

**Public Perceptions About Trust in Emergency Risk
Communication:
Qualitative Research Findings**

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Communication to the general public is a critical component of effective emergency response following terrorism events. Trust is essential to effective communication. Four Schools of Public Health conducted focus groups across the country with different ethnic groups to inform development of public messages and

strategies in the event of an emergency. Secondary analysis of the transcripts was conducted to explore factors related to trust in government. General lack of confidence in the government's ability to respond was associated with concerns about preparedness, lack of disclosure and dedication. Local officials and emergency responders were more trusted than federal officials, and were associated with greater levels of disclosure and empathy. Past experience contributed to perceptions of trust. Urban groups were more concerned about officials' honesty; whereas rural groups were concerned about resource allocation. Local organizations and agencies were most trusted, as well as the United States Centers for Disease Control and Prevention (CDC), United States Federal Emergency Management Agency (FEMA) and the American Red Cross (ARC). The findings lead to recommendations related to allocation of emergency response resources for underserved areas; integration of local and federal agencies in emergency response preparedness and communication; and an emphasis on full disclosure, action steps, and leadership in emergency response communication.

Key Words: Trust, perception, emergencies, communication

Introduction

Risk communication typically involves the exchange of information among individuals or groups regarding potential health or environmental hazards (Trettin and Musham 2000). Effective risk communication calls for an interactive approach; communicators need to acknowledge the needs and concerns of the public and respond accordingly (Chess, Salomone, and Hence 1995). In the case of disasters this interactive relationship is especially important. Emergency risk communication provides the public with clear, accurate, and timely information (Wray et al. 2004). Effective communication during an emergency can provide the public with action steps to prevent illness and injury, reduce anxiety levels and facilitate relief efforts (Wray et al. 2004).

The success of risk communication to the public in the event of emergencies relies heavily on public confidence in government agencies. Hence, maintaining and nurturing trust in government is a concern in communicating emergency risk to the public (Hance, Sandman, and Chess 1998). Guidelines for crisis communication advocate that it should be truthful, honest, frank, and open to ensure more effective outcomes (Covello 2003). Trust plays a central role in decision-making processes and compliance rates among message recipients, as individuals are more likely to follow instructions given by someone they trust (Shore 2003). When the public has low knowledge about the risk at hand, trust plays an important part in public perceptions about severity of that risk (Siegrist and Cvetkovich 2000). For many of the terrorism and bioterrorism threats, public knowledge is low (Blendon, Benson, Desroches and Weldon 2003), making trust even more important than in situations where the public has a basic understanding of threats and action steps. If Americans trust government officials to take the correct actions, they are more likely to follow public health directives (Grey and Ropeik 2002).

The primary intention of terrorist attacks is to generate fear and uncertainty (Evans et al. 2002), heightening the challenge for emergency risk communication. In the case of a terrorist attack, public perceptions of trust and confidence in government agencies may affect compliance with emergency response recommendations for the public, which in turn may affect the outcome of the attack. Declining trust in government may undermine support for government action and the community response to it (Hetherington and Globetti 2002). The current paper reports on public trust in government and emergency response from qualitative research conducted to inform the development of emergency risk communication strategies responding to terrorist emergencies.

Defining Trust

According to Webster's (1991), trust is the "assured reliance on the character, ability, strength, or truth of someone or something." Public trust in government has been defined in terms of different

types of relationships, with different implications for trust. The relationship between the public and the government can be described as fiduciary, or held in trust, and is characterized by asymmetrical power. In this caretaking scenario, an individual places her trust in an agent and cannot control or monitor the performance of that agent. She trusts that the agent will perform in her interest and not his own (Thomas 1998). Trust also develops through mutual relationships and interpersonal exchanges. Mutual trust is also a component of public trust in government. These relationships and the expectations they prompt are particularly important in determining how the public will respond to government efforts and emergency response (Thomas 1998). Government officials and emergency responders who interact with the public and develop mutual trust relationships may be more effective sources for communicating emergency risk information. Perceptions that agencies and officials are shirking their civic duties may obstruct efforts to promote public safety.

Constructs Related to Trust

Political science and risk communication scholars have identified a number of factors that relate to trust, including confidence in the government's preparedness, honesty, willingness to disclose information, dedication, and caring. Personal experience informs perceptions of trust and which organizations the public deems trustworthy. These factors can be divided into three broad categories: 1) Public perceptions of the government; (2) Personal experience; and (3) Trustworthy organizations

Public Perceptions of the Government.

A primary determinant of trust is the public's perceived confidence that the government can perform its duties. Risk communication dealing with food hazards has shown that officials who are perceived as knowledgeable about the topic, unbiased, and without a vested interest are perceived as more trustworthy than those who are not (Breakwell 2000). The anthrax attacks in 2001 left many feeling that the United States government was unprepared to deal with potential

terrorist attacks (Brown and Prior 2002). Many people did not believe or feel they were provided with adequate information to respond to the anthrax attacks. Among individuals residing in areas where anthrax cases were found and who believed they were affected, only 50-55% felt they were provided with accurate information on how to protect themselves and their families (Blendon et al. 2002).

Perceived honesty and *full disclosure* of information are also key elements in determining trust among the public. Falsehoods meant to protect the secrecy of government programs lead to a more general, long-term distrust in the government (Thomas 1998).

When government officials are perceived as *dedicated* and *caring* about the health and well being of the public, levels of public trust are likely to be higher. Government officials are deemed trustworthy when they act in ways that show their concern for the public and put the needs of the public before their own needs (Peters, Covello, and McCallum 1997). The public expects responders to put themselves in danger to protect the public, to make their needs secondary to the public's, and be empathetic to the needs of the public. The public's expectations may or may not be realistic. Sociologists have discussed role conflict and when first responders can be expected to respond in certain ways during disasters. Whether or not first responders can act in what the public perceives as a dedicated way may be more strongly related to emergency preparedness and response systems than individual decisions (Friedman 1986).

Personal Experience.

Past experience with government agencies or officials affects perceptions of trust. Individuals who have had poor interactions with the government may consider non-government sources of information as more trustworthy (Blendon et al. 2003). Trust can also be affected by real or perceived discrimination on the part of the government (Eisenman et al. 2004). In a national sample survey (n=3011 American adults) conducted to assess knowledge, attitudes and behaviors related to smallpox threat; three in ten minority Americans (28%) believed that health professionals would discriminate against them if an outbreak occurred (Blendon et al. 2003).

Trustworthy Organizations.

The public trusts medical personnel over government sources to provide information regarding food risks (Frewer and Miles 2003). A national poll of 1,002 adults explored Americans' opinions about the state of the public health system and its ability to handle a bioterrorism attack. A series of questions assessed whom the public most trusts for information about how to protect themselves and their family from contracting smallpox. Trust in medical personnel far out-weighted that of government officials (with the exception of U.S. Centers for Disease Control and Prevention (CDC) officials) (Lake 2002). In another study, 43% of respondents identified a senior scientist from the CDC as a trustworthy source; more than 16% chose no other official (Blendon et al. 2003).

In summary, the literature shows a number of factors that influence public perceptions of trust in the government, including: perceptions of confidence, honesty, disclosure, dedication, and caring. Personal experience with the government affects perceived trust; perceived discrimination by the government can contribute to this perception. In addition, medical personnel are preferred over government sources for risk communication. The CDC is an exception, the one government agency noted in the literature as a trusted emergency information source. Past research offers important cautionary experience for emergency risk communication, especially that emerging from government agencies. But more work needs to be done to address which factors contribute to low levels of trust in specific populations, and how emergency risk communication strategies can best anticipate and mitigate these low levels of trust.

Methods

Pre-Event Message Development Project

The anthrax attacks of 2001 clarified the need for government agencies to develop strategies for providing accurate and timely information to the public in the event of a terrorist attack. Funded by the CDC in an initiative titled the Pre-Event Message Development

Project (PMDP), research teams from four schools of public health were selected to conduct formative research, and develop and audience-test informational message materials and dissemination strategies for release to the public in the event of a terrorist attack. Focus groups have been established as an effective tool to gather knowledge, beliefs, opinions, and preferences from selected audiences on a given topic (Basch, DeCicco and Malfetti 1999; Krueger 1994; Morgan 1997; USDHSS 1992) and are commonly used to gain formative data from populations to inform message development (USDHSS 2002; Valente 2002; Kreuter et al. 2000). Partner institutions conducted focus groups in the Southeast, Midwest, Southwest, and West Coast of the United States. Participants were drawn from a purposive sample of audience segments stratified by ethnicity and place of residence: Caucasian, African American, Hispanic, Native American, Asian American, and new immigrants (members in classes teaching English as a second language—ESL). For the first four ethnic groups, samples were drawn from rural and urban locations (Asian and ESL groups were from urban locations only). Participants were recruited through community organizations or by professional recruiters. Standardized protocols were used by all four schools, including institutional review board applications and research protocols, discussion guides, coding guides, and templates for report writing.

Focus group participants were asked about their knowledge of and attitudes towards the color alert system. Then participants were asked about four different potential terrorist threats (VX gas, dirty bomb, botulism, or plague). Next, participants responded to a three-part hypothetical scenario in which one of the agents was released in their or a nearby community. Participants were asked what they would want to know, where they would look for the information, what they would do, and their perception of emergency response systems in their community. Finally, participants were asked how well the available agent-specific informational materials answered their questions. Focus groups generally lasted 1-2 hours and were led by trained moderators. Research was approved by each institution's Institutional Review Board. Focus groups were conducted in 2003.

Results of the formative research are reported elsewhere (Wray and Jupka 2004; Henderson et al. 2004; Glik et al 2004; Becker 2004; Vanderford 2004). Concerns about trust in the government emerged in focus groups conducted in rural and urban areas, across ethnicities, and across the country.

Secondary Analysis Methods

The purpose of the current study was to conduct a secondary analysis of the focus group transcripts from the PMDP to examine the factors that contribute to public trust in the government in the context of a terrorist threat, and to assess whether factors such as location of residence, ethnicity, and region of the country influence perceptions of trust. Such an assessment may provide added insights for development of emergency risk messages and dissemination strategies in the event of terrorist attacks and other disasters, accounting for specific elements of trust, and specific needs of different demographic groups.

The discussion guides for the PMDP focus groups included several questions designed to assess confidence in the government and emergency response systems, and recommendations for steps first responders and local politicians could take to enhance the perceived security of the public. These questions prompted much of the discussion that we re-examined for the current study. In addition, other questions elicited unexpected and unsolicited comments related to trust. Thus, it was possible that these data reflected a bias showing that some factors were more important simply because we directly asked about them, while other factors appear less important because we did not directly ask about them. Table 1 shows those questions used to assess perceptions of government, and some of the questions designed for other purposes that prompted comments on the government and trust. To prepare for the qualitative data analysis, segments of the transcripts relating to the government and trust first needed to be identified and selected for coding. Segments identified as pertaining to “perceptions of government” in the primary analysis were selected for the current study. Units of analysis were defined as individual comments, ending when the next person began to speak.

Table 1: Questions Prompting Comments about Government used in the PMD Focus Groups, 2003

Interview questions designed to elicit information on perceptions of government	Interview questions not specific to government
How confident are you that there are systems in place that will respond in a way that keeps you safe?	Has anyone heard of the color alert system? What else does the system tell you?
How confident are you that your elected state and local government officials will respond in a way that keeps you safe?	What would you do (given this scenario)?
What could the medical and emergency responders do to make you feel more secure?	Where would you go to get more information (given this scenario)?
If you were the mayor of your city or town, what would you tell people in the event of an attack?	How credible is the information in this fact sheet?

A coding guide was developed based on domains identified in the literature. Two new constructs emerged during the coding and data analysis and were added to the coding guide: perceptions about allocation of resources for preparedness and expectations of government action in the event of emergencies. The domains that were identified are presented and defined in Table 2. They are organized in terms of the categories described earlier: 1) public perceptions of the government, 2) personal experience, and 3) trustworthy organizations. The transcript excerpts were also coded according to level of government (local and federal) mentioned in order to assess the potential differences between mutual and fiduciary trust relationships. We defined local government as elected officials (e.g., mayor, sheriff, and state level officials) and civil servants

(e.g., emergency response workers, police, and fire departments). Federal government included elected officials and federal agencies or organizations (e.g., the President, military, and CDC).

Table 2: Domains Related to Trust Used in the Secondary Analysis and the Factors Associated With Them

Domains	Definition
1. Public perceptions of the government	
Confidence in government preparedness	Used when discussing ability or competency of the government officials to perform their duties, including having knowledge, attitudes and skills.
Allocation of resources*	Used when referring to community resources available to deal with a bioterrorism attack.
Expectations of government*	Used when respondents state what government agencies should do or should know to be prepared for a terrorism attack.
Honesty	Used when discussing truthfulness of government officials, manipulation of the truth, or purposeful deception. Also used to define bias, lack of objectivity, fairness or impartiality.
Disclosure	Used when discussing government officials and their sharing of known information with the public, withholding information, or revealing information in ways that may affect the actions of the general public.
Dedication/commitment	Includes statements referring to officials' devotion to their jobs or public safety.
Caring/empathy	Used to describe statements of government concern for the public and what they are feeling
2. Personal experience	
Discrimination	Used when respondents discussed being treated unfairly based on certain characteristics (e. g., race, age, geographic location, etc.).
Past experiences	Used when respondents used a life experience to illustrate positive or negative experiences with government agencies and officials.
3. Trustworthy organizations	
	General trust domain used when respondents refer to organizations in which they trust and those they do not trust.

* Emerging domains

The excerpts were coded based on the domains in Table 2, using a consensus coding procedure. Each individual statement was coded by three analysts, who then met to reach a consensus on the coding (Miles and Huberman 1994; Lacey and Luff 2001). Each statement was discussed among the coders until all agreed upon codes for that statement. In the rare instance that consensus could not be reached the primary investigator was consulted and given the final decision. Excerpts were assigned codes using Atlas TI® software, which allowed statements to be grouped by assigned codes for analysis. Data analysis applied a checklist matrix approach (Miles and Huberman 1994; Lacey and Luff 2001). Statements grouped according to domain were summarized in matrices, with rows specifying domains, and columns specifying focus groups. After audience segments were summarized for each domain category, an overall summary was written across all the population groups for each domain. This matrix-based approach allowed researchers to observe patterns and trends and to examine commonalities and differences among different ethnic groups and by places of residence.

Results

Five hundred and twenty adult males and females were recruited from four regions in the United States (Midwest, Southeast, Southwest, and West Coast) to participate in 45 focus groups. Some of the focus groups were not included in the analysis however, either because the transcripts were in Spanish or because they were not available. Therefore, the final analysis was based on a total of 32 groups and 341 participants that provided a useful cross-section of ethnicity and regions of the country. The make-up of the groups can be seen in Table 3. Table 4 shows the demographic characteristics of the study participants.

Demographic Characteristics.

The mean age of participants was 44 and 61% were female. Most (78%) had at least a high school education, 58% of those went to college. Ethnicity was a factor in recruiting for focus groups. The total sample included 27% Caucasian, 18% Hispanic, 18% African

American, 19% Asian/Pacific Islander, and 13% Native American . The primary language was English (71%) and 15% spoke Spanish as primary language. Forty-five percent were married, 31% single, and 14% were divorced. Sixty-seven percent had children. Seventy percent of the participants reported their annual income earned was \$39,000 or less.

Table 3: Characteristics of Focus Groups

Region	12 Midwest groups 6 Southwest groups 14 West Coast groups
Racial make-up	6 African American groups 11 Caucasian groups 4 Asian American groups 4 English as second language groups 3 Hispanic groups 4 American Indian groups
Population area	11 Rural groups 21 Urban groups
Agent	9 Plague groups 7 Botulism groups 7 Nuclear/Radiology groups 9 Chemical groups

Public Perceptions of the Government.

For each domain, we report a summary of the findings including similarities and differences by place of residence and ethnicity. We also describe how common specific categories of comments were in the analysis.

Confidence in Government Preparedness.

Lack of competence and preparation on the part of government officials was a common concern across groups. With some exceptions, most groups expressed a lack of confidence that the government was prepared to handle a terrorist attack. There were no differences in perception of confidence between rural and urban participants.

**Table 4: Demographic Characteristics of Study Population
(34 FOCUS GROUPS¹ (N=341))**

Characteristic	Category	N	(%)	Mean/SD
Age	Missing	11	3.2%	44/16.78
Sex	Male	134	39%	
	Female	206	61%	
	Missing	1	<1%	
Education	Less than high school	39.4	9%	
	Some high school	35	10%	
	High school diploma or GED	68	20%	
	Some college	93	28%	
	College degree	67	20%	
	Graduate degree	42	12%	
	Missing	4	1%	
Ethnicity/race	African American/Black	61	18%	
	American Indian/Alaska Native	45	13%	
	Asian/Pacific Islander	64	19%	
	Caucasian/White	93	27%	
	Latino/Hispanic	62	18%	
	Other	13	4%	
	Missing	3	1%	
Language in home	English	241	71%	
	Spanish	51	15%	
	Bilingual/English & Other	16	5%	
	Other	31	9%	
	Missing	2	1%	
Marital status	Single	105	31%	
	Married or living with partner	154	45%	
	Divorced or separated	46	14%	
	Widowed	30	9%	
	Missing	6	2%	
Children	Yes	227	67%	
	No	105	31%	
	Missing	9	3%	

Employment	Yes	184	54%
	No	146	43%
	Missing	11	3%
Family income	Less than \$10,000	56	16%
	\$10,000-\$19,999	80	20%
	\$20,000-\$29,999	45	13%
	\$30,000-\$39,999	28	8%
	\$40,000-\$49,999	24	7%
	\$50,000-\$59,999	18	5%
	\$60,000-\$69,999	21	6%
	\$70,000-\$79,999	6	2%
	\$80,000-\$89,999	5	2%
	\$90,000-\$99,999	8	2%
	\$100,000 or more	19	6%
Missing	41	12%	

* Percentages are rounded to nearest whole number

** Low employment rates reported were largely due to those responding as unemployed due to retirement or homemaker.

“Like I said, all we can do is rely on what we see. I can’t be that confident because they can say anything. You know what I mean? It doesn’t really give me that much confidence.”
Urban African American

Residence. Both rural and urban participants had more confidence in local government than in federal government. Participants across groups commented that they would feel most comfortable contacting their local officials regarding an emergency and that their local officials were good sources of information.

“I’m more confident in my local officials here lately. Maybe they are doing a snow job on me, but I think I’ve been noticing that they have been trying to be more aware of preparedness... things that would help the community in case something should happen.” Rural Caucasian

Ethnicity. Differences emerged across ethnic groups however. Most groups (African American, Caucasian, Hispanic, ESL) agreed that the government was not prepared to deal with an attack; Asian

and Native American groups felt the government was capable. These groups mentioned specific local agencies, such as the fire, police, and health department, as well as tribal officers and hospitals as trustworthy sources of information and services.

Some groups, including Native American, felt more strongly than others about their local officials being good sources of information. A Native American participant felt that local officials would be a good source of information.

“Well, I guess I could contact one of these local officials to see if they could contact somebody. I mean because obviously they are going to know something. I mean they’re going to be watching the same thing, and I guess it’s their job.” Rural Native American

Allocation of Resources.

The majority of groups were concerned that sufficient resources were not available to respond in an emergency.

Residence. Both urban and rural participants agreed that there would not be enough resources to deal with an attack and called for more emergency personnel and other resources to prepare for an attack. Rural participants also expressed concern that resources would not be distributed to their communities because of their remote location.

“Like if they have it in [a large urban area] or whatever, they’re not going to send it to us.” Rural Native American

Ethnicity. Most ethnic groups (except Hispanic) expressed concern about having enough resources to adequately deal with an attack. Two (one urban, one rural) African American groups suggested that delivery of resources might be unequal. It was not possible to determine whether they were referring to discrimination due to socio-economic status or race.

“Okay let’s just say for example it was an air burst and which requires people to get part of the wet suits and all this crap

for people. Okay, where is all that stuff going to go and we ain't going to see none of it.... But you got to use some sort of sense to save your own family because if you rely on the politicians to do it I'm telling you all of that is going to a certain part of the city. It ain't coming over here." Urban African American

Expectations of Government.

Groups across categories want officials to be honest, and provide accurate, actionable information. They also expressed a need for more planning and for responders to be adequately trained and equipped. In addition, participants requested more community level resources, coordination, education, and clinics.

"I know that there is a situation that has to be dealt with. Tell me what I can do to protect my family and then what I can do to help. And kind of in that order, that's what I'm looking for." Rural Caucasian

"I would want to know more information and who it is going to affect." Hispanic

Residence. No differences were found between urban and rural groups in terms of expectations.

Ethnicity. One of the urban White groups mentioned that officials and leaders offer more credibility than news personalities. Most groups expected that elected officials (especially local) and emergency response workers would provide more credible information.

Dedication.

Participants perceived the federal government as being less dedicated than local government. A majority of the groups felt that local officials would "spring into action," but some felt they would flee. In contrast, others felt that their local officials would tend to their own families first, and then return to work.

“And that is the same way with the government. They’re going to look out for themselves first too and the heck with us.” Urban African American

Residence. Overall, urban groups perceived the government as less dedicated (more likely to flee or take care of themselves first) than the rural groups. The rural groups commonly stated that they thought the government would be dedicated to assisting citizens.

Ethnicity. African American, Hispanic, and ESL participants did not perceive the government as being dedicated to the public’s safety. African American participants specifically expressed that federal officials would not take care of local community members. Hispanic participants suggested that emergency workers would see to their families first. Caucasian groups were mixed in their thoughts about dedication. Some participants thought officials would stay and others thought they would flee. Among many there was a belief that elected officials may flee while local emergency responders would stay.

“That he is not tucking tail and running, that he actually cares about the people in his community... And that he’s not phoning in from a cell phone a hundred miles away while you’re sitting in town waiting.” Rural Caucasian

Asian groups felt that emergency responders were more dedicated than elected officials (who they thought would tend to their own families first). Only the Rural Native American participants thought that officials, mentioning mostly local tribal officials would be completely dedicated.

Caring.

Very few groups commented on caring, and those that did had mixed feelings. Some groups thought government officials and emergency responders cared about people, while other participants (across groups) were skeptical of the government’s motivation and thought officials didn’t care about the public. Groups that thought the government cared mentioned specific agencies (e.g. Federal

Emergency Management Agency (FEMA), tribal officials). The non-governmental American Red Cross was also mentioned as a caring organization.

“Any attack, if a terrorist came to Los Angeles or San Francisco, I mean, terrorists can attack, but what about the victims and the people who die? I think the Red Cross is gonna help you. It’s a shelter they give you if your apartment was burned or any, you know any... I think the Red Cross is gonna help you to go buy clothes, food, money... something like that, you know.” Urban ESL

Residence. No differences were found between rural and urban groups for the domain of caring.

Ethnicity. When looking across ethnicity, most groups were mixed in their perceptions of caring. Some felt the government was doing a good job; others thought more should be done. One Native American group suggested tribal officials were more caring than state government officials.

“Oh tribal officials? I’d trust them more that I would state, or local, or anything else. I mean even at the federal level. Because, like she said, you know, I hate to say this but the mental level is much higher than the elected officials we’ve got around here at the state level. I mean, you know and they’ve got a more caring attitude than those guys.” Rural Native American

Some of the groups gave specific examples of caring leaders; two Caucasian groups mentioned Rudy Giuliani as an example of a caring leader in the aftermath of the World Trade Center attacks.

“He (Giuliani) made every decision based on instinct, and whatever was at his disposal for the people. I think that’s why so many people backed him, it’s because he wasn’t in it for the prestige, he wasn’t in it for the stage. He went on because his heart was for the people. He saw his people hurting.” Urban Caucasian

Honesty

A few groups in all ethnic categories commented that they perceive dishonesty on the part of the government officials. Few differences arose between ethnic and residence groups regarding their perception of dishonesty.

“I think we need more honesty in what’s going on. Because you get people confused and they don’t take it seriously. It’s that cry wolf thing.” Urban Caucasian

Residence. No major differences between urban and rural groups were evident for the honesty domain.

Ethnicity. While all ethnic groups noted some dishonesty some groups felt more strongly than others. African American groups thought they were purposely not being told the truth about what was happening, while Asian groups felt information was biased to support the government’s particular position.

“I would like him to be honest. Be honest: tell the facts as best as he knows them. Be open and be prepared. Already have a plan. Don’t wait until this thing happens. Plan for it in advance and tell your people. Be honest. Don’t be lying about it. Tell it like it is.” Rural African American

Full Disclosure.

Concerns about full disclosure were noted when groups felt the government does not reveal all the known facts or when the government withholds information. Across ethnic groups and places of residence, most groups indicated that they think the government should provide full information about what they know and provide action steps. It was suggested that if the government officials do not know all the answers, they should be forthright about their lack of knowledge.

The groups had requests including receiving specific information about what actions to take, what the government is doing, what is happening (details about the attack), and details about the effects of

the attack. A few participants felt defending national security was a reason the government would not fully disclose all information.

“We would have some information, but you ought to hold back some ‘cause, you know I mean, not everybody needs to know.” Rural Native American

Residence. No major differences between urban and rural groups were evident for the full disclosure domain.

Ethnicity. While all ethnic groups thought the government withheld information, they differed in their perceptions of motivation to withhold information. African American groups thought important information was purposefully being withheld, whereas Asian groups felt information was not disclosed to support the government’s particular position.

“... I think that if the government knows something in advance, and I’m not saying tell it to panic the people, but to me we don’t need to be kept in the dark about everything that’s going on. There are some things that are vital for us to know. I mean, they are limited on what they can tell, true enough, but they need to tell something so you can be on the lookout” Rural African American

“The U.S. government will tell you what they want. They never talk about stuff like over 500,000 children have been killed for the U. S. safety. But they never talk about that.” Urban Asian

Personal Experience

Discrimination. Discrimination was a concern expressed by only two of the groups, African American and ESL. Interestingly, African Americans did not allude to discrimination by race/ethnicity, but by their location, rural or urban.

“One of my fears would be if something happened in a small town... I don’t feel that we would get the same attention or

care or whatever as a larger. I don't think we would." Rural African American

It can be argued that in the case of some urban African American neighborhoods, it is hard to distinguish if the groups were referring to discrimination by socioeconomic status (SES) or by race. The participants did not specifically state why they felt that resources would not come to their neighborhoods. Interviewers and moderators were Caucasian, which might have made it harder for those being interviewed to bring up discrimination by race. An ESL group mentioned discrimination by race and access to health care:

"They're taking a lot of rights from people. So, we don't know if that happened if we're really going to get help or who they're gonna help. Are they gonna help minorities, or not help?" ESL

Past Experiences

Groups' past experience with the government provided positive and negative contributions to their trust in the government.

Residence. No differences were found between urban and rural groups for past experiences.

Ethnicity. Most groups (all but the Hispanic groups) mentioned the World Trade Center attacks in 2001 as a comment on government ability. African American, Caucasian, and Asian groups mentioned that they did not think enough was done to prevent the attacks on the World Trade Center. However, groups also said that the response was appropriate. Specifically, Asian groups mentioned experience with smallpox, anthrax, and the Iraq war as examples of the government being able to respond.

"Like the anthrax thing when it happened a year ago, everybody was scared because we didn't know about anthrax and it came and everybody was afraid to open their mail. Why? They were not informed what anthrax is. If they were informed, why would you be afraid? We are now in a different world. It's not

before where we didn't know what to do. But it's only a matter of information." Urban Asian

Native American and ESL groups gave mixed reports of past experiences. Native American groups mentioned positive experiences with local authorities.

"Someone broke in to our playground and the traffic police, by the next day, they had it fixed. So, you can probably at least count on them, you know, for something." Rural Native American

Trustworthy Organizations

Trusted Organizations. Many organizations emerged as those people would trust in an emergency situation. Generally participants in groups across all categories indicated local civil servants, emergency personnel, the fire and police departments, and hospital staff, as people and organizations that would be trusted.

Overall, civil servants were more trusted than elected officials, although Caucasian, Native American, and ESL groups mentioned trusted federal officials including the president and the military as trustworthy sources. African American, Caucasian, Native American, ESL and Asian groups mentioned the CDC as a trusted source. The American Red Cross was also seen as a trusted source by Caucasian, Native American, Hispanic, and ESL groups. Some African American, Asian and Caucasian participants mentioned the media.

"Oh Tribal officials, I'd trust them more than I would the state, or local, or anything else, even at the federal level." Native American

"If the CDC can put something on their web page. I check it periodically to see what they're saying. I tend to give a little more validity to what the CDC people say as opposed to the news." Urban Asian

Distrusted Organizations. Groups across all ethnic categories mentioned primarily government officials as distrusted sources; some groups put an emphasis on the federal government, (African American, Caucasian, Native American, and Asian). Some groups also noted that local officials and emergency medical services might not be available.

“Well if you pay attention to what’s going on you can see they’re pretty much scamming and doing everything up under the table. So that’s a lack of confidence right there. Can’t trust your own government.” Rural African American

Discussion

Results of the current study support the argument that trust is a factor in effectively communicating risk. The pattern of results from the secondary analysis provides a clearer and more detailed account of what factors and sources are most influential in communicating trust. Overall, there is a general lack of trust and confidence in the government’s ability to effectively respond to a bioterrorism attack. This distrust appears to be rooted in the perception that the government has not done enough to prepare for an attack, and the belief that government officials (especially at the federal level) withhold important information and are dishonest at times. Many of these perceptions are based on past experiences that the public has had related to terrorist attacks.

The data also reveal important similarities and differences between population groups. First, it is important to note that distrust in the government was a common finding across all ethnic groups, thus emphasizing the need to develop strategies that serve to improve trust relationships between the general public and government officials. Many also noted that they were more likely to trust local officials and emergency responders than federal officials, which may be important when attempting to communicate critical information during a terrorist-related event. This finding also validates how important it is for government officials to develop and maintain mutual trust relationships with the public to ensure effective risk communication.

Despite the perception that government agencies at all levels suffer from lack of resources, personnel and training for emergencies, local responders still hold the confidence of the general public. Domains that underlie overarching confidence give us a hint why: local responders and officials are generally perceived as being more dedicated and more caring for the public that they serve than their federal counterparts. This finding supports the idea of developing and maintaining mutual trust relationships between the public and local officials and responders. These relationships are extremely important to effectively communicate information in an emergency situation.

Results from this study also indicate that substantial differences exist between area of residence and perceptions of trust. Urban groups generally were more concerned with officials fully disclosing information and being honest while rural groups, regardless of ethnicity, tended to deem local agencies and officials highly trustworthy. Past experiences with local agencies and officials were highly influential in developing trust. Clearly above and beyond the potential of communication efforts (e.g. full disclosure) to affect perceptions of trust, the actions of agencies and officials in carrying out their duties bears greatly on public trust. In rural areas the general public may know their local officials, especially local fire and police officials. This personal interaction and ongoing good experience with local officials may add to the greater trust seen in rural areas. In many urban areas government officials and first responders will rarely see many of the people they serve. Rural participants were not as concerned with the nation's lack of resources to handle an emergency situation, but about the likelihood that those resources would be sent to rural areas. With a greater population in urban areas, this is probably a realistic concern. They felt that those in urban areas would receive resources first. Those living in rural areas would benefit from receiving more information and reassurance regarding access to resources in their communities. Having this information may facilitate communication and trust in their communities.

Finally, some organizations were consistently named as trustworthy sources. Participants identified local agencies (specifically first responder groups like law enforcement, fire departments and health services) as trusted organizations and federal agencies as distrusted

ones. The CDC was an exception with five of six ethnic groups naming it as a trusted agency. Four of six groups mentioned the American Red Cross, and a few mentioned FEMA. These are sources that the public deems credible and trustworthy and that the public already identifies as reliable sources of information. These organizations can be highly effective in communicating information to the public before, during, and after a terrorist-related event.

Limitations of the Study

Certain limitations are inherent to this mode of research. The participants of the study made up a non-random convenience sample of various audience segments within the general population, limiting our ability to generalize about the public at large. Focus group research is also limited in that it relies on the skills of moderators and data analysts, with possible bias introduced in the data collection and coding processes. The collaborators on the project sought to minimize these limitations by following the same protocol throughout the research process, from preparation of human subjects protection protocols and discussion guides, through data collection, coding and analysis. In this way, results are comparable across a total of 32 focus groups conducted with general public audience segments across the country, enhancing our confidence in the validity of the results. We were successful in recruiting focus group participants from a variety of ethnic groups, from different parts of the country, including both urban and rural residents.

In this study, external validity is limited in that the findings cannot be generalized to the entire U.S. population. They can however be generalized to the populations that were accessed for the focus group participants. Therefore, it is felt that the research contains important and valid information that may be of value to risk communication practitioners in the crafting of communication strategies responding to bioterrorist events, especially in regard to targeted special populations.

There is also the limitation of this being a secondary analysis. The data had been gathered prior to the development of the research objectives, coding schemes and definitions. While some of the

questions used in the original research led to discussions regarding trust, it is difficult to determine the importance of the various aspects of trust. For instance, it is not possible to conclude that confidence is more important than caring and dedication because our questions asked directly about the former and not the latter. It is logical to assume that domains that were directly assessed would be more prevalent than those that were not. However, the results of this study provide evidence suggesting that all of the above mentioned domains, directly assessed or otherwise, were influential in determining trust in government agencies.

Implications

Perceptions of trust are highly relevant to the development of effective communication strategies concerning potential bioterrorism threats. A variety of implications emerge from this analysis for developing messages that promote trust. These implications are organized around three categories: Considerations prior to an attack, agency integration in dealing with an attack, and emergency response communication.

Prior to an Attack

Adequacy of Resources for Emergency Response. Members of the public have the impression that there are inadequate resources in the areas of equipment, personnel, training, and planning for emergency response. It is important for local agencies to make clear the extent of their preparedness.

Make Training and New Resources Known. Educating the public about preparedness training regimens and new resources may help increase public confidence in government preparedness. When local members of emergency services receive training for a terrorist attack, the news media can be engaged to get this information out.

Emphasize Planning for Underserved Areas. Members of the public in both inner city and rural areas perceive that they will get short shrift in an emergency. Government planning and resource

allocation must anticipate and meet the particular needs of these areas, and must inform the public that this is happening.

Rebuild Trust by Building New Public Experience. Past experience clearly plays a role in the level of public trust in the government. Government officials need to be aware that their actions in other areas can influence trust during emergency situations. Officials acting in a reckless or poor manner can have long lasting effects on trust in government and consequently on the effectiveness of government efforts to respond to emergencies. While it is impossible to provide everyone with a positive experience with the government, improving experiences with the public can begin to recover trust in government by providing the public with positive experiences on which to base their opinions.

Agency Integration in Dealing with an Attack

Integration of Local Agencies for Emergency Response. The results indicate that the general public trusts local agencies for information in an emergency, and give their information greater credibility. Therefore, federal and state agency crisis communication planners must strive to integrate and prepare local agencies and officials for primary roles as communicators during emergencies.

Integrate Community Organizations in Emergency Response. Local hospitals and other services were mentioned as trusted groups and need to be included in the process of planning and preparing for emergencies. These organizations can make substantial contributions in communication during emergencies, and must be prepared for inclusion in this role.

Integrate CDC, ARC and FEMA in Emergency Response Communication. The high level of trust for these agencies indicates that they should be at the forefront of informational efforts during and after emergencies.

Emergency Response Communication

Convey Full Disclosure in Emergency Response Communication. Short of jeopardizing national security during or after a terrorist

attack, government officials should divulge all information to which they have access. Where complete information is not available, officials should offer an honest “don’t know” and promise to follow up with information once it is at hand. Full disclosure will enhance the assurances of honesty and contribute to the likelihood that members of the public will adhere to public agency warning messages, thereby reducing morbidity and mortality.

Provide Action Steps to Empower the Public. Finally, the focus group participants universally demanded action steps for how to respond and stay safe in the case of emergencies. This information is critical in promoting open, honest communication between the public and government agencies. Not only does it give the government a chance to rebuild trust by new experiences with the public but it also may provide the public with a better sense of awareness and capability to deal with emergency situations.

Convey Dedication and Caring in Emergency Response. As learned in the case of Mayor Guiliani’s crisis communication efforts following the World Trade Center Attacks (Mullin 2003), an active, engaged leadership with daily media presence can do a great deal to provide direction and simultaneously inspire public confidence.

Notes

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References

- Basch, Charles E., Ingrid M. DeCicco, and James L. Malfetti J. 1989. “A Focus Study on Decision Processes of Young Drivers: Reasons That May Support a Decision to Drink and Drive.” *Health Education Quarterly* 16: 389-396.
- Becker, Steven M. 2004. “Emergency Communication and Information Issues in Terrorist Events Involving Radioactive

- Materials.” *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* 2: 195-207.
- Blendon, Robert J., John M. Benson, Catherine M. DesRoches, William E. Pollard, Claudia Parvanta, and Melissa J. Herrman. 2002. “The Impact of Anthrax Attacks on the American Public.” *Medscape General Medicine* 4: Online.
- Blendon, Robert J., John M. Benson, Catherine M. Desroches, and Kathleen J. Weldon. 2003. “Using Opinion Surveys to Track the Public’s Response to a Bioterrorist Attack.” *Journal of Health Communication* 8 (Suppl 1): 83-92.
- Breakwell, Glynis M. 2000. “Risk Communication: Factors Affecting Impact.” *British Medical Bulletin* 56: 110-120.
- Brown, Bertram S., and Stephen D. Prior. 2002. “Public Health and Public Trust: The Defining Dyad for the 21st Century.” *International Journal of Emergencies Mental Health* 4: 239-244.
- Chess, Caron, Kandic L. Salomone, and Billie Jo Hance. 1995. “Improving Risk Communication in Government: Research Priorities.” *Risk Analysis*. 15: 127-135.
- Covello, Vincent T. 2003. “Best Practices in Public Health Risk and Crisis Communication.” *Journal of Health Communication*. 8Suppl 1: 5-8.
- Eisenman, David P., Cheryl Wold, Claude Setodji, Scot Hickey, Ben Lee, Bradley D. Stein, and Anna Long. 2004. “Will Public Health’s Response to Terrorism be Fair? Racial/Ethnic Variations in Perceived Fairness During a Bioterrist Events.” *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* 2: 146-156.
- Evans, R. Gregory, James M. Crutcher, Brooke Shadel, Bruce Clements, and Michael S. Bronze. 2002. “Terrorism from a Public Health Perspective.” *American Journal of the Medical Sciences* 323: 292-298.
- Frewer, Lynn J. and Susan Miles. 2003. “Temporal Stability of the Psychological Determinants of Trust: Implications for Communication About Food Risk.” *Health, Risk & Society* 5: 259-271.
- Glik, Deborah, Kim Harrison, Mehrnaz Davoudi, and Deborah Riopelle. 2004. “Public Perceptions and Risk Communications

- for Botulism.” *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* 2: 216-223.
- Grey, George M. and David P. Ropeik. 2002. “Dealing with the Dangers of Fear: The Role of Risk Communication.” *Health Affairs* 21: 106-116.
- Hance, Billie J., Peter Sandman, and Caron Chess. 1988. *Improving Dialogue With Communities: A Risk Communication Manual for Government*. Trenton, NJ: New Jersey Department of Environmental Protection, Division of Sciences and Research.
- Henderson, J. Neil, L. Carson Henderson, Gary E. Raskob, and Daniel T. Boatright. 2004. “Chemical (VX) Terrorist Threat: Public Knowledge, Attitudes, and Responses.” *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* 2: 224-228.
- Hetherington, Marc J. and Suzanne Globetti. 2002. “Political Trust and Racial Policy Preferences.” *American Journal of Political Science* 46: 253-275.
- Kreuter, Matthew, David Farrell, Laura Olevitch, and Laura Brennan. 2000. *Tailoring Health Messages: Customizing Communication with Computer Technology*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Krueger, Richard A. 1994. *Focus Groups: A Practical Guide for Applied Research*. Newbury Park, CA: Sage Publications.
- Lacey, Ann and Donna Luff. 2001. “Qualitative Data Analysis.” Leicester: United Kingdom Trent Focus for Research and Development in Primary Health Care.
- Lake S, Perry & Associates. 2002. *Americans Speak Out on Bioterrorism and U.S. Preparedness to Address Risk*. Princeton, NJ: Robert Wood Johnson Foundation.
- Miles, Matthew B. and A. Michael Huberman. 1994. *Qualitative Data Analysis: An Expanded Sourcebook*. 2nd Ed. Thousand Oaks, CA: Sage Publications, Inc.
- Morgan, David L. 1997. *Focus Groups as Qualitative Research*. 2nd ed. Thousand Oaks, CA: Sage Publications, Inc.
- Mullin, Sandra. 2003. “The Anthrax Attacks in New York City: The ‘Giuliani Press Conference Model’ and Other Communication Strategies that Helped.” *Journal of Health Communication* 8 (Suppl 1): 15-16.

- Peters, Richard G., Vincent T. Covello, and David B. McCallum. 1997. "The Determinants of Trust and Credibility in Environmental Risk Communication: An Empirical Study." *Risk Analysis* 17: 43-54.
- Shore, David A. 2003. "Communicating in Times of Uncertainty: The Need for Trust." *Journal of Health Communication* 8(Suppl 1): 13-14.
- Thomas, Craig. 1998. "Maintaining and Restoring Public Trust in Government Agencies and Their Employees." *Administration & Society* 30: 166-193.
- Trettin, Lillian and Catherine Musham. 2000. "Is Trust a Realistic Goal of Environmental Risk Communication?" *Environment and Behavior* 32: 410-416.
- U.S. Department of Health and Human Services. 1992. *Making Health Communications Programs Work: A Planner's Guide*. Bethesda, MD: National Cancer Institute.
- U.S. Department of Health and Human Services. 2002. *Making Health Communications Programs Work*. Bethesda, MD: National Cancer Institute.
- Vanderford, Marsha L. 2004. "Breaking New Ground in WMD Risk Communication: The Pre-Event Message Development Project." *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* 2: 193-194.
- Valente, Thomas W. 2002. *Evaluating Health Promotion Programs*. Oxford: Oxford University Press.
- Wray, Ricardo and Keri A. Jupka. 2004. "What Does the Public Want to Know About Plague?" *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* 2: 208-215.
- Wray, Ricardo, Matthew Kreuter, Heather Jacobsen, Bruce Clements, and R. Gregory Evans. 2004. "Theoretical Perspectives on Public Communication Preparedness for Terrorist Attacks." *Journal of Family and Community Health* 27: 324-343.