

Table: Comparing results across the four PEMD verification analyses, 11/30/05

Item	SLU	UOK	UAB	UCLA
Pre-event knowledge				
Common findings	PMDP findings indicated that the public has limited knowledge of plague. Consistent with survey research on knowledge of SARS and smallpox.	Information vacuum associated with fear and anxiety.	Public is clearly concerned about rad terrorism. Incidents involving radiation are esp. frightening. Understanding of radiation-related issues and “dirty bomb” are unclear to some people. Survey data confirms concern and fears about terrorism and rad terrorism sp.	There is low knowledge about botulism including treatment and symptoms. Belief by the public that botulism is a low probability event.
Different, contradictory findings	PMDP findings did not contradict published literature.			None mentioned
Different, complementary findings	Other research asked specifically about knowledge of transmission, prevention, and treatment, questions that PMDP did not ask.		Concerns about nuclear terrorism are high. Associations with radiation are dire and negative.	PEMD looked specifically at participants understanding of “Sheltering in Place.” The research found that the term is not well understood and when used could encourage people to do the exact opposite (go out to a shelter).
Unique contributions	PMDP parts struggled to understand differences between bio, chem., and rad agents. Urban groups appeared more knowledgeable; new immigrant groups less so.			PEMD could differentiate between rural and urban communities. PEMD found that those in rural areas are less concerned about botulism because they felt cities would be more likely targets.
Implications	In event of emergency provide basic information about the agent to the public, including info on transmission, treatment, severity, etc. Responders should assume public does not know basic info about the threat.			Foodborne illnesses are not everyday occurrences and much more attention needs to be paid to having valid pre-event messages in place.

Info needs in event	SLU	UOK	UAB	UCLA
Common findings	GP will seek detailed info how to protect self and family: nature of threat, steps to minimize risk of exposure, treatment, and govt response. Depends on proximity to event. Validated by survey and other qualitative research.	Parts want to know status of the attack, including location, range of spread and wind direction; symptoms and treatment; and keeping family safe.	Concerns in a rad event are centered around family/children, and health issues; people want to know how to protect themselves and family. How to recognize symptoms, health effects, when to seek med help.	In general people want as much information as possible.
Different, contradictory findings	PMDP findings contradicted a NYC survey in which Rs complained about too much information. However, PMDP was during event, and NYC survey pre-event.			None mentioned
Different, complementary findings	PMDP did not ask about knowledge of family preparedness plans.			None mentioned
Unique contributions	Info needs consistent across regions, ethnic groups, and U/R residence. PMDP info needs elicited through open-ended not closed-ended questions.		Want to know what to do if driving in a car. What to do to protect pets.	Previous research had looked at different sources of information however they did not investigate what information those sources should be providing.
Implications	Public will look for detailed info on: nature of threat, action steps to stay safe, and govt response. Info needs consistent across country. But action steps, and attentiveness, will depend on proximity.			Adequate information must be provided to the public in the event of a terrorist event.

Info seeking in event	SLU	UOK	UAB	UCLA
Common findings	PMDP confirmed all reported research that public will turn to broadcast media first. Some will also seek info from local agencies and interpersonal contacts (MDs). Both quant and qual studies show that TV is primary source. PMDP also confirmed results of another qual study that found that people will validate accuracy of media reports by checking multiple sources.	Parts expressed desire for printed materials before an event, arguing that available information would decrease panic and anxiety in an event. Esp. true given nature of VX, where immediate treatment is necessary for survival.	Many want information prior to an event. Public views TV as best way to provide info during event. Newspaper, radio and web viewed as also important. Radio important when power is out. Concerned about media sensationalism. Survey data confirms preference for TV broadcast of info.	In an emergency people look to the mass media for information. People will check a number of different sources to get information in order to insure they are getting accurate information. Literature often didn't agree on what channel would be the first source of information however those channels mentioned in the literature were also found in the PMDP study. People will also turn to interpersonal sources.
Different, contradictory findings	One survey found cable was the preferred channel, but PMDP parts preferred local channel (but national vs. local event). One unrepresentative survey found internet as a favored source, but PMDP, with lower SES sample, found that web was less preferred, and more likely to be used later, if available.			While some of the literature said newspapers were trusted; PMDP participants were very skeptical about the honesty of newspapers because of their tendency to sensationalize.
Different, complementary findings	Radio is important back up.			PMDP also found that people would like briefing sessions at community organizations such as town hall meetings and community forums.

<p>Unique contributions</p>	<p>Rural populations will turn to local authorities first, and urban residents to broadcast media first.</p>	<p>American Indians seek interpersonal sources: local emergency responders, law enforcement, or clinicians. Prefer information from tribal authorities as more trusted than fed or state govt. Hispanic parts sought Spanish language materials; they will also seek info from more fluent English speakers in their family (“call the son”). Rural parts prefer interpersonal sources of emergency info, possibly because broadcast media (esp. local) are limited, and so rely more on telephone. Some mentioned police scanners and ham radio.</p>	<p>People will seek additional info to inform decisions and actions.</p>	<p>PMDP looked at use of national vs. local media. Participants would go to local media first because they would have the story first and then turn to national media after the story goes national.</p>
<p>Implications</p>	<p>Public will both to broadcast media and local authorities for emergency info. People compare sources to validate veracity of info, so consistency is important. Internet and print are important over time.</p>			<p>Information will need to be provided through a variety of outlets to reach a larger audience. However radio, television, and the internet appear to be the most important. Those with a lower SES and are older are more likely to look to interpersonal sources for information.</p>

Public action in event	SLU	UOK	UAB	UCLA
Common findings	PMDP confirmed published research: public will seek info, and take action to protect self and family. Not all actions consistent with recommendations however, e.g. fleeing vs. shelter in place. PMDP findings validated by research following real emergencies, and both quant and qual studies.	Some will turn to prayer. Challenges minorities face related to healthcare-seeking need to be addressed specifically given the needs of a chemical attack; barriers could fatally obstruct at-risk individuals from seeking care.	People are confident that recommended actions would keep them safe, and confident they could carry out protective actions. But many will not follow shelter-in-place directives, rather, will go out to find spouses and children. Surveys show a range with large proportions (from few up to 90%) expecting not to comply. Status of family members is the key determining factor.	Studies found people would take generic food-borne illness prevention steps such as boiling water and cooking food longer. For many the first action they would take would be seeking information.
Different, contradictory findings	PMDP findings did not contradict published lit.			Literature found that participants would go to their family physician or the emergency room, however PMDP participants seemed to focus on the actions they could take at home such as boiling water. PMDP participants also had concerns regarding seeking treatment such as cost and overcrowding.
Different, complementary findings	PMDP did not look at long-term behavior change (e.g. alcohol consumption), or at differences between affected and not affected.	Lower SES, minorities and women more likely to pray.	Surveys show low levels of knowledge about local disaster and evacuation plans. During the Three Mile Island disaster, many more than recommended fled.	Most studies have looked at actions after the event, this study looked at emotional reactions and behaviors pre-event.
Unique contributions	Open-ended questions allowed for in-depth discussion and motivation. On the whole results were consistent.			PEMD looks closely at the specific behaviors people would carry out in the case of an attack, previous research looked mostly at emotional response to a possible bioterrorism attack or included a small amount of information on behaviors.

Implications	Public will take common sense precautions, but all following recommendations, esp. regarding shelter in place. Authorities need to let people know specific protective actions, and background information on why actions will protect them.			It is important to provide information to the public as soon as possible, whereas for many in the event of an emergency information seeking would be their first action.
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Emotional response in event	SLU	UOK	UAB	UCLA
Common findings	PMDP confirmed published research: public will react with fear, shock, and disbelief.	Public responds with fear, anxiety and anger. American Indians and Hispanics tended to have more fatalistic attitudes. Rural parts. felt less threatened, consistent with research showing that proximity to disasters is associated with continuing trauma.	Some fatalistic attitudes toward terrorism and esp. rad terrorism were evident, esp. among minorities.	The public responds to a terrorist attack with fear and anxiety. The public will also react with sympathy towards the victims of the attack.
Different, contradictory findings	PMDP contradicted published lit in one area, showing that younger were less fearful, but this could have been due to small sample.			Other literature looked at the long-term psychological effects of and outbreak or terrorist attack, while the PEMD looked only at the emotional response during an attack. Some research found that people would panic and flood emergency rooms, that was not the case with the PMDP, where participants would react rationally.
Different, complementary findings	PMDP focused on short-term, not long-term effects, which showed potential for psychological trauma.	Other studies found emotional response differed by ethnic group, e.g. Whites more likely to show anger. Minorities and lower SES groups more likely to experience greater distress after disasters. Other research noted potential for long-term trauma after '95 sarin attack in Tokyo subway.		One coping message not found in the literature included the importance of prayer.
Unique contributions	Groups under specific risk, e.g. living near army bases or in residential facilities for the elderly felt more at risk, and had heightened emotional response.			PMDP was able to show that increased information decreased fear and anxiety among the public.

Implications	Emergency responders need to anticipate emotional response of the public in communicating to them. Communication should include needed information about action steps to reassure the public, especially those in the vicinity of the threat.			Providing adequate and clear information to the public may prevent excess fear and panic.
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Confidence in government	SLU	UOK	UAB	UCLA
Common findings	PMDP findings were consistent with quant and qual research indicating that the public does not think communities are prepared, which negatively affects confidence and trust in govt. PMDP also consistent with a study showing that openness important in fostering trust. Lack of trust directed more often toward federal officials. African Americans and Hispanics more likely to distrust officials and fear unequal treatment.	Minority participants more likely to express distrust toward the federal govt. This distrust was based on past experience of incomplete dissemination of relevant information. African Americans, Hispanics and American Indians, as well as new immigrants are concerned about discrimination.	PMDP findings consistent with survey data on trusted sources: CDC, physicians, Surgeon Genl, NIH above 70%. DHHS, DHS, President, and AG above 60%.	Public questions the capacity and readiness of the government (local, state, and federal) to handle an emergency foodborne outbreak. People are cynical about the government and are distrustful of new food processing techniques such as irradiation.
Different, contradictory findings	PMDP found public more likely to trust local officials, whereas surveys found feds more trusted (possibly due to wording of questions).	PMDP found that level of trust by Hispanics did not vary (decline) with acculturation (length of stay in the US) as past research had.		Some PMDP participants felt there were systems in place to deal with another terrorist attack, however surveys of health departments have shown many are not prepared to handle a widespread outbreak.
Different, complementary findings	PMDP did not assess change in confidence over time.		Distrust of agencies associated with nuclear power (i.e. DOE). Americans less confident in govt's ability to protect from dirty bomb than other terrorist threats. Lower SES less trust. Less trust for private industry; more trust for scientists and academics.	None mentioned

<p>Unique contributions</p>	<p>PMDP was able to assess reasons behind lack of confidence (e.g. perception of lack of preparedness, previous experience). Also PMDP parts more likely to trust local than fed officials. Rural parts. more likely to trust local authorities.</p>	<p>Rural participants expressed less trust, expecting less support from the federal govt., but were consequently more self-reliant than urban parts. However, rural parts. more likely to trust local information sources. PMDP showed that American Indians tend to distrust the fed govt.; however they have a high level of trust of tribal govts., and felt that tribal administration would be source of assistance and info in emergency.</p>		<p>PMDP was able to differentiate the different forms of government from each other and determine which were trusted and which were not. For the most part the public trusts first responders and federal agencies, however politicians were not trusted.</p>
<p>Implications</p>	<p>Public feels communities not prepared, and this affects trust. Officials can foster trust by being open in an emergency and about preparedness. Many levels should be involved in emergency response.</p>		<p>Agencies and individuals with health expertise need to at forefront of informational efforts.</p>	<p>Government agencies need to be aware of the lack of trust and confidence the public feel. Agencies need to work to build that trust and confidence up prior to an event.</p>

Response to media materials	SLU	UOK	UAB	UCLA
Common findings	Overall perceptions about media coverage of emergencies generally positive and useful source of information.	Severity of symptoms of VX exposure are hard to convey, and are an impediment to encouraging people to seek care.		Consistency and simplicity of messages are important. Images were more memorable than words. The truthfulness of the media was questioned.
Different, contradictory findings	Past studies evaluated news reports that do not necessarily include recommendations for protective actions.			None mentioned
Different, complementary findings	PMDP stratified by race, finding that minorities less trusting of media reports. PMDP noted concern about hype.	Providing definitive information about threat, action steps will decrease levels of fear and anxiety in event.		One study did look at the use of statistics, and found that they were less effective than individual stories. PMDP did not look at statistics vs stories.
Unique contributions	PMDP evaluated emergency response messages specifically, finding that public looks for action steps, clear and accurate information, and additional resources. Precautionary information is reassuring to the public.	Non English speakers fear that they will miss vital communication. Hispanic participants showed a preference for male authorities as sources of information.	Material pre-testing not done before. Some issues: Shelter-in-place not always understood. Unfamiliar with potassium iodide (KI).	PMDP did an in-depth look at how specific words and images can confuse rather than enlighten the audience.
Implications	News media play an important role in informing the public about an event, and providing clear and accurate precautionary actions recommendations. Media exposure can influence perceptions of trust in govt in emergency response. Media strategy must include various media to reach the public.			Great care and effort needs to be put into messages about issues and conditions that people are not familiar with.

Emotional response to media	SLU	UOK	UAB	UCLA
Common findings	Media coverage of emergencies can lead to increased fear. Actionable information can reassure the public.			Those in disadvantaged groups are more likely to feel that additional information will cause panic. And are less likely to have resources to carry out recommendations.
Different, contradictory findings	None.			None mentioned
Different, complementary findings	Past research evaluated exposure to news, not emergency response messages. News coverage does not necessarily include actionable messages. PMDP found that emergency response information reassured parts.			PMDP were able to more clearly look at cultural differences among groups as groups were different races, different parts of the country, and in rural and urban communities.
Unique contributions	PMDP compared different media: TV and radio spots caused some fear and anxiety, due to concerns about completeness of messages, credibility of source, and uncertainty. Print materials more complete and more reassuring. Increased actionable messages were reassuring.	Non-English speakers had pronounced anxiety that info could not be available in their languages. Spanish speakers noted that wording can affect emotional states. Spanish speakers desire info in their language and on their media, though concerned about tendency of Hispanic broadcasters to hype and emotionalize events. Consequently, Spanish speakers will listen to English media also to validate info.		PMDP research was able to look at the emotional responses to different sources of media information. Media material was able to be analyzed in-depth for things like reaction to voice or actors.
Implications	News coverage and information about emergencies have emotional and psychological effects. Actionable messages are reassuring. Emergency response communication should include			The public must feel urgency in messages, they would be more likely to respond to directives.

	accurate information about steps people can take to keep themselves and family safe.			
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