individuals’ decision-making under intense emotional circumstances.

Available at: www.bt.cdc.gov/firsthours/

Fact Sheets on Terrorist Attacks National Academy of Engineering of the National Academies

Written in layman’s terms for reporters and public information officers, and based on the Academies’ publications and member expertise, these fact sheets provide objective information regarding the effects of biological, chemical, nuclear, and radiological agents that could be used in a terrorist attack. Communicators and risk managers will find them useful in understanding how the media chooses to use (or not use) objective information about a harmful agent associated with terrorism.

Available at: www.nae.edu/nae/pubundcom.nsf/weblinks/CGOZ-642P3W?OpenDocument

Also see entry under *News Media and Journalists in the Specific Populations* chapter.

Psychological First Aid for Students and Teachers: Listen, Protect, Connect—Model & Teach

US Department of Education—Readiness and Emergency Management for Schools (REMS) Technical Assistance Center

Published in the newsletter *Helpful Hints for School Emergency Management*, this article provides effective communication strategies for students, families, and teachers in the event of an intentional act of mass casualty violence (e.g., school shooting) or a natural disaster. The theme centers on techniques for administering psychological first aid after such a disaster. The recommendations are consistent with recent scientific evidence regarding psychological reactions after a traumatic event

involving multiple casualties or a highly disturbing crisis and the actions to mitigate negative effects.

Publication date: 2008

Available at: http://rems.ed.gov/docs/HH_Vol3Issue3.pdf

Report of the 7 July Review Committee (2005 London Bombings)

Prepared by the Greater London Authority

This report provides a detailed account of the multiple-site and nearly simultaneous attacks on the London transportation system on July 7, 2005. The almost immediate communication challenges for first responders and government risk communicators are presented

in the hour-by-hour account of problems with communication plans and implementation. The report provides lessons learned that US agencies and organizations could draw from in the event of a similar attack or other multiple-site terrorism episode (some of the risk and crisis communication difficulties experienced in London were not thoroughly anticipated in some best practices models originating in the United States).

Publication date: June 2006

Available at: <http://legacy.london.gov.uk/assembly/reports/7july/report.pdf>

Also see the Additional Resources chapter for links to two follow-up reports.

Natural Disasters

Circumstances surrounding natural disasters often require communications that cannot easily be labeled as risk communications (in the traditional sense) or crisis communications. The need and ability to warn about a possible natural disaster or emergency requires an emphasis on slightly different best practices. Nonetheless, warnings or alerts should reflect the general principles of best practices such as honesty, transparency, pre-crisis preparation, self-efficacy promotion, and acknowledgment of uncertainty.

Effective Risk Communication: A Message-Centered Approach

**By Timothy L. Sellnow, Robert R. Ulmer,
Matthew W. Seeger, and Robert Littlefield**

This book by Sellnow et al. presents a case study analysis of crisis communication needs during a natural disaster. The authors devote one chapter to examining the communication lessons learned from Hurricane Katrina from the perspective of best practices.

Publication date: 2009

T.L. Sellnow, R.R. Ulmer, M.W. Seeger, and R.S. Littlefield, Effective Risk Communication: Message-Centered Approach. New York: Springer, 2009.

Also see entry in the General Principles section of this chapter.

Emergency Communication Challenges in Response to Hurricane Katrina: Lessons Learned from the CDC

**By Marsha L. Vanderford, Teresa Nastoff, Jana L. Telfer,
and Sandra E. Bonzo**

This article summarizes lessons learned from the communication failures during Hurricane Katrina and presents recommendations for crisis communication in future natural disasters that affect significant numbers of communities and the well-being of difficult-to-access populations.

Publication date: 2007

M.L. Vanderford, T. Nastoff, J.L. Telfer, and S.E. Bonzo. "Emergency Communication Challenges in Response to Hurricane Katrina: Lessons Learned from the Centers for Disease Control and Prevention," Journal of Applied Communication Research, 35:1 (2007): 9-25.

Emergency Communications Quarterly US Department of Homeland Security, Office of Communications

This newsletter contains brief articles on lessons learned and successes in communication from recent events. It promotes communication activities of government officials and first

responders during natural disasters, intentional acts, or specific acts of terrorism.

Articles also feature the latest developments in efforts to update and improve national communications plans for threats to homeland security.

The Winter 2009 issue summarizes communication issues that arose during severe flooding in the Midwest during 2008.

Publication date: Winter 2009

Available at: www.safecomprogram.gov/SAFECOM/library/newsletters/1447_emergencycommunications.htm

Public Warnings for Protective Action
Presentation to the National Center for the Study
of Terrorism and Responses to Terrorism
By Dennis S. Mileti

Dennis S. Mileti is a professor emeritus at the University of Colorado at Boulder, and a faculty research associate at the Institute of Behavioral Sciences on UC-Boulder's campus. He specializes in issues related to warning and alert communications that are disseminated during natural and man-made disasters.

His warning communications model has been used by various government agencies, and is based on decades of scientific studies, cumulative experiences of disaster management officials, and lessons learned from such catastrophic events as Category 4 and 5 hurricanes, major flooding episodes, tsunamis, significant wildfires, earthquakes, and the terrorist bombings of September 11, 2001. He is currently working on a soon-to-be-released DHS document entitled, "Warning America."

Available at: www.orau.gov/dhssummit/2007/Presentations/Mileti.pdf

Further reading:

Mileti, Dennis, "Factors Related to Flood Warning Response," 1995.

Available at: www.engr.colostate.edu/~jsalas/us-italy/papers/46mileti.pdf

Recent Presentation:

"Risk Communications and Public Warnings," (essential elements and myths of warnings) presented at the Homeland Security S&T Stakeholders Conference West in 2008, www.dtic.mil/ndia/2008hls/Breakouts/511CMonday/TS4DHSBRIEFOUTMILETI.pdf



Specific Populations

“A well-prepared leader will have communication plans and resources in place to help minimize the number of decisions about communications that must be made in the moment. We can predict both the types of disasters our communications face, and we can predict the questions the public will have during a disaster.”

—From *Crisis and Emergency Risk Communication: By Leaders for Leaders*, **Centers for Disease Control and Prevention**



General Principles

As a risk communicator or public official, you must be comfortable sharing information with many groups—first responders/emergency personnel, community leaders, and various groups within the community.

The resources in this chapter provide guidance on how to ensure that all groups receive the same information at the same time during a risk or crisis event.

Culturally Diverse Populations and Vulnerable Groups

Cultural and social perspectives are often inadequately integrated into communication plans—and this is one of the largest gaps in most current crisis and risk communication best practices models. Although most models acknowledge the importance of removing social and cultural barriers to achieve effective communication during a crisis, recommendations for doing so are sometimes missing or underemphasized.

Building trust is an essential best practice across groups, but may be more difficult to do in those populations with lower levels of trust in government agencies. To ensure you address this issue when developing a crisis communication plan, ask yourself: When does cultural background and

perspective, or life circumstances, matter to the risk and crisis communication process? How should these considerations modify planning and implementation?

Your answers should be based on general communication best practices models and supplemented by sound practices that accommodate socio-cultural variability in values, decision-making, behavioral tendencies, trust-building, past experiences, and life circumstances that influence how communities may respond to communications.

Recent evidence suggests that most of the principles associated with general best practices are also relevant across diverse groups, and once a risk or crisis event has begun, it may not be appropriate—or could even be harmful—to disseminate different messages to different groups. The most appropriate time to address the cultural diversity issue may be the pre-crisis period (to build trust). When developing or updating your communication plan, be sure to conduct extensive pre-crisis planning that provides insights about the communication needs, strengths, beliefs, and vulnerabilities of particular populations.

The resources in this section contain best practices that will help you add this important dimension to your communication plan.



Analysis of Risk Communication Strategies and Approaches with At-Risk Populations to Enhance Emergency Preparedness, Response, and Recovery

Rand Corporation

This report identifies the gaps in current communication plans regarding at-risk populations. It also offers some innovative solutions for reaching and communicating with these groups during the pre-crisis period, as well as during an actual event.

Publication date: December 2008

Available at: http://rand.org/pubs/working_papers/2009/RAND_WR598.pdf

At-Risk Populations and Pandemic Influenza: Planning Guidance for State, Territorial, Tribal, and Local Health Departments

Association of State and Territorial Health Officials (ASTHO)

Chapter 3 of this document provides guidance on communicating with at-risk populations (those most vulnerable to severe outcomes) during a pandemic influenza episode.

Even though the advice is stated in terms of pandemic influenza, the principles also apply to a host of public health crises or risk situations. The recommended practices are consistent with the latest scientific evidence, as well as analyses of previous crisis and risk communication shortcomings and successes in these populations.

Publication date: June 2008

Available at: www.astho.org/Programs/Infectious-Disease/At-Risk-Populations/At-Risk-Population-Planning-Guidance/

Building Liaisons with Latino Communities Southern Center for Communication, Health, and Poverty

Produced for public health information officers and emergency/risk communicators, this series of video webcasts presents best practices and insights regarding communication with Latino/Hispanic communities during a significant public health crisis or risk event. The webcasts review important information not widely disseminated about cross-

cultural communication, cultural values, and communication, and even guidance for using translators and interpreters on health issues.

Available at: http://southerncenter.uga.edu/projectcores/public/webcast_files/publiccorewebcasts.htm#

Crisis and Emergency Risk Communication: Pandemic Influenza

By Barbara Reynolds, MA

Module 5, “Reaching Special Populations,” addresses the point during a crisis when cultural background affects the communication process and how communicators and planners should modify general strategies to accommodate cultural diversity in planning and implementation.

Publication dates: August 2006 (original); October 2007 (revised)

Available at: <http://emergency.cdc.gov/cerc/pdf/CERC-PandemicFlu-OCT07.pdf>

Also see entry under Infectious Disease Outbreaks in the Risk Domains chapter.

Crisis and Emergency Risk Communication in a Pandemic: A Model for Building Capacity and Resilience of Minority Communities

By Sandra Crouse Quinn, PhD

This excellent article presents specific best practices to engage members of minority communities in the crisis or risk communication planning process. The article uses the CERC framework to suggest activities (particularly during the pre-crisis period) that can help build a foundation of trust and credibility and increase the capacity for effective risk management in minority communities during an emergency or crisis situation. Recommendations are specific, practical, and consistent with recent scientific evidence.

Publication date: 2008

Quinn, Sandra Crouse. “Crisis and Emergency Communication in a Pandemic: A Model for Building Capacity and Resilience in Minority Communities,” Health Promotion and Practice, 9:4 (2008): 18S–25S.

**National Resource Center on
Advancing Emergency Preparedness
for Culturally Diverse Communities**
Center for Health Equality, Drexel University
School of Public Health

Supported by the US Health and Human Services Office of Minority Health, this Web site has links to many resources that provide information about risk and crisis communication best practices within a variety of ethnic and cultural groups in the United States. In addition to links to publications and articles that offer guidance, the site provides links to news stories that covered how certain disaster or crisis response plans affected minority populations, as well as links to papers that include new insights for communicating to these populations.

Available at: www.diversitypreparedness.org/

Further reading:

"Averting Disaster: What the California Wildfires Can Teach Us About Reaching Latinos in Times of Crisis,"
www.nclr.org/content/publications/download/54559

First Responders

Risk and crisis communication best practices sources for first responders primarily focus on operability and interoperability issues related to communication technologies and role performance during a significant or extreme risk event. Prioritized communication objectives for this population include: (1) maintaining the continuity of communications among first responders during a disaster that has threatened or destroyed standard modes of communicating; (2) coordinating communication efforts across multiple sectors and jurisdictions; (3) protecting first responders' and affected populations' lives; (4) minimizing long-term psychological consequences of crisis events; and (5) supporting the role performance of first responders under difficult circumstances.

The DHS SAFECOM Communications Program

This Web site offers guidance and several tools related to the continuity and sufficiency of interoperability of wireless communication systems

for local, tribal, state, and federal agencies. Updated information on communications related to emergency and crisis response can be found in the program's newsletter, *Emergency Communications Quarterly*.

Available at: www.safecomprogram.gov/SAFECOM/

Emergency Communications Quarterly:

<http://www.safecomprogram.gov/SAFECOM/library/newsletters/>

Human Resources for Crisis Communication (Module 10)

Prepared by the Centers for Disease
Control and Prevention

The information in this module of the Crisis and Emergency Risk Communication (CERC) training program offers evidence-supported recommendations for communicators (and other first responders) who are involved in the crisis response plan. The author(s) discuss the need to support first responders and to pay attention to their emotional and physical well-being.

Publication date: 2002

Available at: <http://emergency.cdc.gov/cerc/pdf/CERC-SEPT02.pdf>

National Emergency Communications Plan

Developed by the US Department
of Homeland Security

Aimed at first responders, this document presents the plan's goals, as well as a discussion of communication operability and interoperability issues. It focuses on the technical aspects of emergency or crisis communication, and only touches on the actual communication process. The plan also includes responses to problems in communication systems that were exposed by Hurricane Katrina and other incidents.

Publication date: 2008

Available at: www.safecomprogram.gov/NR/rdonlyres/C03BE05F-7460-4A92-A4E9-1FAD951506E1/0/NationalEmergencyCommunicationsPlan_Aug08_v2.pdf

Leadership During a Crisis or Emergency Event

As the acting spokesperson during a risk or crisis event, you need to be able to communicate clearly and honestly to multiple groups/communities to minimize confusion and panic, gauge the psychological aspects during and after an event, and make tough decisions on how best to respond to a dynamic situation.

These resources will give you the knowledge and tools to help you avoid common mistakes as you develop and update your risk and crisis communication plan.

Crisis and Emergency Risk Communication: By Leaders for Leaders

By Barbara Reynolds, MA

This publication is an abridged version of the HHS/CDC *Crisis and Emergency Risk Communication* course book by CDC Crisis Communication Specialist Barbara Reynolds; it also includes information presented during her course lectures.

The general principles discussed are relevant for any risk communicator or leader and can be applied to any real-world situation. However, because the public and media have unique expectations of leaders during a crisis, the author also presents specific insights about failures and successes experienced by those who have been involved in significant crises or disaster events. The discussion is grounded firmly in scientific evidence and first-hand experiences; the best practices are presented clearly and concisely and take into account the public's psychological perspective and decision-making strategies during an emergency.

Key topics include:

- Psychological aspects of communicating during a crisis, including response plan do's and don'ts

- What communities want and expect from leaders during a crisis
- How to build and maintain trust
- Assuming the role of spokesperson
- Working with the media (including checklists and assessments)
- Pros and cons of social media networks

The publication also provides background information about how and why affected populations and other groups respond to a leader's particular crisis communications.

Available at: <http://emergency.cdc.gov/cerc/pdf/leaders.pdf>

Crisis Emergency Risk Communication Package—full textbook with CD-ROM: <http://bookstore.phf.org/>

Also see entry under *News Media and Journalists* in this chapter.

Crisis Communications and Corporate Leadership

By Kathy Bloomgarden, for "The Conversation" blog, *Harvard Business Review*

This brief column from the Harvard School of Business offers crisis communication advice to one corporation, American Airlines, about events that could damage a corporation's reputation and viability. Despite its length, this column incorporates lessons learned from events that threatened public trust and confidence because of a risk and safety issue, such as the Tylenol tampering incident of the 1980s and the more recent contamination of a natural juice drink associated with the company Odwalla.

Publication date: April 17, 2008

Available at: http://blogs.harvardbusiness.org/cs/2008/04/crisis_communications_and_amer.html

Crisis Management and Communications

By W. Timothy Coombs, PhD

This column by a leading scholar for the Institute of Public Relations presents guidance for corporate leaders, senior officials, crisis managers, and risk communicators. The author considers three periods in which effective communication planning and implementation is necessary: pre-crisis, crisis response, and post-crisis. Although the author includes important principles such as how a company should modify its Web site during a crisis), this document is best viewed as a supplement to general best practices guidelines.

Publication date: October 30, 2007

Available at: www.instituteforpr.org/essential_knowledge/detail/crisis_management_and_communications/

Write a Crisis Communication Plan

Ready Business, US Department of Homeland Security

This DHS Web site offers best practices and advice for employers and business leaders regarding communication preparedness for extreme events or crisis situations. It provides guidance on how an organization should communicate with employees, local authorities, or customers after an emergency or disaster has occurred. The principles cover several crucial domains, including business continuity, safety of employees, and protecting investments and the company's reputation.

For businesses, planning for a crisis is crucial, and adopting a proactive versus reactive perspective increases effectiveness during a risk event. The guidance from this source should be used in combination with one of the best practices documents that presents general principles of crisis and risk communication. Priority goals for businesses in a crisis situation can be supported by general good practices of crisis and emergency risk communication (e.g., Be first. Be right. Be credible.).

Available at: www.ready.gov/business/talk/crisisplan.html

News Media and Journalists

Accurate, timely, and credible messaging, delivered by risk communicators who are perceived as trustworthy, are key aspects of a successful risk and crisis communication plan. Knowing how, when, and where to deliver the message may be the difference between keeping the public safe and inadvertently making them vulnerable to health risks caused by an emergency or crisis event.

This section lists resources that will help public health officials and other risk communicators develop flexible communication plans that can help prepare them for the expected and the unexpected when communicating to and with the media.

Crisis and Emergency Risk Communication: By Leaders for Leaders

By Barbara Reynolds, MA

This publication is an abridged version of the HHS/CDC *Crisis and Emergency Risk Communication* course book by CDC Crisis Communication Specialist Barbara Reynolds; it also includes information presented during her course lectures.

The author devotes several chapters on how to work successfully with the media during a crisis or disaster situation, including how to conduct a successful press conference and the communicator's role as spokesperson during a crisis event.

Available at: <http://emergency.cdc.gov/cerc/pdf/leaders.pdf>

Crisis Emergency Risk Communication Package—full textbook with CD-ROM: <http://bookstore.phf.org/>

*Also see entry under *Leadership During a Crisis or Emergency Event* in this chapter.*

Effective Media Communication During Public Health Emergencies

By Randall N. Hyer, MD, PhD, MPH and
Vincent T. Covello, PhD

Produced by the World Health Organization (WHO), this handbook outlines detailed strategies for maintaining effective interaction with the media during a crisis or emergency situation. The information is presented as a seven-step process to help public health officials and other response managers develop and implement a proactive communication plan.

The authors characterize the media as a potential ally that can help disseminate crucial information to the public during a crisis, and assist in achieving primary objectives of communication—including instructing, informing, and motivating self-protective behavior; dispelling rumors; and fostering trust in government agencies.

Publication date: 2005

Available at: www.who.int/csr/resources/publications/WHO%20MEDIA%20HANDBOOK.pdf

Field Guide (shorter version): www.who.int/csr/resources/publications/WHO%20MEDIA%20FIELD%20GUIDE.pdf

Fact Sheets on Terrorist Attacks

National Academy of Engineering
of the National Academies

See entry under Intentional Risk Events (Terrorism, School Violence) in the Risk Domains chapter.

Terrorism and Other Public Health Emergencies: A Reference Guide for Media

US Department of Health & Human Services

Chapter 11 of this document, “Risk Communications During a Terrorist Attack or Other Public Health Emergency,” presents key messages that DHS will disseminate during a terrorist attack, and offers examples of effective wording that has been used for past incidents. The communications and messages presented are examples of how to follow the best practices framework of CERC and other current best practices resources.

Available at: www.hhs.gov/disasters/press/newsroom/mediaguide/11.pdf

*Rest of Media Guide Chapters:
www.hhs.gov/disasters/press/newsroom/mediaguide/media.html*



Social Media

“From cell phones to YouTube, new and exciting innovations in technology benefit the field of risk communication. Not only are they changing the landscape for information sharing, they also are influencing how communicators should plan for emergency situations.... The value of social media in emergency communication became apparent in the aftermath of the April 2007 tragic school shootings at Virginia Tech University.”

— From “**Social Media and Your Emergency Communication Efforts**,”
The Risk Communicator, 1 (2008)



Rapidly Developing Concepts of Risk and Crisis Communication Best Practices

If we have learned one thing about the field of risk and crisis communication, it's that best practices evolve with every incident. New lessons are learned (Hurricane Katrina in 2005, terrorist attacks in Mumbai, India, in 2008), new strategies are adapted, and, more recently, new technologies are being used—by the media and the public—to share information.

One of the biggest changes is the ever-growing access to mobile communication devices, which has given average citizens the ability to document and disseminate—in real time—the ongoing effects of natural disasters, terrorist attacks, or industrial accidents. Additionally, the use of social networking sites (such as Twitter, Facebook, YouTube), blogs, and unofficial Web sites are enhancing the use of mobile devices.

Not only do these new communication channels provide opportunities to reshape and expand how official communications occur (information-sharing

through community response grid approaches), but they also highlight difficulties in controlling message content, rumors, inaccurate information, and trust in government communicators. As a result, some government agencies involved in risk management have already added social media to their communication plans (e.g., blog and YouTube sites for the CDC).

As a risk communicator, it's important to recognize emerging trends, determine which trends to incorporate into your plan, and evaluate the results when the crisis is over.

The Effects of Rapid Information Sharing on Risk and Crisis Communication

New technologies often breed new opportunities for improving best practices. The advent of social networking and text messaging has created new areas of study—such as community response grids and crisis informatics—that could help risk communicators improve their communication plans



and keep pace with how their audiences communicate during a crisis event.

The following resources discuss these new areas of study and offer insights on how they can be used to collect, analyze, and disseminate accurate information in future risk or crisis events.

Community Response Grids: Using Information Technology to Help Communities Respond to Bioterror Emergencies

By Paul T. Jaeger, Kenneth R. Fleischmann, Jennifer Preece, Ben Shneiderman, Philip Fei Wu, and Yan Qu

The authors explain in detail how Internet and mobile communication technologies can enable individuals to report information to emergency responders and public health officials during a large-scale crisis, and strengthen risk management partnerships between the community and responders. This is a good introduction to possible multiple uses of community response grids for communication and risk management.

Publication date: 2007

Paul T. Jaeger, Kenneth R. Fleischmann, Jennifer Preece, Ben Shneiderman, Philip Fei Wu, Yan Qu. "Community Response Grids: Using Information Technology to Help Communities Respond to Bioterror Emergencies," Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science. December 2007, 5(4): 335-346. doi:10.1089/bsp.2007.0034.

Social Networking: Crisis Communication

By Lea Winerman

This brief article on crisis communication and social networking via new communication technologies considers how the creation of official community response grids could create constantly updated maps of a risk situation. Communication would be interactive and flowing in both directions from officials to the public and from the public to risk managers in real time—an innovative paradigm for crisis communication.

Available at: www.nature.com/news/2009/090121/full/457376a.html

Social Media and New Communication Technologies

Scholars, risk communicators, homeland security officials, emergency management personnel, and other observers recognize the prominent, multiple roles of social media in a variety of recent crisis and disaster situations. Recent crisis events illustrate the need for flexibility and open-mindedness when developing a risk and crisis communication plan.

- **Virginia Tech University Shooting (2007).** Through Facebook messages posted by students during and after the shooting, all 32 victims had been identified a full day before traditional journalistic sources had provided a list.
- **California Wildfires (2007).** Residents with camera and video capabilities on their cell phones were able to report on the fires' paths even before first responders could reach the disaster site.
- **Mumbai Terrorist Attacks (2008).** Government risk communicators and the mainstream media had trouble competing with the immediate stories and eyewitness accounts transmitted via social media networks. These channels allowed instant updates, ongoing clarification of the attacks, and almost immediate reporting of casualties.

In light of recent events, risk and communication experts are starting to focus on ways to systematically incorporate this technology into risk and crisis communication, and are determining which best practices would enhance the goals of communication in an emergency situation.

The authors of the following resources have considered the potential significance of these technologies for the risk and crisis communication process and offer suggestions on adding related best practices to your communication plan.

The Future Is Now: Mobile Technology and Public Health

By Anant Shah

This article in *P.H.: The Yale Journal of Public Health* discusses the possibilities for text messaging as a way to disseminate information about an emerging risk or health situation, even among the poorest developing countries (focuses on two projects in Kenya). The author explains why cell phones have “dwarfed the Internet” across Kenya, and identifies this trend as a potential solution for improving public health communication and early disease detection and surveillance in that country and other countries facing similar public health hardships.

Publication date: Winter 2007

Available at: www.cdc.gov/news/2007/03/images/mobiletech.pdf

Online Social Media in Crisis Events

By Leysia Palen

This brief article in *EDUCAUSE Quarterly* reviews how communication unfolded via social media channels during recent significant crisis events and changed the understanding and meaning of public participation during an emerging risk incident (e.g., Virginia Tech shootings, Southern California wildfires). The author reasons how emergency risk management and communication policies may change as a result of sharing information in real time.

Publication date: 2008

Available at: www.educause.edu/EDUCAUSE+Quarterly/EDUCAUSEQuarterlyMagazineVolum/OnlineSocialMediaInCrisisEvent/163107

Social Media and Your Emergency Communication Efforts

Produced by the US Centers for Disease Control and Prevention (CDC)

Aimed at emergency risk communicators, *The Risk Communicator* newsletter presents brief articles on lessons learned and evidence-based guidance regarding emergency and risk communication across

a variety of crisis or risk incidents. Issue 1 includes an article that reviews the literature on recent developments in the use of social media, and explores how this new way of networking is of value to emergency communication efforts.

Publication date: August 2008

Available at: <http://emergency.cdc.gov/ercn/01/RiskCommunicatorIssue1Index.asp>

Also see “Collaboration and Communication During Emergency Response” under the General Principles section of the Risk Domains chapter.

Social Media at CDC—Social Media Tools for Consumers and Partners Centers for Disease Control and Prevention (CDC)

This CDC micro site provides social media tools and guidelines for collaborating, sharing information, and interacting during an emerging risk or crisis event. You can also access updated information via CDC’s social media sites.

Available at: www.cdc.gov/socialmedia/

View podcasts (or read transcripts): www2a.cdc.gov/podcasts/player.asp?f=10572

Social Media’s New Role in Emergency Management

By Sara Prentice and Ethan Huffman

This article identifies and reviews different types of social media and possible ways in which social media communication can improve emergency management. The authors consider how government agencies could begin to incorporate social media in communication plans. The article provides a good overview of the implications of social media for risk management and communication planning.

Publication date: 2008

Available at: www.inl.gov/technicalpublications/Documents/3931947.pdf



Social Media

Additional Resources

“People seem to be able to tolerate you being wrong if you’re honest about why you were wrong and what you were wrong about and what you’re doing to correct it. But if you’re ever perceived as being a dishonest broker of information, I think it’s just about impossible to recover from it.”

— Dr. Julie Gerderding, MD, former director of the Centers of Disease Control and Prevention (CDC), during the SARS outbreak of 2003. Quotation is from *Crisis and Emergency Risk Communication: By Leaders for Leaders*, published by the CDC.



Stay Up to Date with Developing Information Regarding Best Practices

The following sources are frequently updated with materials that reflect the latest developments in best practices for risk and crisis communication. These sources offer discussions or lessons learned from recent or ongoing significant risk and crisis events.

Some Internet sites of professional organizations (e.g., Society for Risk Analysis, the National Communication Association) or government agencies are not included, even if they offer information on or links to reasonable best practices for risk and crisis communication. This section focuses, instead, on sites that have a relatively short lag time between a risk or crisis communication development of significance and relevant information posted on a site. These sources are updated frequently as dictated by new developments or discoveries.

Crisis and Emergency Risk Communication (CERC)

CERC Framework CD-ROM

www.orau.gov/cdcynergy/

Online CERC Course

<http://emergency.cdc.gov/cerc/CERConline/index2.html>

Online Training Developed by Barbara Reynolds

<http://miophp.train.org/cerc/index.html>

Updated Summary of CERC Main Principles

Shari Veil, Barbara Reynolds, Timothy L. Sellnow, and Matthew W. Seeger. "CERC as a theoretical framework for research and practice," *Health Promotion Practice*, 9: (2008): 26S–34S.

Barbara Reynolds and Matthew W. Seeger. "Crisis and emergency risk communication as an integrative model," *Journal of Health Communication*, 10: (2005): 43–55. [Editor's Note: An easy-to-read graphic of a working model of the CERC framework can be found in Table 2.]

Government Agency Web Sites

CDC/CERC

<http://emergency.cdc.gov/cerc/bestpractices.asp>

Ready.gov

www.ready.gov

Flu.gov

www.pandemicflu.gov/news/rcommunication.html

Lessons Learned from the London Bombings in 2005

Follow-up reports to the initial findings, including risk and crisis communication recommendations.

Report of the 7 July Review Committee: Volume 2: Views and information from organisations

This report examines interoperability and technological failures in communication systems.

Report of the 7 July Review Committee: Volume 3: Views and information from individuals

Many of these best practices strategies in this report deal with the actual operation of physical communication systems, and address the importance of disseminating information quickly and meeting the public's communication needs at the beginning of a risk event.

Both reports available at:

www.london.gov.uk/who-runs-london/the-london-assembly/publications/safety-policing/report-7-july-review-committee-0

Emergency Preparedness and Response

US Centers for Disease Control and Prevention Microsite

This site includes links to information on dealing with specific hazards, such as bioterrorism, mass casualties, and natural disasters.

www.emergency.cdc.gov

Media Preparedness

77 Questions Commonly Asked by Journalists During a Crisis

By Vincent Covello

This list of questions will help agencies and risk managers prepare communication plans and anticipate media inquiries. Included are questions relating to the top three areas that the media want to know about an emergency or crisis: What happened? What caused it to happen? What does it mean?

www.dshs.state.tx.us/riskcomm/documents/77_Questions.pdf

Online Newsletters

SAFECOM Newsletters (DHS)

Established by the Office of Management and Budget, SAFECOM is a communications program that provides research, development, testing and evaluation, guidance, tools, and templates on communications-related issues, with the goal of improving interoperable wireless communications during a crisis event.

The organization's Web site has links to various newsletters that cover emergency communications and interoperability technology.

www.safecomprogram.gov/SAFECOM/library/newsletters/

The Risk Communicator (CDC)

This newsletter provides information and resources to help emergency risk communicators prepare and effectively respond in the event of a crisis.

<http://emergency.cdc.gov/ercn/>

Risk Communication Centers and Policy Institutes

Center for Biosecurity at the University of Pittsburgh Medical Center

Posts recent congressional testimony, reports, and papers on crisis or risk communication issues.

www.upmc-biosecurity.org/

Johns Hopkins Preparedness and Emergency Response Research Center

Conducts research on the mental and behavioral aspects of public health systems.

www.jhsph.edu/preparedness/

National Center for Food Protection and Defense (DHS Center of Excellence)

A multidisciplinary research consortium addressing the vulnerability of the nation's food system.

www.ncfpd.umn.edu/

National Resource Center on Advancing Preparedness for Culturally Diverse Communities

Offers research, information, and training on emergency response preparedness as it relates to diverse populations.

www.diversitypreparedness.org/Topic/20/topicId__15765/

Rand Corporation

Offers new reports on risk and crisis communication.

<http://www.rand.org/pubs/new/>

Thought Leaders

Dr. Vincent Covello

Founder and director of the Center for Risk Communication, which researches and develops advanced communication methods and offers training in many areas of risk communication.

www.centerforriskcommunication.com/staff.htm

Dr. Dennis S. Mileti

Professor Emeritus at the University of Colorado at Boulder; member of the Department of Homeland Security's National Social Science Research Center on Terrorism; and vice chair of the California Seismic Safety Commission. Founder and co-editor-in-chief of the journal *Natural Hazards Review*. Authored more than 100 publications focused on the societal aspects of hazards and disasters, including *Disasters by Design*.

<http://ibs.colorado.edu/directory/profiles/?people=miletid>

Barbara Reynolds

Communications specialist on pandemic influenza, vaccine safety, emerging disease outbreaks, and bioterrorism at the US Centers for Disease Control and Prevention (CDC). Adjunct assistant professor at Tulane University. Was a crisis communication

consultant on health issues for France, Hong Kong, Australia, NATO, the World Health Organization and others. Author of *Crisis and Emergency Risk Communication* (2002) and CDC's *Crisis and Emergency Risk Communication* training course.

www.cdc.gov/media/subtopic/sme/reynolds.htm

Dr. Peter Sandman

National and international speaker and consultant, and creator of the "Risk = Hazard + Outrage" formula for risk communication. Helps corporate or government clients through a wide range of public controversies that threaten reputation and cause public outrage. Also helps activists arouse concern about environmental issues, and assists company executives in persuading employees to take safety rules seriously.

<http://www.psandman.com/index.htm>

Water Security Risk Management

Effective Risk and Crisis Communication during Water Security Emergencies

By Vincent Covello

The author offers guidance on communicating potential risks regarding water supplies and how to incorporate valid communication principles into message mapping procedures.

www.epa.gov/NHSRC/pubs/600r07027.pdf



About the Authors

Dr. Tim Tinker is a senior associate with Booz Allen Hamilton who focuses on strategic communications. As a nationally and internationally recognized expert in risk and crisis communications, Tim works in both public and private sectors in the areas of homeland security, defense, emergency preparedness, public health, health care, energy, and the environment to successfully help clients anticipate, prepare, and practice science-based and system-wide risk and crisis communication.

He has consulted with national and international organizations, and is called upon frequently by news journalists to share his expertise on crisis issues. His communications research has been published

in peer-reviewed journals, such as Biosecurity and Bioterrorism, Journal of Health Communication, and the Risk Policy Report.

Dr. Elaine Vaughan is a Researcher in the Department of Psychology and Social Behavior, University of California, Irvine. Dr. Vaughan's research focuses on adaptation and response to situations of risk and uncertainty; the interplay among cultural values/beliefs and emotional or cognitive response to risk; and the interpretation and use of scientific risk information by diverse social and cultural groups. Dr. Vaughan received her PhD from Stanford University.

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