Pre-Event Message Development Project

Year 1 Summary Report on Results of Focus Groups Conducted about Plague

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Executive Summary

Background
In the case of a terrorist attack utilizing plague, the general public will need timely and reliability information. Participants will rely on governmental and public health agencies to provide this information. In order to determine the information needs of the general public, four schools of public health, (Saint Louis University, University of Alabama, University of Oklahoma, and University of California Los Angeles) under contract with the Centers for Disease Control and Prevention (CDC), conducted a total 55 focus groups in different areas of the country on a number of potential terrorist agents (plague, botulism, radiological, and VX gas).

Methods
The focus groups were conducted with a variety of populations including: Urban, rural, Caucasian, African American, Hispanic, Native American, Asian, Public Health Professionals, First Responders, and students of English as a Second Language. Focus groups covered three topic areas. 1) pre-event knowledge of the Color Alert System, potential bioterrorism agents, and personal protective measures; 2) emotional and informational responses to a hypothetical attack; and 3) pre-testing of existing educational materials. Reports were written for each of the four agents. This report covers the findings of those 14 focus groups related to plague.

Findings – general public
Pre-event knowledge
The general public had somewhat limited knowledge of the Color Alert System as well as the different potential terrorist threats. Minority populations such as Asians and Hispanics showed the least understanding. Public education on the uses of the Color Alert System and the different agents may raise awareness in these areas. Educational channels should include various ethnic media and communities.

Responding to a hypothetical attack.
Emotional response. In the case of a terrorist attack the general public will be frightened, anxious, confused and even frustrated.

Information needs. The general public wants information; they will need information regarding prevention, disease recognition, and treatment immediately. Because of the short incubation period, and severity of the disease it is important that the information provided by the media and other forms of communications address the following topics:

1. Understand the nature of the threat.
2. Take protective actions if you think you have not been exposed.
3. Take steps if you think you have been exposed, or if you have been in contact with someone who may have been exposed.
4. Take steps if you know you have been exposed.
5. Understand information related to the specific event.

Information seeking. For the most part the participants said that they would look to the broadcast media for immediate information, namely, television and radio. Participants also indicated that they would call local law enforcement, emergency response, and medical authorities for information about how to protect themselves. In the urban groups the media would be the first source of information, while in rural areas, local authorities would be called first. Over the course of an event, participants indicated that they would then look to newspapers and the Internet for more information. Information should be provided in ethnic media as well. Participants described strategies of checking different information sources (e.g. different media channels and the Internet) to assess the accuracy of the information they receive.

Pre-testing of educational materials

Response to materials. Those materials available to participants at the focus groups lacked the answers to many of the participants' questions. Tested materials were developed for use in the case of naturally occurring plague, and so provided less relevant or inadequate information for a terrorist scenario. Materials that are designed specifically to deal with plague in a terrorism situation and that provide the answers to the above questions are required.

Recommendations for improvement of materials. Participants also recommended how message materials should be prepared to achieve the best result in providing emergency information to the public. Available message materials should be written at a simple reading level, including visuals, provide easily understandable and clear statistics, and should include information about plague as a result of a bioterrorism event. A source of the information should be included in print and broadcast media, and a method of follow up (such as a 1-800 number) should also be included.

Dissemination strategies. A means of providing consistent and accurate information to the media, local health departments and public and emergency response officials needs to be developed so that they can in turn provide useful information to the general public.

Addressing misconceptions. Many members of the general public make what could be deadly assumptions regarding plague: plague is a disease of the past and medical advances allow for the easy treatment and cure of plague. Part of the communication challenge includes addressing these misconceptions.

Building trust through open-ness. There is a general distrust of the government. Minority groups, such as African Americans, may be especially suspicious of the government. Many populations also were somewhat skeptical with regards to the media. In order to get the needed information to the public these trust issues will need to be overcome. For the general public information can be reassuring, and may prevent a wide spread panic and further distribution of the contagious disease. Many participants also indicated that the perception of open-ness on the part of government officials in the event of an emergency would be an important strategy to build trust.

The general public was also convinced that the government did not have enough drugs for treatment and the public health system could not respond adequately for additional hospital, testing, and education needs and wanted someone to respond to their concerns. It is also important to the public that they are given a chance to get involved in community planning and other aspects of preparedness.

Findings -- Public health professional and first responders
Public health workers and first responders had many of the same information needs of the general public. There was less emotional response in the professional groups and more discussion of readiness and preparation. These professional participants did however show concern for their families in the case of an emergency as well as concern about the potential for the general public to panic.

To the public, full disclosure is a must. In contrast, first responders and public health professionals showed some hesitation at providing the public with too much information. A balance between getting the importance of the topic across and preventing large-scale panic is important. Information provided to the public should include action steps that individuals can take to prevent infection or get the needed help if the infection has already occurred.

Conclusion
In the event of a potential bioterrorist attack, the information needs of the public will be great. Based on this research the materials that are currently available to provide this much needed information to the public are inadequate. New materials designed to inform the general public need to be created. The findings from this research are designed to inform the development and testing of these much-needed materials. A creative brief, developed in the light of this research, provides a framework for the development and assessment off new materials.

I. Introduction

The threat of terrorist action requires the design, development, and dissemination of technically accurate and timely information about how persons may best protect themselves and their communities to the public health workforce and many community agencies and organizations, as well as the general population. The Centers for Disease Control and Prevention and the Association of Schools of Public Health responded by funding the "Pre-Event Message Development Project" (PEMD). The project provides funding to four primary schools of public health (University of Alabama-Birmingham (UAB), Saint Louis University (SLU), University of California at Los Angeles (UCLA), and the University of Oklahoma (UOK)), and includes Principal Investigators from a number of disciplines. The goal of the project is to develop and evaluate through audience testing pre-event message content appropriate to a variety of formats. The areas of primary focus include chemical, biological and radiological events. The content and message structure formats will be tailored to meet the needs of a variety of audiences, including but not limited to, the public health workforce, first responders, state and local authorities, as well as the general population, including segments of low literacy, non-English speakers, and/or minorities. Each of the four programs serving in primary roles bring special strengths and expertise to the process. By using formative research with exploratory focus groups followed by evaluative audience testing, critical information about what audiences want to know has been developed in parallel with the information that the research team, CDCP and the ASPH Bioterrorism Council recognizes needs to be known. This report presents the results of the formative research.

A. Consensus Process

Since its inception the PEMD project has been carried out as a collaborative endeavor, with input and effort from the four collaborators, as well as from colleagues at the CDC and ASPH. This consensus-based approach has taken the shape of mutually agreed upon goals, methods and measures, as well as shared effort. From the first meetings, collaborators agreed to the benefits of a common approach. One benefit was that common tasks could be divided up among the partners (such as writing the introductory section of this Year 1 report). Most significantly, opportunities for building scale into a project using standardized focus group methodology could produce greater confidence in the validity and generalizeability of the findings: results from fifty focus groups are more compelling than results from ten.

The accomplishment of specific benchmarks in the workplan, such as the development of the focus group discussion guide, take place more or less as follows. The conceptual framework for the focus groups was laid out in broad strokes at the first two meetings of collaborators. SLU took the lead on drafting the conceptual framework, and preparing the first draft set of questions based on the framework. The partners reviewed the draft, and shared their comments in a conference call. SLU revised the guide and again submitted the draft for review. Final revisions were made after a final round of reviews, and collaborators approved the result in a conference call. At that point, we could all

move forward with preparation of protocols for ethical review, and commence the research itself.

Such an approach can be time-consuming, especially when participants are located in five or more locations spread across four time zones. The *modus operandi*, consequently, has called for weekly conference calls, and periodic (quarterly) in-person meetings. The meetings are necessary to reach agreement on decisions of consequence, such as preparation of workplans; the calls keep work moving forward. Typically one school will take the lead on a particular task, but the final version is the one agreed to by all. The pace of the consensus building process has become faster with time, as basic elements have fallen into place. For example, much of the project relies on the conceptual framework. Once the difficult work of achieving consensus on the framework was accomplished, later elements were easier to complete. All key deliverables in the project have been benefited from this approach, including the coding guide for the analysis; the preliminary presentations of results in Sept. 2003; and the application for renewal of the project.

B. Methodology

The two specific aims of the project activities were 1) to obtain insight into the general public's current knowledge, attitudes, and potential responses to terrorist threats and 2) to pre-test agent-specific informational materials developed by the CDC. To achieve these two aims, qualitative research methods were employed and focus group interviews were conducted with two primary audiences, public health professionals (frontline public health workers, fire fighters, emergency medical technicians [EMTs] and police) and the general public. Focus group interviews have become an important means of collecting data to address message and campaign creation, as they can be done relatively quickly yet still capture opinions and sentiments of selected groups or segments within a population (Krueger, 1994).

1. Data collection

The data collection tool was comprised of a set of open-ended questions (focus group guide) designed to elicit information pertinent to designated domains of interest relevant to pre-event messaging. Focus group guides were also customized to include agent specific scenarios and informational materials. The development of the guides was a collaborative effort between UCLA, UAB, UOK, and SLU.

The basic structure of the focus group guide for the general public included the following sections:

1. Introduction & ice breaker
2. Current knowledge and attitudes about the national color alert system and different types of terrorist threats
3. Three part scenario rollout based on specific type of agent - radiological, chemical (VX), or biological (plague or botulism)

4. Confidence in the government's ability to respond to a terrorist event of the type described
5. Part four of the scenario in which participants are asked to review agent-specific educational materials / information

The focus group guide for the public health professionals was similar in structure, but did not include the section on the national color alert system, knowledge about different types of terrorist threats, or confidence in the government's ability to respond to a terrorist threat or event.

Fifty-five focus groups were conducted by the partner universities, in the public and professional sectors. The focus groups were conducted in places convenient for the participants and designated by the subject recruiters. Focus groups were audio taped and responses to questions were transcribed. In addition to public and professional groups within the U.S. mainstream population, the partner universities conducted groups within minority groups to include American Indian, Hispanic, African American, and Asian populations, as well as groups conducted with persons to which English is a second language. Some Hispanic groups were conducted in Spanish.

2. Measures

Table 1 below lists the constructs of interest for the two different audiences with which the focus groups were conducted.

Table 1: Constructs studied in each population

Public health professionals and first responders	**General public audience segments**
Formative research questions: • Professional and public information needs • Professional and public information seeking behavior • Preferred channels for terrorism information dissemination Materials pre-testing questions: • Comprehension • Emotional response • Believability • Intention to use materials • Recommendations for improvement	Formative research questions: • Pre-event knowledge, attitudes and response • General knowledge about basic health science as it relates to different threats • Confidence in the government and public health response to a potential attack • Terrorism information needs • Terrorism information seeking behavior Materials pre-testing questions: • Comprehension • Emotional response • Believability • Self-efficacy and response-efficacy intention to follow advice Recommendations for improvement

3. Analysis

Focus group transcripts for both public and professional groups were entered into the various qualitative data analysis programs (university choice) for coding using the designated coding protocol. Coding proceeded from macro domains to smaller units of coded material. Coding and recoding were completed when all portions of the focus group experiences were classified, domains were "saturated," and common themes emerged (Strauss & Corbin, 1994). Themes elicited for each focus group are presented in the Topline Summary Reports. The Summary Reports were presented to the partner universities for utilization in the crafting of Final Topic Specific Creative Briefs for designated content areas, and Final Focus Group Reports.

The coding analysis process was generated from 1) literature on the theory of the Cultural Construction of Realities, 2) literature of Grounded Theory, and 3) code domains identified in collaboration with participating universities, CDC, and ASPH (Glaser & Strauss, 1967; Strauss & Corbin, 1996). As Miles and Huberman (1994) note, the coding process is simultaneously data collection, method, and analysis (Miles & Huberman, 1994). Consequently, code categories are not simply convenient labels facilitating text retrieval, they are crucial data leading to an auditable trail of findings (Strauss & Corbin, 1994; Miles & Huberman, 1994). In this study, "code categories" will be referred to as "domains."

Thematic analysis is a process which encodes qualitative information, therefore themes are generated as the coding proceeds. Research relevant statements were extracted from each interview, coded, and analyzed for meanings. These meanings were clustered into themes which could be analyzed across focus groups (Morse, 1994).

It is important to note that frequency of the response is only one aspect of identification of themes. The significance of meaning as judged by the nature of the subject's discourse could mean that something less frequently mentioned could also represent a theme, provided, for example, that it is mentioned with great emphasis (Valle, 1989).

Issues of coding reliability

The coding of transcripts proceeded from the first coding of the manuscript to a process known as "check-coding" in which 1) two researchers code the same data set and coding difficulties or disagreements are discovered and/or 2) one researcher codes the data set and repeats the process on an identical un-coded manuscripts several days later. The processes of check-coding increase definitional clarity and validate reliability, and are also an assessment of internal consistency in individual coders (Miles and Huberman, 1994).

Inter-coder reliability (inter-rater reliability) was computed in the following manner:

$$\text{Reliability} = \frac{\text{\# of agreements between coders}}{\text{Total \# of agreements and disagreements}}$$

Inter-coder reliability was assessed by the partner universities for each of the focus groups conducted. Inter-coder reliability was considered to be acceptable when it equaled or exceeded 70%. Code-recode reliability was computed utilizing the same formula. However, for code-recode reliability results equal to or exceeding 80% must be obtained. The coding of focus groups by the partner universities achieved acceptable levels of inter-rater and/or code-recode reliability. Reliability of results was also confirmed by a process of cross-group validation in which themes were compared, and similarities noted. It is notable that cross-group reliability was also achieved in this research.

Limitations of the study

The participants in the study represent a non-random convenience sample of the population. However, there is much discussion in the literature about the use of non-probabilistic sampling techniques. In probability samples, each member of the population has an equal chance of being included in the study. The most common uses of a probability sample are to determine distribution in a population and to test the relationships between variables. However, a primary limitation of this type of sampling is that it cannot easily be used to obtain information about the meaning of a construct (Morse, 1986).

The assumption underlying the use of non-probability sampling is that not all subjects experience the phenomenon of interest in the same ways. In qualitative research, sample size is dependent upon the purpose of the inquiry. In-depth information from a small target population is the desired outcome rather than dilute information from a large number of subjects. In a project such as this one, the researcher's main emphasis is on understanding and identifying explanatory models and cultural constructions which will in turn facilitate the crafting and delivery of messages important to the continued health and well-being of the public. In addition to other issues, the validity of the study after its completion depends upon the richness of the information obtained, and the observational and analytic skills of the researcher (Patton, 1990).

Issues of validity

Validity is the degree to which the research measures what it is supposed to measure. Krueger (1994) states that the use of focus groups in qualitative research is valid if the focus groups are used carefully for a problem that is amenable to focus group inquiry. The validity depends upon the context in which it is used and the procedures followed in the conduct of the groups (Krueger, 1994). Focus groups are particularly valuable prior to initiating a social marketing campaign for the purpose of addressing designated population groups.

In order to ensure validity, the findings must be grounded in the focus group data, inferences made from the data must be logical, analytic strategies applied correctly, and alternative explanations accounted for (Schwandt & Halpern, 1988). Ideally, the research should have the possibility of being replicated by other investigators. "Transparency" of method addresses the issue of clarity of data and procedures such that the study may indeed be replicated at a later date (Miles & Huberman, 1994).

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 the CDC and ASPH in the crafting of pre-event messages addressing the issues extant in the realities of bioterrorist activity, especially in regard to targeted special populations.

C. Human subjects protocol

Over the course of several months, representatives from each member institution provided input on the content and wording of a joint human subjects protocol to be submitted to each institutions' review board. Drafts were circulated between the institutions and changes were noted until a final document was agreed upon. In addition to the protocol, each institution prepared consent forms and packets under the guidelines of their review board for submission. After submission, each institution provided an approval letter to the funding agency.

1. Study groups

The cooperative agreement under which the work was carried out was awarded by the ASPH and the CDC to the partners: SLU; UOK; UCLA; and UAB. Tulane University (TU) and the University of South Florida (USF) were awarded subcontracts by UAB and the University of North Texas (UNT) was awarded a subcontract by UOK. As requested by the CDC, each of the four schools, along with subcontract institutions held scenario-based focus groups and pre-tested messages for different audience subgroups. Messages were tested among various elements of the U.S. population (White, African American, Hispanic, Asian and Native American) as well as professional groups (first responders and public health professionals).

2. Role of subjects

The cooperative institutions accepted best practices of qualitative research to inform message development and pre-testing. The purpose of *formative research* in this study was threefold: (1) to gain a clearer understanding of the information needs of each target population as it relates to bioterrorism threats; (2) to identify likely applications of such information; and (3) to learn how best to present and deliver terrorism messages to each target population. To gather this information, focus group discussions with audience segment from both professional and general public populations were held. The purpose of *pre-testing* was to get feedback about draft or prototype materials from members of audiences of interest, for the purpose of enhancing the clarity and quality of materials. Focus groups were led by moderators trained to guide discussions in non-directive, and non-judgmental ways, and to elicit responses from all participants.

For the *pretesting portion* of the focus group discussions, a set of core content was developed into fact sheets. The fact sheets were read and given to participants to respond to and to use for reference in answering the interview questions, as they assess their

quality. Specifically, participants in the focus groups were asked to assess these materials in the areas of: (1) Clarity of the material and information conveyed; (2) Comprehensibility of the information; (3) Adequacy of the level of detail; and (4) Recommendations for improvement.

3. Inclusion and exclusion criteria

As a collaborative effort, the combined study sample of all participating institutions is intended to draw on the principal population subgroups in the United States, as well as public health and emergency professionals. In drawing the convenience sample for the general public audience segments, every effort was made to balance representation of both sexes. Only adult populations were examined, so only individuals who have attained the legal age for consent under the applicable law in the state in which the focus groups were conducted should be considered for participation in focus groups (45 CFR 46.402). For all institutions involved, the age of twenty-one years was decided.

For some project partners, focus group participants were limited only to adults from the specific audience segment. Other partners used more stringent criteria. In an attempt to minimize risk to study participants, in some cases individuals with a history of trauma were excluded from the study. Exclusion criteria included; but were not limited to, combat experience, violent crime, terrorist incident, motor vehicle accident, disaster (natural or manmade), domestic violence, or sexual abuse. Individuals with a history of a psychiatric illness including, but not limited to, anxiety disorder, depressive illness, bipolar disorder, posttraumatic stress disorder, psychosis, alcoholism, or substance abuse were also excluded from focus group participation. Additionally, individuals who had relatives or friends killed or injured in a terrorist incident were excluded. A subject self-report checklist was administered before some focus groups to assess the presence or absence of the above features was devised.

4. Subject recruitment

Participants in focus group activities were drawn from a convenience sample of members from each target population. Each university established community and professional contacts, or used existing databases to derive a sample. Although groups were already delineated by race for general public and specific jobs for the professional groups, there was an attempt to consider age, SES, and gender while recruiting.

Focus groups were also stratified using an urban vs. rural distinction. Rural communities having less than 12,000 adults over the age of 16 were targeted. Gender representation was approximately half male / half female. Different literacy levels were included as well. This difference was important to consider in the development of pre-event messages so that messages are appropriate for all literacy levels.

Individual participants from all research segments were paid for a formative research session in which they were involved. Exceptions were those whose professions would

not allow for the acceptance of compensation. Total focus group time was approximately 1.5 -2 hours in length.

5. Focus group procedure

As part of the focus group introductions, the focus group moderator reviewed issues related to informed consent, confidentiality and risk/benefit. Participants were told that their participation was voluntary and that they could choose not to complete the study or any part of it without penalty or loss of benefits to which they were otherwise entitled. They were told that the materials they reviewed and discussed were potentially distressing and that they could choose not to participate in any part of the discussion, to leave the group temporarily, or to terminate participation completely. Upon request, they would be given the name and telephone number of a mental health clinician. An informed consent document was reviewed by each participant before the group began, and in some cases where IRB protocol required it, signed by participants.

Referral information was readily available. The conducting institution contacted potential clinicians before focus groups begin to secure their willingness to assist in case a participant requires attention. The UOK mental health team, a partner school, was willing to assist by telephone, in addition to a list of willing potential clinicians for referral purposes at a local level.

D. Demographics

In all 14 focus groups were conducted by seven different universities. These groups were conducted in rural and urban areas; Southeastern, Western, and Midwestern parts of the country; and with Caucasian, African American, Hispanic and Asian audience segments effectively representing diversity in the American public. Overall, the 129 participants ranged from 17 to 86 years of age, with an average age of 47 (SD = 17.5). Seventy-nine females participated (62%), there were 49 males (38%), and 1 (.8%) did not report their sex. Twenty-four (22%) had a high school diploma or GED, 24 (22%) had some college, 9 (8%) had some high school, 8 (7%) had less than high school, 26 (24%) had a college degree, and 19 (17%) held a graduate degree. Race was mixed, 27 (21%) were African American, 28 (27%) were Caucasian, 11 (8%) were American Indian or Alaskan Native, 31 (24%) reported Hispanic, 12 (9%) reported Asian, and 7 (5%) spoke English as a second language. Most (85; 67%) reported that their main language spoken at home was English, 19 (%15) reported they spoke Spanish at home, while 15 (12%) reported they had bilingual homes and 8 (6%) reported some other language (not specified), and 2 (2%) did not report on language spoken at home. Thirty (27%) were single, 67 (60%) were married or living with a partner, 9 (8%) were divorced or separated, 5 (4%) were widowed, and 18 (14%) did not report a marital status. Most (80, 66%) had children, while 41 (34%) did not, and 8 (6%) did not respond to the question. Most (74; 62%) were employed, 45 (38%) were not employed, and 9 (7%) did not respond to the question. The median family income was in the $30,000 to $50,000 range (28; 22% did

not respond). Overall demographics can be seen in Table 4, a summary of each of the specific group demographics can be seen in Table 5.

Table 2: Overall focus group demographic characteristics (N = 129)

Characteristic	**Category**	**N (%)**	**Mean/SD**
Age		17-86	47 / 17.5
	Missing		
Sex	Male	49 (38%)	
	Female	79 (62%)	
	Missing	1 (.8)	
Education	Less than high school	8 (7%)	
	Some high school	9 (8%)	
	High school diploma or GED	24 (22%)	
	Some college	24 (22%)	*
	College degree	26 (24%)	
	Graduate degree	19 (17%)	
	Missing	19 (15%)	
Ethnicity/race	African American/Black	27 (21%)	
	American Indian/Alaska Native	11 (8%)	
	Caucasian/White	28 (22%)	
	ESL	7 (5%)	
	Asian	12 (9%)	
	Hispanic	31 (24%)	
	Professional	13 (10%)	
	Missing	0	
Language in home	English	85 (67%)	
	Spanish	19 (15%)	
	Bilingual	15 (12%)	
	Other	8 (6%)	
	Missing	2 (2%)	
Marital status	Single	30 (27%)	
	Married or living with partner	67 (60%)	
	Divorced or separated	9 (8%)	
	Widowed	5 (4%)	
	Missing	18 (14%)	
Children	Yes	80 (66%)	
	No	41 (34%)	
	Missing	8 (6.2%)	
Employment	Yes	74 (62%)	
	No	45 (38%)	
	Missing	9 (7%)	
Family income	Less than $10,000	12 (12%)	
	$10,000-$19,999	23 (23%)	
	$20,000-$29,999	15 (15%)	
	$30,000-$39,999	8 (8%)	*
	$40,000-$49,999	7 (7%)	*
	$50,000-$59,999	10 (10%)	
	$60,000-$69,999	12 (12%)	
	$70,000-$79,999	1 (1%)	
	$80,000-$89,999	2 (2%)	
	$90,000-$99,999	4 (4%)	
	$100,000 or more	7 (7%)	
	Missing	28 (22%)	

* = median

Table 3: Individual Focus Group Demographics

Focus Group #	1	2	3	4	5	6
University	UCLA	UCLA	UCLA	UCLA	OAK	SLU
Population:	Urban Hispanic	Urban Asian	Urban ESL	Urban White	Rural Native American	Urban African American
Age						
Minimum	21	23	22	27	25	63
Maximum	75	78	54	86	60	75
Mean	43	42	37	57	44	71
Standard Deviation	14.442	16.994	11.600	19.591	11.507	4.045
Gender						
% Female	90%	58%	71%	69%	46%	12%
% Male	10%	42%	29%	31%	54%	88%
Education						
No high school	-	-	14%	-	18%	22%
Some High School	11%	8%	27%	-	9%	44%
HS Diploma	33%	-	-	-	46%	11%
Some College	44%	8%	-	25%	18%	11%
College Degree	-	50%	14%	50%	9%	11%
Some Graduate	-	-	-	-	-	-
Graduate Degree	11%	33%	43%	25%	-	-
Marital Status						
Single	30%	25%	14%	25%	20%	43%
Married	60%	75%	86%	50%	60%	-
Divorced	-	-	-	19%	20%	14%
Widowed	10%	-	-	6%	-	43%
Income						
Below $10, 000	-	42%	-	-	20%	33%
$10, 000 - $19,999	29%	33%	43%	12%	20%	33%
$20, 000 - $29,999	29%	8%	14%	-	20%	17%
$30, 000 - $39,999	14%	8%	14%	6%	10%	-
$40, 000 - $49,999	14%	8%	27%	-	20%	-
$50, 000 - $59,999	14%	8%	-	31%	-	-
$60, 000 - $69,999	-	-	-	19%	10%	-
$70, 000 - $79,999	-	-	-	-	-	-
$80, 000 - $89,999	-	-	-	-	-	-
$90, 000 - $99,999	-	-	-	19%	-	-
Above $100,000	-	-	-	12%	-	17%
Mean	$20,000-$40,000	$10,000-$30,000	$20,000-$40, 000	$50,000-$70,000	$20,000-$40,000	$20,000-$40,000

Table 3: Individual Focus Group Demographics- Continued

Focus Group #	7	8	9	10	11	12
University	SLU	SLU	SLU	SLU	UAB	USF
Population:	Rural African American	Urban White	Rural White	Prof	Prof	Urban Hispanic
Age						
Minimum	18	25	17	32	28	22
Maximum	53	32	68	46	44	80
Mean	30	29	51	39	35	46
Standard Deviation	9.093	3.512	18.255	5.727	6.110	20.614
Gender						
% Female	43%	33%	22%	83%	14%	50%
% Male	57%	67%	78%	17%	86%	50%
Education						
No high school	-	-	-	-	-	Education
Some High School	-	-	11%	-	-	Data
HS Diploma	71%	33%	33%	-	-	Missing
Some College	29%	-	33%	50%	-	
College Degree	-	33%	11%	50%	29%	
Some Graduate	-	-	-	-	-	
Graduate Degree	-	33%	11%	-	71%	
Marital Status						
Single	50%	33%	11%	17%	29%	Marital
Married	50	33%	89%	67%	71%	Status
Divorced	-	33%	-	17%	-	Missing
Widowed	-	-	-	-	-	
Income						
Below $10, 000	21%	-	-	-	-	Income
$10, 000 - $19,999	43%	-	-	-	-	Data
$20, 000 - $29,999	14	100%	-	-	14%	Missing
$30, 000 - $39,999	7%	-	17%	-	14%	
$40, 000 - $49,999	7%	-	-	-	-	
$50, 000 - $59,999	-	-	17%	33%	-	
$60, 000 - $69,999	7%	-	67%	-	29%	
$70, 000 - $79,999	-	-	-	17%	-	
$80, 000 - $89,999	-	-	-	33%	-	
$90, 000 - $99,999	-	-	-	-	14%	
Above $100,000	-	-	-	175	29%	
Mean	$10,000-$30,000	$20,000-$30,000	$50. 000-$70,000	$70,000-$90,000	$60,000-$80,000	

Table 3: Individual Focus Group Demographics- Continued

Focus Group #	13	14
University	Tulane	Texas
Population:	Urban African American	Rural Hispanic
Age Minimum Maximum Mean Standard Deviation	Age data not available	 24 63 44 13.083
Gender % Female % Male	 50% 50%	 54% 46%
Education No high school Some High School HS Diploma Some College College Degree Some Graduate Graduate Degree	Education data not available	 - 29% 14% 29% 29% - -
Marital Status Single Married Divorced Widowed	Marital status not available	 20% 70% 10% -
Income Below $10, 000 $10, 000 - $19,999 $20, 000 - $29,999 $30, 000 - $39,999 $40, 000 - $49,999 $50, 000 - $59,999 $60, 000 - $69,999 $70, 000 - $79,999 $80, 000 - $89,999 $90, 000 - $99,999 Above $100,000 Mean	Income data not available	 - 29% 43% - - - 14% - - - 14% $30,000-$50,000

II. Findings

The findings section presents the results of the analysis of the focus group discussions, according to the different constructs or domains that informed the discussion guides. A copy of both moderator's guides can be seen in Appendix D.

The professional and public group differed in the way in which pre—event knowledge and the hypothetical scenario were covered. The findings for the general public are presented first, followed by the professional findings. The general public moderator's guide was split into three parts with specific goals:

- General knowledge of preparedness and bioterrorism.
  - What do people know?
- Presentation of a hypothetical plague terrorism attack scenario.
  - What do people want to know?
  - Where do people look for information?
- Presentation of pretest materials to participants.
  - How do current materials address reported needs?

A. Findings from general public group

1. Pre-event knowledge

The first set of questions were meant to test the knowledge of the general public regarding general preparedness such as knowledge of the Color Alert System (CAS) and different types of potential agents that can be used during a terrorism attack.

Color Alert System

Most groups did not have significant knowledge of the CAS, but did have some general knowledge of the system. Very few participants realized that the CAS system is not a public warning system, but has the objective of alerting homeland and local security workers.

African American groups, the Midwestern urban white group, the California Hispanic group, and the Native American group had some participants that were aware of what the CAS system was meant to tell people. Participants knew that alert levels changed based on information about the likelihood of a terrorist attack occurring.

> *FG 13, "Well high alert for terrorism. Something that's going on. They have reason to believe that something may happen. Especially when it gets around the holidays."*

> *FG 1, pg 1 "The different level of danger. Each color represents a different level of danger."*

> *FG 4, pg 4 " This is a system where everyone now, you're informed and it probably isn't as significant unless it's a big threat. So I think that by having different colors it's a way to say this is open information, this is public information.*

Unlike those Hispanic participants from California, most Hispanic participants in Florida did not know what the CAS is, and most did not pay attention to it. Asian participants also had very limited knowledge of the CAS.

> *FG 2, pg 1 "Green is a possible terrorist attack."*

White rural and urban participants and Asian participants were wary of the usefulness of the CAS. Asian participants felt that the system was giving them incomplete information, and ESL participants wanted to know how the government determined the colors.

> *FG 4, pg 3 "It is probably a little bit intrusive because it is forced upon your consciousness and we either should have something that we should do if there's something that's going to happen or we probably shouldn't be bothering with making it part of our consciousness all the time. It's not good mental health."*

> *FG 9, pg 2 "Sometimes I feel it's just another means of the media being able to beep in on the television and get the adrenalin moving and everything. There for a while when it was fluctuating back and forth, I myself thought they were kind of just playing around."*

> *FG 2, pg 1 "You don't even know what to do with it."*

> *FG 4, pg 5 "The thing about the colors is that they do not tell the public what they should do. It is just colors, but nothing else."*

> *FG 3, pg 4 "What I don't understand is how. . .the government identifies these codes."*

According to participants in the western urban white group, the CAS did not have a lot of impact on the general public; exceptions mentioned were travel and attending events with large crowds.

> *FG 4, pg 3 "In general, day by day it does not mean a whole lot, except you realize that there is a scale from low to high…it does not have a lot of impact."*

> *FG 4, pg 2 "If you were traveling and I knew that I have to go to the airport, let's say, there is an orange alert, I would know that I'd better be prepared to spend a lot of time prior to the flight, because there would probably be additional delayes by security."*

FG 4, pg 3 "If you are thinking of going to an event, like if there is something going on in the coliseum and there was an orange alert, maybe you decide not to leave or go to a high profile place."

One urban white participant felt that the color system could allow the government to get around blame in the event of a terrorist attack.

FG 4, pg 4 "I think there is a feeling of guilt about 9/11 that comes from the governments that they didn't warn us; they didn't have the information. A lot of people are asking why didn't you, they don't seem to want to have a congressional investigation, why we didn't have that information…it smells very much like a military type of thing where you have five levels, different colors, it's like a death-com 1 or death-com 5, shooting missiles over whoever our supposed enemy is at the time. I don't know, I think it's basically a way to cover possible blame if someone makes a mistake."

Protection knowledge in case of an attack

Some of the participants in the urban African American groups did not feel that there was anything they could do to prevent a terrorist attack; however, there were steps they could take to prepare for a terrorist attack. Acquiring information and staying alert were the most significant steps mentioned in the urban African American group as well as many of the other groups. Sources of information include the internet, television, radio, local public health and law enforcement agencies, local Red Cross and training classes at local schools.

FG 13, "There's really, there's no way you can prevent anything from happening. You can be at the store and something can happen."

FG 1, pg 1 "Be informed so that we can be prepared."

Rural African American and white groups thought staying vigilant and being aware of one's surroundings was protective. Urban Midwestern white participants also echoed a similar belief.

FG 9, pg 2 "Well I think that's kind of easy here because we pretty well know everybody, and if you see a truck or a car going down the road, you are pretty sure of who it is. And anybody that is different kind of stands out."

FG 8, "They are wanting society to be more observant as far as like more vigilant and just noticing things instead of just like walking by and forgetting about it."

In California, participants mentioned preparing for an attack by stockpiling water, food, and emergency supplies. It was mentioned that preparing for an attack was like preparing for an earthquake. Midwestern participants also mentioned that preparing essentials like

food, water, and medication would help. In the ESL group gas masks were agreed upon as a key element of preparation as well.

> *FG 6, pg 2 "Get your water. And prepare to get dry foods that you can put in cans and keep. A lot of candy and candy bars I reckon and fruit. It seems like that would be a good idea to do."*

> *FG 3, pg 6 "Isn't that the same department as . . .when we have an earthquake. . .It is the same thing. I do. I am prepared for an earthquake."*

> *FG 6, pg 2 "If you are on a certain type of medication like insulin, try to get that. So know what you need if you are not able to come outside."*

> *FG 3, pg 11 "See that's uh going back to my concern about the mask. We need one, see. That's how I think when it comes to chemicals that's how I think that's the only focus that I do have personally."*

Terrorist threat knowledge (Chemical, radiological, and biological)

For the most part, urban African American and both rural and urban white participants gave correct information about the three terrorist agent categories (chemical, biological, radiological).

> *FG 13, "Uh getting a disease. Using a crop duster or something to spread it over everybody. Plague, Ebola something like that."*

> *FG 9, pg 3 "Maybe like a nuclear bomb. Something like that. Would that be radiation?"*

> *FG 6, pg 3 "A chemical threat is when they use types of chemicals such as gas."*

Some of the groups had very limited knowledge about the different agents, rural African Americans among them. The Native American participants understood chemical attacks, but were confused about radiological attacks and biological attacks. The Asian and ESL focus group participants were also confused about radiological terrorism.

> *FG 5, pg 4 "(Biological) that consists of putting something that has gotten into the water."*

> *FG 5, pg 6 "(Chemical attack is) something like poisonous gas."*

> *FG 3, pg 13 "A Radiologist is different. It's kind of like uh, like light. It's a different event of light. But I think it's very hard for our animal, uh enemies to emit some x-ray or other radio-lights. It's impossible. It's very hard for them to operate it. So I think it's impossible. It's not feasible way to attack us."*

When discussing a biological agent in one urban African American group, participants questioned how accurately one could determine if it were actually a terrorist activity versus an accident or natural illness.

> *FG 13, "Like if you had a single person that you can't really like evaluate if its really a terrorist attack or not because it won't be like mass destruction first."*

2. Hypothetical Attack

General public participants were asked to respond to a plague attack scenario that was rolled out in number of sections. With each section presented participants were giving more agent specific information. Between each section participant were asked a serious of questions.

How do participants respond emotionally to a suspected or actual emergency?

Although there was some variation in participants' answers, the ways that they initially responded to a suspected or actual emergency were along the lines of common sense, regardless of their ethnicity. Participants responded that they would seek out information, contact their family members to see if they were okay and, if necessary, look for food, shelter and water. Emotional responses somewhat predictably, fell mostly in the scared and worried category, and often times that fear increased as the scenario was rolled out.

> *FG 3, pg 16 "I would feel disturbed."*
>
> *FG 6, pg 4 "It would be mighty scary."*
>
> *FG 4. pg 17 "I'd probably do some, I would probably start doing some shopping for essentials. Maybe just some extra bottles of water, just to make sure. Or to avoid chaotic responses. But I'd probably start shopping already. Look for essentials."*

Certain groups, however, did voice specific concerns based on where they lived. Participants from the American Indian group had some particular worries due to their location.

> *FG 5, pg 2 "Because you don't know what's going on, and we do live in a city with a base that is very close. So it's a little scary."*

A group of African Americans that lived in a residential facility for older adults said that they would be scared and might panic, based largely on the fact that they felt their physical condition or their age make them more vulnerable in the event of an attack.

> *FG 6, pg 5 "We would panic."*

FG 6, pg 5 "But you can take a person like myself in a wheelchair, where you can't run. And when you can't get out, and all these people are running. Here you are sitting in this chair, and you cannot get through people. You cannot get around the people. So you know it is going to be a more frightening thing to me."

Young participants were more likely to be nonchalant and feel that they would easily survive a plague attack.

FG 8, "I think I'm confident that I would be safe, because I think I would go on the antibiotics and I think I am healthy enough to survive it. If I was 75 and not doing too well, I don't think I would feel that way, but I am still in the invincible stage."

What do participants want to know in the event of an emergency?

Most participants requested information that would help them: understand the nature of the threat, take protective action, seek help if exposed, and better understand the event itself.

FG 1, pg 5 "What precautions we can take."

FG 5, pg 12 "Well, I really don't know. I think I'd want to know who came in contact with all this, or how many people have been in contact with it, and what's the severity of it is, and then you'd know whether you'd want to get out or stay at home. It would be bad if it did happen, because most likely you would be contacted with chemical warfare, biological warfare, whatever, if it happened here in this city."

Where do participants seek information in the event of an emergency and why?

Participants' answers to this question were very similar. Regardless of the make-up of the group, participants responded that they would use the television, radio, internet and the media to find information about what was going on. For most non-rural groups the television and radio were mentioned as the first option for gathering information with the newspaper and internet becoming more important as the crisis continued.

FG 6, pg 3 "Television."

FG 4, pg 13 "The Internet."

Even participants who are just learning English, such as those in the ESL focus group, stated that they would turn to the television in order to get information.

FG 3, pg 8 "CNN is best."

Three groups of participants- American Indians, African Americans, and Caucasians who reside in rural areas- offered alternatives by saying they would also contact law enforcement, the government or a health center immediately. While still important, the media was secondary to individual contact for these groups.

> *FG 5, pg3 "Well, I guess you'd go to the law enforcement first and call them, and then find out from the State Department, then probably go to the radio."*
>
> *FG 7, pg4 "I'd come here to the health center."*
>
> *FG 9, pg10 "And the health department just up the street as well would be another. The same people who do the restaurant inspections are probably going to be getting as much information as possible. They may have some things."*

What actions would participants take in the event of an emergency?

Certain participants' first actions included seeking additional information from people in the medical field and other people they considered to be in authoritative positions.

> *FG 6, pg 5 "Probably I would try to find somebody in the medical (field) thatwould tell me if I should have some kind of…something to wear."*
>
> *FG 6, pg 6 "In a really bad situation I would think that our National Guard would be out, and they could help you. Ask information from them. Police, fireman. . . you ask some information from some of them."*

Other participants would shelter in place. They would close their windows and stay indoors with their families. Preparing for these types of attacks resembles preparing for natural disasters, such as snowstorms or earthquakes.

> *FG 2, "Well if you are inside, I think we would try to close our windows."*
>
> *FG 5, pg 6 "Well, I think I'd be going to the basement, finding me a shelter out there."*
>
> *FG 3, "And gather the family together."*
>
> *FG 9, "Like preparing for a snowstorm."*

Other participants would do just the opposite by packing up some things and leaving the area.

> *FG 4, pg 15 "I want to know where those people live, and what area they frequent. If I am still in town I'd leave. Definitely. I'd leave. Pack up the Jeep."*
>
> *FG 7, pg 3 "And try to get as far out of Missouri as possible."*

What are the participants' perceptions about government and preparedness?

Some participants wondered about how prepared the government is, but they phrased this more as a genuine question rather than as a concern.

> *FG1, "They know about these things that will probably happen, but is the government also equipped to disseminate things after the attack because you don't know when, nobody knows when, not even the government knows when. So if it happens then we have to have something about it. Are they equipped, too? Are they developed something?"*

Participants that did comment about the government's preparedness had opinions that varied, even within the same group.

> *FG2, "I would feel unconfident because I don't think there is enough…in St. Louis, Missouri or surrounding counties. There is probably enough [shelter] for the dignitaries and politicians here but not for the citizens."*

> *FG2, "To a certain extent I think so [that the government will respond in a way that keeps the public safe.] I got a lot of complaints about the government but I think in some ways they do."*

The minority groups were more skeptical as a whole (even though a few individuals in this group disagreed) about how trustworthy the government was in the case of an emergency like the one presented. While it was almost universally agreed that it was the government's responsibility to provide information, the belief that the information would be reliable went from one end of the trust spectrum to the other.

> *FG1, pg 11 "The government has the obligation to the truth."*

> *FG1, pg 11 "They say what they want. They think the people do not know."*

What are participants' perceptions about the role of the media?

When participants commented directly on the media's performance, it was positive.

> *FG3, pg 35 "I think the media is doing a great job. Keep us informed in every single thing is happening. Every day something new comes up and we are responsible… I am the one and I appreciate the media news, radio, T.V…I am listening. I have to be listening every day."*

3. Materials Pre-test

Pretest materials were presented after the scenario. The plague materials used were those easily available online. These materials were meant to address plague as a

naturally occurring disease, not as a disease that may be used as a terrorist weapon. Because the materials tested were created for purposes different then the ones in which they were being utilized during this study the materials were found to be inadequate and included a number of serious information gaps.

How well do preliminary message materials address information needs?

Most of the groups admitted that they learned something from the materials, however, there was disagreement among groups, and many times within groups, on the usefulness of what was learned from the materials. There were many gaps in the materials. Participants in the ESL group thought the information was highly useful as the information seemed to be true and was clear, as did members of the urban Asian group and urban African American groups.

> *FG 3, pg 48 "I think it is very good information if it is true. It's pretty good, because they tell you the symptoms, how to prevent symptoms, and not to be panicked because um this happen already. This thing happening now and how it happened it says in that little part written down part ** but here it's never happened because we have a cure for that. And we know that it's a lot of injury everywhere. I work for twenty years in a lab where so many chemicals are. Cyanide and all kind of chemicals, for twenty years. And they tell us we have...they tell us what is, what's in and how it can affect us. Lungs and skin and disease. So, this is pretty good. I like it."*

> *FG 2, pg 11 "The information is very clear that the plague is treatable and the health organizations are very much equipped on trying to cure the plague and not to panic.*

> *FG 6, pg 14 "It explains the stuff really good."*

Participants in the ESL group were the only ones that had never heard of the plague disease. One participant related the lack of information to not being a native of the United States.

> *FG 3, pg 42 "This is the first time I know about the Bubonic Plague. Because as a foreign person, you know, in our countries we have um that color, we have all different kind of place in our countries. So I really know about this. But for the first one I was not aware. And, I'm wondering since this is a very important information for myself, I'm wondering if uh, how many more plagues are we surrounded that I don't know."*

What are unmet information needs?

All groups requested more information on plague. Information on the differences between the different types of plague was requested by a number of participants. There was also concern about the long-term effects of plague by urban Hispanic participants.

> *FG 3, pg 50 "The difference from Pneumonic Plague and the Bubonic Plague. People don't know the difference. They just need the way they treat the disease."*

Almost all participants wanted more information on the transmission of plague and steps they could take to prevent transmission.

> *FG 4, pg 29 "I would like to know next steps? So what? It's transmitted by fleas, I've killed my dog. No I am serious: where does it say what should you actually do?"*

> *FG 9, "I don't think there's that much information about how to protect yourself. It lists the symptoms and how it's transmitted and all that, the rest of the information…there isn't that much there."*

> *FG 13, "Like what can you do to help yourself? And I don't see it here, unless I'm missing something."*

> *FG 8 "The next thing I was curious about was like, does it have to come from an animal source or is this something that they can blow up to a large scale? Is it the same as flying a plane over and…spread? Like how long? Yeah, when it's incubated does it have short life cycle if it's not in a certain….? I mean that's just me. I'm just curious if you can get it from an animal or source that actually has it or can you just come in contact with it like on a surface like a wall?"*

Many groups, such as the urban Asian and urban and rural White groups, were particularly concerned about transmission of plague via pets and farm animals. The rural White group was concerned that people may even shoot their pets if they were not educated about the role that animals play in the transmission of plague.

> *FG 4, pg 31 "Maybe on the fact sheet, no on the Q & A sheet, if you would have cats what immediately to do with them. Whether to be in contact with them or call somebody."*

> *FG 9, pg 13 "That's what I meant a while ago, I think you will end up finding a lot of people shooting their pets just to be safe. I don't think that, but on the other hand my kids are more important to me than my pets."*

> *FG 9, pg 13 "The question I had was kind of about pets because people might think to keep their pets inside away from rodents. But I don't know if that would be better or not, because if you bring your pets inside they are going to draw fleas no matter where they are. The dog could give it to you if it's inside."*

Participants wanted information on how plague is diagnosed and how to tell the difference between plague and other common illness.

> *FG 8, "Or what they need to do. So let's just say I go in for a cold and he comes in with the plague. We both have basically the same symptoms. Could you tell between the two by blood? Could you tell by swab? Anything that would differentiate the two would be helpful to know.* "

Some populations, such as the urban Asian, urban Hispanic and urban African Americans, wanted additional information on the availability of antibiotics and the government's ability to get antibiotics to the general public in the event of an outbreak. Urban White groups were concerned about the government's ability to pay for the consequences of the outbreak. They were also concerned about how effectively the public health system would work in the event of an outbreak. Particularly do they have enough labs to test everyone? Will hospitals be overwhelmed?

> *FG 2, pg 13 "Are these drugs really real? I mean, it's easy to produce the same streptomycin that is mentioned there. Is the drug the same as the one that you treat the plague?"*

> *FG, 4 pg 37 "How much would it cost to contain? Hopefully, it's better to do prevention and have equipment and trained personnel in advance. What are the costs associated with?"*

> *FG 8, "And too I was thinking that some sort of bioterrorism or weapon…that maybe there's going to be over-crowding or too many people at the hospitals. So something along the lines of maybe if you can't get in to a hospital, or maybe with triage or something you are probably going to get people in there that don't necessarily have the plague but are having all of these symptom or claiming that [they] are having symptoms. So like what to do if somebody has it and you have to keep them at home or something, what are ways to contain it? Or is there anything you can do until you get them into the hospital to try to fight what's going on or…I don't know."*

> *FG 6, pg 16. "I would want to (know) where a lot of those state and county public labs, health labs would be here."*

Some groups also wanted more information on how plague could be used as a terrorist instrument.

> *FG 4, pg 34 "How much of a threat is 'plague' as far as they use as a bio-terrorist weapon. Can it really be spread around; is it realistic? Would it be hard to dispense, is it hard to produce?"*

> *FG 3, pg 46 "What is aerosol attack?"*

The ESL group drew parallels to the SARS outbreaks.

> *FG 3, pg 38 "Yes. Cause I know about the Bubonic. I know that. That um...about*

this one I was not aware of it. . . Cause right now in my mind, right now, in my mind what's going on is like oh okay, that sound like um, the SARS right now going on. So, I like to know what's the difference."

Rural African Americans participants were also suspicious that the government or others may be creating new versions of disease. Do diseases exist that they don't know about?

FG 7, pg 10 "I have a question. Is there anything out there that they might not know about? Might not know how to treat? . . Like they might make up something, combine two together and might not be able to stop it or something?"

How do participants respond emotionally to preliminary message materials?

Participants had a range of emotional responses to the materials. Their emotions ranged from increased anxiety to feeling less anxious because of the materials. Some of the groups displayed apathy, especially younger groups, towards the topic. The ESL group felt there were real reasons to be concerned about the potential of a bioterrorism attack utilizing plague.

FG 3, pg 46 "I do believe they are...they can do anything. Anything they can make. Anything evil they can do. So, I'm alert. I'm alert all the time."

The materials scared participants in the rural African American group and Native American group. One Hispanic group felt that these materials might cause panic because they do not provide adequate answers to important questions.

FG 7, pg 12 "I'm scared of plague. I got nervous."

FG 5, pg 18 "I think it's a little scary and it's something that myself, just for myself, I take for granted, because I don't find out anything. I know that I always think it's going to happen someplace and to happen around here it's made me very aware that I need to get more information like this."

The California urban White group responded with fear and the desire to move far from the site of possible contamination.

FG 4, pg 32 "Looking at the area where plague is mostly rampant now, I'm considering moving. California is not a good place to be, or Mexico, or Arizona."

Many participants in a number of groups were relieved to have additional information. They felt knowing where plague comes from,how to treat plague, and recognize plague was an advantage. Other participants expressed the belief that having as much information as possible helps people make good decisions.

FG 5, pg 20 "Getting better educated in it, and I think the more you know about, the less anxious you're going to be about all of this stuff."

FG 4, pg 33 "I feel a lot better, I guess knowing about it since I walked in here. I mean, I feel a lot of different. Now, if I hear anything about a plague, just randomly even in class, or something, I think, I have an advantage already from the fact sheet knowing where it comes from and how to treat it."

FG 6, pg 20 "I feel more secure knowing what to expect and what to look for."

FG 8, "I am not a firm believer of anything but you're definitely at least more informed as you can possibly be so you can make the right decision. So you definitely have the bare-bone basics to …you know what you are supposed to do."

Urban White participants in the Midwest were concerned with overreacting. However, they appreciated having the information.

FG 8, "I would just be afraid of overreacting. You know having the flu and freaking out. I mean I don't think that I would personally but of course go to your doctor, your family doctor. Don't go to the emergency room. Me personally, that's what I would do. And bring it up to him so he can do the appropriate tests. Yeah, this gives plenty of information. The only thing that I'm worried about is getting it confused with the regular flu and hospitals being packed with people that don't have emergencies"

Urban African Americans felt they would be more cautious after being exposed to the materials.

FG 6, pg 19 "Pass the information on to someone else for one. You could do that. You could say you are concerned about this particular disease/plague spreading, so they can be cautious of it too. They might have it and no one knows it but themselves. If you had told them about it, then they'll know and pay attention to it."

How credible are the preliminary message materials?

Urban Asian participants found the materials credible, as did Midwestern urban and rural White participants.

FG 2, pg 12. "When we go to the department store and someone says, 'there is a sale on the other side.' You believe them right away."

FG 8, "I don't think they are keeping anything. If anything I think they are giving you too much information. Maybe not too much, but more than your average person is going to need. But I don't think they are keeping anything. It's pretty honest and forthcoming."

One group, urban white participants, found the materials credible because a university provided them.

> *FG 4, pg 36 "yes . . . because it comes from UCLA."*

Participants felt that the materials were more credible when they contained information participants had been exposed to before.

> *FG 13, "It's pretty believable to me. I don't see anything out of the ordinary here."*

> *FG 5, pg 20 "I believe it because I've heard of the bubonic plague. I've heard of that you know. I know in New Mexico they used to tell us about the prairie dogs."*

While for the most part participants found the materials credible, there were a few concerns. Credibility was questioned in many groups because there was no source for the information provided.

> *FG 4, pg 46 "So, I have my doubts from this information. (You don't know where it came from.)"*

> *FG 5, pg 21 "It depends on whose; it can be, because it depends on who's writing this out. I mean it can be, who's giving us this information."*

Rural African Americans felt that materials that answered more of their questions would be more credible.

> *FG 7, pg 13 "Just go a little bit more in detail."*

Southern African American participants felt that information specific to attacks was not being disclosed in the print materials. Including information specific to an event may be beneficial in increasing credibility of the materials. Native Americans also felt the government may not provide all of the information that is available.

> *FG 13, "Like I said, they don't tell us which one is occurring. It's not saying a terrorist actually has tried to use plague in some other country before. Or something like that has happened before. It's not saying, like, if people are trying to get their hands on it. Or what people have access to this."*

> *FG 5, "There wouldn't be no knowing of it until they had a least three or four cases of it in the clinics and stuff like that. By that time you'd already be infected with it and have it or not. You just, you know, the local government wouldn't. . . cause not to raise panic in the community, that's all they would do."*

How successful are materials in fostering self-efficacy?

Most groups felt there were no action steps to follow, and the materials did not provide any information on protecting themselves. However, this was not the case for all groups.

FG 1, pg 18 "We need more information on what to do."

The ESL group was confident that after reading the materials they could keep themselves safe. The White Urban Midwestern group, a relatively young group, also felt they would be safe in the case of a plague attack, even through some of their assumptions regarding the protectiveness of youth were unrealistic.

FG 3, pg 49 "I am confident."

FG 8, "I think I'm confident that I would be safe because I think I would go on the antibiotics and I think I am healthy enough too to survive it. If I was 75 and not doing too well I don't think I would feel that way, but I'm still in the invincible stage. And I feel that this would give me the information I would need to go get proper treatment."

Urban African Americans felt more confident in their abilities to recognize symptoms and handle animals, but had very little confidence in their abilities to shelter in place. Rural African Americans and Native Americans were also confident they could avoid dangerous animals and keep their houses safe.

FG 5, pg 18 "You'd know what the symptoms are and how long, how many days to watch for."

FG 6, pg 17 "I have a brother that's a hunter . . . and I was thinking he's out there where all these are. I know he's out there with all of these animals and things we're talking about. And it's good to let him know what if you going to hunting look for these signs and symptoms in case something happens and you get sick."

FG 7, pg 11 "Keep a clean household 'cause it said in there it had parasites coming from household rats that carry disease."

FG 6, pg 13 "You know when you are taping up your windows you go to think too, you're taking up your windows and you're only killing yourself in the house. You got to get some air. In other words you gonna have to take air conditioning, everything that brings in air. You can't live without air. "

What are participants' recommendations for improving the materials?

Participants made a number of recommendations for improving the materials. The two most common recommendations included making the language easier to understand and the addition of action steps.

Formatting and readability:

Materials should be shorter (maybe one sheet) and have less information. The language should be less complicated and visuals should be added.

> *FG 8, "I would concentrate on something they really needed to know and have a website available with more information. Things like surveillance, opportunities and research…[???] if they want more information on it that could be available. If they wanted to know what we are doing to control, that's good information to have available but I don't know if it's necessary. Because I think if it is too much people will skim all of it."*
>
> *FG 4, pg 38 "I believe it is a high educational level. I think that many people if you give this in public some wouldn't even read it. I think it is not geared to the general public. We need a commercial type of fact sheet for the general public."*
>
> *FG 4, pg 38 "I think this is too complicated and I don't think that public will respond to this."*
>
> *FG 13, pg "Be more specific and put it in laymen terms."*
>
> *FG 8, "How the plague was treated. I mean I'm not a scientist. I'm not a doctor. I cannot pronounce half these words that are in here. And I had to….by this time I'm kind of reading a little bit more quickly through it. So when I came across words I that didn't understand, I had to go back and read it again. I mean, it's just a lot of technical words."*
>
> *FG 2, pg 14 "If you could have pictures or visual aids. So we could visualize what is said here. "*

Participants recommended re-ordering the information by putting the most important information first,.

> *FG 3, pg 50 "I think maybe does plague occur naturally, should go first the second paragraph. I think it's really important."*
>
> *FG 8, "I think the….should be up right under clinical features. Most people just want to know what is it, how you get, where is it. If anyone wants more information I agree that they could go to a website or something because I agree with him-I think people are going to skim this over and they are going to see some words they don't understand and be like 'the rest of it is going to be like that.' So they wouldn't look it over thoroughly."*

Increase the size of the fonts on the materials.

> *FG 4, pg 37 "You probably want to increase the font and use both sides of the paper. Because you have to remember that people 18 to 95 who want this information."*

Inclusion of missing information:

Participants suggest including information on who to contact if they suspect an attack. It is also important that materials be available in languages other than English.

> *FG 4, pg 30 "It might need – maybe, you know like a phone number. Or if you have a couple of questions you call and ask for more information."*

In general, participants requested more specific information on the transmission, diagnosis, treatment of plague, and also the long-term effects of plague on those who have been exposed.

> *FG 7, pg 12 "You should put as much as possible to make everybody aware"*

> *FG 5, pg 21 "I would go back. . .some of the answers. . .for the things you had just asked us previously."*

> *FG 3, pg 49 "I have question, is um, what's the bad effects after you get cured from the disease. "*

All groups wanted more information on what steps to take in the event of a plague outbreak.

> *FG 4, pg 29 "It should be like a sections: what could we do: 1, 2, 3."*

> *FG 3, pg 48 "How could we respond? The article does not list the authorities we should report any suspicious cases. The telephone line or hotlines we can call. Or some useful websites like that."*

> *FG 9, pg 14 "I think just be a little bit more specific about what we can do to protect ourselves."*

What are participants' other recommendations for preparedness?

Participants were concerned about the ability of the government to handle an outbreak. Rural White participants were worried about the availability of treatment to those infected in an attack.

> *FG 9, pg. 11-12 "I don't believe that they've got enough antibiotics. I believe that they are getting them somewhere within 12 hours just because of modern transportation. [???] None of the nurses in this room are old enough to remember when there wasn't outdates. I remember when a drug didn't have an outdate on it. You used it until you looked at it and maybe it discolored and you were told not to use it. Now they have shelf life and things like that. How could they possible have a lot if they were in need? I believe they gave some statistics in there of 150,000 people could be infected. Seven days worth of antibiotics for 150,000 is a lot of antibiotics. And there are specific ones, you can't just get…They mention four specific antibiotics."*

There was concern about how the public health system would handle an outbreak. It was suggested that there should be special clinics available in the case of an outbreak.

> *FG 8, "I'm not sure there is anything else you could add to it because it's got to be put out there and if you are having the symptoms you need to go to the doctor. I wouldn't say if you don't have any rats don't come in, you just got the flu or anything because you just never know. Maybe if something like this did happen maybe you have a specific clinic specializing in the plague or something. If it was that thing…widespread…then you go there and get checked out. Like a quick, draw blood-do you have the plague? No….You know I don't know if that's possible but that may be a way to keep the chaos down a notch."*

> *FG 6, pg 21 "Like someone said more labs. We really need more labs. You know where you can go and have this taken care of. We really need that."*

There should be a plan for dissemination of information through the media and other methods in the case of an attack.

> *FG 8, "I think I would also try to put them into the media somewhere."*

> *FG 8, "Maybe have a representative go in the neighborhood. Go door-to-door handing them out. Like he said your neighbor coming to your door saying 'here." Bring it a little closer."*

Participants recommended that the materials be available before an attack, even though people may not pay attention to the materials before an attack. It is important to be able to get educational materials out as soon as an attack happens. Places to put the materials includes clubs, neighborhood watches, supermarkets, schools, physician offices, all public buildings, and even leaflets dropped by planes.

> *FG 4, pg 34 "And also they seem to think that anytime at the library or in public places, there are information brochures, and many times you see them and sometimes they'll pick them up and take them home. For me personally, I barely read there. They are there, I may have a stack some place, but only after hearing the announcement, then I will pick it up. "*
>
> *FG 4, pg 34 "It kind of goes back to, I read it and I'll have the information, I am not trying to memorize it . . . I am put it up in the file, so when they make the announcement that the plague has spread in downtown L.A. I'll know where it is."*

Californians felt it was important that preparation be started with children at young ages.

> *FG 4, pg 39 "You know we are in the break of a new world, so this probably should start in grades one or two, get kids informed you know they're a different generation then we all are. "*

Getting people more involved would help people be more prepared. Getting people involved in the case of outbreak (such as alerting shut-ins and assisting with the disabled and elderly) would be a good idea.

> *PG 7, pg 16 "The point is what I'm saying as long as they are wanted to know about this information that they should get involved in this and that they should not be left in the dark because others will not come to us. Look at the information. Everybody jumps to the fact like that. Some people want to know what's going on. Now other people might ignore it, but I don't see ignoring."*
>
> *FG 5, pg 19 "It makes me want to get with the civil defense and help plan and help to get more people involved on the planning session as to what we need, procedures that we need to do if anything, if any plague or anything happens here."*

Hispanic participants felt it would be better for people to receive information from the TV or radio. People also said they would go to the health department to find this type of information.

> *FG 1, pg 15 "I think that it is fine but it think that people will understand more if there is a program on TV or on the radio."*

B. Findings from professional groups

Professional groups were also divided into three sections. These sections each had specific goals:

- Perception of readiness.
    - How prepared are you for an attack?
- Presentation of hypothetical plague terrorism attack scenario.
    - What does the public need to know?
    - What is the role of the media in getting this information out?
    - What do professionals need to know?
    - Where do public health and first responders get their information?
- Presentation of pretest materials to participants.
    - How do current materials address reported needs?

1. **Perception of readiness**

CAS knowledge was not tested in the professional groups. Participants were asked to reflect on their preparedness for a bioterrorism incident. Participants felt that they were not sufficiently prepared if there were to be a bioterrorism attack.

> *FG 10, pg 2 "Under equipped."*
>
> *FG 11, pg 10 "I know what I've been told, but as far as personal knowledge, studying, I'm not as confident as I would probably like to be."*

2. **Hypothetical attack**

Professional participants were not given a scenario rolled out in sections like that of the general public groups. Instead, participants were asked a serious of questions regarding how they would response if a plague attack had occurred. When responding participants often wore two hats. Participants answered some questions from the perspective of a member of a general public community, while at other times professionals answered questions from the standpoint of being a frontline public health worker or first responder.

How do participants respond emotionally to a suspected or actual emergency?

Rather than being scared or worried, first responders would seek out information to provide to the public.

> *FG 10, pg 4 "If it's a biological hazard, again, I think our best source of information to us at a local level would be our own health department. And they would have the links with the CDC. We also have resources with the military and that might be another way that we might get information."*

What do participants want to know in the event of an emergency?

From the public standpoint- What does the public need to know?

Professionals reported that they feel the public needs to know how to be prepared for a terrorist attack, such as what do in case of an attack, where to go in case of an attack, and where they can get information if there is an attack. It is important to give the public information that is appropriate, so as not to cause a panic.

> *FG 10, pg 2 "How to best prepare yourself in the case of an attack. What to do? Do you tape up your windows? Do you go out and buy a gas mask? Do you just stay indoors?"*
>
> *FG 10, pg 8 "What's contaminated and where to stay away from. What to do to help first responders do their job?"*
>
> *FG 10, pg 2 "What ways to obtain information? How do you find out whether you need to buy a gas mask, tape up your windows? Do you turn to channel five? Do you turn on KMOX? How do you get this information? Are you driving down the road and see it on giant TMS board, biological agent released on I-44, take alternative route. How do you get that information out? "*
>
> *FG 10, pg 3 "It would have to be something not to cause panic. It would have to be a pretty general bit of information. You know, how to prepare maybe your family, your job. It couldn't be too dramatic or it would cause panic."*

After the event of an attack the general public will want to know if they will be evacuated, the released agent's symptoms, and transmission. The public will also be concerned about their family members. It will be important that the general public know how to take care of themselves prior to the arrival of the authorities and first responders.

> *FG 10, pg 4 "How you can get ill? How is the agent distributed to your system? Is it going to be ingestion? Is it going to be dermal? Is it going to be a vapor? Do you breathe it? How can you get sick? That helps you protect yourself also."*
>
> *FG 10, pg 4 "How to recognize those signs and symptoms and what they need to do themselves before we can get them or before rescue workers get to them to get them treatment."*
>
> *FG 10, pg 3 "They are going to be checking on their families and friends too. What doing to happen to them? They are going to want to know what they are going to do."*

What do first responders need to know?

In the event of an attack, first responders need to know where the agent has been released or where the emergency is located and how they can get themselves to that location to secure it.

> *FG 10, pg 3 "Information as far as location."*
>
> *FG 10, pg 3 "Which roads are blocked? Which roads need to be blocked?*
>
> *FG 10, pg 3 " Basically what our objective is as far as securing this location and where else the contaminants could be and what we need. Basically what our objective is we know we have the spill here but how do we contain it or isolate it, or anybody who has been affected by this. What do we need to do with them*?"
>
> *FG 10, pg 3 "Where any facilities might be? Who they need to contact? The public is going to want to know what the symptoms are, what it is, how are you going to get, where they need to contact, what center do they need to go to."*

First responders need to know the basics about the agent that is used, including whether or not it affects different people differently.

> *FG 10, pg 5 "What is it? Where is it? How to protect yourself?"*
>
> *FG 10, pg 4 "Does a certain bacteria or a certain agent affect people differently? Like are there agents out there that blacks are immune to that whites are going to contract or vise versa? Does it affect ethnic groups? From my standpoint, if it's a bioterrorist attack it's going to attack everybody; every living organism will be affected?"*

For communicating with community members who do not speak English, the media will have to play a big role in disseminating information. There also may be department employees that are members of minority groups who can speak different languages. Interpreters will play an important role in providing services to individuals who do not speak English.

> *FG 10, pg 4 "That's probably going to be a media situation. . . there is going to have to be a method for them to find out the information. Some departments have members of those communities, although the numbers are very little."*
>
> *FG 10, pg 4 "Some of the hospitals have interpreters. With the Bosnian population, the government has placed interpreters into the hospitals and schools. But I don't know how much they have made or done that to the extent of public safety information."*

Where do participants seek information in the event of an emergency and why?

Participants in the first responder group look to the state health department to provide their needed information. Participants would use the department's website or receive alerts. Systems like the National Crime Information Center (NCIC) allow local agencies to communicate with other networked agencies. Frontline public health workers would turn to the CDC for information.

> *FG 10, pg 5 "We would probably look to the Missouri Department of Health. That's where we would get our information."*
>
> *FG 10, pg 5 "They have a website. And law enforcement has various computer outlets also whether it be the NCIC system, if there was an alert to go out chances are we would received something across that type of networks. And then we also have a web-based network that we are able to communicate with other agencies that we might be able to get some of the information from."*
>
> *FG 10, pg 5 "As well as SEMA [State Emergency Management Agency]. Some of our people had training with SEMA. And I know since bioterrorism has come into light or the threat of it, we also have the network set up, the Amber Alert System, it also doubles in case of a terrorism type incident. And that actually uses that system. And the health department is part of that system as well to get that information out. They have multi-faxing capabilities where they can send out hundreds of faxes to media outlets at one time. So if we give them the information, they can process it."*
>
> *FG 10, pg 4 "If it's a biological hazard, again, I think our best source of information to us at a local level would be our own health department. And they would have the links with CDC."*

Public health professionals cited both the television and the CDC as ways to obtain information. They also felt that the public would go to the mass and local media as well as local emergency services personnel for information in the case of a terrorist attack.

> *FG 11, pg 2 "I don't know if everyone in the general public would go to the CDC, I know we would because that's what we know, but not necessarily the general public, they might just search around to see what they could."*
>
> *FG 11 "That's (media) where the general public is going to go to get their information."*
>
> *FG 10, pg 6 "It would be law enforcement primarily and then maybe the EMS thereafter."*

It is possible that emergency teams will look to the military for information in the case of an attack. Local law enforcement is also an option for information.

FG 10, pg 5 "We also have resources with the military and that might be another way that we might get the information."

FG 10, pg 5 "I was going to say law enforcement."

The responsibility of disseminating information in the case of a terrorist attack will belong to a number of different organizations including law enforcement, emergency medical services, the health department and certain federal government agencies. Frontline public health participants included elected local officials as important for dissemination as well. These agencies will have to work together to get the information to the public. All agencies should have someone who is prepared to talk with the media. Front line public health workers thought it was important that local personalities know what to say in the case of an attack.

FG 10, pg 6 "That would be a joint venture basically by law enforcement, by EMS, by Health Department, by Natural Resources, EPA. All of these agencies would be working together. In law enforcement and first responders in responding we don't know the information nor can we answer the questions about that agent like the Department of Health can."

FG 11, pg 13 "I think it needs to be a team effort because they are going to ask some questions that the governor will not have the medical expertise to answer."

FG 10, pg 8 "Most agencies have a public information officer and that's what XXXX's primary job is. And all the major media groups whether it be radio or television or the newspaper that's where the public is going to turn to first. And it would be the most expeditious way to get the information out."

FG 11, pg 13 "Even radio personalities that people listen to every day, you know, they would be wanting to know what they have to say."

The responsibility for running the operation will fall on SEMA until federal agents can come in. Local law enforcement will need to work with them when dealing with road closures and other logistical issues.

FG 10, pg 7 "SEMA is Missouri State of Emergency Management Agency. It's like the federal FEMA but it's at the state level though. Most likely it's my understanding that they would basically be the ones to take over until the federal government intervened."

FG 10, pg 7 "If you are going to hear what areas are going to be quarantined and which areas you can get in and out of and traffic control management, I'd rather hear that from the police department."

In case of an electric outage government buildings have backup communication systems. The phone lines may still work but there will be problems getting through.

> *FG 10, pg 6 "A lot of the government buildings have back-up generators to where that communication system, the vital equipment can still operate. For how long? That kind of depends on the equipment and resources and how fast the power company can act."*

> *FG 10, pg 6 "The big thing that…obviously the phone lines would be flooded mainly because if the power goes down it's my understanding that the cell phone towers go down too because they operate on power also. So the hard lines would be flooded."*

According to the participants, the agency responsible for communicating medical information to the public should be the Department of Health, as they are credible. But no matter who provides that information it will be important that the information provided to the public is consistent and correct.

> *FG 10, pg 7 "Even if that information is the same it should still probably come from a, for a public information release, in my opinion it would probably be better to have it from somebody from the Department of Health getting it out to the general public. Now if you want to disseminate that information throughout other organizations you are going to get the same information."*

> *FG 10, pg 7 "That is why the SEMA is going to have that set up so that different departments don't give conflicting information. There is going to be on outlet out of the command post. That's the reason why they do that."*

What actions would participants take in the event of an emergency?

First responders stated that they are trained to take care of their families first, and, once that is complete, to go about their job duties.

> *FG 10, pg 2 "That's kind of the training we have gone through. Usually we direct all our employees that family is first. Once you have secured your family and yourself then you go ahead and go about your job duties. In the maintenance department whether or not it's helping with traffic management, if there was something destroyed, repairing any structures that need to be repaired or helping coordinate or set up areas for decontamination or something like that."*

What are the participants' perceptions about government and preparedness?

First responders seemed to think of themselves as people who will handle the public's concerns, so they seemed more concerned with their own preparedness than the government's preparedness.

> *FG 10, pg 9 "And I think to for law enforcement officers you want a fact sheet*

of how to contain it, how to stop it. For the general public if you got it, this is how you check yourself, this is what you do, this is how you get rid of it. And this is what you don't do it when you got it. The general public, their responsibility is to themselves. Law enforcement, first responders, their responsibility is to the public. So you have to come at it at a different angle."

Public health professionals were asked not what they thought of the government's preparedness, but rather who they think the general public would respond to in the event of an attack.

What are participants' perceptions about the role of the media?

First responders respect that the media will, most likely, play an important role in helping to disseminate information to the public in the event of an emergency. The television seemed to them to be the quickest way to get information out. They brought up the fact that not everyone has a computer and that newspapers take too long to come out.

FG 10, pg 13 "I think it would be the media again. I think the first outlet is going to be the television media or the news media. And again something they can see as opposed to just listening to it on the radio probably would be the most effective way to get it out."

Public health professionals perceived the media to be a key source of information for the general public. Newscasters and radio personalities were mentioned as people the public might be comfortable with or look to for information in the event of an attack.

FG 11, pg 13 "Even radio personalities that people listen to every day, you know, they would be wanting to know what they have to say."

3. Materials Pre-test

The section for pre-testing materials was the same in the professional groups as it was in the general public groups.

How well do preliminary message materials address information needs?

According to the public health workforce groups the materials were too technical and at times contained too much information, while the first responder group felt the materials gave a little information about statistics but none about what actions could be take.

FG 8, "I think it's very informative too, but I think there is almost too much."

FG 10, pg 9 "It's more information I guess."

FG 10, pg 9 "To me it's just what it is and the statistics behind it."

What are unmet information needs?

First Responders had many of the same information needs as the general public, including more information on treatment of plague, and there were also lingering questions about transmission.

> *FG 10, pg 10 "How long it can last? Say a person does cough, how long does it stay in here before the bacteria dies? Or if it's direct contact, how easy. . .what we deal with now, it has to be an airborne or blood borne pathogen. It has to be an exchange of bodily fluids like someone getting blood in an open cut we have. Is that the case or is it more severe than that? Can it be just skin-to-skin and absorption?"*

First Responders also requested action steps that the general public could take in the case of an outbreak.

> *FG 10, pg 9 "To me it's just what it is and the statistics behind it. It really didn't tell you how to prepare yourself or treat yourself or how to get rid of it in your home or your animals."*
>
> *FG 11, pg 30 "I don't see that there was really anything in here about preventions. . . I mean, I am just afraid somebody is going to read this and think we gotta kill all the cats in the neighborhood, you know."*

How do participants respond emotionally to preliminary message materials?

First Responders were afraid that these materials would cause the general public to panic. Midwest First Responders said they would be more suspicious if there were a case of plague in the Midwest.

> *FG 10, pg 12 "If there was a case of plague that popped up in St. Louis now I would think that would put my radar up and say okay now in the next two to six days I'm going to be watching the media to see if there's more of them. And if there is another one that pops up I'm going to think something's wrong."*

How credible are the preliminary message materials?

One of the First Responder groups thought it *was* credible because of the depth of the information provided; however, in agreement with many general public focus groups, placing a source on the materials can help with credibility.

> *FG 11, pg 27 "It was so advanced, tended to (make) me believe that someone took some time to research, they knew what they were talking about."*
>
> *PG 10, pg 15 "But there is also no source listed at all on here. They should put the source of the information on there. . .the Department of Health. . .or CDC or something like that."*

How successful are materials in fostering self-efficacy?

First Responders strongly believed that the materials provided no useful action steps.

> *FG 10, pg 11 "As a first responder this does nothing for me."*

> *FG 10, pg 11 "It doesn't tell me how to prevent contact for myself, how to prevent me from contracting. And it doesn't tell me what I should do for the public other than to okay if you have got these symptoms maybe you should go see the doctor."*

What are participants' recommendations for improving the materials?

First Responders requested more information on protecting themselves while doing their jobs.

> *FG 10, pg 13 "We would want to know how it can be prevented because if you are working an accident and somebody coughs on you and you don't know whether or not they have it. They are going to want to know do I need to wear gloves, do I need to wear masks, will bleach kill it, do I need to carry a bunch of Lysol."*

First Responders felt that a lot of what was in the materials was irrelevant and some information should be left out.

> *FG 10, pg 16 "It doesn't even mention anything about biological attack, just sickness.'*

> *FG 10, pg 10 "As a first responder, if you are talking bioterrorism, I could really care less that you can get it from rock squirrels, ground squirrels, prairie dogs or whatever. I don't care why it came in there. If it is a bioterrorism issue then that's what we are discussing, we are assuming that it wasn't a giant squirrel infestation that hit the St. Louis metropolitan area."*

> *FG 10, pg 10 "I think to for law enforcement officers you want a fact sheet of how to contain it, how to stop it. For the general public if you got it, this is how you check yourself, this is what you do, this is how you get rid of it. And this is what you don't do when you got it. The general public, their responsibility is to themselves. Law enforcement, First Responders their responsibility is to the public. So you have to come at it at a different angle."*

> *FG 11, pg 19 "Was hoping that the fact sheet was going to clinicians and questions and answers were what was going to be dropped from the airplane. . . to the general public, because. . . I would definitely want my doctor to know this... but I could care less even being a public health employee."*

All groups including the professional groups wanted more information on what steps to take in the event of a plague outbreak. Professional groups also agreed with the general public that materials needed to be shorter and less technical. Visuals should also be added.

> *FG 10, pg 11 "The fact sheet is good but people are not going to read something like this before hand. So when it happens they are not going to want to read anything. . . they won't read anything unless it happens right then and there. If it's affecting them now, now they will read it. So they need something that is direct and to the point. This is what to look for. This is how to get it treated. This is how to help yourself until we can get you treated. The history, we don't have time for that."*

> *FG 10, pg 17 "Maybe a more useful card, a card more than a fact sheet. Something you can put in your glove compartment."*

> *FG 11, pg 25 "I just felt like it way way, way too advanced for the general public. . . if it was left up to me, the general public would not even see this fact sheet."*

> *FG 10, pg 10 "A picture of what a victim might look like too rather than just words."*

What are participants' other recommendations for preparedness?

First Responders were also concerned about the availability of antibiotics in the case of an outbreak. They also suggested that there are steps that need to be taken to control panic including choosing the correct wording and providing adequate information through the media.

> *FG 10, pg 13 "Unless you say bioterrorism. As soon as you say the word bioterrorism then I think you would start a panic."*

> *FG 10, pg 13 "I think the Q & A would be an important sheet at that point. That way we would have something to give to the public whether we put it out to the media that way or if they individually."*

> *FG 10, pg 14 " I think it would be the media again. I think the first outlet is going to be the television media or the news media. And again something they can see as opposed to just listening to it on the radio probably would be the most effective way to get it out."*

Making sure that health care providers have the information they need before an attack can be very helpful.

> *FG 10, pg 15 "It could be a thing done before hand – check with doctors and make sure they are informed on everything. And then that would relieve strain on the hospitals if they know that they can call their doctor and get the information they need."*

III. Discussion

A. General Public

1. Pre-event knowledge

Knowledge of Color Alert System (CAS)

There was a wide range of knowledge when it came to the CAS system. Many participants understood a little about the system but did not fully understand what exactly the system was telling people. Public education is needed to ensure understanding of the meaning of the CAS. Certain ethnic groups such as the Asian and Florida Hispanic groups had very limited knowledge of the CAS, but there were no evident reasons for the differences in knowledge other than individual situations and experiences. Many participants had concerns about the usefulness of the CAS. From their comments, it appears that they either do not pay attention to the system or don't take the warning seriously. This shows that the usefulness of the system is questioned across groups, without the skepticism coming from any particular group. One participant compared the red alert to "crying wolf."

General pre-event knowledge

Many participants in rural groups felt that they could prevent a terrorist attack. These participants felt that they knew their community and it would be easy to keep an eye out for each other and anything strange. This was not the case for the urban groups. This difference may be due to the difference in the connection to the community that rural and urban participants have. Rural participants know more of their neighbors and are more likely to have lived in an area longer then their urban counterparts.

Although most participants felt that they could not prevent a terrorist attack themselves, they believed there are a number of things that people can do to prepare for an attack. Almost all participants expressed a desire for additional knowledge about being prepared for an attack and the steps that should be taken before, during, and after an attack. Those participants living in areas with high occurrences of natural disasters (earthquakes or snowstorms) mentioned that preparing for an attack is just like the preparation they have done for these disasters. The only group that felt they would need gas masks was the ESL group, all other groups either didn't mention the masks or didn't go as far as agreeing that everyone should have one. The belief about the importance of the gas mask may come from the experiences that those recently entering the country had before they entered the United States.

Terrorist threat knowledge

Like the CAS, there was a wide range of knowledge regarding different types of terrorist attacks. Urban groups appeared to be much more educated in regards to the different types of threats then rural groups (with the exception of the rural white group). Ethnic groups such as Hispanic, Asian, and ESL groups seemed to have the most trouble distinguishing among the threats. It is possible that this group does not have the same exposure as others to this information in the mainstream media, or that this information on threats and actions is not being filtered through traditional ethnic information systems.

2. Response to hypothetical attack

Emotional response to an emergency

Although there was some variation in participants' answers, many of the ways that they initially responded to a suspected or actual emergency were along the lines of common sense, regardless of their ethnicity, education or socioeconomic status. The only variance in findings had to do with participants' specific location. Participants that resided in areas where they felt they were at special risk (nursing home, close to a base) felt they had nowhere to go in the event of an attack, resulting in heightened emotional states.

Information in the event of an emergency

Participants want to know basic information about plague, modes of transmission, what protective actions they can take, their personal risk, symptoms, and what to do if they think they have been exposed to plague. In addition, they want information about the bioterrorist event, the attackers, and the investigation and prosecution of the attackers.

Overall, participants stressed that they wanted as much information as possible in the event of an attack or emergency and they would seek out information from sources that are able to provide information quickly and keep up with any changes. All groups cited the television as a useful way to receive information. Other sources of information likely to be used included radio, emergency response systems, and the Internet. Those in rural communities also included local health officials, First Responders, and civil authorities. Information sources, such as the media, local health department and safety employees will need to have some way to get useful information to the general public.

Actions in the event of an emergency

The actions participants said they would take were highly variable. They included seeking information from those in the medical field and those in positions of authority, sheltering in place, and fleeing the area.

Government's preparedness

Participants were almost equally split between those who felt the government was prepared and those who did not, with ethnicity, education and socioeconomic status seemingly not much of a factor. There was a strong belief among almost all participants,

particularly minorities, that the government withholds information and if a terrorist attack were to occur the government should operate with complete openness and disclosure. They also emphasized the importance of leadership from local health and elected authorities.

Role of the media

Given that participants from all the groups stated that they watch television, and the news in particular, as a way to gather information in the event of an attack, it would seem that this indicates participants trust the media to deliver valuable information. Looking to the media for information is something that seems to transcend ethnicity, socioeconomic status, age and education, since the television is such a main staple in American culture. Television media will be a key source of information if an attack or emergency does arise. Radio will also be an important source.

3. Materials pretest – response

How well do preliminary message materials address information needs?

The usefulness of the information included in the print materials came into question by almost all the groups. While the pre-test materials did provide new information to participants, it was woefully inadequate. However, participants were grateful for any information that could help them to better understand plague. This shows that in a time of crisis, any information is comforting. There were a few participants within the groups who found the materials highly clear, useful, and credible.

What are unmet information needs?

From the standpoint of information needs, people are most concerned about what steps they need to take to protect themselves and their loved ones.

- The most requested information was action steps that participants could take in the event of a terrorist attack (especially how to protect themselves and prevent illness).
- Almost all groups also requested additional information on the different types of plague, symptoms, and diagnosis of plague.
- It was mentioned that without information on pets and plague transmission via animals, people may choose to kill their pets or livestock to protect themselves from infection.
- A few participants wanted information regarding the long-term health effects of plague if one were to survive, as well as how plague could be used as a bioterrorist weapon.
- Urban groups wanted to know if there would be adequate antibiotics to treat those who are infected, and the ESL group wanted to know how plague resembled SARS, an epidemic that affected most Asian countries and Asians communities within North America.

- The requested information did not, for the most part, differ by ethnic or geographic groups.

How do participants respond emotionally to preliminary message materials?

Participants displayed a number of different emotions when discussing the materials. Those emotions included anxiety, fright, relief for gaining knowledge, as well as flight from area of attack. All groups displayed some sort of anxiety or fright although the concerns did differ among the different geographies and groups. The young urban White group was concerned with becoming panicky in the situation, and another group felt the materials may cause people to panic. The rural groups were the most likely to describe themselves as scared. All groups were at least somewhat grateful for having the information. This speaks toward to importance of providing adequate information to the public.

How credible are the preliminary message materials?

All groups thought that the materials were at least somewhat credible. Groups uniformly requested that a source of the information be added to the educational materials. Information provided was more credible when it came from a university or other respected organization. Several of the ethnic groups felt that materials, which reflect information that they are somewhat familiar with, are more credible. Parts of the materials that used familiar terminology and situations were perceived as more credible.

How successful are materials in fostering self-efficacy?

The materials did not increase the self-efficacy of most of the groups. While some groups said they would be better able to recognize symptoms of plague and avoid some transmission risks (wild animals and household sanitation), there was an awareness that there were no action steps included within the materials. All participants (with the exception of the young and invincible urban White group) felt that they did not have the needed information to respond correctly to a plague outbreak.

What are participants' recommendations for improving the materials?

There were many suggestions made by the individual groups. These suggestions were heard over and over again including:

- Providing additional information on plague transmission, diagnosis, and treatment;
- Including information on where the public could go for additional information if an attack should occur;
- Steps to take in the case of an attack;
- Re-ordering the information so as the most important points are at the beginning of the materials;
- Make the font larger and the whole document short with less information; and

- Adding visuals.

There did not appear to be any uniform differences between ethnicity or geography when looking at recommendations made to improve the pretest materials.

What are participants' other recommendations for preparedness?

The participants had a number of recommendations regarding how the country or their community as a whole could feel more prepared. Participants suggested the dissemination of information on the resources that the country has to deal with a terrorist attack. They were also convinced that the government did not have enough drugs for treatment and the public health system could not respond adequately for additional hospital, testing, and education needs and wanted someone to respond to their concerns. Participants also emphasized the need for materials to be available before the onset of an outbreak, creating and disseminating the materials after the fact will be too late. It is also important to the public that they are given a chance to get involved in community planning and other aspects of preparedness.

B. Professionals

1. Perception of readiness.

First Responders has some information and training on responding to a bioterrorism outbreak, but felt that they were still under-prepared.

2. Response to hypothetical attack

Emotional response to an emergency

First Responders took a pragmatic, rather than emotional, stance on how they would respond to a suspected or actual emergency. They seemed to recognize and understand that for them, suspected or actual emergencies are times when they need to take action.

Information in the event of an emergency

First Responders information needs resembled those of the general public. First Responders need to know where the agent has been released, where the emergency is located, and how they can get themselves to that location. They also need to know basic information about the agent involved in the attack. Overall, participants stressed that they wanted as much information as possible in the event of an attack or emergency and they would seek out information from sources that are able to provide information quickly and keep up with any changes. The sources mentioned were state, local, and federal sources, but they were varied with no one source appearing as an authority. Like the general public, they cited the television as a useful way to receive information. First responders

findings for information sources for the general public, resembled those sources listed by the general public themselves.

Actions in the event of an emergency

First Responders seemed to have a set protocol in the event of an emergency given their specific job training roles. They would ensure the safety of their family, and then get to work.

Government's preparedness
First Responders were more concerned with their own preparedness than the government's. They want to have adequate training, equipment, and resources to deal with emergency situations.

Role of the media
Professionals agree with the general public that the media will play a key role in disseminating information.

3. Materials pretest – response

How well do preliminary message materials address information needs?

Unlike the general public who wanted more information, professionals felt the pre-test materials contained *too much* information. They thought the materials were too complicated for the general public and might cause widespread panic. This is a typical response of professionals who are asked to evaluate materials containing difficult or disturbing information for the general public. However, the general public clearly stated that they would like as much good information as possible. Professional groups also felt the materials were too technical for the general public, and were more suited for professionals. Like the general public, these groups wanted the materials to provide action steps for them as First Responders and for the general public.

What are unmet information needs?

Professionals requested the same information as the general public, including action steps people could take in the event of an attack, treatment of plague, and transmission.

How do participants respond emotionally to preliminary message materials?

First Responders were concerned that the materials would cause the general public to panic.

How credible are the preliminary message materials?

The professional groups agreed with the general public that the materials were credible overall, but requested a source for the information. This makes the placement of a

credible source on the materials the most effective means of increasing the credibility of the materials.

How successful are materials in fostering self-efficacy?

Self-efficacy was not improved for First Responders. The First Responder groups felt that the materials provided no information on how they could, as part of their jobs, handle a plague attack. Professional groups also felt the materials were inadequate at providing the general public with action steps.

What are participants' recommendations for improving the materials?

Most of all, professionals and First Responders requested information on how to do their jobs if there was an attack. Professionals wanted information on what steps they could take to keep the community as a whole safer. Professional participants, unlike the general public, felt that the pre-test materials contained information that was irrelevant in the case of an attack. The information on naturally occurring transmission was not useful and was a waste of time for the professional participants in the Midwestern part of the country. Professionals also recommended making the materials less complicated, shorter, and including visuals.

What are participants' other recommendations for preparedness?

Professional participants were concerned about the availability of treatment if a plague outbreak should occur. Professional participants also recommended that adequate information be provided to health care providers prior to any outbreak or attack.

IV. Recommendations

CAS and pre-event knowledge recommendations

- Make a concerted effort to educate the public about the different levels of alert, how those levels are determined, and how the public should react.
- Provide materials and information to the public regarding the different types of terrorist threats and how to respond to these threats as soon as possible. There is still a lot of confusion among the general public regarding the difference between biological, chemical, and radiological threats. There is also confusion in regards to how to react to a potential event. Having the material available before the event is important.
- Make sure the information on the terrorism agents and protective measures is placed in ethnic media and communication systems to allow that information to reach different ethnic groups.

Materials pre-test recommendations

- Provide information on the following questions and topics in educational materials:
  Understand the nature of the threat.
  - What is plague?
  - What type of plague is it?
  - What is the history of plague in humans?
  - What is the biology of plague?
  - What are the consequences of exposure to plague?
    What are the long-term effects of exposure to plague?
  - How is it similar or dissimilar to other, familiar infections?
  - How quickly can it spread?

  Take protective actions if you think you have not been exposed.
  - What steps can I take to protect myself?
  - What steps can I take to protect my family?
  - Should I evacuate or stay home?
  - Are there protective measures I should take to keep my home safe?
  - Are there other actions that are NOT necessary?
  - Are there are any household alternatives for protective gear?

  Take steps if you think you have been exposed, or if you have been in contact with someone who may have been exposed.
  - What are the pathways of transmission?
  - Is plague infectious? When, and under what circumstances?
  - Can farm animals or pets be infected, or transmit plague?
  - What determines the risk of exposure? E.g. Proximity to agent? Contact with exposed individuals? Contact with infected individuals?
  - What are the symptoms of plague?
  - What is the incubation period of plague?

- How is plague diagnosed?
- What are NOT pathways of transmission?
- Where can I go for testing?
- How do I dispose of contaminated articles safely?

Take steps if you know you have been exposed.

- Where do I go for treatment?
- What are the specific locations offering treatment?
- What can I do if I can not get to a location offering treatment?
- How quickly do I need to seek treatment?
- Is there a possibility of a cure if I have been infected?
- What is the availability of necessary medication?

Understand information related to the specific event.

- What is known about the perpetrators?
- What steps are being taken by local, state and federal authorities to investigate the event and prevent further events?
- How was the agent released?
- Where did the event take place?
- If there is a continuing threat, what is its location?
- How long will that location be under threat?
- What steps are being taken by local, state and federal authorities to respond to the emergency?
- What resources are available for affected individuals?
- Where can affected individuals get more detailed information?
- What do affected individuals need to do to get help?
- What is the source of reported information?

- A delicate balance exists between providing enough information and providing too much information. Messages need to be thorough but not too technical. If the information is too simple then the messages have low credibility, but if the information is too technical and hard to read then the messages are not suitable for the general public.
- Create materials to inform specifically about plague introduced in a terrorist situation. Existing materials on naturally occurring plagues are not helpful in the case of a terrorist attack. All of this non-bioterrorism related information should be left out of the new materials.
- Write messages in plain language, preferably at a reading level no greater than sixth grade to make sure that individuals with lower literacy and educational levels are able to understand any information provided. People may experience a decrease in reading level due to increased stress as well. Non-native speakers of English may find print communication difficult to understand.
- Include a source for the information in the materials. The source should be easily recognized by the general public and could include: local health departments, the CDC, the president, the Red Cross, or another respected organization.

- Include information specific to an event to increase credibility of the message.
- Include steps that individuals can take to protect themselves when presenting information about an event. Action steps that can be taken by individuals will give them a sense of control.
- Include graphics and pictures as much as possible. Using pictures, other visuals, and color can help increase the comprehension of print materials.
- Include a phone number for people to call if they have questions, as well as websites people can go to for more detailed information.
- Include information about whether and how pets or farm animals can carry the plague, how to avoid that, and what to do if it happens. People have very strong protective feelings about their pets.

Recommendations for dissemination

- Disseminate information using multiple channels: TV, Internet, radio, foreign media, comic books, hotline to local health departments. Consider that while some people's first response is to stay at home, others would flee the area. This will affect the media that each of these groups of people has access to.
- Disseminate information through a joint effort among federal government, local government, and health agencies.
- Choose a credible spokesperson. People from various backgrounds and ethnicities share distrust of the government. Medical experts, public health officials, local authorities and First Responders may be the best spokespersons. Academic experts are also trusted and credible.

V. Conclusions

There are a number of principles that govern the design and dissemination of messages dealing with bioterrorism events. When preparing messages interdisciplinary theories should be consulted, and these messages based on valid research findings or audience research. Other things to remember when preparing and disseminating these messages include:

1. Assuring an ethical approach
2. Need for open, accurate, clear and consistent messages.
3. Need to develop effective media-based dissemination plans.
4. Foster relationships with professionals working in the media.
5. Gauge public perception and monitor the media in ongoing events.
6. Ensure collaborations for agencies responsible for communication.

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Appendix A

Full Group Demographics

N = 520

DEMOGRAPHIC DATA FOR 54 FOCUS GROUPS[1] (N=520)				
Characteristic	**Category**	**N**	**(%)**	**Mean/SD**
Age		486	93%	43.66/16.14
	Missing	34	7%	
Sex	Male	222	43%	
	Female	297	57%	
	Missing	1	<1%	
Education	Less than high school	42	8%	
	Some high school	39	8%	
	High school diploma or GED	85	16%	
	Some college	132	25%	
	College degree	104	20%	
	Graduate degree	59	11%	
	Missing	59	11%	
Ethnicity/race	African American/Black	107	21%	
	American Indian/Alaska Native	45	9%	
	Asian/Pacific Islander	64	12%	
	Caucasian/White	144	28%	
	Latino/Hispanic	133	26%	
	Other	13	2%	
	Missing	14	3%	
Language in home	English	361	69%	
	Spanish	90	17%	
	Bilingual/English & Other	31	6&	
	Other	35	7%	
	Missing	3	1%	
Marital status	Single	133	26%	
	Married or living with partner	242	46%	
	Divorced or separated	56	11%	
	Widowed	34	6%	
	Missing	55	11%	
Children	Yes	338	65%	
	No	151	29%	
	Missing	31	6%	
Employment	Yes	311	60%	
	No	174	33%	
	Missing	35	7%	
Family income	Less than $10,000	75	14%	
	$10,000-$19,999	87	17%	
	$20,000-$29,999	58	11%	
	$30,000-$39,999	40	8%	
	$40,000-$49,999	32	6%	
	$50,000-$59,999	29	6%	
	$60,000-$69,999	28	5%	
	$70,000-$79,999	11	2%	
	$80,000-$89,999	10	2%	
	$90,000-$99,999	13	2%	
	$100,000 or more	32	6%	
	Missing	105	20%	

[1] The rural Hispanic botulism group is not included in these numbers as the focus group transcript was not available for inclusion in the analysis.

Appendix B

Plague Creative Brief

1

Plague Creative Brief – 01/12/04

1. Target Audience(s)

- General population residing in the area where a terrorist attack using pneumonic plagu threatened or has happened.

- Special attention should be paid to low literate and disabled individuals, and non-Englis speakers.

2. Objective(s):

General public audiences want answers to questions in a five areas. This section provides the categorie with specific questions people have listed under each. For the most part, questions in the first four categories can be answered before an event. Questions about the event itself can only be answered afte fact.

Understand the nature of the threat.

- What is plague?
- What type of plague is it?
- What is the history of plague in humans?
- What is the biology of plague?
- What are the consequences of exposure to plague?
  What are the long-term effects of exposure to plague?
- How is it similar or dissimilar to other, familiar infections?
- How quickly can it spread?

Take protective actions if you think you have not been exposed.

- What steps can I take to protect myself?
- What steps can I take to protect my family?
- Should I evacuate or stay home?
- Are there protective measures I should take to keep my home safe?
- Are there other actions that are NOT necessary?

Take steps if you think you have been exposed, or if you have been in contact with someone who may have been exposed.

- What are the pathways of transmission?
- Is plague infectious? When, under what circumstances?
- Can farm animals or pets be infected, or transmit plague?
- What determines the risk of exposure? E.g. proximity to agent? Contact with exposed individuals? Contact with infected individuals?
- What are the symptoms of plague?
- What is the incubation period of plague?

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- How is plague diagnosed?
- What are NOT pathways of transmission?
- Where can I go for testing?
- How do I dispose of contaminated articles safely?

Take steps if you know you have been exposed.

- Where do I go for treatment?
- What are the specific locations offering treatment?
- What can I do if I can not get to a location offering treatment?
- How quickly do I need to seek treatment?
- Is there a possibility of a cure if I have been infected?
- What is the availability of necessary medication?

Understand information related to the specific event.

- What is known about the perpetrators?
- What steps are being taken by local, state and federal authorities to investigate the eve and prevent further events?
- How was the agent released?
- Where did the event take place?
- If there is a continuing threat, what is its location?
- How long will that location be under threat?
- What steps are being taken by local, state and federal authorities to respond to the emergency?
- What resources are available for affected individuals?
- Where can affected individuals get more detailed information?
- What do affected individuals need to do to get help?
- What is the source of reported information?

3. Obstacles

- Unrealistic Beliefs
  - Plague is a “dead’ disease and is no longer a threat.
  - It is no big deal because there must be medicine and treatment available.

- In the event of a plague outbreak, people perceive that there will be a state of panic.
  - Hospitals and emergency rooms will be crowded and highways will be clogged v traffic from people trying to leave town.
  - Some populations (e.g. Californians) are much more savvy than others about preparing for and dealing with disasters.

-e.g. withdrawing money from an ATM, stocking up on food, and talking with family about a disaster plan.

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- There is great distrust of the federal government by all populations
  - Those who speak English as a Second Language are an exception.
  - African Americans most fervently distrust the federal government, believing that "government conspiracies" exist.
  - Minority populations alike are suspicious about the government responding to emergencies in a discriminatory manner

  – that is some get special treatment such as more access to information, supplies, emergency shelters, etc.

- All audience segments are suspicious about the extent that the government discloses information in emergencies.
  - Most populations *do* trust the CDC, although they recognize it as part of the fede government.

- The term "crying wolf" is overwhelmingly used to describe the government's actions rel to bioterrorism. People perceive that the government both exaggerates and doesn't tell whole truth.

- Perception that the media often hypes the topic of bioterrorism.
  - Wariness of taking it seriously.
  - This apathy is particularly apparent in younger people (< 30 years old).

- Younger people (< 30 years old) have inaccurate perceptions about risk.
  - Would definitely survive a plague attack because they're young and healthy.

- There is the perception that First Responders have the ability, but not the proper equipment, to respond to a bioterrorist emergency.

- There is concern about doctors' ability to recognize plague symptoms.
  - Plague symptoms are very similar to flu symptoms.
  - The public, physicians and medical systems need instruction about what to do if plague-like symptoms appear.

- Any information is reassuring.

- In the event of a plague outbreak, people will feel afraid, anxious, frustrated and helple
  - Perception that there are few protective actions that can be taken.
  - Desire for someone to tell them what to do and where to go.

4. Key Promise

1

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Message should be written to convey the following promises.

- Understanding plague. By understanding the basics about plague, the type of plague u in the attack, history of plague, and other biological aspects the general public may be to avoid exposure.

- Avoiding exposure. By following the recommended actions, the general public can pro themselves and their families from being exposed to or infected by plague in the event bioterrorism attack.

- Preventing infection. If an individual thinks he or she has been exposed, or has been i contact with an exposed or infected person, there are steps that he or she can take to prevent infection and death.

- Treating infection. If an individual is exposed to plague there are steps that he or she c take to prevent infection and death.

- Full disclosure. Public health, emergency response and law enforcement officials will f disclose to the public as much information as they can about the event and steps they taking to respond to it.

5. Support Statements / Reasons Why

- Understanding plague. Having background knowledge of plague can help people to av exposure, recognize symptoms, and stay calm during emergencies.

- Avoiding infection. There are steps the general public can take to protect themselves a their family from plague in the event of a bioterrorism attack.

- Preventing infection. There are steps that individuals can take to avoid transmission, c confirm whether or not they have been exposed to or infected by plague.

- Treating infection. Plague can be treated with antibiotics; providing the general public directions on getting timely treatment can prevent death. Early recognition of plague symptoms can prevent death.

- Full disclosure. By providing the public with all of the accurate information available, th public health and security workers and representatives will build a trusting relationship

1

Plague Creative Brief – 01/12/04
the general public.
6. Tone • Provide full disclosure, with as much information as possible about the event, and step the government is taking to respond, including successes and failures. Convey that th government is "leveling" with the public, short of jeopardizing efforts to locate and thwa attackers. • Be especially careful about being honest and forthcoming with minority and other disadvantaged groups who are suspicious of the government. • Avoid fear tactics to prevent causing people undue stress or panic. Emphasize the seriousness of the event and show that it is not just hype. • Make sure that individuals with lower literacy and educational levels are able to unders any information provided. • Always include steps that individuals can take to protect themselves when presenting information about an event. Action steps that can be taken by individuals will give then sense of control.
7. Media • In an emergency, most people will turn to the mass media for information first, especial television and radio. • Many members of the public are aware of and will pay attention to the emergency broadcast system. • As time passes, people will turn to the internet and newspapers for more detailed information. • People will turn to local media for information, especially if the event takes place in thei area. • They will also seek information from national and international media. • People will corroborate and validate the information they find by using different channe

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Plague Creative Brief – 01/12/04

8. Openings

- Audience members also mention community locations they will turn to for information. Such locations include:
    - Police stations, fire stations
    - City Hall and other public buildings
    - Healthcare providers: hospitals, health departments, clinics, physician offices, a the Red Cross
    - Schools
    - Grocery stores, gas stations and ATM machines (in the case of an emergency n will stock up on money, food and gas.)
    - Clubs
    - Neighborhood Watch groups
    - Religious organizations

9. Creative Considerations

CAS and Pre-Event Recommendations

- There should be an effort to educate the public about the different levels of the CAS system.
- Provide public materials on different types of terrorist actions.
- Provide information on all types of media, including ethnic media.

Message Recommendations

- A delicate balance exists between providing enough information and providing too muc information. Messages need to be thorough but not too technical. If the information is t simple then the messages have low credibility, but if the information is too technical an hard to read then the messages are not suitable for the general public.
- Materials need to be created to inform specifically about plague introduced in a terroris situation. Existing materials on naturally occurring plagues are not helpful in the case o terrorist attack. Specifically, they do not include information about steps individuals ca take to protect themselves and loved ones.
- Messages should include graphics and pictures as much as possible. Using pictures, c visuals, and color can help increase the comprehension of print materials.

1

Plague Creative Brief – 01/12/04

- The information needs to be organized such that action steps required for specific circumstances are immediately apparent.
- Information should also be included about unnecessary actions, or to avoid misconceptions about transmission routes.
- Messages should make statistics (numbers/rates) meaningful, clear, and consistent.
- Concern about family is very powerful and prominent among all audience groups.
- From the standpoint of information needs, people are most concerned about what step they need to take to protect themselves and their loved ones.
- It is important to consider special populations such as those that are disabled or canno speak English when designing materials and dissemination strategies.
- Messages should include a phone number for people to call if they have questions, as as websites people can go to for more detailed information.
- Messages should be written in plain language, preferably at a reading level no greater sixth grade. People may experience a decrease in reading level due to increased stres Non-native speakers of English may find print communication difficult to understand.
- People have very strong protective feelings about their pets. Include information about whether and how pets or farm animals can carry the plague, how to avoid that, and wh do if it happens.

Increased Credibility

- Include information specific to an event to increase credibility of the message.
- Inform people if there are any household alternatives for protective gear.
- People from various backgrounds and ethnicities share distrust of the government. Me experts, public health officials, local authorities and first responders, may be the best spokespersons. Academic experts are also trusted and credible.

Dissemination

- Multiple channels should be used to disseminate information: TV, Internet, radio, foreig media, comic books, hotline to local health departments. Consider that while some people's first response is to stay at home, others would flee the area. This will affect th

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media that each of these groups of people has access to. • Dissemination needs to be a joint effort among federal government, local government, health agencies.

Appendix C

Plague Pre-test Materials:

Part One - Plague Fact Sheet

Part Two - Questions and Answers About Plague

Part One - Plague Fact Sheet

CLINICAL FEATURES

- **Bubonic plague**: enlarged, tender lymph nodes, fever, chills and prostration
- **Septicemic plague**: fever, chills, prostration, abdominal pain, shock and bleeding into skin and other organs
- **Pneumonic plague**: fever, chills, cough and difficulty breathing; rapid shock and death if not treated early

ETIOLOGIC AGENT

- *Yersinia pestis* - bacillus

INCIDENCE

- In the U.S., 1 to 40 cases reported annually (avg = 13 cases) by western states, 1971-1995
- Worldwide, 2861 cases reported by 10 countries to WHO in 1995

SEQUELAE

- Rare, consequences of disseminated intravascular coagulation, lung damage
- Mortality 50-90% if untreated; 15% when diagnosed and treated

COSTS

- Not known

TRANSMISSION

- Flea-borne, from infected rodents to humans
- Direct contact with infected tissues or fluids from handling sick or dead animals
- Respiratory droplets from cats and humans with pneumonic plague

RESERVOIRS

- Primarily wild rodents in U.S. (especially rock squirrels, ground squirrels, prairie dogs, other burrowing rodents)
- Commensal rats may be important elsewhere

RISK GROUPS

- In the U.S., persons exposed to rodent fleas, wild rodents, or other susceptible animals in enzootic areas of western states
- Most cases occur in southwestern states of NM, AZ, CO, and in CA
- Highest rates in Native Americans, especially Navajos; other risk groups: hunters; veterinarians and pet owners handling infected cats; campers or hikers entering areas with outbreaks of animal plague

SURVEILLANCE

- National Notifiable Disease Surveillance System (NNDSS) for animal plague surveillance, for reports of human cases, and laboratory testing of fleas, animal tissues and serum specimens, and serosurveys of carnivores
- CDC, Fort Collins, is a WHO Collaborating Center for Reference and Research on Plague Control, and reports all human plague cases in the U.S. to WHO

OPPORTUNITIES

- Increased self-sufficiency of state and county public health labs
- Expanded active surveillance through carnivore serosurveys and application of geographic information systems (GIS) to surveillance programs
- Increased education of public and health professionals
- Collaborative applied research on plague prevention and control with other federal, state, and local health agencies, including application of GIS to surveillance

RESEARCH

- Ecology-based prevention and control strategies
- Improved diagnostic reagents and methods
- Risk factor identification using landscape ecology and epidemiology

Part Two - Questions and Answers About Plague

Q. How is plague transmitted?
A. By fleas that become infected with bacteria *Yersinia pestis* that cause plague.

Q. How do people get plague?
A. By the bite of fleas infected with the plague bacteria.

Q. What is the basic transmission cycle?
A. Fleas become infected by feeding on rodents, such as the chipmunks, prairie dogs, ground squirrels, mice, and other mammals that are infected with the bacteria *Yersinia pestis*. Fleas transmit the plague bacteria to humans and other mammals during the feeding process. The plague bacteria are maintained in the blood systems of rodents.

Q. Could you get plague from another person?
A. Yes, when the other person has plague pneumonia and coughs droplets containing the plague bacteria into air that is breathed by a non-infected person.

Q. What are the signs and symptoms of plague?
A. The typical sign of the most common form of human plague is a swollen and very tender lymph gland, accompanied by pain. The swollen gland is called a "bubo" (hence the term "bubonic plague"). Bubonic plague should be suspected when a person develops a swollen gland, fever, chills, headache, and extreme exhaustion, and has a history of possible exposure to infected rodents, rabbits, or fleas.

Q. What is the incubation period for plague?
A. A person usually becomes ill with bubonic plague 2 to 6 days after being infected. When bubonic plague is left untreated, plague bacteria invade the bloodstream. When plague bacteria multiply in the bloodstream, they spread rapidly throughout the body and cause a severe and often fatal condition. Infection of the lungs with the plague bacterium causes the pneumonic form of plague, a severe respiratory illness. The infected person may experience high fever, chills, cough, and breathing difficulty, and expel bloody sputum. If plague patients are not given specific antibiotic therapy, the disease can progress rapidly to death.

Q. What is the mortality rate of plague?
A. About 14% (1 in 7) of all plague cases in the United States are fatal.

Q. How many cases of plague occur in the U.S.?
A. Human plague in the United States has occurred as mostly scattered cases in rural areas (an average of 10 to 20 persons each year). Globally, the World Health Organization reports 1,000 to 3,000 cases of plague every year.

Q. How is plague treated?
A. According to treatment experts, a patient diagnosed with suspected plague should be hospitalized and medically isolated. Laboratory tests should be done, including blood cultures for plague bacteria and microscopic examination of lymph gland, blood, and sputum samples. Antibiotic treatment should begin as soon as possible after laboratory specimens are taken. Streptomycin is the antibiotic of choice. Gentamicin is used when streptomycin is not available. Tetracyclines and chloramphenicol are also effective. Persons who have been in close contact with a plague patient, particularly a patient with plague pneumonia, should be identified and evaluated. The U.S. Public Health Service requires that all cases of suspected plague be reported immediately to local and state health departments and that the diagnosis be confirmed by CDC. As required by the International Health Regulations, CDC reports all U.S. plague cases to the World Health Organization.

Q. Is the disease seasonal in its occurrence?
A. No, plague can be acquired at anytime during the year.
Q. Where is plague most common? {PRIVATE "TYPE=PICT;ALT=Reported cases of human plague, western U.S. map, 1970-97"**}**
A. Generally, plague is most common in the southwestern states, particularly New Mexico and Arizona.

Q. Who is at risk for getting plague?
A. Outbreaks in people occur in areas where housing and sanitation conditions are poor. These outbreaks can occur in rural communities or in cities. They are usually associated with infected rats and rat fleas that live in the home.

Appendix D

Focus Group Discussion Guides

Part One- General Public Discussion Guide
Part Two- Professional Discussion Guide

Part One: General Public Moderator's Guide

INTRODUCTION (3 min.)

- Hi, my name is _____and I work for SLU.
- Thank you for helping us.

- We're developing informational materials regarding possible emergency situations.
- We've asked you to come here today to think about these situations and look at some of our materials.

- Before we begin, I'd like to introduce our project team. (Introduce team members by name). They are going to take notes during our discussion today.

Ricardo	Heather	Bruce	Betsy
Cheryl	Mary	Terri	Kris
Keri	Christina	Suzy	Alan
Laura	LaBraunna		
	Angela		

Informed "consent" (5 min.)

- Before we look at the materials, I'd like to review something with you. *(Nonverbal notetaker will distribute the "informed" consent document.)*
- This document explains the purpose of the discussion group and what you can expect while you're here.
- Let's go over the key points.

- First, I want you to know that your participation today is voluntary and you don't have to answer any question that makes you feel uncomfortable. You may leave at any time without penalty.
- Second, our discussion today will be audio taped. This will allow us to pay close attention to your comments and make our notes more accurate. Your name will not be identified in any of our transcripts and only our project team will have access to those transcripts.
- And finally, you will receive $20 cash after our discussion, which will last no more than 2 hours.

- Possible benefits of participating in our discussion include:
  - Becoming better informed about bioterrorism and what to do in the event of an attack;
  - Experiencing increased confidence in your ability to make an informed decision about a possible bioterrorism attack; and
  - Having the opportunity to discuss your fears and concerns about a bioterrorism attack.
- Possible risks of participating in our discussion include:
  - Feeling distress or anxiety by discussing the possibility of a bioterrorism attack.

Please take a minute to fill out the demographic form. We're not asking for your name, answering is voluntary, can refuse to answer any questions and still participate in the discussion group.

- Does anyone have questions? **We're going to start recording now**. *(Nonverbal notetaker will start the audiotape recording.)*

Guidelines (5 min.)

- Please try to talk one at a time.
- We're very interested in your opinions. There are no right or wrong answers, only different ideas. So please be honest and share what you think. I didn't create these materials so please don't worry about hurting my feelings!

- During our discussion, you may think of a lot of questions that you have about bioterrorism. We'd like you to write them down.
- We won't be able to answer your questions during the discussion, in part because the reason we're here is to see whether *the materials* answer all your questions.
- If we answer questions during the discussion this could affect your response to the materials you'll review later.
- I'm going to warn you, you're going to feel frustrated when we don't answer your questions right away.
- At the end of our discussion, a bioterrorism expert from the SLU Center for the Study of Bioterrorism will be available to answer any remaining questions you have.
- Also at this time please turn off cell phones and pagers if you are able to do so.

- We will also give you some information sheets to take with you.
- Are there any more questions before we begin?

(NOTE TO MODERATOR: If participants ask questions during the discussion, say:

"We can't answer your question now as it may influence the results of the discussion. Please write down your questions and a bioterrorism expert will be available at the end of the discussion to answer them.")

Icebreaker/introductions (5 min.)

- Let's go around the room and please introduce yourself by saying your first name only [and title, department, etc.] and telling us your favorite restaurant in St. Louis.
- Ok, now let's begin our discussion.

GENERAL QUESTIONS (10 minutes)

Pre-Event Knowledge, Attitudes and Responses:

- Recently there has been news about potential terrorist threats, and President Bush has instituted a color alert system for terrorist attacks.

Questions:

- Has anyone heard of the color alert system?

  Prompts (if needed)

  - What do the different colors mean?
  - What else does the system tell you?
  - How many different colors are there?

- What are the kinds of things you can do to protect yourself from a terrorist attack?

  Prompts (if needed)

  - Where do you find information about protecting yourself?

- There are different kinds of terrorist threats. What is a *chemical* threat?
- What is a *radiological* threat?
- What is a *biological* threat?

  Prompts (if needed)

  - How can it be transmitted?

SCENARIO ROLLOUT (45 minutes)

- For the remainder of the focus group, please note that we'll be talking only about biological threats.
- Now, I am going to walk you through a made up story about what might happen if a biological weapon were used right here in St. Louis.
- There are four parts to the story. After each part, we'll talk about your reactions and thoughts.
- I will read the story out loud.
- Please remember that what I'm telling you is made up. This is not happening now, and we hope it will never happen.

Scenario, part 1: Non-Specific Agent

Read this verbatim:

You wake up about 7 am on a Tuesday and turn on the local news to hear that President Bush has raised the Homeland Security Advisory System threat level to severe (red). The president and his advisors report that this change in the national threat level is based on knowledge of a credible threat that a terrorist group may be planning a biological attack in St. Louis. Officials suspect that the attack may involve a biological weapon.

Questions:

- Tell me how you would feel about this news?
- What would you want to know?
  - Would you want to know what the agent was?
- What would you do?
- Where would you go to get more information?
  - Why would you turn to these sources?
  - Who do you think is the best source of information in the event of an attack?

Scenario, part 2: Symptoms

Read this verbatim:

A week later, early on a Monday afternoon, you turn on the radio and hear that 15 people in St. Louis have presented at local emergency rooms and doctors' offices with fever, headache, weakness, and rapidly developing pneumonia with shortness of breath, chest pain, cough, and bloody saliva. Although the cause has not been confirmed, these symptoms are consistent with plague. Plague is a disease that can infect the lungs and may spread from person to person through the air.

Questions:

- *Now* how do you feel about this news?
- What would you want to know?
  - Would you want to know what else, besides plague, this could be?
- *Now* what would you do?
  - Why would you action now?
  - Why did you not do action before?
- *Now* where would you go to get more information?
  - Why would you turn to these sources now?
  - Who do you think is the best source of information in the event of an attack?
  - Would you find that some sources are more reliable at this stage than others? Why?

Scenario, part 3: Specific Agent + Symptoms + Response

Read this verbatim:

Later that same day, you turn on your TV to find that a local government official has issued a statement. She confirms that there has been a deliberate release of a biological agent in St. Louis and

the agent has been confirmed to be the one that causes plague. It was believed to have been released at a shopping mall, into the air. So far, there are 30 presumed cases, however more persons in St. Louis are potentially infected. Local health workers and emergency personnel are working to contain the problem by shutting down the mall, figuring out who was there, and calling for the potentially infected to seek medical treatment.

Questions:

- Tell me how you would feel about this.
  - Is your feeling different than the way you felt before? How? Why?
- What would you want to know?
  - Would you want to know that there was enough medicine available?
- What would you do now?
  - If you were NOT exposed, would you still go to the doctor for treatment?
  - Why would you do <u>action</u> now?
  - Why did you not do <u>action</u> before?
- Where would you go to get more information now?
  - Why would you turn to these sources now?
  - Who do you think is the best source of information in the event of an attack?

BT information seeking behavior

Questions:

- How confident are you that there are systems in place that will respond in a way that keeps you safe?

- How confident are you that your elected state and local government officials will respond in a way that keeps you safe?
- What could the medical and emergency responders do to make you feel more secure?
- If you were the mayor of your city or town, what would you tell people in the event of an attack?

FACT SHEET PRETESTING STAGE

Scenario, part 4: Release of information

Read this verbatim:

Local officials release information with recommendations for steps you can take to protect yourself from plague.

- Now we're going to show you some materials of the sort that might be released should such an attack like this ever happen.
- Please give us your honest thoughts, feelings and responses to these materials. Again, please keep in mind that there are no right or wrong answers; we are just looking for your reactions. *(Instruct participants to remove plague fact sheets from their folders.)* They are titled "Questions and Answers about Plague" and "Plague Fact Sheet."
- Take about 10 minutes to look at the materials, and feel free to write down other questions, comments, and concerns about the materials.
- When you're finished, please turn over the papers just to indicate that you're done reading. Do you have any questions?

Comprehension:

- What do you think are the main points of these fact sheets?
- After reading these fact sheets what questions do you have about plague?
- What parts of the fact sheets were unclear or difficult to understand?
  - Were there any parts of the fact sheets you had to read twice, or that didn't make sense to you the first time you read them?
- Based on this message, what action would you take in the event of a plague outbreak?

- Is there any other information you would want to know that isn't included in the fact sheets?
  - How is this agent spread?
  - How is a case of plague confirmed?
  - What would you do to protect your family?
  - What would you do if you think you are infected?

Emotional response

- How do these fact sheets make you feel?
  - What about these fact sheets makes you *emotional response*?
  - How could we change these fact sheets to make them less/ more *emotional response?*

Credibility:

- How credible is the information in the fact sheets?
  - Why? Or what makes you say that?
- What, if anything, would make this information more credible?
- Is there anything here that you think is not being disclosed?

Self-Efficacy, Response Efficacy and Behavioral Intent:

- How confident are you that the actions recommended in the fact sheets will keep you safe?
  - Why or why not?
- How confident are you that you can carry out these recommendations?
  - Why or why not?
- Which, if any, of the recommendations do you intend to follow?

Recommendations for Improvement

- Do you have <u>any other recommendations</u> to make these fact sheets better or more useful to you?

CONCLUSION (15 min.)

- Now I'd like to introduce our bioterrorism expert, Bruce Clements/ Terri Rebmann/ Suzy Walker. S/He will answer your remaining questions. *(Bioterrorism expert will answer questions.)*

- Thank you for joining us today.
- We really appreciate you taking the time to meet with us.
- Please leave the pre-test materials, but you can take the rest of the folder with you.
- You can leave at any time but don't forget to see (Nonverbal notetaker) to receive your $20.

(IF ANYONE REQUESTS THE PRETEST MATERIALS, SAY: "The materials we are currently testing still need to be finalized and approved before they will be available for release.")

Part Two: Professional Focus Group Moderator's Guide

INTRODUCTION (3 min.)

- Hi, my name is _____and I work for SLU.
- Thank you for helping us.

- We're developing informational materials regarding possible emergency situations.
- We've asked you to come here today to think about these situations and look at some of our materials.

- Before we begin, I'd like to introduce our project team. (Introduce team members by name). They are going to take notes during our discussion today.

Ricardo	Heather	Bruce	Betsy
Cheryl	Mary	Terri	Kris
Keri	Christina	Suzy	Alan
Laura	LaBraunna		
	Angela		

Informed "consent" (5 min.)

- Before we look at the materials, I'd like to review something with you. *(Nonverbal notetaker will distribute the "informed" consent document.)*
- This document explains the purpose of the discussion group and what you can expect while you're here.
- Let's go over the key points.

- First, I want you to know that your participation today is voluntary and you don't have to answer any question that makes you feel uncomfortable. You may leave at any time without penalty.
- Second, our discussion today will be audio taped. This will allow us to pay close attention to your comments and make our notes more accurate. Your name will not be identified in any of our transcripts and only our project team will have access to those transcripts.
- And finally, you will receive $20 cash after our discussion, which will last no more than 2 hours.

- Possible benefits of participating in our discussion include:
  - Becoming better informed about bioterrorism and what to do in the event of an attack;
  - Experiencing increased confidence in your ability to make an informed decision about a possible bioterrorism attack; and
  - Having the opportunity to discuss your fears and concerns about a bioterrorism attack.
- Possible risks of participating in our discussion include:
  - Feeling distress or anxiety by discussing the possibility of a bioterrorism attack.

Please take a minute to fill out the demographic form. We're not asking for your name, answering is voluntary, can refuse to answer any questions and still participate in the discussion group.

- Does anyone have questions? **We're going to start recording now**. *(Nonverbal notetaker will start the audiotape recording.)*

Guidelines (5 min.)

- Please try to talk one at a time.
- We're very interested in your opinions. There are no right or wrong answers, only different ideas. So please be honest and share what you think. I didn't create these materials so please don't worry about hurting my feelings!

- During our discussion, you may think of a lot of questions that you have about bioterrorism. We'd like you to write them down.
- We won't be able to answer your questions during the discussion, in part because the reason we're here is to see whether *the materials* answer all your questions.
- If we answer questions during the discussion this could affect your response to the materials you'll review later.
- I'm going to warn you, you're going to feel frustrated when we don't answer your questions right away.
- At the end of our discussion, a bioterrorism expert from the SLU Center for the Study of Bioterrorism will be available to answer any remaining questions you have.
- Also at this time please turn off cell phones and pagers if you are able to do so.

- We will also give you some information sheets to take with you.
- Are there any more questions before we begin?

(NOTE TO MODERATOR: If participants ask questions during the discussion, say:

"We can't answer your question now as it may influence the results of the discussion. Please write down your questions and a bioterrorism expert will be available at the end of the discussion to answer them.")

Icebreaker/introductions (5 min.)

- Let's go around the room and please introduce yourself by saying your first name only [and title, department, etc.] and telling us your favorite restaurant in St. Louis.
- Ok, now let's begin our discussion.

GENERAL QUESTIONS (30 minutes)

Pre-Event Knowledge, Attitudes and Responses:

- When you hear the term biological weapons, what comes to mind?
- How confident are you about your scientific understanding of these issues?

  Prompts (if needed)
  - Communicable /non-communicable diseases, transmission routes, public health responses, etc.
- What type of information about biological attacks do you think the public needs to know before an event occurs?

Types of Information Needed:

- Imagine that you just learned that St. Louis had been hit with a biological attack. Tell me how you would feel about this?
- As a public health or emergency responder, what would you need to know?
- In your professional capacity, what do you think the public would want to know about the attack?
- What are some differences in the types of information that specific populations would need to know (e.g. different ethnic groups)?

- What kinds of information do you think you'll need to know to respond to questions from the public?

Terrorism Information Seeking Behavior:

- Where would you go to find information you would need to provide to the public?
- Why would you go to those places?
- In your opinion, where would the public seek information in the event of a biological attack?

Terrorism Information Dissemination:

- In the event of a biological attack, who do you think should be responsible for disseminating information?

  Prompts (if needed)
  - What are the different roles that different agencies play?
- In your professional capacity, what would you do to make important information available to the public in the event of an attack?

  Prompts (if needed) [If information dissemination is relevant to participants]
  - What type of plan do you have for making information available in the event of a biological attack?
  - How could messages we produce help you to supplement your plan?
- How else can we help you be prepared for questions and information needs from the public in the event of an attack?

PRINT MATERIALS (10 min. review, 25 min. discuss)

- For the next part of the discussion group we'll ask you to respond to some prototype materials that we have developed to provide information for the general public.
- *(Instruct participants to remove plague fact sheets from their folders.)* They are titled "Questions and Answers about Plague" and "Plague Fact Sheet."

- Take about 10 minutes to look at the materials, and then we'll ask you to please give us your candid opinion about them.
- Feel free to write down other questions and comments. When you're finished, please turn over the papers just to indicate that you're done reading.

Comprehension:

- What do you think is the main point of these fact sheets?
- After reading these fact sheets what questions do you have about plague?
- What parts of the fact sheets were unclear or difficult to understand?

  Prompts (if needed)

  - Were there any parts of the fact sheets you had to read twice, or that didn't make sense to you the first time you read them?

- Based on this message, what action would you take in the event of a biological attack? [This statement may need a word or two to clarify whether action is from the personal or professional standpoint.]
- What other information would you want the public to know that is not included in the fact sheets?

Emotional response

- How do these fact sheets make you feel?

  Prompts (if needed)

  - What about these fact sheets makes you *emotional response*?
    - How could we change these fact sheets to make them less/ more *emotional response?*

- In your professional capacity, how do you think these fact sheets would make the general public feel?

  Prompts (if needed)

  - What aspects of these fact sheets would increase the public's level of confidence and security?
  - What aspects of these fact sheets would increase the general public's fear/anxiety level?
  - What aspects of the layout or graphics in these fact sheets would provoke fear from the public?

- How would you expect to disseminate these types of fact sheets?
  - Press conference on TV, Internet, newspaper, town hall meeting?

Credibility:

- How credible is the information in the fact sheets?

  Prompts (if needed)

  - Why? Or what makes you say that?

- What, if anything, would make this information more credible?
- In the event of a biological attack, how would the information in these fact sheets be useful to you or others in the emergency response team?
- In your opinion, do these fact sheets give realistic advice for handling a biological attack that would be useful for you to use to inform the public?
- Do you think the general public will find them credible?

Self-Efficacy, Response Efficacy and Behavioral Intent:

- How confident are you that the actions recommended in the fact sheets will keep the public safe?

Prompts (if needed)

- Why or why not?

- How confident are you that the public can carry out these recommendations?

Prompts (if needed)

- Why or why not?

- In the event of a biological attack, how likely would you be to use this type of fact sheet to help inform the public?
- How could you incorporate this fact sheet into your current emergency response plan?

Recommendations for Improvement

- Do you have any other recommendations to make these fact sheets better or more useful for the public?

CONCLUSION (15 min.)

- Now I'd like to introduce our bioterrorism expert, Bruce Clements/ Terri Rebmann/ Suzy Walker. S/He will answer your remaining questions. *(Bioterrorism expert will answer questions.)*

- Thank you for joining us today.
- We really appreciate you taking the time to meet with us.
- Please leave the pre-test materials, but you can take the rest of the folder with you.
- You can leave at any time but don't forget to see (Nonverbal notetaker) to receive your $20.

(IF ANYONE REQUESTS THE PRETEST MATERIALS, SAY: "The materials we are currently testing still need to be finalized and approved before they will be available for release.")

Appendix E

Individual Focus Group Reports

Part 1 – UCLA Focus Group #1: Topline Report
Part 2 – UCLA Focus Group #2: Topline Report
PART 3 – UCLA FOCUS GROUP #3: TOPLINE REPORT
Part 4 – UCLA Focus Group #4: Topline Report
Part 5 – SLU Rural African Americans
Part 6 – SLU Rural White
Part 7 – SLU Urban African Americans
Part 8 – SLU Rural White
Part 9 – UAB Frontline Public Health Workforce
Part 10 – Tulane African American

Part one - UCLA Focus Group #1: Topline Report

Agent: *Plague*
Population: *Hispanic Urban*

Demographics
Of the ten participants in this group, all ten completed demographic forms. This demographic summary is based on these ten participants. In general, this group can be characterized as:

- Latino/Hispanic
- Spanish-speaking, some bi-lingual Spanish/English
- predominately female
- representing a range of ages, occupations, education levels, and incomes

Gender, age, marital status and children: The group was predominantly female. Only one of the ten participants was male. Participants ranged in age from 21 to 75 years old, with the mean age of the group being 43 years. Most focus group participants, 60%, reported being married or living with a partner. Three were single and one widowed. Seven participants said that they have children. Five, half of the whole group, reported having children under the age of 18.

Ethnicity and language: All ten of the participants reported their ethnicity as Latino/Hispanic. Sixty percent reported Spanish as the primary language spoken in the home; 30% reported English; and 10%, one participant, reported a combination of Spanish and English.

Education, occupation and income: Education levels for individuals in the group ranged from completing less than high school to having completed a graduate degree (see Table 1). One person did not answer this question. Half of the group reported currently being employed. Occupations listed included: office assistant, student, baby sitter, secretary, bilingual teacher, retiree, and nurse. One participant, the nurse, was identified as a health care worker. The median family income category for those reporting income was $30,000 - $39,999 per year (see Table 2). However, three of the participants did not provide information on family income.

TABLE 1: Highest level school completed (n=10)		
	No.	**Percent**
Less than high school	1	10%
Some high school	-	-
High school diploma or GED	3	30%
Some college	4	40%
College degree	-	-
Graduate degree	1	10%
Missing	1	10%
Total	10	
Agent: Plague *Target group:* Hispanic urban		

TABLE 2: Family income in the year 2002 (n=10)		
	No.	**Percent**
Less than $10,000	-	-
$10,000 - $19,999	2	20%
$20,000 - $29,999	2	20%
$30,000 - $39,999	1	10%
$40,000 - $49,999	1	10%
$50,000 - $59,999	1	10%
Missing	3	30%
Total	10	
Agent: Plague *Target group:* Hispanic urban		

Pre-Event Knowledge

All focus group participants seemed to be familiar with the Color Alert System.

- "The different levels of danger. Each color represents a different level of danger."

Suggested ways to prepare for an attack included general information-seeking and a few preventative measures.

- "Be informed so we can be prepared."
- "At home, don't be in a place with many people."

Chemical threats were characterized as "gas," water and air contamination, and general danger. Radiological threats elicited responses of "death," "destruction," tragedy and panic. A biological threat was defined as a virus, and also elicited mention of illness and contamination.

Emotional Response
When faced with Part 1 of the plague scenario, all participants felt nervous, anxious, and tense. Through Parts 2 and 3, they communicated feelings of fear, worry, and heightened anxiety.

Knowledge
Participants stated minimal previous knowledge or beliefs regarding non-specific threats and plague.

- "You don't know who has it, any person can have it and it is in the air that you breathe."

Actions
In response to Part 1 of the plague scenario, participants largely agreed that they would stay home and gather their loved ones. Primary actions also included actively seeking information at health departments, hospitals, and clinics. "Looking for treatment" was also mentioned toward the end of the scenario.

- "Prepare our family so that we are together."
- "Listen to the news so that we know what is going on."

Information Seeking
Television, radio, the Red Cross, schools, fire departments, police stations, city hall, health departments, and hospitals were all identified as possible sources of information. Participants agreed that an ideal spokesperson would be from the health department.

When faced with the plague scenario, participants wanted to know "where it is happening," "what the President is going to do," "where you can get help," and "how we can protect our family." They also agreed that they would want to know how to prevent contracting plague, how to "stop infection," and how to assess whether people are infected or not.

- "How we can help control the epidemic?"
- "What type of virus is it?"
- "What we should do in the next couple of days?"

Release of Information
The group agreed that the primary points of the materials were transmission, water contamination, and symptoms.

A significant amount of questions and comments indicated less-than-optimal comprehension.

Recommendations for Improvement
Focus group participants agreed that they "need more information on what to do." They also stated that the information would be more palatable were it not in print form, which proved to be difficult.

- "I think it is difficult to read."
- "Like if my parents would read this, they would ask what it is. I think that it should have more simple language."
- "For me it is fine but a lot of other people will not know what it says."
- "They should give a phone number to call if they have questions."
- "I think that it is fine but I think that people will understand more if there is a program on TV or on the radio."
- "It doesn't have a lot of information on [how to keep your family safe]."
- "It does not say anything [about the virus]."

Response to Government
Participant sentiments regarding government were mixed. There was a certain level of doubt about information disclosure, but most respondents agreed on the responsibilities of government in the event of an attack.

- "We are going to want to know everything but sometimes they leave out information."
- "The government has the obligation to tell us the truth."
- "[The government] say[s] what they want. They think the people do not know."
- "The government needs to stay calm and prevent."

<u>Perceptions of Emergency Response Systems</u>
Conversation regarding emergency response systems was minimal.

Part Two- UCLA Focus Group #2: Topline Report

Agent: *Plague*
Population: *Asian Urban*

Demographics
Of the 13 participants in this group, 12 completed demographic forms. This demographic summary is based on these 12 participants. In general, this group can be characterized as:

- Asian/Pacific Islanders of diverse ages
- mostly speaking Tagalog/Filipino at home
- highly educated – 83% had college or graduate degrees
- low income – 75% reported a family income of less than $20,000

Gender, age, marital status and children: The group was approximately 42% male and 58% female. Participants ranged in age from 23 to 78 years old, with the mean age of the group being 42 years. Most focus group participants, 75%, reported being married or living with a partner. The other 25% reported being single. Seven participants, 58% of the group, said that they have children. Three of these seven, 25% of the whole group, have children under the age of 18 years.

Ethnicity and language: All participants in the group identified their ethnicity as Asian/Pacific Islander, with two specifying their ethnicity as Filipino. Three persons in the group reported speaking mostly English in their home; one reported speaking mostly Vietnamese; and the remaining eight reported speaking Tagalog/Filipino at home.

Education, occupation and income: Education level for individuals in the group ranged from completing some high school to having completed a graduate degree (see Table 1). Approximately 83% reported having completed a college or graduate degree. Forty-two percent of the focus group reported currently being employed. Three of the participants gave their occupation as "caregiver" and two as "student." Other occupations given included: clerk, housekeeper, and printer. One participant was retired and three did not give an occupation. None of the participants reported being a specific type of health care worker, although "care giving" could be health-related. The median income category for the group was $10,000-$19,999 per year. No participant reported $60,000 or more in family income for the year 2002 (see Table 2).

TABLE 1: Highest level school completed (n=12)		
	No.	**Percent**
Less than high school	-	-
Some high school	1	8%
High school diploma or GED	-	-
Some college	1	8%
College degree	6	50%
Graduate degree	4	33%
Total	7	
Agent: Plague *Target group:* Asian urban		

TABLE 2: Family income in the year 2002 (n=12)		
	No.	**Percent**
Less than $10,000	5	42%
$10,000 - $19,999	4	33%
$20,000 - $29,999	-	-
$30,000 - $39,999	1	8%
$40,000 - $49,999	1	8%
$50,000 - $59,999	1	8%
Total	12	
Agent: Plague *Target group:* Asian urban		

Overview

There was a significant amount of consensus in this focus group, with two or three people seeming to serve as spokespersons. One phenomenon to consider is that while respondents said that the information sheets were easily comprehensible, it was apparent that they still had many questions regarding the fundamental points.

Pre-Event Knowledge

Focus group participants' familiarity with the color alert system was limited. Some mentioned that it seemed that there is information "not being given" to them, and that the colors "don't matter. "

- "Green is a possible terrorist attack."
- "[The color alert system makes me feel] somehow a little concerned, but you don't even know what to do with it."
- "Since not all of us are well aware of what those colors mean, it's not much of a concern. . . What I think is that maybe they should give information regarding the meaning of each color."

Suggested ways to prepare for an attack included stockpiling of water, food, and emergency supplies. Three of the participants mentioned that they had engaged in these

activities. Meanwhile, definitions of agent categories were mixed, and none of the participants ventured a guess about the definition of radiological terrorism.

- "Biological has something to do with nuclear power or events like that."
- "[Chemical terrorism] is putting something in the water, in the air. . ."

Emotional Response
When faced with Part 1 of the plague scenario, all participants felt fearful. They felt "more afraid" after hearing Part 2, and this trend continued through Part 3.

- "I'm scared of dying."
- "Helpless is the word."
- "It's fear, fear of the unknown."

Knowledge
Participants stated minimal existing knowledge regarding the various agents.

- "You will be dead before you know that we have a biological [attack]."
- "I think the FDA is very strict now [about regulating drugs]."

Actions
In response to the plague scenario, participants focused on contacting and ensuring the safety of their loved ones. Responses also included putting on masks, seeking medical care, and *not* leaving the home.

- "Put on a mask." (Parts 1 and 2)
- "I don't think anybody from my place will go out."
- "Find out where everybody you care about was and is." (Part 3)
- "Try to go to a hospital. . .and ask for the real symptoms. . .get medical treatment or something."

Information Seeking
Television and internet were described as preferred sources of information. Desired information included an explanation of symptoms, and protective action.

- "Do we have an antidote?"
- "How many feet away is a safe distance?"

Release of Information
The group appeared to understand the fact sheets without much difficulty. Also, there was a high level of confidence in the credibility of the materials.

- "You know what to do and you are not going to expose yourself to the possibility of getting plague. This is a good way of disseminating information."
- "For me I'm secure [as a result of reading this sheet]."
- "The information is very clear. . ..very well explained."

- "Why should I not believe it when you hand it down to us?"
- "I cannot contest what is written here."

However, participants had a significant amount of questions that indicated less-than-optimal comprehension.

- "What makes me confused is [the part about] household cats. . ."
- "Are these drugs really real?"

Recommendations for Improvement
Suggestions included pictures, a higher level of specificity in describing symptoms, distinguishing plague from other diseases, current research, and definitions of words such as "outbreak" and "biologic."

- "Some people wouldn't understand what 'biologic' meant. So you would have to simplify the language used."
- "If you could have pictures of. . .visual aids. So we could visualize what is said in here."

Response to Government
Participant sentiments regarding government were mixed. While respondents were "very confident" that state and local officials would handle an attack effectively, various doubts surfaced in regards to the federal government. There was a distinct consensus throughout the session that the government withholds information from the public.

- "They know about things that will probably happen, but is the government also equipped to disseminate things after the attack?. . .because you don't know when, not even the government knows when. Are they equipped?"
- "Things like biological war. . .if we are just informed [of] it being managed and handled carefully, I don't think we have to be scared. . .It's only a matter of information."
- "I doubt [that the government is doing something]."

<u>Perceptions of Emergency Response Systems</u>
Focus group participants agreed that competent emergency response systems are in place. The only concern that was voiced addressed the issue of capacity.

- "I'm confident [that emergency responders know what to do]. But if there is an outbreak, I don't know if. . .they are going to be shorthanded."

<u>Part Three- UCLA Focus Group #3: Topline Report</u>

Agent: *Plague*
Population: *ESL*

Demographics

Of the eight participants in this group, seven completed demographic forms. This demographic summary is based on these seven participants. In general, this group can be characterized as:

- of mixed ethnicity, mostly Latino and Asian/Pacific Islander
- "English as a second language" speakers
- mostly married
- diverse in education levels
- low to medium income

Gender, age, marital status and children: The group was approximately 29% male and 71% female. Participants ranged in age from 22 to 54 years old, with the mean age of the group being 37 years. Most focus group participants, 86%, reported being married or living with a partner. One participant reported being single. Three participants said that they have children, two of whom have children under the age of 18 years.

Ethnicity and language: Approximately 57% of the group was Latino/Hispanic. Another 29% were Asian/Pacific Islander. One person reported being "Indian." Two persons in the group reported speaking mostly English in their home; two reported speaking mostly Spanish; and the remaining three reported speaking Tagalog, Hindi, or Chinese at home.

Education, occupation and income: Education level for individuals in the group ranged from not completing high school to having completed a graduate degree (see Table 1). Approximately 57% of the focus group reported currently being employed. Three of the participants gave their occupation as "housewife." Other occupations given included: housekeeping/attendant, domestic, machinist, and cashier. None of the participants reported being a health care worker. The median income category for the group was $20,000-$29,999 per year. No participant reported $50,000 or more in family income for the year 2002 (see Table 2).

TABLE 1: Highest level school completed (n=7)		
	No.	**Percent**
Less than high school	1	14%
Some high school	2	29%
High school diploma or GED	-	-
Some college	1	14%
College degree	-	-
Graduate degree	3	43%
Total	7	100%
Agent: Plague		
Target group: English as a Second Language		

TABLE 2: Family income in the year 2002 (n=7)		
	No.	**Percent**
Less than $10,000	-	-
$10,000 - $19,999	3	43%
$20,000 - $29,999	1	14%
$30,000 - $39,999	1	14%
$40,000 - $49,999	2	29%
Total	7	100%
Agent: Plague		
Target group: English as a Second Language		

Overview

This focus group population was recruited from an adult ESL program. Participants were all previously acquainted, and the comfort level was high.

Pre-Event Knowledge

Focus group participants had heard of the color alert system, and agreed that orange and red indicate significant alerts. Several participants, however, expressed confusion about how the system was constructed.

- "I think the system works in the way by color codes. . .So if it's a higher level, I assume they're kind of expecting an attack."
- "The orange is the worst it can get."
- "Orange level is. . .we have to be very aware [of what] is going on around us."
- What I don't understand is how. . .the government identifies these codes."

Methods of protection from attack included buying canned foods, water and medicine. Gas masks were agreed upon as a key element of preparation as well. Also, one participant likened preparation for a terrorist attack to preparing for an earthquake.

- "Isn't that the same department as . . .when we have an earthquake. . .It is the same thing. I do. I am prepared for an earthquake."

Definitions of agent categories were varied. Chemical threats were characterized as "poisonous gas" and "cyanide," while biological threats were "bacterial or related to viruses and anthrax. However, there was significant confusion surrounding radiological threats.

- "Radiological and chemical are the same meaning."
- "A radiologist. . .is like light. . . it's not a feasible way to attack."

Emotional Response
When faced with Part 1 of the plague scenario, some participants felt scared, "concerned," "very worried," or "disturbed." Others, however, mentioned that they were accustomed to hearing about alerts. Throughout Parts 2 and 3, fear levels increased.

- "I don't feel worried because I'm used to the alert every day." (Part 1)
- "I definitely feel really, really worried." (Part 3)

Knowledge
Participant knowledge and beliefs centered around non-specific preparation and transmission. As one participant was a chemist, she offered various comments as well.

- "[A gas mask] cannot protect all part[s] of your body."
- "[For] most chemicals, you cannot find a quick treatment."
- "If you sneeze then I get all your germs."
- "I don't think we have very quick treatment for the disease caused by virus."

Actions
In response to the plague scenario, the overriding actions to be taken included staying or coming home, seeking health care, and a significant amount of information seeking (see below).

- "Well, I stay home with my husband. Don't open the window, no door, no nothing. . .not gonna work."
- "Gather the family together."
- "Leave the area and get away as soon as you can."

Information Seeking
Television was agreed upon as the preferred source of information. Participants also mentioned radio, internet and newspaper. CDC, the Red Cross, and WHO were cited as other valuable sources of information.

- "I would try the website of the Center of Disease Prevention. . ."
- "TV is a good source."
- "Sometimes I can't understand English news completely."

Desired information included treatment, safe places, prevention, protection, and transmission.

- "[I would want to know if it is] okay to stay home."

Release of Information
While the fact sheets helped participants understand transmission, it also raised various questions, both agent-specific and general.

- "Are the symptoms similar to SARS?"
- "How could. . .any terrorist use a simple virus to attack [the] United States?"
- "I'm wondering. . .how many more plagues are we surrounded [by] that I don't know."
- "How can you know that you're exposed?"
- "What is [an] aerosol attack?"

Focus group participants asserted that they were confident that they could carry out the actions. However, they were concerned about the completeness and credibility of the materials.

- "I don't trust all the information on the article because [it's] too simple."
- "I have my doubts from this information."

Recommendations for Improvement
Suggestions included "adding more on the symptoms," as well as providing preventative tips. Participants did communicate, however, that they materials lacked actionable steps and seemed incomplete.

- "I don't think the information is complete."
- "There are no solutions. There are no solutions in here."

Response to Government
Participant sentiments regarding government were mixed. When asked about state and local officials, one participant said "that's tough," and another cited California's electricity woes as a reason to be wary of government. Others asserted their confidence in President Bush and the federal system.

- "[My husband] believes in USA army and he believes in Bush. . .Okay Bush can handle it, he can do everything. .don't worry about it."
- "They're taking a lot of rights from people. . .we don't know if we're really gonna get help. . .are they gonna help minorities, or not help?"
- "I think maybe they'll make themselves safe first."

Perceptions of Emergency Response Systems

Participants mentioned fire departments and 'health authorities' as sources of information. Also, in general, they felt confident that systems are in place to respond to an attack.

- "Everybody's been trained for an emergency. Even the police have been trained for it."

Appendix F

Coding Guide

Coding Rules

Consider each participant's response as one text unit. Exception: If a participant is speaking and the moderator or another participant interjects and the participant continues speaking, consider both responses and the interjection one text unit.

Write all relevant codes in the right hand margin next to the piece of text you are coding.

Code all yes/no responses or statements of agreement.

Code the moderator's question, probe, or prompt when it needs to be included in order to provide context for the participant's response. Example:

> M: What do you think about what participant X just mentioned about the radio being the best source of information in the case of an attack?
>
> P5: Oh, I agree very much.

No code: You will not code any piece of text that is irrelevant to the context of the BT discussion or insufficient for understanding what the participant is trying to get across.

CODE TERMS
FOR
PRE-EVENT MESSAGE ANALYSIS

Public Groups
5 August 2003

DOMAIN: PRE-EVENT KNOWLEDGE

PARENT CODES	
Color Alert System:	**CAS**
[All references to the Color Alert System]	
Child Codes:	
Has knowledge of the Color Alert System	**CAS.K**
Does not have knowledge of the Color Alert System	**CAS.NK**
PARENT CODES	
Protection of self from attack:	**PSA**
Child Codes:	
Shelter in place:	**PSA.SIP**
(See shelter sheet)	
Get information	**PSA.GI**
Gas mask	**PSA.GM**
Duct Tape	**PSA.DT**
Other	**PSA.O**
PARENT CODES	
Meanings of BT categories	**MBT**
Child Codes:	
Meanings of chemical attacks	**MBT.C**
Meanings of radiological attacks	**MBT.R**
Meanings of biological attacks	**MBT.B**

OTHER

DOMAIN: RESPONSE TO GOVERNMENT

Rule: Include statement(s) of belief/perception or knowledge about government entities considered to be involved in response to a bioterrorist attack

PARENT CODES [all inclusive]
Government agencies **RG**
Trust/Credibility in government
Government Responsiveness

DOMAIN: PERCEPTIONS OF EMERGENCY RESPONSE SYSTEMS

Rule: Include statement(s) related to perceptions of the roles of emergency responders. Include statements of belief/perception or knowledge about media only under PER.M

PARENT CODES
Role of first responders **PER.RFP**
Role of health and human service providers **PER.RHH**
Role of media **PER.M**

SCENARIO, PART 1

DOMAIN: EMOTIONAL RESPONSE

[see emotional response sheet attached]

Rule(s): When a statement includes evidence of emotional response AND action code for both.

PARENT CODES
Non-Specific Agent **ER.NSA**

Child Codes:
What do participants feel or not feel? **ER.NSA.FL**

DOMAIN: KNOWLEDGE

*Rule(s): Include statement(s) of belief made pertaining to something **other than** the government, a government entity, or media source then code for knowledge-these are to be coded under response to government and or perceptions or ERS's..*

PARENT CODES
Non-Specific Agent **K.NSA**

Child Codes:
What do participants believe/know? **K.NSA.BEL**

DOMAIN: ACTIONS

Rule(s): Include behaviors related to responses to a bio-terrorist attack, except for behavior(s) related to information seeking. When a statement includes evidence of emotional response AND action code for both.

PARENT CODES
Non-specific Agent **A.NSA**

Child Codes:
What would participants do or not do? **A.NSA.DO**

DOMAIN: INFORMATION SEEKING

PARENT CODES
Non-specific Agent **IS.NSA**

Child Codes:
What information do respondents want to know? **IS.NSA.WHA**
Where would they go to get more information & why? **IS.NSA.WHR**

OTHER

DOMAIN: RESPONSE TO GOVERNMENT

Rule: Include statement(s) of belief/perception or knowledge about government entities considered to be involved in response to a bioterrorist attack

PARENT CODES [all inclusive]
Government agencies **RG**
Trust/Credibility in government
Government Responsiveness

DOMAIN: PERCEPTIONS OF EMERGENCY RESPONSE SYSTEMS

Rule: Include statement(s) related to perceptions of the roles of emergency responders. Include statements of belief/perception or knowledge about media only under PER.M

PARENT CODES
Role of first responders **PER.RFP**
Role of health and human service providers **PER.RHH**
Role of media **PER.M**

SCENARIO, PART 2

DOMAIN: EMOTIONAL RESPONSE

[see emotional response sheet attached]

Rule(s): When a statement includes evidence of emotional response AND action code for both.

PARENT CODES
Non-Specific Agent **ER.SYM**

Child Codes:
What do participants feel or not feel? **ER.SYM.FL**

DOMAIN: KNOWLEDGE

*Rule(s): Include statement(s) of belief made pertaining to something **other than** the government, a government entity, or media source then code for knowledge-these are to be coded under response to government and or perceptions or ERS's..*

PARENT CODES
Non-Specific Agent **K.SYM**

Child Codes:
What do participants believe/know? **K.SYM.BEL**

DOMAIN: ACTIONS

Rule(s): Include behaviors related to responses to a bio-terrorist attack, except for behavior(s) related to information seeking. When a statement includes evidence of emotional response AND action code for both.

PARENT CODES
Non-specific Agent **A.SYM**

Child Codes:
What would participants do or not do? **A.SYM.DO**

DOMAIN: INFORMATION SEEKING

PARENT CODES
Non-specific Agent **IS.SYM**

Child Codes:
What information do respondents want to know? **IS.SYM.WHA**
Where would they go to get more information & why? **IS.SYM.WHR**

OTHER

DOMAIN: RESPONSE TO GOVERNMENT

Rule: Include statement(s) of belief/perception or knowledge about government entities considered to be involved in response to a bioterrorist attack

PARENT CODES [all inclusive]
Government agencies **RG**
Trust/Credibility in government
Government Responsiveness

DOMAIN: PERCEPTIONS OF EMERGENCY RESPONSE SYSTEMS

Rule: Include statement(s) related to perceptions of the roles of emergency responders. Include statements of belief/perception or knowledge about media only under PER.M

PARENT CODES
Role of first responders **PER.RFP**
Role of health and human service providers **PER.RHH**
Role of media **PER.M**

SCENARIO, PART 3

DOMAIN: EMOTIONAL RESPONSE

[see emotional response sheet attached]

Rule(s): When a statement includes evidence of emotional response AND action code for both.

PARENT CODES
Non-Specific Agent **ER.SASR**

Child Codes:
What do participants feel or not feel? **ER.SASR.FL**

DOMAIN: KNOWLEDGE

*Rule(s): Include statement(s) of belief made pertaining to something **other than** the government, a government entity, or media source then code for knowledge-these are to be coded under response to government and or perceptions or ERS's..*

PARENT CODES
Non-Specific Agent **K.SASR**

Child Codes:
What do participants believe/know? **K.SASR.BEL**

DOMAIN: ACTIONS

Rule(s): Include behaviors related to responses to a bio-terrorist attack, except for behavior(s) related to information seeking. When a statement includes evidence of emotional response AND action code for both.

PARENT CODES
Non-specific Agent **A.SASR**

Child Codes:
What would participants do or not do? **A.SASR.DO**

DOMAIN: INFORMATION SEEKING

PARENT CODES
Non-specific Agent **IS.SASR**

Child Codes:
What information do respondents want to know? **IS.SASR.WHA**
Where would they go to get more information & why? **IS.SASR.WHR**

OTHER

DOMAIN: RESPONSE TO GOVERNMENT

Rule: Include statement(s) of belief/perception or knowledge about government entities considered to be involved in response to a bioterrorist attack

PARENT CODES [all inclusive]
Government agencies **RG**
Trust/Credibility in government
Government Responsiveness

DOMAIN: PERCEPTIONS OF EMERGENCY RESPONSE SYSTEMS

Rule: Include statement(s) related to perceptions of the roles of emergency responders. Include statements of belief/perception or knowledge about media only under PER.M

PARENT CODES
Role of first responders **PER.RFP**
Role of health and human service providers **PER.RHH**
Role of media **PER.M**

BT information seeking behavior

Use the OTHER category for coding the responses to the following questions…

How confident are you that there are systems in place that will respond in a way that keeps you safe?

How confident are you that your elected state and local government officials will respond in a way that keeps you safe?

What could the medical and emergency responders do to make you feel more secure?

If you were the mayor of your city or town, what would you tell people in the event of an attack?

OTHER

DOMAIN: RESPONSE TO GOVERNMENT

Rule: Include statement(s) of belief/perception or knowledge about government entities considered to be involved in response to a bioterrorist attack

PARENT CODES [all inclusive]
Government agencies **RG**
Trust/Credibility in government
Government Responsiveness

DOMAIN: PERCEPTIONS OF EMERGENCY RESPONSE SYSTEMS

Rule: Include statement(s) related to perceptions of the roles of emergency responders. Include statements of belief/perception or knowledge about media only under PER.M

PARENT CODES
Role of first responders **PER.RFP**
Role of health and human service providers **PER.RHH**
Role of media **PER.M**

SCENARIO, PART 4: PRE-TEST MATERIALS

DOMAIN: RELEASE OF INFORMATION

PARENT CODE
Informativeness (Comprehension) of materials **RI.COM**

Child Codes:
Knowledge learned(+/-) **RI.COM.KL**
Unanswered questions/Add'tl info needed **RI.COM.AIN**
-understanding what to do in the case of an event

PARENT CODE
Emotional Response **RI.ER**

Child Codes:
How did the materials make the participants feel? **RI.ER.MFL**
How could the materials be changed to make participants feel less/more emotions? **RI.ER.FLM**

PARENT CODE
Credibility (Believability) **RI.CR**

Child Codes:
What was the credibility of the print materials? **RI.CR.PM**
How can credibility be increased? **RI.CR.ICR**
Was there anything participants feel that was not being disclosed? ***RI.CR.DC***

DOMAIN: RELEASE OF INFORMATION

PARENT CODE
Self-efficacy **RI.SE**

Child Codes:
Participants' confidence in the recommended actions for safety; what to do. **RI.SE.CON**
Participant's confidence for understanding of the risks of a/an (plague, botulism, chemical, nuclear) event/disease **RI.SE.R**
Willingness to follow recommended actions **RI.SE.FOL**
Knowledge of where to turn for information **RI.SE.WHR**
Code self-efficacy for actions mentioned during the pre-test materials section

DOMAIN: RECOMMENDATIONS FOR IMPROVEMENT
PARENT CODES
Print Materials(+/- feedback) **RCI.PM**

Code with RI.COM.AIN when a participant had questions that would need to be added to the materials. **May be interchangeable**
Other Materials (any form of dissemination outside of PM's) **RCI.OM**
-any comments concerning further protection (e.g. systems)

OTHER

DOMAIN: RESPONSE TO GOVERNMENT

Rule: Include statement(s) of belief/perception or knowledge about government entities considered to be involved in response to a bioterrorist attack

PARENT CODES [all inclusive]
Government agencies **RG**
Trust/Credibility in government
Government Responsiveness

DOMAIN: PERCEPTIONS OF EMERGENCY RESPONSE SYSTEMS

Rule: Include statement(s) related to perceptions of the roles of emergency responders. Include statements of belief/perception or knowledge about media only under PER.M

PARENT CODES
Role of first responders **PER.RFP**
Role of health and human service providers **PER.RHH**
Role of media **PER.M**