

WORKING P A P E R

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

Final Report

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WR-598-HHS

December 2008

Prepared for the United States Department of Health and Human Services,
Office of the Assistant Secretary for Planning and Evaluation

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EXECUTIVE SUMMARY

A. Study Overview

Communication is a critical component of helping individuals prepare for, respond to, and recover from emergencies. The crisis and emergency risk communication (CERC) field is defined by the Centers for Disease Control and Prevention (CDC) as, “an effort by experts to provide information to allow an individual, stakeholder, or an entire community to make the best possible decisions about their well-being within nearly impossible time constraints and help people ultimately to accept the imperfect nature of choices during the crisis” (CDC, 2002, p.6). However, there is limited knowledge about how to best communicate with at-risk populations in emergencies, a group that is a particular focus of the Pandemic and All-Hazard Preparedness Act of 2006 (PAHPA; P.L. 109-417). RAND researchers, under contract by the U.S. Department of Health and Human Services (HHS) Office of the Assistant Secretary for Planning and Evaluation (ASPE), sought to understand the communication needs of these populations. This one-year project provides the groundwork to inform the Secretary’s obligation under the PAHPA to plan for the needs of at-risk populations.

The PAHPA, signed by the President in December, 2006 created the HHS Office of the Assistant Secretary for Preparedness and Response (ASPR) and tasked it with new authorities for a number of efforts, including:

- ensuring that the needs of at-risk individuals (sometimes referred to as “special populations,” “special needs populations,” or “vulnerable populations”) are integrated into all levels of emergency planning.
- ensuring effective incorporation of at-risk populations into existing and future policy, planning, and programmatic documents at the Federal and State levels.
- establishing a Director of At-Risk Individuals within ASPR.

In this report, we use a broadened definition of at-risk populations that considers both the HHS working definition for at-risk individuals and that used by the CDC within the context of CERC (Reynolds, 2007, p. 97). HHS defines the needs of at-risk individuals on the basis of five functional areas (shown below in italics).

Before, during, and after an incident, members of at-risk populations may have additional needs in one or more of the following functional areas:

- *Maintaining Independence – Individuals in need of support that enables them to be independent in daily activities.*
- *Communication – Individuals who have limitations that interfere with the receipt of and response to information.*
- *Transportation – Individuals who cannot drive due to the presence of a disability or who do not have a vehicle.*
- *Supervision – Individuals who require the support of caregivers, family, or friends or have limited ability to cope in a new environment.*
- *Medical Care – Individuals who are not self-sufficient or do not have or have lost adequate support from caregivers and need assistance with managing medical conditions.*

In addition to those individuals specifically recognized as at-risk in the PAHPA (i.e., children, senior citizens, and pregnant women) individuals who may need additional response assistance should include those who have disabilities; live in institutionalized settings; are from diverse cultures; have limited English proficiency or are non-English speaking; are transportation disadvantaged; have chronic medical disorders; and have pharmacological dependency.

Reynolds' defines at-risk populations as, "any group that cannot be reached effectively during the initial phases of a public safety emergency with general public health messages delivered through mass communication channels" (2007, p. 97). Characteristics that might define such populations are cognitive impairment, language barriers, physical impairments, cultural beliefs relevant to the pandemic, lack of access to mass media, or pre-existing group psychological, social or political/legal contexts that would shape reaction to emergency communications.

For the purposes of this report, we endorse the HHS definition of at-risk populations which places emphasis on their medical needs but also highlight other types of needs regarding their ability to prepare, evacuate, and respond adequately to the risk communication messages. Thus we propose an expanded definition:

At-risk individuals are those who have, in addition to their event-related medical needs, social and structural needs that may interfere with their ability to access or receive medical care, prepare for an emergency, and take appropriate measures (e.g., evacuate, shelter-in-place, etc.) and respond adequately to risk communication messages during an emergency.

Communication about the risks associated with large-scale hazards and emergencies is a critical component of individual preparedness, response, and recovery. Although much is known about risk perception and communication, these topics have been less well addressed for at-risk populations, particularly as they relate to emergency preparedness. We define risk communication as "an interactive process of exchange of information and opinion among individuals, groups, and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risk, that express concerns, opinions, or reactions to risk messages or to legal and institutional arrangements for risk management" (Commission on Risk Perception and Communication, 1989). In addition, risk communication (National Center for Missing and Exploited Children, 2005; National Organization on Disability, 2006) specifically includes actionable information (Altman, Bostrom, Fischhoff, & Morgon, 1994; Covello & Allen, 1988). That is, the information does not simply describe the nature or consequences of a risk, but rather provides information on how to prepare for, protect against, respond to, or recover from the risk.

In this report, we present an assessment of current risk communication practices focused on at-risk populations. This assessment is intended to inform planning for risk communication regarding public health emergency preparedness, response, and recovery for at-risk populations.

B. Policy Goals and Objectives

This study addressed three main policy questions:

- What public health preparedness outreach and risk communications strategies are used with senior citizens, persons with disabilities, and other at-risk populations, including their caregivers and providers of long-term care services? How have those strategies been translated into educational and outreach information?
- Which strategies, if any, demonstrate promising evidence of success (e.g., through increased public awareness and compliance) and thus might inform broader public health preparedness planning for at-risk populations, including people with disabilities and/or senior citizens?
- What can we learn from existing emergency preparedness efforts that might specifically support ASPE's role in the implementation of the PAHPA and enhance emergency preparedness for at-risk populations?

The study had three components:

- *Literature review.* The team reviewed the literature on emergency preparedness risk communication and public health messaging strategies, particularly for at-risk populations, to describe promising risk communication strategies and identify gaps in the literature.
- *Compendium search.* The team assembled a compendium of current emergency preparedness communication, outreach, and education materials and practices directed at senior citizens, persons with disabilities, and other at-risk populations and their caregivers, including providers of long-term care services.
- *Site visits.* The team conducted interviews with representatives in four sites to identify promising or emerging efforts to educate and inform at-risk populations and their caregivers and providers.

C. Key Findings

In our assessment, we identified a number of advancements in the area of risk communication for at-risk populations. However, we also identified many remaining barriers to effective risk communication with this population. Below we describe both advancement and barriers.

Community-based participation strengthens emergency preparedness, response, and recovery for at-risk populations

Including representatives from at-risk populations in emergency planning can inform the types of risk communication strategies, as well as the approaches for message dissemination, that are needed. In addition, involving these representatives in the development and review of communication materials can ensure that messages are appropriately crafted. These community-based participatory approaches were

emphasized by informants in our site visits, are encouraged by findings from the literature review, and are also in keeping with the goals outlined by the CDC (CDC & U.S. Department of Health and Human Services, 2004, 2006).

Training through exercises and drills that include risk communication for at-risk populations may improve response to future disasters

Another potential way to address public concerns is to strengthen training activities among emergency responders through exercises and drills as well as through community engagement. Specifically, exercises and drills should include community-based organizations (CBOs), agencies, and other partners in the training itself as a way to aid mutual learning, increase cultural competence, and strengthen the capacity of health departments and other agencies/CBOs. Enhanced training for those delivering messages about the special needs of different at-risk populations may increase trust among members of these populations. Although, there is currently no evidence for assessing the impact of exercises (Dausey, Buehler, & Lurie, 2007), our compendium review echoes the idea that training activities should directly address at-risk populations including making messages clear and comprehensible, using concrete examples to make the messages more immediate, and tailoring to the specific audience and situation. Involving at-risk populations in preparedness activities (e.g., involving children with disabilities in school-based drills or senior citizens in influenza vaccination clinic exercises) can provide valuable lessons for future disasters.

Evaluating the implementation of risk communication programs and impact of risk communication efforts is critical but systematic efforts are lacking

Evaluating the impact of risk communication efforts and sharing lessons can inform future messaging. Coordinating risk communication activities *before* emergencies involves a variety of collaborative training activities (i.e., local businesses and other coalitions engaged in preparing at-risk populations). Coordinating communication to at-risk populations *after* an emergency emphasizes learning how to address gaps that were identified in previous events and how to minimize future problems. However, based on the literature review and site visits, we found that there is currently little formal evaluation of past efforts to inform communities about future risk. Building a capacity for systematic evaluations to track messages, monitor media coverage, and survey recipients about exposure and accompanying responses will be key to identifying what works to increase public awareness and compliance.

Our compendium review identified relatively few risk communication materials intended for longer-term recovery. Moreover, informants during our site visits told us that this continues to be a gap. At-risk populations are not only at increased risk of poor consequences during an event, but they often are more susceptible to challenges in re-establishing daily life after disasters. Risk communication efforts that include messages for these populations (e.g., how to access specialized resources, eligibility for specific social services) are critical. After-action reports and other evaluation activities that occur after the acute stage of a disaster provide opportunities for emergency managers to share experiences and lessons with other counties and states. To meet their full potential, these evaluation activities need to address successes and shortfalls relevant to at-risk populations.

Effective risk communicators must be trained to understand emergency risk communication, know their stakeholders, and be trusted in the community

Our literature review identified the importance of having those tasked with communicating to the public about risk (e.g., public health officials, public information officers [PIOs], and the media) engage the community, use trusted sources to deliver messages, and offer frequent messages in multiple modes that are locally and personally relevant. Site visit informants described efforts to address these communication needs. For example, one state is using weather reporters as trusted and preferred spokespersons to deliver emergency information. The literature review validates this approach. We also learned from site visits that states regularly engage their PIOs in continuing education.

Reaching at-risk populations requires the use of multiple channels, formats, and tools

Using multiple modes and languages, clear and actionable plans, and new technologies in a timely manner can all enhance the reach of emergency risk communication.

Messages should be readily understood by the intended audiences, in whichever medium or language they are presented. Pictures and images can effectively communicate across the majority of at-risk populations; those with visual impairments will obviously require other communication modes. Translation of materials into other languages by native or local experts can ensure that proper dialectical differences and colloquialisms are used to increase the likelihood that the intended audience will recognize and relate to the message. The literature review findings also underscore the importance of culturally competent risk communication materials for effective comprehension.

The most effective risk communication during an event delivers balanced facts and incorporates timely information. Facts about the risks should be accompanied by information on what individuals can do to protect themselves. Further, these actions need to be presented in terms that populations at risk can relate to and that closely match the recipients' perspectives, technical abilities, and concerns.

New technologies, such as videophones, help lines, and mass phone alerts, can complement traditional print, Internet, radio, and television media, significantly broadening outreach. All of these new technologies are consistent with the principles identified in the compendium review.

Most states identified lack of resources as a major barrier to increasing capacity to develop and disseminate risk communication materials for diverse at-risk groups. Both our site visit informants and the literature review highlighted the need to tailor message content for some groups and to develop messages that can be disseminated in multiple modes; however, this kind of tailoring may not be financially feasible. Our informants cited inadequate resources as limiting the types of technologies that are available for enhancing risk communication. Thus, broadening capabilities through the addition of videophones and other novel technologies may not be possible without additional resources.

Finally, the use of interpersonal and social networks, often through community organizations such as faith communities, and other community groups are important channels for reaching at-risk populations.

D. Report Limitations

This report is limited in scope for two reasons. First, no evidence was available in some areas. For example, more evidence is needed for communicating risk as it relates to the post-event/recovery stage of emergencies for at-risk populations. Second, some important questions were beyond our study scope. For example, we could not survey at-risk populations to determine associations between disaster experiences, exposure to risk messages and their impact. Nor did we examine the effectiveness of new technology approaches for reaching at-risk populations.

E. Policy Considerations

Consistent with the HHS definition of at-risk populations, the function-based approach to implementing emergency planning under the Pandemic and All-Hazard Preparedness Act is ideal for emergency risk communication. A key theme in our discussions with informants across states was the importance of using “people first” language that does not inappropriately attribute a disability to the audience but rather, emphasizes the importance of understanding what the various at-risk populations are able to do to prepare and respond to emergencies. Thus, the function-based approach under PAHPA that focuses on individual capabilities rather than on labels or broad generalizations about populations was endorsed by study informants. This suggests that most risk communication messages and dissemination strategies should be designed to match the abilities and resources of individuals rather than their disabilities. For example, rather than focusing on a limitation such as being blind, risk communication should focus on communicating in forms that are interpretable for those with visual impairments (i.e., Braille, oral). Accordingly, communication for those needing supervision should also be directed to caregivers, family, or friends tasked with helping at-risk individuals.

Many aspects of communicating risks in the face of emergencies apply to all individuals, regardless of whether they are from an at-risk population. Further, most individuals at risk are able to communicate in some common ways. For example, all groups except those with visual impairment have the ability to interpret pictorial material, particularly if it is simple and does not require translation to multiple languages. Supplementing imagery with audio messages is likely to address the needs of most at-risk populations.

However, we also learned that some content of emergency risk communication is specific to a particular at-risk group. Thus, consistent with a functional-capabilities approach, tailoring messages for particular groups should be based on functional areas, including independence, transportation, need for supervision, communication, and medical care needs. In such cases, the message may also need to target caregivers and providers instead of the individuals at risk, who are unable to execute the information themselves. For example, individuals who need assistance with aspects of daily living may need information about how to involve their caregiver in preparing for and responding to disasters. Another example is that people who use wheelchairs need information on how to evacuate “on wheels.”