



Community Shielding in the National Capital Region

A Survey of Citizen Response to Potential Critical Incidents

by:

Monnica T. Williams, *Research Analyst, CSR*
Gregory B. Saathoff, *Executive Director, CIAG*
Thomas M. Guterbock, *Director, CSR*
Anna MacIntosh, *Senior Research Analyst, CSR*
Robin Bebel, *Assistant Director, CSR*

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Executive Summary

When a terrorist attack or another disaster occurs, individual and community responses will be the most important predictors of survival. How can a community ‘contain contagion’ after an attack with a dirty bomb or a biological agent? Although highways leading from an attacked metropolitan area may be seductive, they may be roads to nowhere, leaving citizens trapped and vulnerable.

In most cases, remaining at home or other safe havens in the community will provide the greatest personal security. This is true in terms of physical and emotional safety, since people make their best decisions when they are in stable, familiar environments, and make their worst decisions when in unstable, unfamiliar environments. This study explores how residents of the National Capital Region (NCR) might respond to potential acts of terrorism, and assesses their willingness to practice “community shielding,” a wider form of shelter-in-place.

When communities are deployed to provide support for shelter-in-place, there is less chance for first responders to be overwhelmed by unnecessary and dangerous evacuation attempts. Government, medical disaster response, faith-based, private sector, and other groups are freed up to offer critical services to persons with unique needs, such as the homeless and persons with physical limitations. Additionally, responders can target shielded communities for delivery of essential supplies.

The community shielding concept was endorsed in a recently released report entitled *Public Preparedness: A National Imperative Symposium* (2005). This report was a collaboration between the Homeland Security Policy Institute of GWU, the Department of Homeland Security, the Council for Excellence in Government and the American Red Cross.

This report describes the results of a telephone survey of 1,071 households within the NCR, conducted in March of 2005 to investigate attitudes toward public preparedness consistent with a community shielding approach. The survey was conducted by the Center for Survey

Research at the University of Virginia. This survey specifically assesses emergency preparedness, public knowledge of biological and nuclear threats, finding safety in an emergency, obstacles to sheltering in place, sources of information in an emergency, and attitudes toward anti-terrorism policies.

Key Findings

Many NCR residents have prepared themselves for an emergency by storing food, water, and other essentials in their homes. However,

- Over a quarter have no food available in the event of an emergency,
- Forty percent have no water stored away,
- About half of residents do not feel they would be able to shelter at home for more than a week, and
- Only 23.2 percent of respondents have a designated emergency meeting place.

The survey asked about preferred destinations when an evacuation is warranted.

- Over half said they would go to a friend or relative’s home;
- Only about ten percent would go to a shelter.

In terms of distance from the hazard,

- Two thirds would travel over 20 miles away,
- About twelve percent would stay less than 20 miles away, but not near the affected area, and
- One fifth would stay just outside the affected area

Lower Socio-economic status (SES) households and people more attached to their communities are more likely to stay nearby.

When asked about notifying residents who should evacuate, respondents were split evenly on whether they wanted to be notified by distance from the hazard or by zip code. Fewer than a third of residents know their 9-digit zip codes.

The majority of respondents would follow authoritative advice to shelter in place in the event of a terrorist emergency.

- Eighty-four percent would be willing to shelter at home for 48 hours in the event of a dirty bomb attack.

- Three-quarters were willing to shelter at work for 48 hours in the event of a dirty bomb attack.
- Over half were willing to shelter at home for two weeks in the event of a smallpox attack.

Although most would comply, there remain sizable portions of the NCR population that are unwilling or unable to shelter. Residents who are more strongly attached to their community are more willing to shelter at home. Nonetheless, residents need to know that loved ones are being cared for if families are separated, as many would face danger to be with family and friends. Bringing food, water, and needed supplies directly to confined residents would significantly increase cooperation. The need for information about the crisis and communication with loved ones is also a priority during any shelter-in-place scenario. For situations in which residents must be confined at home for a long period, most do not feel that boredom or restlessness would be a serious problem.

Respondents said local television news, local radio, and national television news were the preferred sources for information about what to do in the event of a terrorist attack. National news programs and personal physicians were seen as the most reliable sources, whereas local religious leaders and the city mayor were seen as the least reliable. Respondents also identified shopping centers as locations where they would be comfortable receiving specific security education about their area.

Respondents showed varying levels of confidence that different services would be available in an emergency. They felt that radio and health care facilities would still be functioning, but only half felt public transportation, cell phone, cable TV, and internet access would be.

Respondents' opinions were mixed as to how prior local emergencies had affected their confidence in the ability of local government to manage emergencies.

- Almost half said that prior experience had made them more confident, but

- More than a third said that it had made them less confident.
- Virginia and Maryland residents were over twice as confident as those in DC.
- The overwhelming majority, 85 percent, said they would strictly follow local government instructions in the event of an emergency.

When asked who should keep the United States safe from terrorism,

- Over half said the federal government, and
- Slightly less than a third said federal government, local government, and the individual all share equally.

The majority said they would be willing to undergo increased inconveniences if it would help the government protect them, but opinions were mixed when asked if the government had taken away too many individual rights in its efforts to combat terrorism, or if they would be willing to pay more taxes for more protections. Most respondents who were familiar with the Patriot Act said that it should be revised.

Recommendations

In the event of a biological or radiological attack, simply telling NCR residents to shelter in place would not be effective for everyone. Most residents are willing to shelter in place and follow the advice of authorities in an emergency, but many do not have the resources to do so.

If plans were made by localities to bring food, water, medications, and other needed supplies directly to residents' homes or businesses, residents would respond favorably. To be most successful, such an approach must also attempt to keep families together, or at the very least have a way to let residents know their loved ones are safe.

Educational efforts are warranted to ensure the public is prepared for a crisis of this nature. Further study is recommended to develop a community shielding and emergency preparedness plan for the NCR. Additional surveys are warranted to assess community response to this concept in other areas of the United States.

Acknowledgements

This report details the citizen response to potential critical incidents conducted for the Critical Incident Analysis Group, under contract with the Center for Survey Research of the University of Virginia. All those connected with this project are grateful to the hundreds of National Capital Region residents who have given of their time to answer many detailed questions in order to help their government better serve them.

Thomas M. Guterbock, Ph.D, Director of the Center and Associate Professor of Sociology, has been the principal investigator from the commencement of these studies, and has been involved in all phases of the project, including budgeting, questionnaire drafting, focus groups, logistical planning, data analysis, and editing this report.

Gregory B. Saathoff, M.D., Executive Director of the Critical Incident Analysis Group at the University of Virginia School of Medicine, served as principal investigator and as primary point of contact between CSR and the CIAG on all aspects of the project. He participated actively in the design of the questionnaire, development of the research questions, and in guiding the development of this report.

Monnica Williams, M.A., Research Analyst, was the project coordinator for this study. Ms. Williams developed the questionnaire, assisted with the focus groups, was responsible for writing and debugging of the computer-assisted telephone script, supervised the data analysis and data coding, and drafted most of the text of this report, which was then edited jointly with Dr. Guterbock.

Anna MacIntosh, M.A., Senior Research Analyst, performed most of the statistical analyses for this report and wrote three chapters.

Robin Bebel, Assistant Director, was involved with the project from the beginning and was instrumental in the development of the questionnaire. She also wrote initial drafts of two chapters of this report and assisted with the editing and proofreading.

John Lee Holmes, M.A., Acting Senior Research Analyst, managed the operation of the CATI laboratory during the interviewing phase of this study, wrote the methods report, and helped proofread the text.

Paul Miller, Ph.D., drafted the analysis plan and worked on much of the initial analysis. Ms. Deborah Rexrode assisted with the analysis and compiled most of the figures and tables. Ms. Tatiana Omeltchenko proofread the report, edited many of the figures and tables, and assisted with the table of contents. Ms. Caroline Dyar formatted the preliminary drafts of the questionnaire, edited the CATI program script, coded open-ended responses, and proofread the report. Mr. Greg Clumpner worked on the advanced stages of the CATI programming to ensure proper question rationing and a problem-free instrument.

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The Center for Survey Research is responsible for any errors or omissions in this report. Questions may be directed to the Center for Survey Research, P.O. Box 400767, Charlottesville Virginia 22904-4767. CSR also may be reached by telephone at 434-243-5222; by electronic mail at surveys@virginia.edu, or via the World Wide Web at: <http://www.virginia.edu/surveys>.

The Critical Incident Analysis Group (CIAG), can be contacted at the University of Virginia, P.O. Box 800657, Charlottesville, VA, 22908-0657, 434-243-9458 and by electronic mail at ciag@virginia.edu.

Chapter 1: Introduction

The survey of Citizen Response to Potential Critical Incidents was conducted by the University of Virginia's Center for Survey Research (CSR) in the spring of 2005. The survey was commissioned by the university's Critical Incident Analysis Group (CIAG) on behalf of a consortium of universities in the Washington, D.C. area. This consortium forms the National Capital Region Project, which includes Washington, D.C. and adjoining parts of Virginia and Maryland. Funding for this research was provided by the US Department of Homeland Security.

This introduction will serve to establish and define the key elements of this study. A brief description of questions asked and analysis done will be provided, as well as a summary of the methods used to collect the data. Finally, there will be a description of the demographics of the sample of residents interviewed.

Research Questions

When a terrorist attack or another localized disaster occurs, individual and community responses will be the most important predictors of survival. Preparation for disaster is a key component.

As defined by CIAG, a critical incident is an event that threatens a significant risk of injury, loss, or destructive conflict that has the potential to significantly change or confound our culture. While this covers a lot of possibilities, the survey itself is limited to terrorism and focuses on two types of events, biological and radiological attacks. These two types of terrorism are represented by two hypothetical scenarios: a potential release of smallpox and the possibility of a "dirty bomb" explosion. Both scenarios require a significant amount of time before the community is safe again.

One of the goals of this survey is to examine how to best 'contain contagion' after such an attack. The concept of "community shielding" proposes that citizens remain in a safe place, with necessities provided by community or government resources, until the threat abates

(Saathoff and Everly, 2002; CIAG 2002). This involves more than just asking citizens to "shelter in place" until safe. To be successful, community shielding requires tailoring to community-specific special needs.

This initial telephone survey of 1,071 randomly selected residents of the National Capital Region (NCR) was designed to form the basis of more extensive research into issues raised by the possibility of some future incident. While the results of this study may be limited, they provide a starting place for further discussion and research into the following critical questions:

- To what extent have residents prepared their households for an emergency situation?
- How familiar is the public with specific terrorist threats, such as a dirty bomb or smallpox?
- Would residents respond to an attack by staying at home or evacuating spontaneously?
- How would this change if authorities instructed them either to evacuate or to stay in place?
- How do evacuation intentions vary in relation to a resident's degree of community attachment?
- Where, specifically, would residents go to find a "safe haven," a place to be safe and stay put?
- What features of a location lead to it being perceived as a "safe haven?"
- What proportion of residents would be willing to shelter in place for specific, defined periods?
- What can localities provide to meet the public's needs while sheltering in place?
- What are the obstacles to sheltering in place?
- How do the specific obstacles vary in relation to demographics and the degree of community attachment?
- What sources of aid and information are trusted by residents?
- How much confidence do residents have in specific infrastructure sectors in case of attack?
- Do experiences in prior, real local emergencies make NCR residents more

- or less confident in the ability to manage an attack?
- How do residents feel about current government efforts to fight terrorism?

Many of these concepts are relatively new and efforts to implement them are in preliminary stages. This survey provides information that will better inform the government's ability to effectively anticipate, prevent, and manage critical incidents.

Each chapter in this report contains a descriptive summary of a different aspect of the concept of community shielding. Chapter 2 begins by addressing emergency preparedness and the extent to which citizens are ready to withstand some potential event. Chapter 3 continues this line of inquiry by examining how likely citizens are to heed emergency instructions, where they would choose to go and how likely they are to suffer from the confinement. Chapter 4 looks specifically at biological and radiological terrorism, public needs in the face of these disasters and what obstacles would need to be overcome for larger numbers of people to shelter in place. Sources of information, the trust placed in them and the potential for shopping centers to serve as sources of emergency information are detailed in Chapter 5. Chapter 6 examines public trust in critical infrastructure. Chapter 7 looks at public attitudes toward policy issues, including the fiscal and legal responsibilities in the prevention of terrorism. Finally, Chapter 8 will provide a summary of survey findings.

The complete 2005 interview script is found in Appendix A of this report. Appendix B details survey methodology. Appendix C provides information on the demographic characteristics of the sample, Appendix D includes the weighted frequency distributions for all substantive questions, and Appendix E contains a full variable list.

Subgroup Analysis

Question responses were broken out and analyzed by several demographic categories. Results are only reported for instances where analysis provides relevant and *statistically significant* differences between subgroups. (Statistically significant differences are those

that probably did not result from sampling variability, but instead reflect real differences of opinion within the region's adult population.) The demographic variables listed below were those principally used in subgroup analysis. In some cases, categories were combined to facilitate comparison.

- Age. Age was divided into five categories for most analyses: 18-25, 26-37, 38-49, 50-64, and over 64.
- Education level. Persons with some high school, high school graduates, some college, four-year degrees, some graduate work, and those with professional and graduate degrees, were compared.
- Marital status. Respondents presently married were compared with those in other categories (separated, divorced, widowed, or never married).
- Work status. Persons in the labor force working full-time or part-time were compared with those not in the labor force: retirees, homemakers, students, and those looking for work.
- Military status. We compared persons in the armed forces — serving currently, on reserve, and veterans — to those who have never served.
- Household income. Several categories of self-reported annual household incomes were compared: Less than \$15,000; \$15,000 to \$34,999; \$35,000 to \$49,999; \$50,000 to \$74,999; \$75,000 to \$99,999; \$100,000 to \$149,999; \$150,000 to \$250,000; and more than \$250,000. For most analyses, these were collapsed into four categories.
- Homeowner status. We also compared homeowners with renters.
- Race/ethnicity. Whites, African-Americans, and "Others" were compared. Hispanic respondents were also compared with non-Hispanic respondents. Middle Eastern / Arab Americans were compared with others.
- Gender. Women were compared with men.
- Religious participation. We asked respondents if they attended services weekly, monthly, annually, or not at all.
- Geographic area. The study areas in the National Capital Region include:

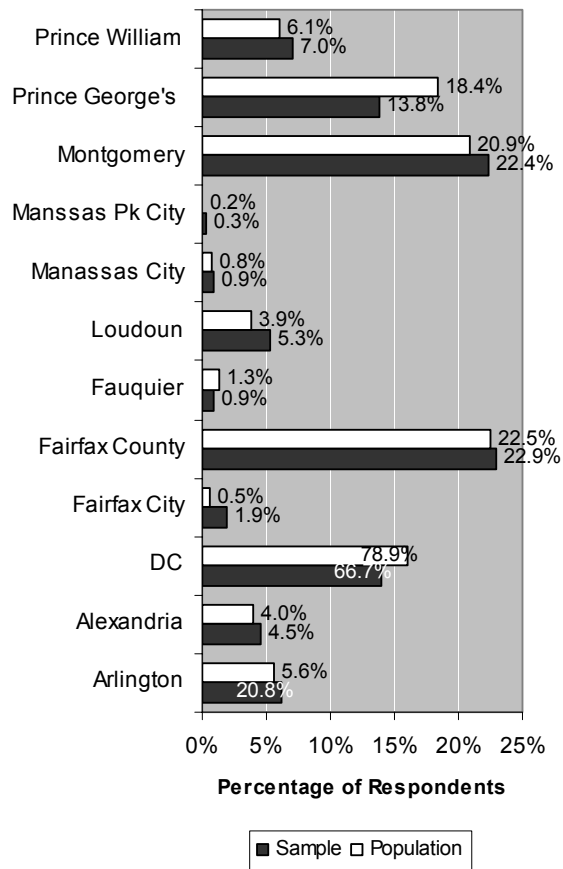
- District of Columbia.
- Virginia: Arlington County, Alexandria City, Fairfax City, Fairfax County, Fauquier County, Loudoun County, Manassas City, Manassas Park City, Prince William County.
- Maryland: Montgomery County, Prince George's County.
- Type of area. People who lived in rural areas were compared with people who lived in urban or suburban areas.
- Community attachment. Several items were combined to create an index of community attachment, including five items from a published measure of community attachment (Chavis & Wandersman, 1990), as well as the length of time the person has lived in the NCR, distance from nearest close relative, how many neighbors are known by the respondent, and if the respondent would like to live in the same place five years from now.

Demographic Profile

Respondents were asked some questions about themselves and their households to allow for analysis of the data by social and personal characteristics. It is an indicator of the validity of a survey to test the representativeness of the sample by comparing it to the population from which it was drawn. CSR has used Census estimates available for 2004 to compare with the raw numbers obtained from the survey sample. As is often the case in telephone surveys, women were somewhat overrepresented at 60.3 percent compared to a natural occurrence in the population of 52.3 percent.

It was also important to assure that responses were obtained from representatives of all communities in the sample. As is detailed in the following graph, CSR completions follow census estimates fairly closely. The most notable deviation was in Prince George's County where the census would forecast 18.42 percent of the total completions. In reality, only 13.8 percent of the total said they were from that county. See Figure 1-1 for details.

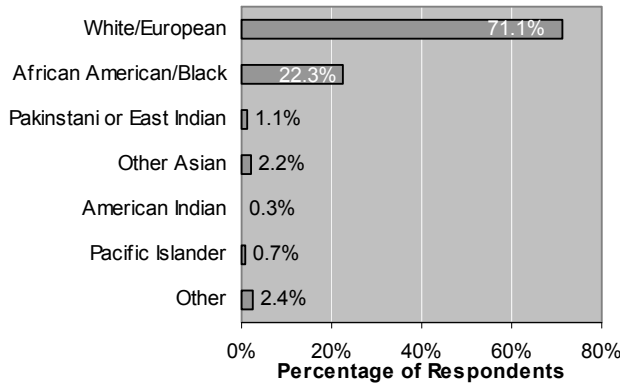
Figure 1-1: Respondents by County



Although specific racial data was requested of all respondents, the number of responses obtained for some categories precluded meaningful analysis. Most responses were therefore reported in aggregate form. As can be seen from Figure 1-2, whites or European-Americans comprised 71.1 percent of the completed cases where a response could be obtained, and blacks or African-Americans formed 22.3 percent, with the rest of the cases representing other categories.

In addition to racial information, we also asked about ethnic identification separately for two groups. Not shown in Figure 1-2 are Middle Eastern and Arab respondents, representing 1.1 percent, and Hispanics representing 2.2 percent.

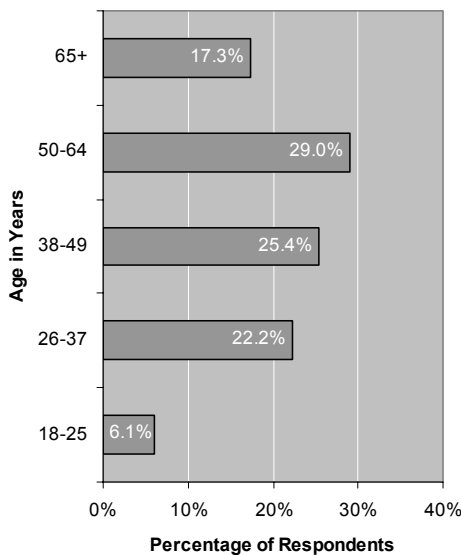
Figure 1-2: Racial Breakup of Respondents



When asked if anyone in the home had difficulty communicating in English, only 3.9 percent said yes. The most common language spoken by these non-English speaking members of the household was Spanish (37.5%), followed by French (9.4%); the rest were an assortment of other languages.

In terms of age, 6.1 percent of our sample was between the ages of 18-25, 22.2 percent was 26-37, 25.4 percent was 38-49, 29.0 percent was 50-64 and 17.3 percent were 65 and older.

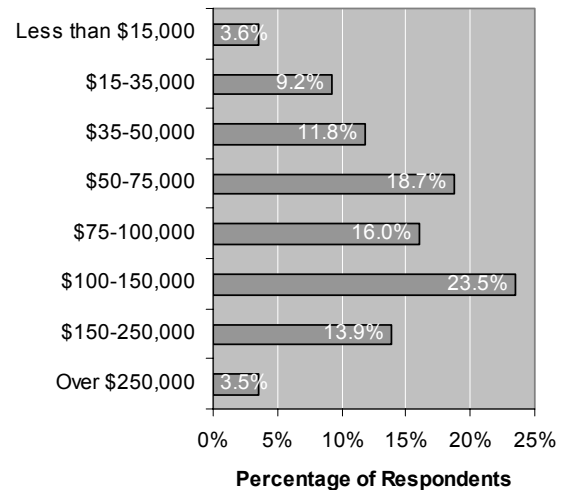
Figure 1-3: Age of Respondents



When asked about children, 33.8 percent of respondents had one or more children in the home. Specifically, 13.6 percent had children age five or under in the household, 17.1 percent had children between six and twelve and 14.0 percent reported teen-agers between thirteen and seventeen.

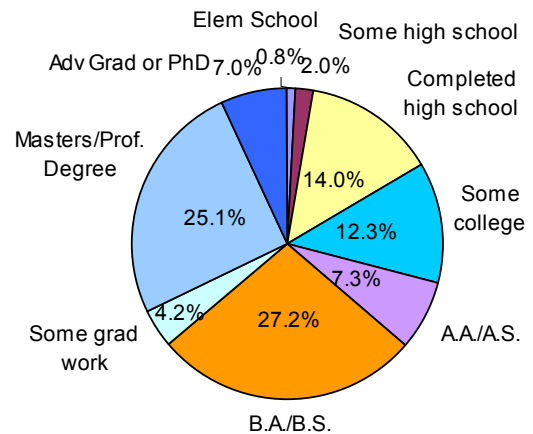
Figure 1-4 illustrates the household income of our sample. The largest group in the sample, at 17.8 percent, was respondents with a household income between one hundred and one hundred and fifty thousand. The most and least affluent households were almost identically represented at 3.5 percent and 3.6 percent respectively.

Figure 1-4: Household Income



Respondents to this survey were very well educated with 28 percent having at least a Bachelor's degree and 32 percent with a Master's Degree or Advanced Graduate or PhD. A total of 71 percent of the respondents had some level of college education.

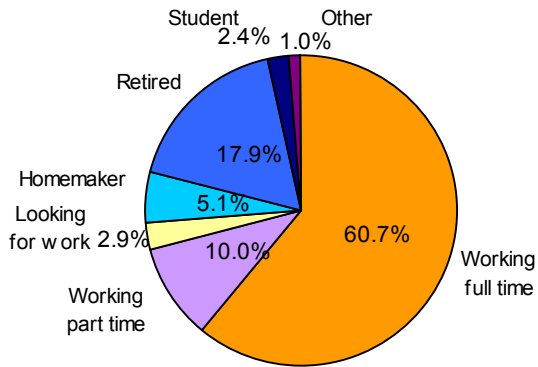
Figure 1-5: Education of Respondents



Sixty-one percent of the respondents indicated they were employed full-time; with 10% working part-time. One-third of the respondents

are not currently employed, which includes full-time students, homemakers, retired people, and others. This is shown in Figure 1-6.

Figure 1-6: Employment Status



To compensate for areas in which the census data did not match our sample, the numbers for each county were weighted to match the actual population of residents in those areas. The sample was also weighted for race, gender, and homeownership. For more about the weighting procedure, see the Methodology Report in Appendix B.

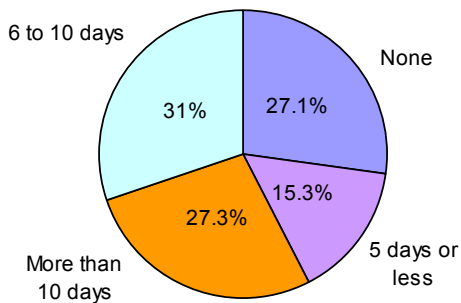
Chapter 2: Emergency Preparedness

One purpose of the survey is to evaluate how well residents have prepared themselves for an emergency. To this end, residents were asked if they had various types of supplies on hand in the event of an emergency that might help them stay inside their homes for an extended period.

Stored Food and Supplies

When asked “Do you have non-perishable food stored away in your home?” 73.0 percent said they did. Those who did have food stored away were asked how long they thought the food would last. The mean number of days was 16.8, with 21.0 percent of those having enough for 5 days or less, 37.5 percent having enough for 6-10 days, and 41.6 having stored food for 10 days or more. Figure 2-1 shows the percentage of respondents with and without stored food.

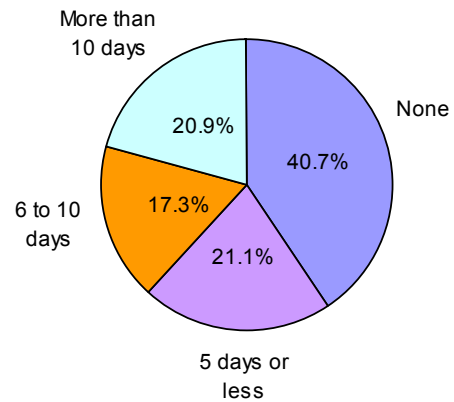
Figure 2-1: Percentage of Respondents with Non-Perishable Food Stored Away



Responses to this item varied significantly by age, with persons aged 26-37 least likely to have food stored away (62.3%) and those age 63 and older most likely to report having food stored away (82.9%). Persons living in the NCR area longer, suburbanites, homeowners, and people in single-family homes were more likely to report having food stored away. Pet owners were also more likely to have food stored away (81.4%), as well as veterans and those serving in the military (84.1%). People living in Maryland were more likely to report having stored food than people in Virginia or DC. Only about half of students and people looking for work were likely to have food stored away.

When asked a similar question about whether they had water stored away in the event that tap water became unavailable, 59.6 percent of residents said they did. Of those who did, 35.5 percent had enough for 5 days or less, 29.2 percent had enough for 6-10 days, and 35.3 percent had enough for 10 days or more. On average, those with water stored away said it would last for almost two weeks (13.0 days). However, if those with no stored water are included, the average drops to just over a week (7.7 days). Figure 2-2 shows the percentage of respondents with and without stored water.

Figure 2-2: Percentage of Respondents with Water Stored Away



Similarly, responses to this item varied significantly by age, with persons aged 26-37 least likely to have water stored away (47.1%) and those age 63 and older most likely to have water stored away (72.4%). As with stored food, homeowners, pet owners, veterans and those who were serving in the military, and suburbanites were most likely to have stored water. People reporting Middle Eastern/Arab ethnicity were also more likely to report having stored water in their homes.

Respondents were asked if they had an emergency supply of medication. Almost half (48.2%) said yes, 37.8 percent said no, and 14.0 percent said they did not take medication. People living in Virginia were somewhat more likely to have an emergency supply of medication than those in DC or Maryland. This was also true of retired people and those over age 65. Blacks were less likely to have emergency medication compared to whites or others.

The majority, 81.6 percent, did have a first aid kit. Newcomers to the NCR were more likely to have a first aid kit, as were people living in rural areas, people living in single family homes, and those with military experience. Students, single people, females, and low income households were least likely to have a first aid kit.

Only 33.6 percent had a complete emergency preparedness kit, with another 29.0 reporting an incomplete kit, and 37.5 reporting no kit at all. It was explained to respondents that an emergency preparedness kit is a container with supplies that can be used during an emergency, like a flashlight with extra batteries, a battery powered radio, non-perishable food, water, medications, and other supplies like blankets and warm clothing.

Emergency Meeting Place

Residents were asked if they had a designated meeting place to meet in the event of an emergency. Only 23.2 percent of respondents said they had designated such a place. This does not include the 4 percent who said this question was not applicable to them.

People with children in the home, people living in single family homes, pet owners, people who were more strongly attached to their communities, full-time workers, higher income households, African-Americans, and those age 50-64 were more likely to have a designated meeting place than others.

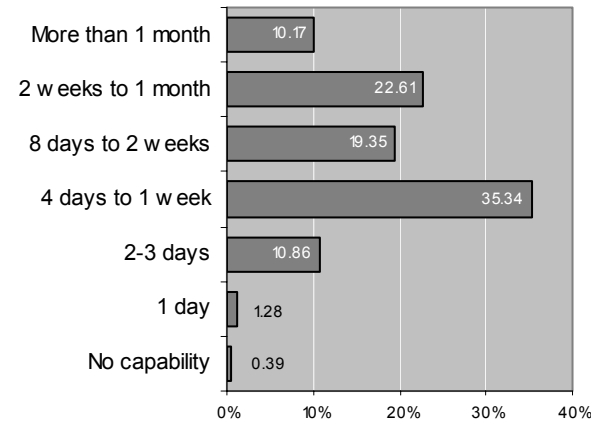
Capacity to Shelter at Home

Finally, residents were asked directly about their capacity for sheltering in their homes, or how long they could stay at home without leaving. Eleven percent were able to shelter in place for less than 3 days, 35.3 percent said they could shelter in place for 4-7 days, 19.3 percent said they could stay for 1-2 weeks, and almost a third were able to shelter in place for over two weeks.

To examine group differences in response to this item, we divided participants into those who could stay at home for one week or less (47.9%) and those who could stay at home for over a week (52.1%). Not surprisingly, those living in single-family homes were able to shelter longer

than people in apartments or townhouses. This may be related to the finding that people living with others could stay longer than those living alone.

Figure 2-3: Capacity for Sheltering at Home



People aged 65 and older could shelter at home for longer than younger people; 64.9 percent of those 65 and over versus 44.4 percent of those age 26-37 were able to shelter for more than a week. People who reported living in the National Capital Region for all their lives were best able to shelter at home for over a week (59.6%), and those living in NCR for 6-10 years were least able (37.3%). Students and people looking for work were not able to shelter as long as people working full-time, part-time, or retirees. Women reported being able to shelter at home longer than men.

Summary

Many NCR residents have prepared themselves for an emergency by storing away food, water, and other essentials. However, about a third have no food or water available in the event of an emergency. Over a third lack an emergency supply of medication, and one in five lack even a first aid kit.

About half of residents do not feel they would be able to shelter at home for more than a week. In general, older people are better prepared than younger residents, students, or people looking for work. Education and income were not consistent predictors of preparedness.

Chapter 3: Finding Safety in an Emergency

This chapter explores where NCR residents would find safety in the event of an emergency that would drive them from their homes. We examine where and how far residents would travel to feel safe, how they would like to be notified of a threat, and public perception of difficulties posed by boredom or restlessness on confinement.

Evacuation

When asked, only 9 percent of our sample did not have a car. Looking at income, we find that most of these people have an income of less than \$50,000. Based on this finding and the findings of our pretest, for this report we will assume that all evacuees are in a personal vehicle.

To determine an understanding of the realities of distance, respondents were posed the following question *“If your local leadership recommended an evacuation of your community, where would you go?”*

The following response options were provided:

- 1 a friend or relative’s home just outside of the evacuated area
- 2 a public shelter just outside of the evacuated area
- 3 a friend or relative’s home within twenty miles of the evacuated area
- 4 a public shelter within twenty miles of the evacuated area
- 5 a friend or relative’s home beyond 20 miles of the evacuated area
- 6 a public shelter beyond 20 miles of the evacuated area

They were also permitted to give other responses if they desired.

Over half (54.2%) said they would go to a friend or relative’s home over 20 miles away from the affected area. 14.4 percent said they would go to a friend or relative’s home just outside the affected area, 8.5 percent said a friend or relative’s home within 20 miles of the affected area, 6.0 percent said a public shelter over 20 miles away, 4.7 percent said a public shelter

within 20 miles of the area, and 4.3 percent said some other remote location, like a hotel or vacation home. Less than one percent said they would not evacuate.

Dividing respondents by evacuation destination, 57.5 percent said they would go to a friend or relative’s home versus 9.6 percent who would go to a shelter. Dividing respondents by evacuation distance, 19.8 percent would stay just outside the affected area, 11.8 percent would stay within 20 miles of the evacuated area, and 68.4 percent would travel beyond 20 miles.

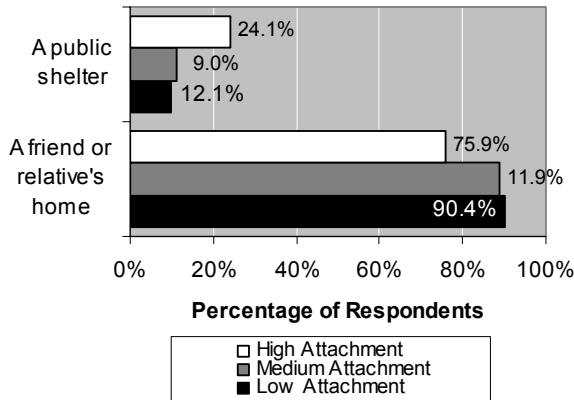
Table 3-1: Evacuation Location by Area

Evacuation Location	Urban	Rural	All
Friend/relative +20 miles away	53.3%	62.0%	54.2%
Friend/relative’s home nearby	15.2%	8.5%	14.4%
Friend/relative within 20 miles	9.2%	2.8%	8.5%
Public shelter +20 miles away	5.5%	11.3%	6.0%
Public shelter nearby	4.8%	2.8%	4.7%
Another remote location (vol.)	4.5%	1.4%	4.3%
Public shelter within 20 miles	2.5%	5.6%	2.9%
Other	2.5%	2.8%	2.6%
As far away as possible (vol.)	1.7%	1.4%	1.7%
Would not evacuate (vol.)	0.7%	1.4%	0.8%

A cross-tabulation of that question with a respondent characterization of their own residence as urban or rural shows that, at 77.7 percent (urban) and 73.3 percent (rural), the majority would prefer a friend or relative. A significantly higher percentage of rural dwellers chose the options that required the most driving more frequently than urbanites.

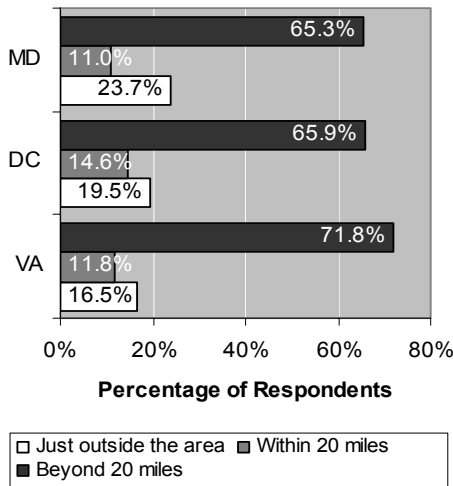
This variable was also strongly related to the respondents’ degree of community attachment. Those with high attachment were much more likely to say they would go to a public shelter, whereas those with low attachment were less willing to go to a shelter, as shown in Figure 3-1.

Figure 3-1: Evacuation Destination by Community Attachment



As shown in Figure 3-2, more Virginians (71.8%) choose to go beyond twenty miles than do either Marylanders (65.3%) or those from Washington D.C. (65.9%). More of those from Maryland (23.7%) would stay just outside the evacuated area, perhaps a reflection of their understanding of local geography.

Figure 3-2: Evacuation Destination Distance by Place of Residence



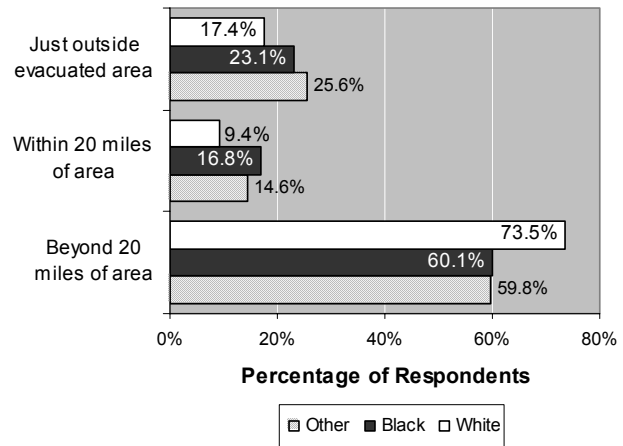
Those who are serving or who have served in the military are also more likely to travel more than twenty miles (78.9%) compared to civilians (66.7%) seeking refuge.

In addition, men are more likely, at 73.1 percent, to drive more than twenty miles past the evacuation zone than women (63.8%). They are

also more likely to head for a public shelter (17.4%) than women (11.5%).

Looking at these same location issues by race of the respondent shows some significant differences. Blacks are less likely (45.9%) than whites (58.5%) to travel to a friend or relative more than twenty miles away. In general, blacks are more likely to stay closer to home. One big difference shows up in looking at the willingness to go to a shelter. Blacks indicate some willingness in 16.9 percent of cases, where whites only chose the shelter 10.6 percent of the time.

Figure 3-3: Evacuation Distance by Race



If household income and level of education are used as indicators of socio-economic status, then those of less advantaged backgrounds are more likely to seek shelter in a public place and more likely to stay closer to home. In fact, the willingness to travel jumps from the mid-sixties to 77.5 percent at the more than \$100,000 income level. The likelihood of staying in a public shelter is significantly higher for the less well educated and for those who make less than \$35,000.

Having a relative close by increases the chances that a respondent will remain just outside the evacuated area, the choice of 29.3 percent of people with a relative within walking or driving distance versus 14.6 percent of people with no close relative.

When analysis is done based on years spent in the Washington D.C. area, most people are

strongly inclined to leave the D.C. area in the event of an emergency, with a high of 77.5 percent at three to five years of residency. The exception is during that first year, when more than a third, or 35.5 percent of respondents, would stay just outside the area.

Table 3-2: Evacuation Distance by Length of Residence

Length of Time	Nearby	<20 mi.	>20 mi.
Less than 1 year	35.5%	12.9%	51.6%
1 to 2 years	10.9%	13.0%	76.1%
3 to 5 years	12.5%	10.0%	77.5%
6 to 10 years	16.7%	15.5%	67.9%
11 to 19 years	14.1%	9.8%	76.1%
20 years or more	20.9%	11.3%	67.8%
All my life	27.1%	13.2%	59.7%

Evacuation distance was also strongly related to the respondents’ degree of community attachment. Those with high attachment were more likely than others to say they would stay just outside the affected area, whereas those with low attachment were more likely to travel beyond 20 miles of the evacuated area.

Evacuation Notification

To determine the best way to notify residents of a localized disaster, we posed the following question: *“Imagine there was an airborne release of a hazardous material, and officials are asking people to evacuate based on where they live. Which would you be more likely to respond to: If they asked everyone to evacuate who lives within a certain distance from the hazard, or if they ordered evacuation according to the ZIP codes in which people live?”*

Residents were split on their response to this question – 48.5 percent said they would like to be notified by distance from the hazard whereas 51.5 percent wanted to be notified by zip code.

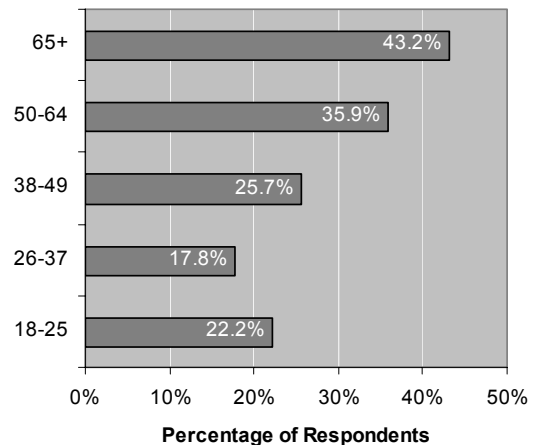
To best notify residents by zip code, it would be important for residents to know their complete 9-digit zip code. Therefore, we first asked people if they knew their 9-digit zip code. The majority of residents (71.2%) acknowledged that they did not know their more specific 9-digit code. This reflects significantly on government’s ability to notify residents in the event of a localized emergency. For this reason, it is worth

examining the differences between groups to better forecast who would be likely to miss an evacuation notice based on 9-digit zip code.

As expected, there is a linear relationship between lack of knowledge of the 9-digit zip code and length of capitol region residence, with a high of 94.1 percent for new residents down to 64.1 percent for those living there for more than 20 years. At almost 77 percent, renters are more likely than homeowners (67.7%) not to know their entire code.

Perhaps not as apparent are the differences in knowledge between the working and non-working. Those not working full-time (34.6%) have a better than average chance of saying they can recall their zip code. Rural dwellers are more likely (39.8%) than urban dwellers (27.8%) to say they can recall their entire code. This question had a definite age influence. Older residents were significantly more likely to say they could recall all nine digits of their zip code, as shown in Figure 3-4.

Figure 3-4: Respondents who Know Nine Digit Zip Code by Age

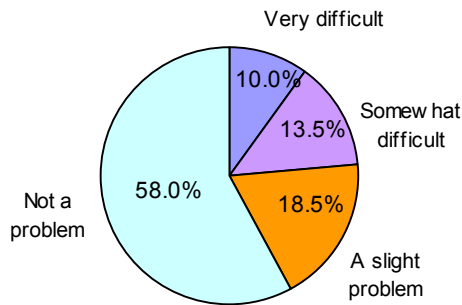


Boredom and Restlessness

One potential problem with an evacuation situation or any situation where residents are confined for an extended period is boredom and restlessness. We specifically asked residents if they thought these would be a problem in a situation where they may have to be confined at home for several weeks.

Overall, most people do not see the possibility of boredom as a big problem. Of those answering, 76.5 percent consider it to be either not a problem at all or only a slight one.

Figure 3-5: Problem of Boredom on Confinement

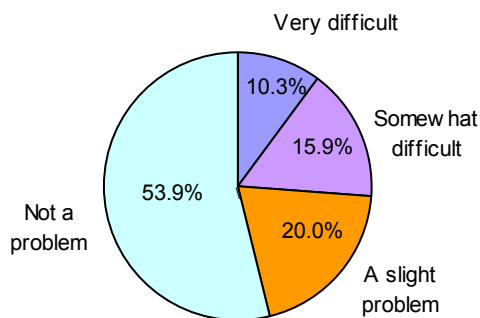


Rural respondents report even less anticipated boredom, with only 19.7 percent feeling it would be a somewhat or very difficult problem.

Some significant difference is seen in reported employment. While those who work full-time are close to the reported average, those who work part-time (28.2%), those who are looking for work (34.5%), homemakers (30.0%) and especially students (41.5%) are significantly more likely to anticipate that boredom will be a problem.

Restlessness appears anticipated as somewhat more of a problem. Those seeing it as a somewhat or very difficult problem are at 26.1 percent, with those foreseeing either no problem or only a slight one at 73.9 percent.

Figure 3-6: Problem of Restlessness on Confinement



Those who have served or are currently serving in the military report significantly less of a problem. Almost 85 percent feel it would be a slight problem or none at all.

There is a definite increase in those perceiving restlessness as at least a somewhat difficult problem as the level of education increases. Only 18.5 percent of those with less than a high school education see it as difficult, whereas 29.3 percent of those with a graduate degree or some graduate work think it will be somewhat or very difficult. Just over 74 percent of those with less than a high school education do not consider restlessness a problem at all.

Summary

In the event of a required evacuation, most people would travel over 20 miles away from the affected area. Most of these would be going to stay with family or friends, although some are willing to stay in public shelters. Lower Socio-economic status (SES) households and people more attached to their communities are more likely to stay nearby.

In terms of notifying residents who should evacuate, respondents were split evenly on whether they wanted to be notified by distance from the hazard or by zip code. Since fewer than 30 percent of residents know their 9-digit zip codes, notification by distance may be more practical.

For situations in which residents must be confined at home for a long period, most do not feel that boredom or restlessness would be a serious problem.

Chapter 4: Public Response to Terrorist Emergency

Although there are many types of emergencies that may warrant an evacuation, some sorts of disasters are most safely managed when residents remain where they are, or shelter in place. This chapter examines the public response to specific terrorist threats, namely the possibility of a biological attack involving smallpox or another type of attack involving a “dirty bomb” radiological dispersal device. This chapter examines specifically where residents would go, how long they would stay, and what things they would need to shelter in place for the necessary length of time. Many of these questions are similar to those from a related study done by R.D. Lasker (2004).

Questions were approached by asking respondents what they would do in the hypothetical event of each of these attacks. A detailed scenario was constructed for each situation, followed by a series of questions. All residents were posed a question about what they would do in the event of a dirty bomb attack while they were at home. To keep the length of the survey manageable, the two remaining scenarios were each given to half of the respondents: a scenario involving a dirty bomb attack while the respondent was at work and a scenario involving a community-wide smallpox epidemic.

Public Knowledge of a Dirty Bomb

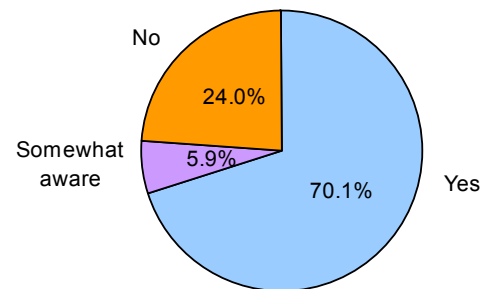
The term dirty bomb is used to refer to a radiological weapon that combines radioactive material with conventional explosives. The bomb is designed to disperse radioactive material over a large area, so clean up of the affected area might require considerable time and expense. Affected areas may be contaminated for some time, causing health concerns to residents and extensive economic damage. Additionally, the terrorist detonation of a dirty bomb would create psychological harm through mass panic and terror.

NCR residents were presented with the following scenario: “Please imagine that one afternoon, when you are at home, you hear on

the news that a bomb has just exploded in a building a mile away. Authorities believe it was a ‘dirty bomb.’ A dirty bomb is not an atomic bomb, but an ordinary bomb that has radioactive material mixed in it, so the explosion spreads radioactive material on the ground and into the air. Before today, did you know the difference between a ‘dirty bomb’ and an atomic bomb?”

In response to this question, 70.1 percent of NCR resident said they did know the difference between a dirty bomb and an atomic bomb, and another 5.9 percent said they were somewhat aware. Almost a quarter did not know what a dirty bomb was.

Figure 4-1: Percentage of Residents Who Knew What a Dirty Bomb Was



There were some group differences in knowledge about a dirty bomb. People who did not work full time and unmarried people were less aware of this threat (61.2% and 64.7%, respectively). As expected, awareness increased with age, with the 50-64 year group reporting the most knowledge (80.4%) and the 18-25 year old group the least (47.9%). Those with military experience had more knowledge, as did those who were married and those with more education and income. Members of ethnic minorities were less aware than whites, as only about half of non-whites knew what a dirty bomb was. Males were more aware than females (82.2% versus 60.1%, respectively).

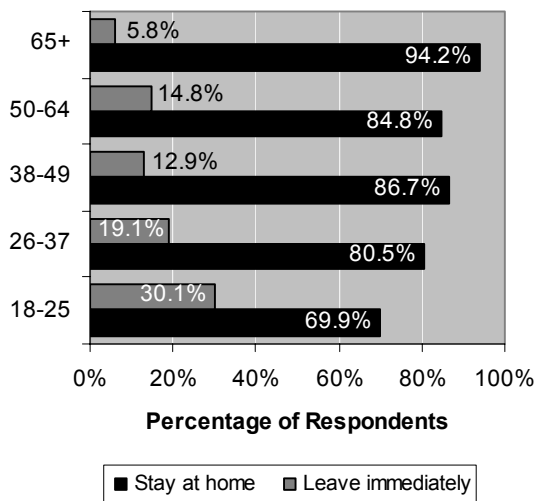
Public Response to a Dirty Bomb Attack at Home

Respondents were then asked to imagine they were at home and provided with the following information: “Residents in the area are instructed to take shelter at home or in some type of building, since this will provide significant protection from radioactive dust

created by the blast. They want everyone in your community to stay in their place of shelter for 48 hours or until an ‘all clear’ is given. Based on this information, would you stay at home or would you leave immediately to go somewhere else?”

The great majority, 84.1 percent, would follow the advice provided and stay at home. However, 15.5 percent said they would leave immediately, and another 0.4 percent said they would do something else. Not included in these figures are 3.0 percent who said they were not sure what they would do. Of those who said they would stay at home, the vast majority (97.5%) said they would stay the full 48 hours or longer, if necessary.

Figure 4-2: Percentage of Residents Who Would Shelter at Home Based on Age

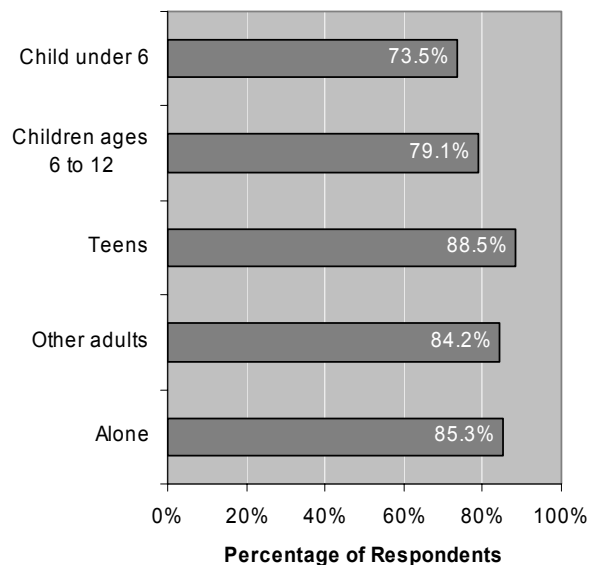


There were some significant group differences between those who said they would stay and those who would not. Those living in the NCR for 1-2 years were least likely to stay at home (68.8%), while those who had lived in the area for longer periods were more likely to stay at home. Suburbanites and those living in rural areas were more willing to shelter at home than those in urban areas. As shown in Figure 4-2, age was a significant factor, with younger people less likely to stay and older people more likely to stay at home. Seventy percent of 18-25 year olds said they would stay compared to 94.2 percent of those 65 and older. Students and those looking for work were less willing to shelter at home than working or retired people.

Females were somewhat more likely to stay than males. Blacks were more likely to agree to shelter at home than whites, and whites were more willing to shelter at home than people who indicated a different racial identification.

Those with children under the age of six in the home were more likely to flee than those without: 25.8 percent said they would leave immediately compared to 10.7 percent without small children. Interestingly, those with teens in the home were more likely to stay, with only 10.7 percent fleeing immediately. Figure 4-3 depicts the percentage in each group that were willing to shelter at home.

Figure 4-3: Percentage of Residents Who Would Shelter at Home Based on Family Composition



Finally, those who indicated a high level of community attachment were much more willing to stay at home (90.7%) than those reporting a low level of community attachment (78.5%). In fact, those with a low level of community attachment were twice as likely to leave immediately than those more strongly attached.

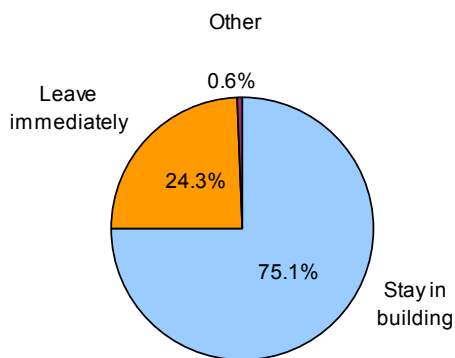
Public Response to a Dirty Bomb Attack at Work

Half of the respondents in the sample were given the same dirty bomb scenario again, but were asked to imagine that the event had occurred

while they were at work. If they did not work, or worked at home (and this was true of 14.7 percent of the sample), they were asked to imagine that they were at another location in the community that they often visit, such as a department store or library. Residents were allowed to choose whatever location they preferred for the scenario, as long as it was in a building. (Among those without a regular workplace outside of the home, 35.3 percent said they would be at a store or mall, 12.9 percent said school, 9.8 percent said recreation facility, 8.9 percent said church, 7.1 percent said office or work building, 6.7 percent said library, and 4.0 percent said a friend or relative’s house.)

In response to a dirty bomb attack while at work, the majority, 75.1 percent, said they would stay in the building, and 24.3 percent said they would leave immediately. It is noteworthy that the percentage saying they would stay is distinctively less than those who would stay in place if they were at home at the time of the attacks. Of those agreeing to stay in the building, the majority – 92.3 percent – said they would stay the full 48 hours or longer, if necessary.

Figure 4-4: Percentage of Respondents Who Would Shelter in Building



Those living in Virginia were more likely to comply than those living in DC or Maryland (79.0%, 74.2% and 71.1%, respectively). People working in government or non-profit jobs were more agreeable to shelter at work than those in private industry. People living alone were more likely to comply than those living with others.

Although those reporting low community attachment were more likely to stay in the building (80.6%) than those with high attachment (69.7%), these differences were not statistically significant.

Reasons for Non-Compliance for a Dirty Bomb Attack at Home

Those who said they would not stay at home but would leave immediately, were asked the reason they would leave. Respondents were permitted to give more than one answer to this question.

The most common response was that the respondent would simply feel safer elsewhere, and this answer was given by almost half of participants. The next most common response was to find or take care of children at 16.7 percent, followed by 10.0 percent who did not trust the advice of the authorities, 8.8 percent who wanted to find or take care of another adult family member, and 6.2 percent who needed to get food or water.

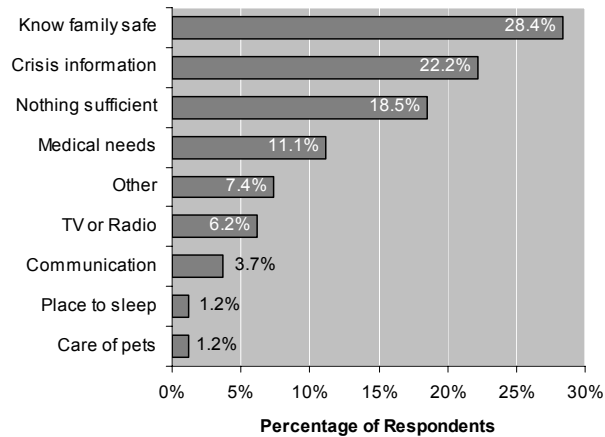
Those who said they would leave to find their children, adult family members, or others were asked if they would stay if they could be assured that their loved ones were being kept safe and cared for during the emergency. Of these, 71.4 percent said they would stay for the full 48 hours or longer, if necessary, but 19.3 percent said they would stay only a few hours or less.

Those who said they would leave to get food, water, or medication were asked if they would stay if there were people who could safely bring to their home any needed food, water, or medications. Of these, 85.9 percent would stay for the full 48 hours or longer, if necessary. These results suggest the potential feasibility of a community shielding strategy, in which needed services would be provided to residents as they shelter in place.

Residents who had initially said they would not shelter in place were asked if there were any other needs they had that would help them to stay at home for the full 48 hours. This was an open-ended question, and interviewers were instructed to probe for as much information as possible from the respondent. The answers were

then coded based on the similarity of the responses.

Figure 4-5: What Respondents Would Need to Shelter at Home for 2 Days



As shown in Figure 4-5, the most common concern was to know that family members were safe, followed by information about the crisis, a way to communicate with others, and a radio or TV. Nonetheless, 18.5 percent of those who would leave said that nothing would be sufficient because they would not stay under any circumstances.

Reasons for Non-Compliance for a Dirty Bomb Attack at Work

Those who said they would not be willing to shelter at work or another location away from home were told that building they were in had made arrangements to make sure people were fed and kept safe during the emergency. Given this new information, 39.4 percent said they would not leave the building, but the majority of these did not change their answers as 60.6 percent said they would still leave.

Those who said they would not be willing to shelter at work or another location away from home, but would leave immediately, were also asked the reason they would leave. Respondents were permitted to give more than one answer to this question.

The most common reason given for leaving was that the respondent would feel safer someplace else (36.6%), followed by find or care for children (28.4%), find or take care of other adult

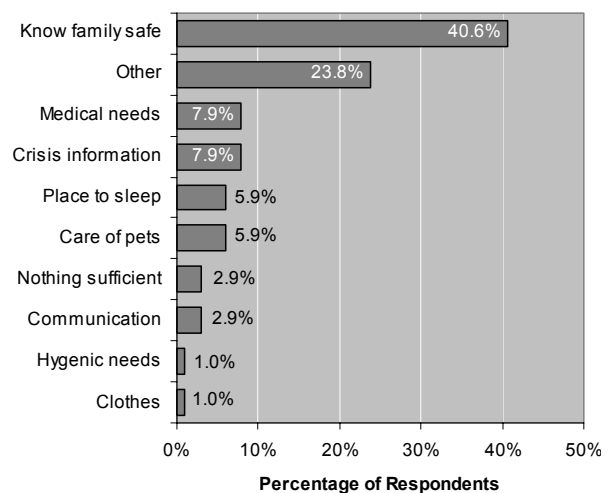
family member (24.9%), and get food or water (11.4%).

Those who said they would leave to find their children, adult family members, or others were asked if they would stay if they could be assured that their loved ones were being kept safe and cared for during the emergency. Of these, 67.8 percent would stay for the full 48 hours or longer, if necessary, but 20.5 percent said they would stay only a few hours or less.

Those who said they would leave to get food, water, or medication were asked if they would stay if people could bring these items. Of these, 75.4 percent said they would stay for the full 48 hours or longer, if necessary.

Residents who had initially said they would not shelter away from home were asked if there were any other needs they had that would help them to stay in the building for the full 48 hours. Answers focused mainly on the need to know that family members were safe, followed by a variety of individual concerns that could not easily be categorized. The most common concerns appear in Figure 4-6.

Figure 4-6: What Respondents Would Need to Shelter at Work for 2 Days



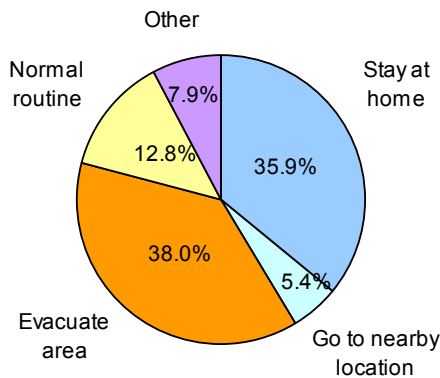
Public Response to a Smallpox Attack

To determine the response to the event of a smallpox epidemic, NCR residents were posed the following scenario: “Imagine that you are at home, and you heard on the news that smallpox

had infected many people in your community, as the result of a terrorist attack. Smallpox is a serious, contagious, and sometimes fatal infectious disease. Generally, direct and fairly prolonged face-to-face contact is required to spread smallpox from one person to another, but smallpox can also spread through direct contact with infected bodily fluids or contaminated objects. Imagine that your community had been infected with smallpox. If you thought that your community had become the scene of a smallpox epidemic, where would you go?"

Respondents were given the choice to stay at home, go to another nearby location in the community, evacuate the area, or continue their normal routine (do nothing), or something else that they specified. Thirty eight percent said they would evacuate, 35.9 percent said they would stay at home, 12.8 said they would continue their normal routine, and 5.4 percent said they would go to another nearby location, such as a family member’s house. This does not include the small number of people (1.4%) who said they did not know what they would do. Figure 4-7 illustrates these findings.

Figure 4-7: Public Response to a Smallpox Attack when No Instructions are Given



After eliciting this response from respondents, they were then given the following information: *“residents are instructed to take shelter at home, since this will provide protection from contracting small pox from others. They want everyone in your community to go to their homes and stay there for 2-4 weeks or until an ‘all clear’ is given. People are permitted to go outside, but not to have contact with anyone outside the family who has not been recently*

vaccinated for smallpox. This means no going to public places and no contact with unknown strangers. During the emergency, businesses in your area are all shutting down...”

In light of this new information, the same question was posed again to compare the response rates. This time, 36.2 percent said they would evacuate, 54.3 percent said they would stay at home, 4.4 percent said they would continue their normal routine, and 2.6 percent said they would go to another nearby location. This is shown in Figure 4-8.

Figure 4-8: Public Response to a Smallpox Attack when Instructed to Shelter at Home

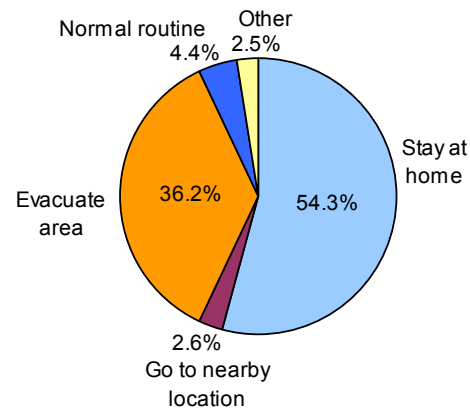
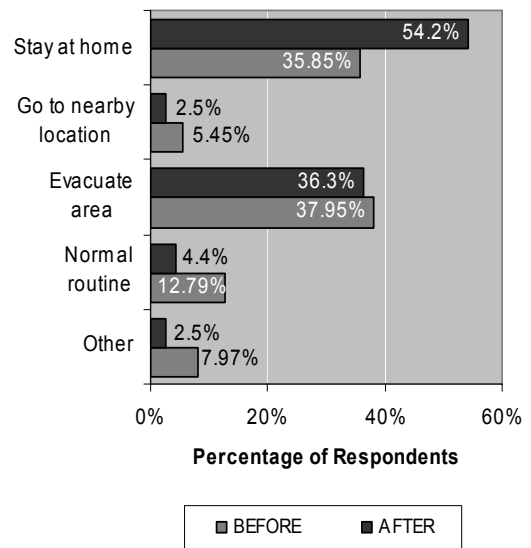


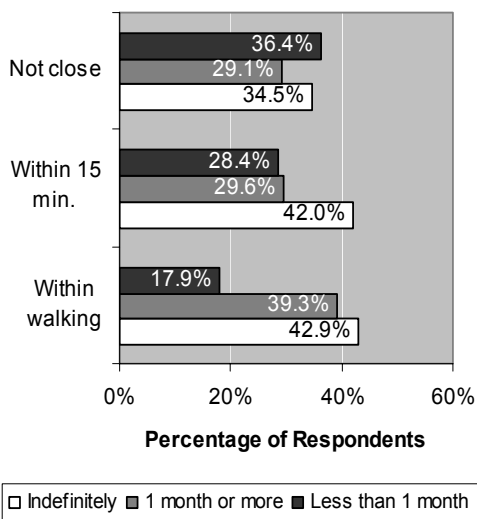
Figure 4-9: Response to Smallpox Before and After Being Instructed to Shelter at Home



The percentage agreeing to stay at home increased, however the percentage of people planning to evacuate did not change substantially. This means that over a third of residents are reporting they would disregard public health and safety advice, even if it meant a potentially greater likelihood of spreading the contagion. These two responses are detailed in Figure 4-9.

There was a direct linear relationship between willingness to stay at home based on the distance of relatives from the respondent. Over seventy percent of residents with a relative within walking distance were willing to stay at home, 61.2 percent of those with a relative within a 15 minute drive were willing to comply, and only 45.7 percent were willing if they had no relatives close by.

Figure 4-10: Willingness to Shelter at Home based on Distance of Away of Close Relative



Those who reported a high level of community attachment were more likely to stay at home (61%), whereas those scoring low on the index of community attachment were less willing (42.5%).

People who did not work were more willing to stay at home than those who did. Willingness to shelter at home was 62.9 percent for people not working, 55.0 percent for people working part-time, and 50.2 percent for people working full-time. Those over age 65 were more willing to stay home compared to the 26-37 year old group

who were more likely to evacuate. In fact, 49.0 percent of 26-37 year olds said they would leave the area compared to 36.2 percent overall.

Only forty percent of those working for the government or non-profit organizations were willing to stay at home, compared to 55.8 percent in the private business sector. Blacks and Hispanics were more willing to stay home than others. However, only 14.3 percent of those with Middle Eastern or Arab ethnicity were willing to shelter at home.

Those who said they would evacuate were asked where they would go, how far away that was, and why they would leave. These were a series of open-ended questions, and respondents were free to say anything they liked. Responses were then coded and classified.

When asked where they would go, 39.4 percent said they would go to stay with family or friends, 35.0 percent said they would go to another state, 11.1 percent said they would go to an unaffected area, another 11.7 percent said they would simply go “far away,” with no particular place in mind, and 2.8 percent said they would go to a church or shelter.

When asked how far away they would need to travel to get to their destination (assuming that one hour’s drive is sixty miles), 20.5 percent said less than one hour’s drive away, 26.3 percent said 1-3 hours away, 22.8 percent said 3-5 hours away, 12.9 percent said 5-10 hours away, and 17.5 percent said over 10 hours away.

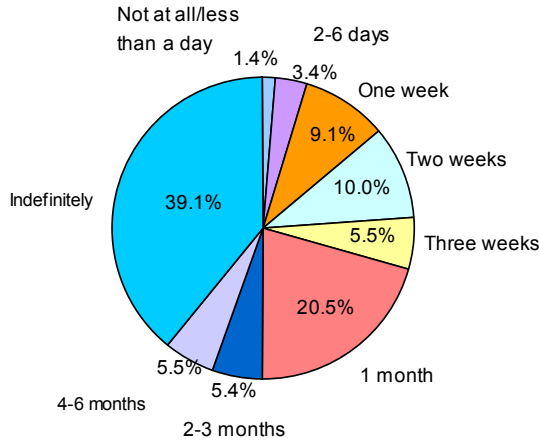
When asked why they would go to that specific destination, over a third (34.3%) said that they would feel safer far away, 21.6 percent said to be with family, 18.6 percent said to get some needed supplies, 8.3 percent said they couldn’t stay cooped up that long, and 17.2 percent of responses didn’t fit into any of these categories.

How Long Residents Would Stay at Home During Smallpox Attack

Those who agreed to stay home or stay at a nearby location were asked how long they would be willing to remain, without going out into the community. The majority, 39.1 percent were willing to stay for at least one month, as shown

in Figure 4-11. 31.5 percent agreed to stay for one month or longer, and 29.4 percent did not want to shelter at home longer than one month.

Figure 4-11: Length of Time Residents would Shelter at Home During a Smallpox Attack



To study group differences, we examined the proportions of people who were unwilling to shelter for the full 4 week period. People with college degrees were more likely to leave early, as were homeowners, people living alone, and males. People with no close relatives nearby were twice as likely to leave early as people who had a relative living within walking distance (36.4% versus 17.9%).

Reasons for Non-Compliance in the Event of a Smallpox Attack

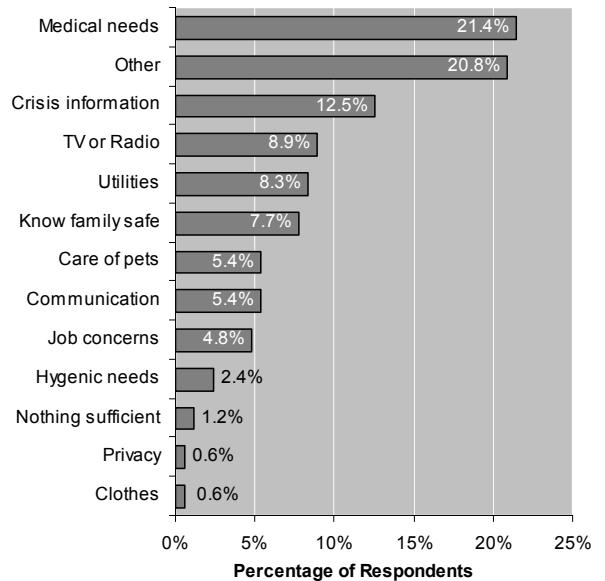
Respondents who said they would not stay at home, or would not stay home for the 2-4 weeks requested by authorities, were then asked why they would leave their homes. They were permitted to give more than one answer to this question. Forty two percent said they would leave to get food or water. Almost eight percent said they would leave to find their children, and another 8.5 percent said they would leave to find other adult family members. Reasons varied widely, and answers included to get medicine, meeting job responsibilities, or just feeling safer somewhere else.

Those who said they would leave to get food, water, or medication were asked if they would comply if there were people who could safely bring to their home any needed food, water, or medications. Of these, 6.4 percent would stay

for 1 week or less, 7.3 percent would stay for 2 weeks, 32.8 percent said 1-6 months, and 53.5 percent said indefinitely. Comparing the mean length of time this group said they would stay before and after being given the option of having food provided, there is a significant increase.

Those who said they would leave to find their children, adult family members, or others were asked if they would comply if they could be assured that their loved ones were being kept safe and cared for during the emergency. Of these, 16.0 percent would stay for 1 week or less, 16.8 percent would stay for 2 weeks, and 67.2 percent would stay four weeks or longer. Although the mean length of time the respondent agreed to shelter at home increased, this was only marginally significant (p=.052).

Figure 4-12: What Respondents Would Need to Shelter at Home for 4 Weeks



Residents who had initially said they would not shelter in place were asked if there were any other needs they had that would help them to stay at home for the full four weeks, other than food, water, or knowing that their loved ones were cared for. This was an open-ended question, and interviewers were instructed to probe for as much information as possible from the respondent. The answers were then coded based on the similarity of the responses. Although responses varied widely, answers appeared to focus on medical concerns, the need

for more information about the crisis, and the need to communicate with loved ones.

Scenario Comparisons

When examining the willingness of residents to shelter in place, there appears to be a difference in response based on the type of attack, with residents most willing to shelter in place for a short-lived disaster, and preferably at home, as shown in Figure 4-13.

Figure 4-13: Willingness to Shelter in Place Based on Scenario

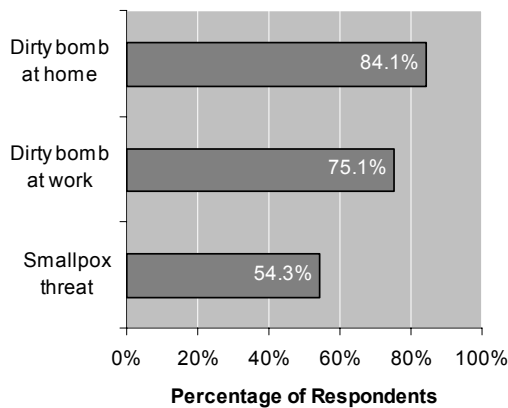
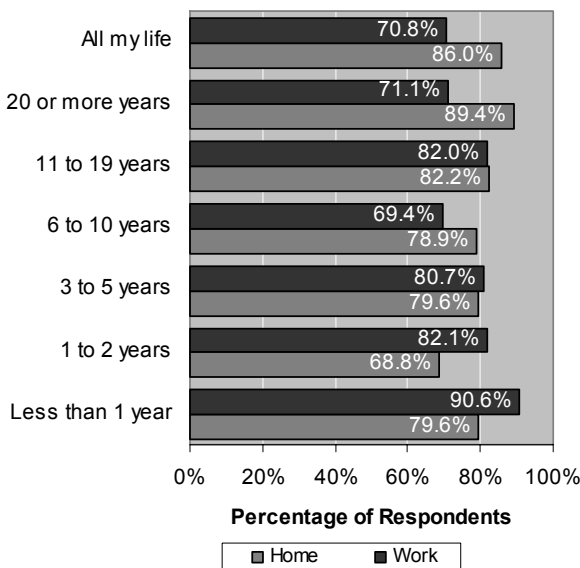


Figure 4-14: Willingness to Shelter in Place Based on Years in NCR for Dirty Bomb



In a situation involving a radiological dispersal device, the length of time a person is willing to shelter seems to depend not only on where they

are asked to shelter, but also on how long they have lived in the NCR. New residents to the DC area are more willing to shelter at work whereas long-time residents are more willing to shelter at home.

Summary

The good news is that the majority of respondents would follow authoritative advice to shelter in place in the event of a terrorist emergency. However, there remain sizable portions of the population that are unwilling or unable to shelter should the need arise. In general, residents who are more strongly attached to their community via relatives, neighbors, or having spent many years in the area are more willing to shelter at home in an emergency. Nonetheless, residents need convincing evidence that loved ones are being cared for if families are separated by the crisis. Many would brave danger to be with family and friends.

It is not surprising that residents would be more willing to shelter at home than at work. Also, providing food, water, and medical necessities increases the ability of residents to shelter in place. Information about the crisis and the ability to communicate with loved ones increases respondents willingness to shelter in place.

One clear finding is that many residents would require support from the community to shelter in place, even for short periods of time. In such a situation, the community would be required to have a credible plan for the emergencies described in this chapter, followed by an effective mechanism for distributing food, water, medications, and information to those affected. This type of community plan and response, referred to as “community shielding,” goes beyond simply the ability of the individual to shelter in place. The results of this chapter lend evidence to the importance of a community shielding plan implemented by local government.

Chapter 5: Sources of Information in an Emergency

This chapter investigates issues dealing with what sources residents would consult in order to obtain more information about what they should do in the event of a terrorist attack, which sources they consider the most reliable, and whether or not they would be likely to utilize information booths in shopping malls to obtain such information.

Sources of Information

Respondents were asked which sources they would consult to get more information about what they should do in the event of a terrorist attack and were told that they could list as many sources as they would like.

The most common response was local television news, with 68.4 percent of respondents saying that they would consult this source. This was closely followed by local radio, with 62.7 percent of respondents listing this option. Almost half of the respondents (49.0%) listed national television news. The internet was also a popular source for information on what to do in a terrorist attack. Slightly more than a quarter (26.4%) of respondents said that they would visit an internet news site, 16 percent said that they would visit a government website, and 22.3 percent said that they would visit some unspecified type of website. Other common sources of potential information were local newspapers (15.9%), family or friends (15.6%), and the local police (9.6%).¹ Please see Table 5-1 for a full listing of responses to this item.

Next, respondents were asked which one of these sources would be their preferred source of information on what to do in the event of a terrorist attack. Again, the most common response was local television news, with approximately a third (33.1%) of respondents saying that this would be their preferred source of information. Slightly more than a fifth

(21.0%) said that they would prefer to receive their information from local radio and 11.6 percent said that their preferred source of information would be national television news. Internet sources were also somewhat popular with government, news, and other websites each being the preferred source for approximately 5 percent of the respondents, shown in Figure 5-1.

Table 5-1: Preferred Sources of Information

Source of Information	Count	% Cases
Local TV news	712	68.4%
Local radio	653	62.7%
National TV news	510	49.0%
Internet news site	275	26.4%
Internet unspecified	231	22.3%
Internet government site	166	16.0%
Local newspapers	165	15.9%
Family or friends	162	15.6%
Local police	100	9.6%
Local fire department	61	5.8%
Local government phone line	61	5.8%
Dept. of Homeland Security	57	5.5%
Internet health site	44	4.3%
Other Federal Agency	38	3.6%
Doctors/healthcare providers	36	3.4%
Red Cross	23	2.3%
Fed Emergency Mgmt Agency	20	1.9%
Home reference materials	17	1.7%
Church or community group	14	1.4%
Centers for Disease Control	10	1.0%
Library	5	0.5%
Other	53	5.1%
None	5	0.5%
Don't Know	10	1.0%
Refused	3	0.3%
Total	3432	330.0%

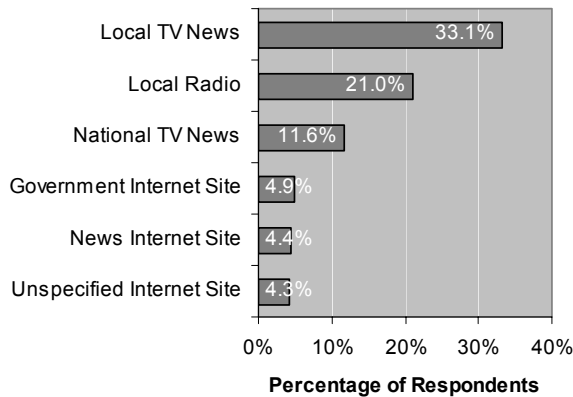
There were a number of statistically significant differences based on demographic variables.² Those respondents who live alone were significantly more likely to prefer local radio as an information source and significantly less likely to prefer the internet (both government sites and other sites) as compared to those who

¹ Percentages on this question total more than 100 percent because respondents were permitted to list multiple sources of information.

² Because there were such low responses for a number of the categories, in order to investigate demographic differences, we divided the information sources into five categories: local radio, local television news, national television news, government website, and all other websites.

live with at least one other individual. Those respondents who have children under the age of 6 were much less likely to prefer the local radio and were more likely to prefer non-government websites than were those with older children.

Figure 5-1: Most Preferred Single Source of News in the Event of a Terrorist Attack



As compared to other employment types, retired persons were the most likely to prefer local radio as an information source, homemakers were much more likely than others to prefer local television news, and homemakers and retired persons were much less likely than others to prefer the internet (both government sites and other sites). Similarly, those people over the age of 65 were also much less likely than others to prefer the internet.

There were also some interesting differences based on education and income. Those who had less than a high school education were more likely to prefer the local radio than were others and were less likely to prefer local television news. Those with a high school degree or less were more likely to prefer national television news and less likely to prefer using the government website. Those with incomes of less than \$50,000 were more likely to prefer using the local radio and national television news, but were less likely to prefer non-government websites, as compared to those earning greater amounts of money.

Hispanic people were significantly more likely than non-Hispanics to prefer using the radio but were less likely to prefer television news (both local and national). The same is true for people

who identified themselves as Middle Eastern or Arab. Interestingly, Hispanics were less likely to prefer government websites but were more likely to prefer other internet sources, whereas the reverse is true for Middle Eastern/Arab people. Looking at the differences between blacks and whites, African-Americans were significantly less likely than whites to prefer the local radio, but were significantly more likely to prefer television news (both local and national).

Reliability of Information Sources

Respondents were also asked how reliable they consider a number of information sources to be regarding information about what they should do in the event of a terrorist attack. They were asked to rate each of the sources on a scale of 1 to 10, where 10 is the most reliable and 1 is the least reliable. Respondents were questioned about: local news programs, national news programs, local medical professionals on TV, their personal physician/medical professional, their local pastor/religious leader, the city mayor, the state governor, the US Surgeon General, the President of the United States, and the Department of Homeland Security.

In order to rank these items from most reliable to least, we computed a mean response for each one. The higher the mean score, the higher the reliability level assigned to the item by our respondents. A rating of 8 to 10 was considered “high reliability,” 4 to 7 was “medium reliability,” and 1 to 3 was “low reliability.” Table 5-2 shows the information sources ranked by mean, from most reliable to least reliable.

The most trusted information source was national news programs, with an average rating of 7.61. Sixty-one percent of respondents rated it an “8” or higher and 16.3 percent rated it a “10,” the highest possible rating.

Respondents’ personal physicians were also a highly trusted source of information, with an average rating of 7.52. Almost 60 percent (59.6%) rated it an “8” or higher and 22 percent rated it a “10.”

Table 5-2: Reliability of Sources of Information

Rank	Source	Mean	% High Reliability	% Medium Reliability	% Low Reliability
1	A National News Program	7.61	61.0	35.0	4.0
2	Your Personal Physician/Medical Professional	7.52	59.6	34.1	6.3
3	A Local News Program	7.42	55.2	40.8	4.1
4	The US Surgeon General	7.37	59.1	33.1	7.8
5	The Department of Homeland Security	7.22	57.0	31.7	11.2
6	A Local Medical Professional on TV	7.13	51.6	41.5	6.9
7	The State Governor	6.86	46.4	43.2	10.4
8	The President of the United States	6.68	50.5	31.1	18.4
9	Your Local Pastor/Religious Leader	6.10	38.2	39.3	22.7
10	The City Mayor	6.06	32.3	50.8	16.9

Local news programs were also highly regarded in terms of reliability. Respondents gave such programs an average rating of 7.42, with 55.2 percent giving it an “8” or higher.

Next on the list was the US Surgeon General. Almost 60 percent (59.1%) of respondents gave this a rating of “8” or higher, with an average rating of 7.37.

The US Surgeon General was followed by the Department of Homeland Security. Respondents gave the Department of Homeland Security an average rating of 7.22, with 57.0 percent rating it an “8” or higher. Over a fifth (21.3%) gave it the highest possible rating of “10.” Local medical professionals on television were viewed as somewhat less reliable than a respondent’s own personal physician. Respondents gave medical professionals appearing on television an average rating of 7.13, with slightly more than half rating them an “8” or higher.

Regarded as slightly less reliable were government officials, with the State Governor receiving an average rating of 6.86 and the President of the United States receiving an average rating of 6.68. Almost half (46.4%), however, did rate the State Governor an “8” or higher, and slightly more than half (50.5%) rated the President of the United States as an “8” or higher. Furthermore, approximately a fifth (20.5%) gave the President of the United States a “10,” the highest possible rating.

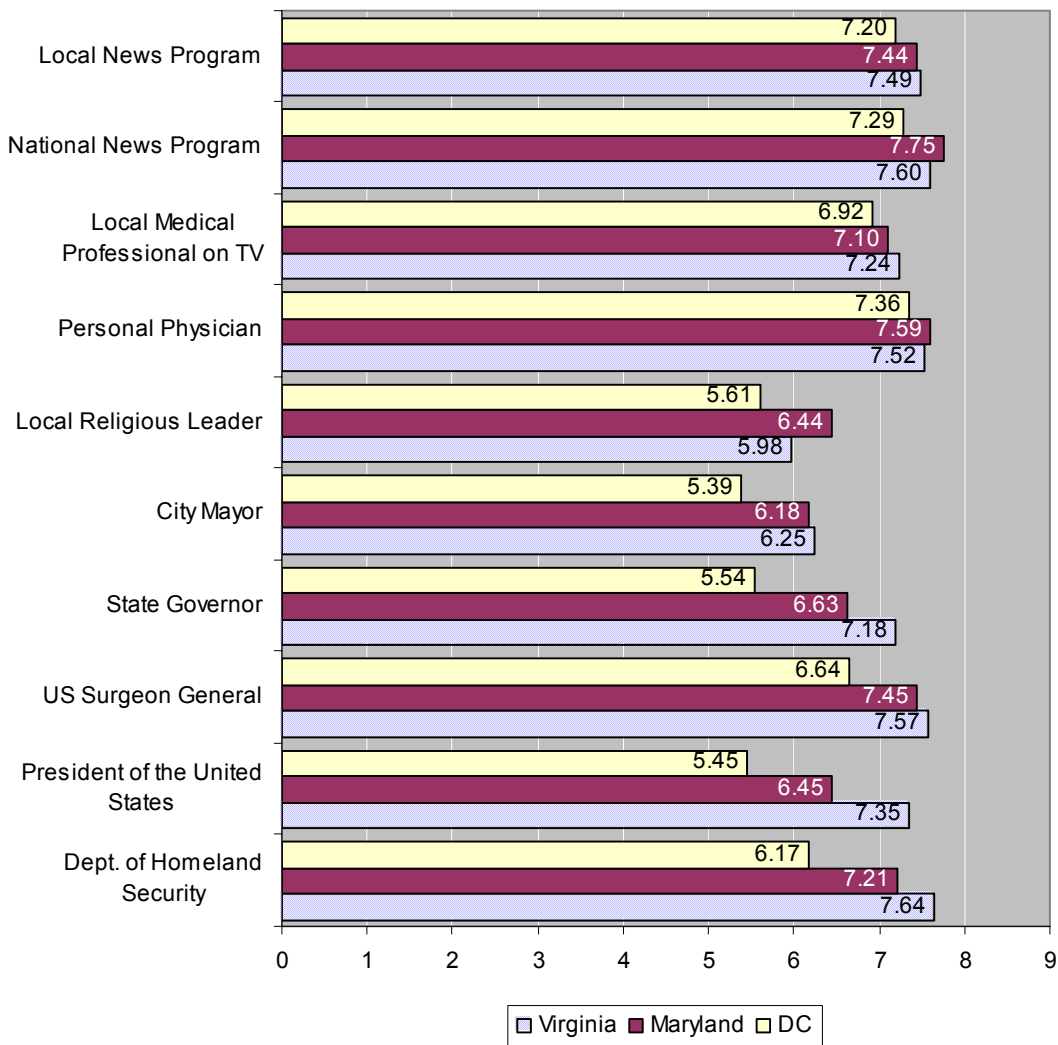
The least trusted information sources were the respondent’s local pastor/religious leader and the City Mayor. Local pastors/religious leaders received an average rating of 6.10 and the City Mayor received an average rating of 6.06.

Approximately 38.2 percent of respondents rated their local pastor/religious leader an “8” or higher, whereas slightly less than a third (32.3%) rated the City Mayor an “8” or higher.

Demographic Differences in Reliability Ratings

There were a number of different demographic differences for how much respondents trusted each of these sources. Interestingly, those respondents residing within DC were less likely than residents of Virginia or Maryland to rate any information source as reliable. These differences were statistically significant for seven of the ten items: national news programs, local religious leaders, the City Mayor, the State Governor, the US Surgeon General, the President of the United States, and the Department of Homeland Security. Residents of Virginia and Maryland were roughly equal in their ratings with the following exceptions: residents of Maryland were more likely to rate their local religious leaders as reliable; residents of Virginia were more likely to rate the State Governor as reliable; and residents of Virginia were more likely to rate the President of the United States as reliable. Although the survey did not ask respondents their political party, it is reasonable to suppose that the credibility of the elected officials is affected by the partisan loyalty of residents. In addition, residents of Virginia were slightly more likely to rate the Department of Homeland Security as reliable. Please see Figure 5-2 for an illustration of differences in reliability ratings based on area of residence.

Figure 5-2: Reliability Ratings By Area of Residence



In general, reliability ratings tended to go down with the amount of time that one had lived in the National Capital Region. There were significant differences in reliability ratings based on length of residence in the region for: the City Mayor, the State Governor, the US Surgeon General, the President of the United States, and the Department of Homeland Security.

One significant difference arose based on the type of home in which respondents reside. Those residing in an apartment or condominium were significantly more likely to give higher ratings to the Department of Homeland Security than were those residing in single-family homes, duplexes, or townhouses.

Significant differences also arose based on the type of area where one resides. Those living in rural areas were significantly more likely to give higher ratings for the reliability of personal physicians, religious leaders, the President of the United States, and the Department of Homeland Security.

Interestingly, those respondents with no close relatives in the area, as compared to those with a relative within close walking or driving distance, were less likely to rate local and national news programs and their local religious leaders as reliable.

Those respondents who own a vehicle rated the reliability for all but the Department of Homeland Security higher than those who do not

own a car. This difference was statistically significant for local medical professionals on television, respondents' personal physicians, the City Mayor, the State Governor, the US Surgeon General, and the President of the United States.

Respondents who live alone were significantly more likely to rate the City Mayor as more reliable than were those who live with at least one other person. Those respondents with children under 18 living in their household were more likely to give high reliability ratings for national news programs, but were less likely to report high reliability ratings for the City Mayor and the US Surgeon General.

Those respondents who work full-time were less likely than those who work part-time or who are not working to give local religious leaders high ratings.

Those who are married are significantly more likely to give higher reliability ratings to the President of the United States. The same is true for those who have served in the military.

Not surprisingly, how often respondents attend religious services is related to how highly they rate the reliability of their local religious leaders, with those attending weekly rating them the highest and those never attending giving them the lowest ratings. Frequent religious services attendees were also more likely to give high reliability ratings for national news programs, local medical professionals, personal physicians, the City Mayor, and the US Surgeon General.

For the reliability of local news programs and local religious leaders, education level appears to be loosely correlated with trust in information sources, with those people with lower levels of education giving high reliability ratings.

There are also some significant differences based on income. In most cases, those earning between \$50,000 and \$100,000 gave the highest ratings, whereas those earning less than \$50,000 and more than \$100,000 gave lower ratings. The differences for local and national news programs, the City Mayor, the State Governor, and the US Surgeon General demonstrated this pattern and were statistically significant. Reliability ratings given to local religious

leaders were correlated with income, with those with lower incomes giving them higher ratings.

People of Hispanic origin were significantly less likely to give local religious leaders high ratings, as compared to non-Hispanics. Those people of Middle Eastern or Arab origin, as compared to non-Middle Easterners or non-Arabs, were significantly less likely to give medical professionals on television and the US Surgeon General high ratings. Asians (not including those of Pakistani or East Indian descent) were the most likely to trust both local and national news programs. African Americans were also more likely than Caucasians to trust both these sources and were more likely than Caucasians and those of other races to trust their local religious leaders. Those respondents who were neither African American nor Caucasian were more likely to give high ratings to the City Mayor, the State Governor, the President of the United States, and the Department of Homeland Security.

Women appeared to be more trusting than men, giving higher reliability ratings to both local and national news programs, local medical professionals on television, local religious leaders, and the City Mayor. Men, on the other hand, gave significantly higher ratings to the President of the United States than did women.

Potential for Shopping Mall Information Booths

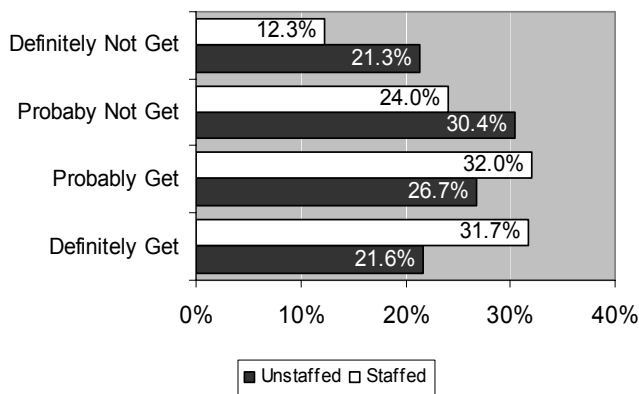
Because shopping malls are plentiful and tend to be in centralized locations within communities, we were interested in investigating the potential of information booths in shopping malls as a source of information on what to do in the event of an emergency or terrorist attack.

Half of the respondents were asked to suppose that there was an information booth available in an enclosed shopping mall near them. They were further told that "[t]his booth had a computer screen where you could get current, localized information on what people in your area should do in case of an emergency or terrorist attack." The other half of the respondents were asked to imagine a similar booth, but one that was staffed by a Red Cross volunteer with a computer instead of just an unstaffed computer screen.

All respondents were then asked how likely they would be to stop by and get information from the booth. They could respond that they would definitely get it, probably get it, probably not get it, or definitely not get it. Respondents were significantly more likely to say that they would stop by and get the information if they were told that the booth would be staffed by a Red Cross volunteer than if they were told that there would just be a computer screen at the booth.³

Of those respondents who were told that there would be a computer screen at the booth, approximately a fifth (21.6%) said that they would definitely stop by and get the information and an additional 26.7 percent said that they would probably stop by, indicating that slightly less than half of the respondents would utilize such a service. Of those respondents who were told that the booth would be staffed by a Red Cross volunteer with a computer, 31.7 percent said that they would definitely stop by and get the information and an additional 32 percent said that they probably would, totaling 63.7 percent. See Figure 5-3 for an illustration of these items.

Figure 5-3: Predicted Use of Shopping Mall Information Booths



Again, there were a number of different demographic differences on these items.⁴ Those

³ In order to determine whether the difference was statistically significant, we created a mean for each of the variables and performed an independent-samples t-test. The difference is indeed statistically significant.

⁴ In order to investigate these demographic differences, we first dichotomized the responses into two categories: those who would get the information (definitely get it and probably get it) and those that would not (definitely not get it and probably not get it).

respondents with a relative living within walking distance were somewhat more likely than those with a relative within driving distance or no relative in the area to say that they would obtain information from a shopping mall booth containing a computer screen.

Out of all of the employment categories, students were the most likely to say that they would get information from these booths and those looking for work were the least likely.⁵ Women were more likely than men to report they would use the information booths and those who attend religious services weekly or monthly were more likely than those that rarely attend them. Those working for private companies were significantly more likely than those working for non-profit organizations, the government, or those who were self-employed to say they would visit these booths.

Respondents with incomes greater than \$100,000 were significantly less likely than those with incomes less than \$100,000. Finally, Caucasians were less likely than those of other races, pet-owners were less likely than people without pets in the home, and men were less likely than women to report that they would get information about how to react in the event of a terrorist attack from a computer screen in an unstaffed shopping mall information booth.

As for those reporting that they would get information from a shopping mall information booth if it was staffed by a Red Cross volunteer, those living within DC were significantly less likely than those residing in Maryland or Virginia to predict future usage. This is perhaps influenced by the location of most large malls outside of DC city limits.

Those with a relative within walking or driving distance were more likely to report that they would use this booth than were those without a relative in the area.

Similarly to those who predicted that they would use a computer screen booth, pet-owners were

⁵ It must be noted, however, that these categories were quite small, with only 21 students and only 14 people looking for work responding to this question. Any conclusions should therefore be drawn with caution.

less likely than people without pets in their homes to report that they would get information from a booth staffed by a Red Cross volunteer.

Those people who live alone were less likely to get the information than those who live with someone else. Likewise, respondents with children in the home were more likely than those without children to report that they would probably or definitely use a booth staffed by a Red Cross volunteer. This is especially true if those children are under six years of age.

Contrary to the pattern based on job category that arose for the computer screen booths, those people working in private business, along with those working for the government, were more likely to report that they would get information from a shopping mall information booth staffed by a Red Cross volunteer.

Those with less than a high school education were the most likely to report that they would use this service, whereas those who had completed at least some graduate work were the least likely. Similarly, the greater one's income, the less likely he or she was to report predicted use of such a booth. This suggests the potential for such a service to reach those who might otherwise lack access to such information.

African Americans were the most likely to report that they would use a booth staffed by a Red Cross volunteer, whereas Caucasians were the least likely. Those of other races fell in between African Americans and Caucasians. Again, women were more likely than men and those who attend religious services weekly or monthly were more likely than those that rarely attend them.

Interestingly, higher community attachment was also associated with likelihood of getting information from a booth staffed by a Red Cross volunteer. Those respondents who were highly attached to the community were also the most likely to report that they would get information from this type of booth.

Finally, in general, younger people were more likely than older people to report that they would use a shopping mall information booth staffed by a Red Cross volunteer to obtain information

about what to do in an emergency or terrorist attack.

Summary

Respondents were most likely to report local television news, local radio, and national television news as sources that they would consult to get more information about what they should do in the event of a terrorist attack. Not surprisingly, these were also their most preferred sources of information. In terms of how reliable respondents think different types of sources are, national news programs and personal physicians were seen as the most reliable, whereas local religious leaders and the City Mayor were seen as the least reliable.

When asked if they would use an information booth in a shopping mall to obtain information about what to do in an emergency or terrorist attack, slightly less than half of the respondents said that they would use the booth if it involved a computer screen. Far more than half, however, said that they would use such a booth if it was staffed by a Red Cross volunteer. Significant demographic differences appeared for all items and are discussed above.

Chapter 6: Confidence in Critical Infrastructure

This chapter will discuss the issues of residents' confidence in their essential government and private utility services, also called critical infrastructure.

Confidence in Specific Services

We were interested in respondents' confidence in local services. They were asked to report how confident they would be that each of a list of services would still be available to them in the event of a major local emergency, such as a natural disaster or terrorist attack. Respondents were questioned about: electricity, natural gas, public water, cell phone service, home phone service, local broadcast television, cable television, internet access, radio, public transportation, highways, health care facilities, and local banks/financial institutions.

In order to rank these items from most confidence to least, we computed a mean response for each one. The higher the mean score, the more confidence the respondents had that the service would still be available in the event of a major local emergency. Table 6.1 shows the services ranked by mean, from most confidence to least. This table also illustrates the percent of respondents telling us that they were confident that each service would still be available.

Respondents were most confident that the radio would still be available in the event of a major local emergency, with 95.1 percent reporting that they were very or somewhat confident that it would still be available and 71.3 percent reporting that they were very confident. This finding is of particular importance given the fact that approximately a fifth of respondents listed local radio as their preferred source of information on what to do in the event of a terrorist attack, making it the second most cited source for information.⁶

⁶ See Chapter 5 for more information on respondents' preferred information sources.

Respondents also have a high amount of confidence that health care facilities would still be available in the event of a major local emergency. Approximately 40 percent reported that they were very confident that health care facilities would still be available and an additional 43.8 percent said that they were somewhat confident, totaling 83.9 percent.

The service receiving the third highest amount of confidence was local broadcast television, with slightly more than three-quarters (76.9%) reporting that they were somewhat or very confident that such a service would still be available. Almost a third (31.9%) were very confident. Again, this finding is of particular interest given the finding that a third of respondents rated local television news as their preferred source of information for what to do in the event of a terrorist attack.⁷

Closely following local broadcast television were public water and natural gas. Approximately three-quarters (74.3%) of respondents were very or somewhat confident that water would still be available and 74 percent were very or somewhat confident in the availability of natural gas piped to their home.

Home phone service ranked sixth in terms of respondents' confidence that it would still be available in the event of a major emergency. Only a quarter were very confident that the service would be available and 69.4 percent reported either very or somewhat confident.

Highways ranked next on the list, with 61.8 percent of respondents being somewhat or very confident that they would still be available (with 26.5% very confident).

⁷ Again, see Chapter 5 for more information on respondents' preferred information sources.

Table 6-1: Confidence in Public Services

Rank	Item	Mean	% Confident (Very & Somewhat)	% Very Confident Only
1	Radio	3.64	95.1	71.3
2	Health care facilities	3.20	83.9	40.1
3	Local broadcast TV	2.98	76.9	31.9
4	Public Water	2.94	74.3	29.8
5	Natural Gas	2.92	74.0	29.1
6	Home Phone Service	2.83	69.4	25.0
7	Highways	2.71	61.8	26.5
8	Electricity	2.69	61.0	21.4
9 (tie)	Local banks/Financial Institutions	2.63	61.6	20.2
9 (tie)	Cell Phone Service	2.63	58.8	23.9
11	Cable TV	2.62	58.9	22.8
12	Internet access	2.58	58.3	18.7
13	Public transportation	2.41	47.6	13.9

Ranking eighth in terms of mean confidence that the service would still be available was electricity. Sixty-one percent of respondents were somewhat or very confident that they could count on electricity being available (21.4% were very confident).

Tying for ninth place on the list in terms of mean confidence was local banks or financial institutions and cell phone service. Slightly more than 60 percent (61.6%) of respondents were somewhat or very confident that local banks or financial institutions would still be available in the event of a major local emergency, with 20.2 percent being very confident. Slightly less than 60 percent (58.8%) were somewhat or very confident that cell phones would still work, with 23.9 percent being very confident. Cell phone service is seen as slightly less reliable than “land line” telephone service.

Whereas respondents were quite confident that local broadcast television would be available in the event of a major local emergency, they were somewhat less confident that cable television would be available. Slightly less than 60 percent (58.9%) of respondents said that they were confident that cable television would still be available (22.8% were very confident).

Ranking twelfth on the list of thirteen items was internet access. Slightly less than a fifth (18.7%) of respondents were very confident that internet access would still be available after a major local emergency and an additional 39.6 percent were somewhat confident, totaling 58.3 percent.

Respondents were least confident that public transportation would be available. Less than half (47.6%) reported that they were either somewhat or very confident that this service would still be available in the event of a major local emergency. Only 13.9 percent were very confident.

Demographic Differences in Confidence in Specific Services

There were a number of differences in confidence in specific services based on different demographic variables. To investigate these demographic differences, we first dichotomized the responses into two categories: those who were confident (somewhat confident and very confident) and those who were not confident (not so confident and not at all confident). These differences are outlined in this section.

Respondents from Maryland expressed less confidence that electricity would still be available in the event of a major local emergency than did those respondents from Virginia and DC. They also expressed less confidence that local broadcast television and cable television would be available. Respondents from Virginia were more likely than those from Maryland or DC to say that they were confident that natural gas would still be pumped to their homes. Residents of DC were less confident than those of Virginia and Maryland that water and highways would still be available. Whereas confidence in radio services was high across the board, those respondents living in Virginia were the most confident while

those respondents living in DC were the least confident. The same pattern is true for confidence in healthcare services and confidence in banks/financial institutions.

Those respondents living in suburban areas, followed by those living in rural areas, were the most confident that natural gas would still be available in the event of a major local emergency. Those living in urban areas were the least confident in their natural gas. Those respondents living in rural areas were the most confident that water and highways would still be available. This was followed by respondents living in suburban areas and, finally, those living in urban areas. Those living in rural villages were much less likely than those living in other types of areas to express confidence in radio services. Finally, those respondents living in suburban areas were more confident than those living in rural or urban areas in the availability of healthcare services.

Respondents who were new to the area (*i.e.*, those who have lived there less than a year) were the most confident that local phone service and internet service would be available after an emergency, whereas those who had lived in the area for their entire lives were the least confident. Those living in a single family home were less confident than were those living in townhouses/duplexes or apartments/condominiums that electricity would still be available.

Those respondents with a relative living within walking distance were the most confident that public transportation services would still be available after a major local emergency, whereas those with no close relatives were the least confident. Respondents with a relative living within walking distance were also more confident in the availability of banks/financial institutions than were those with a close relative within driving distance or no close relatives.

Interestingly, those respondents who own a vehicle were less likely to express confidence that electricity would be available. On the other hand, vehicle owners were more likely to be confident that radio services would be available. Perhaps not surprisingly, those respondents without a vehicle were significantly more

confident that public transportation would still be available as compared to those with a vehicle.

Those respondents who live alone were significantly more confident that cell phone service would be available in the event of a major local emergency. They were less confident, however, that highways would be available. Respondents with teenagers living in the home were more confident in the availability of electricity than were those whose children are younger.

Older and younger respondents appeared to be less confident in the availability of highways than were middle-aged respondents. Those respondents aged 26 to 37 were the most confident in the availability of healthcare services, whereas respondents over the age of 50 were the least confident.

Respondents who are unemployed were more confident in the availability of cell phone service than were those who are employed—either full-time or part-time—and respondents who work full-time were the most confident in local broadcast television. Education appears to be related with one's confidence in the availability of natural gas, with those with higher levels of education being more confident than those with lower levels. On the other hand, those with lower levels of education were more confident in the availability of public transportation than were better educated respondents.

Those earning less than \$50,000 a year were less confident in the availability of local broadcast television and healthcare services in the event of a major local emergency than were respondents earning more than \$50,000. On the other hand, they were more confident in the availability of public transportation. Those respondents with very low incomes (*i.e.*, those earning less than \$15,000) were the least confident that radio services would be available. Those with incomes between \$50,000 and \$100,000 were more confident in the availability of internet services than were those earning more or less money.

Religion also appeared to make a difference in confidence in services. Respondents who attend religious services weekly or monthly were more confident in the availability of internet services

in the event of a major local emergency than were those who attend less often. The same is true for their confidence in public transportation.

Respondents who are married or widowed were more confident than those who are separated, divorced, or never married in the availability of radio service. The same is true for confidence in highways. Furthermore, those who are married are more confident in the availability of banks/financial institutions than are those who are single (including those who have never been married and those who are separated, divorced, or widowed).

Hispanic respondents were more confident in the availability of electricity than were those who are not Hispanic, whereas they were less confident in the availability of local broadcast television. Those respondents who self-reported Middle Eastern or Arab were less confident in the availability of local phone service than those who did not. African Americans were the least confident in the availability of natural gas, whereas Caucasians were the most confident. Finally, Caucasians and African Americans were less confident than respondents of other races in the availability of water.

In general, men were more confident in the availability of services in the event of a major local emergency than were women. Specifically, men were more confident in the availability of electricity, natural gas, water, local phone service, local broadcast television, internet services, and radio than were women.

Finally, there were two differences based on community attachment. Those respondents who were high in community attachment were more confident that water services and public transportation would still be available in the event of a major local emergency.

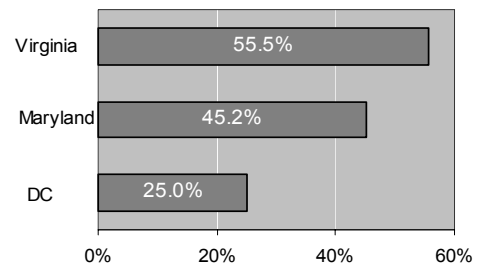
Overall Confidence

In recent years, there have been a number of emergency situations in the National Capital Area. We were interested in how these situations affected respondents’ confidence in their community’s ability to manage a terrorist attack. Respondents were asked to tell us whether emergency situations in the Capital Area—both

weather-related and man-made emergencies—had made them a lot more confident, a little more confident, a little less confident, a lot less confidence, or had made no difference in their confidence in their community’s ability to manage a terrorist attack.

The results were somewhat mixed. Almost half (46.4%) of the respondents said that prior experience with emergency situations in the National Capital Area had made them more confident (with 14% saying a lot more confident). On the other hand, 36.5 percent of respondents said that their prior experience had made them less confident (with 11.7% saying a lot less confident). The remaining 17.1 percent said that their prior experience made no difference in their confidence.

Figure 6-1: Effect of Prior Experience on Confidence in Community Response



In terms of demographic differences, those respondents residing within DC were much less likely to report that their prior experiences with emergency situations in the National Capital Area had increased their confidence in their community’s ability to manage a terrorist attack, as compared to those living in Virginia or Maryland. African Americans were less likely than Caucasians or those of other races to report increased confidence. On the other hand, those respondents who attend weekly religious services were more likely to report increased confidence due to prior emergency situations than were those respondents who attend less frequently. Similarly, men were more likely than women to report increased confidence. Finally, those respondents who demonstrated a high amount of community attachment were much more likely to report that previous emergency

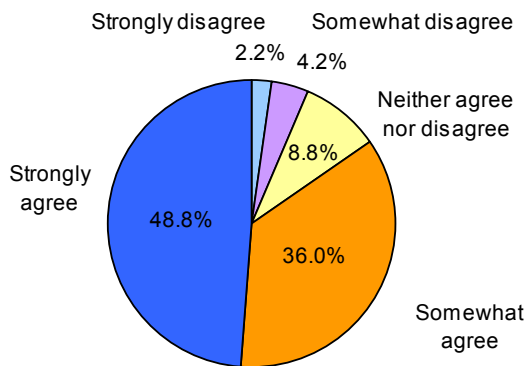
events had increased their confidence in their community’s ability to manage a terrorist attack.

Related to confidence in their community is respondents’ willingness to follow local government instructions in case of an emergency. Respondents were asked to report whether they strongly agreed, somewhat agreed, somewhat disagreed, strongly disagreed, or were neutral in regards to the following statement:

“I would strictly follow local government instructions for health protection and treatment until the crisis had passed.”

Results demonstrated strong confidence in the local government, with almost half (48.8%) of the respondents saying that they strongly agree that they would strictly follow government instructions. Another 36 percent said that they somewhat agree. Less than 10 percent (8.8%) were neutral, 4.2 percent somewhat disagreed, and only 2.2 percent strongly disagreed. See Figure 6-2.

Figure 6-2: Agreement that Respondent Would Follow Government Instructions



Whereas agreement with the above statement is high across the board, those respondents living in small towns were the most likely to say that they would strictly follow local government instructions. This was followed by those living in urban or suburban areas. Those living in rural villages or out in the country were less likely to say that they would follow government instructions. Agreement also appears to be somewhat related to age, with older respondents being more likely than younger respondents to state that they would be willing to follow local

government instructions. Caucasians were more likely than non-Caucasians to report agreement with this statement.

Finally, those respondents who were high in community attachment were significantly more likely to report that they would strictly follow local government instructions for health protection and treatment until the crisis had passed than were respondents who were lower in community attachment.

Summary

This chapter dealt primarily with respondents’ confidence in what would happen in the event of a major local emergency. Respondents showed varying levels of confidence—ranging from 47.6 percent to 95.1 percent—that different services would still be available.

Respondents’ opinions about how prior local emergencies had affected their confidence were mixed, with almost half saying that prior experience had made them more confident and more than a third saying that it had made them less confident (the remaining respondents said that it made no difference). The overwhelming majority, however, said that they would strictly follow local government instructions in the event of an emergency.

Chapter 7: Views about Responsibility

This chapter will discuss the issues of residents' attitudes toward anti-terrorism policies. In particular, we asked respondents who they felt should keep the country safe from terrorists, who should pay for anti-terrorism efforts, the trade-offs between individual liberties and increased protection, and the Patriot Act.

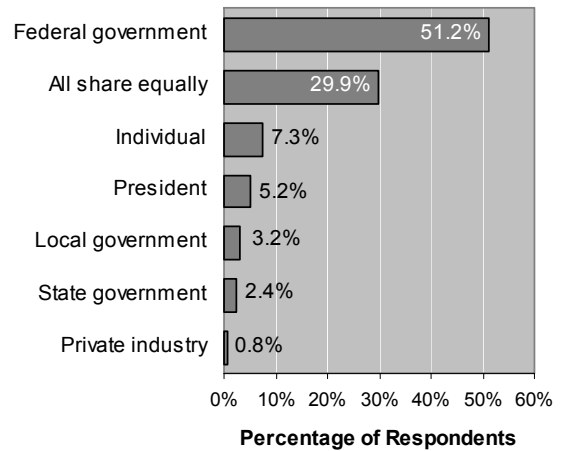
Attitudes toward Anti-Terrorism Policies

We were interested in gauging who respondents think is responsible for protecting them from terrorist attacks. Respondents were asked who they think is primarily responsible for keeping the United States safe from domestic and foreign terrorism. They could choose from the individual, the local government, the state government, the federal government, or private industry. The majority of respondents (51.2%) said that the federal government is responsible.

Less than 10 percent (7.3%) said that the responsibility lies on the individual, 3.2 percent said that the local government is responsible, 2.4 percent said the state government, and less than one percent said that private industry is responsible. Almost 30 percent (29.9%), however, volunteered the response that everyone shares responsibility and 5.2 percent volunteered that the responsibility should fall on the President. See Figure 7-1. When we combine the volunteered responses for the President with that of the Federal government, well over half (56.4%) believe that this branch of the government is responsible for protecting citizens from terrorist attacks.

A number of different demographic variables arose for this item. Interestingly, those respondents who do not own a car were somewhat less likely than those owning cars to say that the Federal government or individuals are responsible and were somewhat more likely to say that the responsibility falls on the State government or to everyone equally.

Figure 7-1: Views About Responsibility



Looking at age, older respondents were somewhat less likely to report that the responsibility belongs to the individual than were younger respondents. Similarly, younger respondents were more likely than older respondents to say that the responsibility should go to private industry. Respondents differed slightly in their responses to this question based on their level of education. Those who had not completed high school, as compared to other respondents, were more likely to say that the local government or private industry should be responsible, and were less likely to say that the Federal government should be responsible.⁸

Hispanic people were somewhat less likely than non-Hispanics to say that the Federal government or everyone equally is responsible and were somewhat more likely to say that the responsibility falls on the State government or private industry. Finally, looking at race, African Americans were less likely than Caucasians and those of other races to report that the responsibility belongs to the Federal government and were slightly more likely to say that it belongs to the local government and to everyone equally. Interestingly, no one who was of a race other than Caucasian or African American thought that the responsibility should go to the local government.

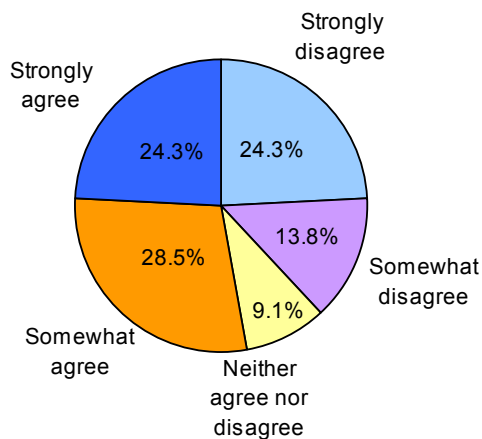
⁸ It must be stated, however, that only 27 respondents fell into this category. Any conclusions, therefore, must be drawn with caution.

Willingness to Pay for Anti-Terrorism Efforts

In terms of who should pay for anti-terrorism efforts, respondents were asked how much they agree with the following statement: *“I would be willing to pay more taxes now if it could better protect me from terrorist threats in the future.”*

Respondents could say that they strongly agreed, somewhat agreed, somewhat disagreed, strongly disagreed, or were neutral. Again, results were mixed. Approximately a quarter of the respondents (24.3%) said that they strongly agreed with the statement and an additional 28.5 percent somewhat agreed, totaling slightly more than half (52.8%) in agreement that they would be willing to pay more taxes. Approximately a quarter of the respondents (24.3%), however, said that they strongly disagreed with the statement and another 13.8 percent somewhat disagreed. Slightly less than a tenth (9.1%) of respondents were neutral in relation to this statement.

Figure 7-2: Willing to Pay More Tax for Increased Protections from Terrorism

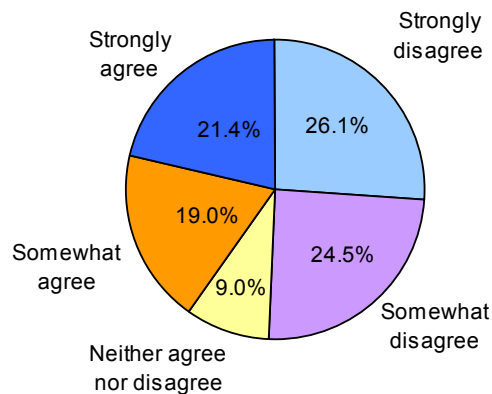


To investigate these differences by group, we first dichotomized the responses into two categories: those who agreed (somewhat agree and strongly agree) and those who disagreed (somewhat disagreed and strongly disagreed) or were neutral. Those respondents living in Virginia were the most likely to say that they would pay more taxes in return for increased protection, whereas those living in DC were the least, with residents of Maryland falling in between. Similarly, those living in urban areas

were less likely than those living in rural areas to agree with this statement. Those respondents who have teenagers living within the household were more likely to agree with this statement than were parents whose children are younger. Finally, Hispanic people were much less likely than non-Hispanics to agree with this statement and Caucasians were slightly, but significantly, more likely to agree with this statement than were African Americans and respondents of other races.

Similar results to the previous question appeared when respondents were asked whether they agreed that *“the government spends too much time and money on purported anti-terrorism efforts.”* Slightly more than a quarter (26.1%) strongly disagreed and another 24.5 percent somewhat disagreed, demonstrating that they were pleased with the status quo. Nineteen percent, however, somewhat agreed with the statement and approximately a fifth (21.4%) of respondents strongly agreed, indicating that not all respondents are pleased with the amount of money that the government is currently spending on anti-terrorism efforts. Nine percent of respondents were neutral in regards to this statement. See Figure 7-3.

Figure 7-3: Agreement that Government Spends Too Much on Anti-Terrorism Efforts



A number of different demographic differences appeared for this item as well. Interestingly, those respondents living in Virginia were somewhat more likely to disagree with this statement than were respondents living in Maryland or DC, indicating that they are more

pleased with the government’s current spending on anti-terrorism efforts.

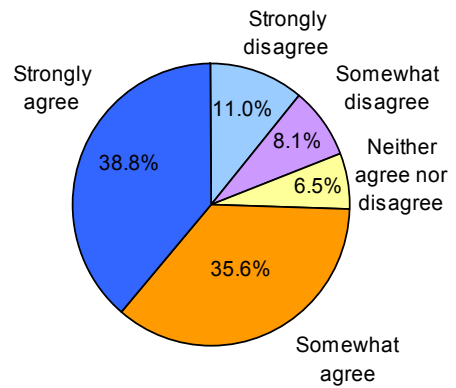
Respondents’ opinions regarding this question also varied by employment status. Those respondents who were looking for work were the most likely to agree with this statement, indicating that they thought that the government is spending too much time and money on anti-terrorism efforts. Those respondents working full-time, homemakers, and retired persons were somewhat more likely to disagree, indicating that they are pleased with the status quo. Those respondents who had not graduated from high school were more likely to agree with this statement and those with incomes greater than \$100,000 were significantly more likely to disagree.

Perhaps not surprisingly, those respondents who had served in the military were somewhat more likely to disagree with this statement than were those who had never served. Those respondents who reported themselves to be Middle Eastern or Arab were much more likely to agree with this statement, indicating that they think the government is spending too much time and money on anti-terrorism efforts. Finally, Caucasians were more likely than those of other races to report their disagreement with this statement.

Individual Liberties vs. Increased Protection

Another important question is whether or not respondents would be willing to experience more inconveniences if it could help the government protect them from terrorist threats in the future. The majority of respondents said that they would be willing to undergo increased inconveniences if it meant that it would help the government protect them. Almost 40 percent (38.8%) strongly agreed that they would be willing to experience more inconveniences and an additional 35.6 percent somewhat agreed, totaling almost 75 percent. Eleven percent of respondents strongly disagreed, 8.1 percent somewhat disagreed, and 6.5 percent were neutral. See Figure 7-4.

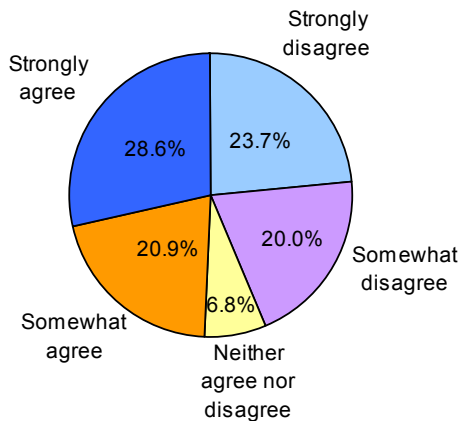
Figure 7-4: Willingness to Undergo More Inconveniences



Although agreement with this statement is high for all groups, those respondents residing within DC were much less likely than those living in Virginia or Maryland to say that they would be willing to undergo increased inconveniences if it could help the government protect them from terrorist threats in the future. Similarly, those living in rural areas agree more with this statement than those living in urban areas. Those with pets at home were significantly less likely to say that they would be willing to undergo increased inconveniences. Those who attend religious services weekly or monthly, as compared to those who attend less often, were more likely to state that they would be willing to undergo more inconveniences if it meant that it would help the government protect them better. Finally, women were more likely to be willing to undergo more inconveniences than were men.

When asked, however, whether or not the government has taken away too many individual rights in its efforts to combat terrorism, opinions were more mixed. Almost 30 percent (28.6%) strongly agreed that the government had taken away too many individual rights and another 20.9 percent somewhat agreed. A fifth somewhat disagreed with the statement and another 23.7 percent strongly disagreed, indicating that 43.7 percent were pleased with the status quo. Approximately 7 percent (6.8%) expressed neutrality. See Figure 7-5.

Figure 7-5: Agreement that Government Has Taken Away Too Many Individual Rights



Once again, a number of different demographic variables emerged on this item. First, residents of DC were the most likely to agree with this statement, indicating that they think that the government has taken away too many individual rights. Residents of Virginia were the least likely to agree and residents of Maryland fell in between. Similarly, those living in urban areas were more likely to agree with this statement than were those living in suburban or rural areas. Interestingly, respondents living in a duplex or townhouse were less likely to agree that the government has taken away too many rights than were those living in single-family homes or apartments.

Homemakers and retired persons were much more likely to disagree with this statement than were those of other employment statuses, indicating that they were more pleased with the status quo. Those who have never been married were the most likely to agree with the statement and those who are widowed were the least likely. Those with incomes greater than \$100,000 were more likely to disagree that the government had taken away too many rights than were those who earn less than \$100,000. Looking at race, Caucasians, followed by African Americans, were the most likely to disagree. Those of other races were somewhat more likely to agree with this statement. Men were more likely to agree than were women.

Finally, those respondents who were high in community attachment were less likely to agree with this statement, indicating that those high in

community attachment are more pleased with the status quo than are those who are lower in community attachment.

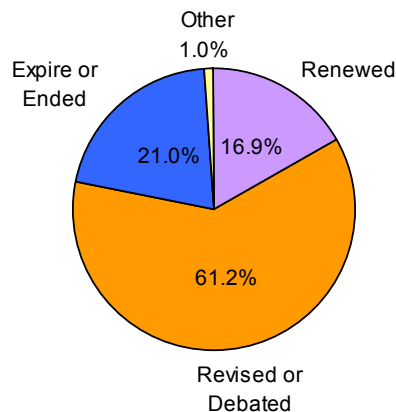
Patriot Act

In order to investigate respondents’ opinions towards the Patriot Act, we first asked a screener question to ensure that only those familiar with the act were asked for their opinions. More than half (57.3%) of the respondents were familiar with the Patriot Act. The rest of the respondents said that they had only just heard of it (21.2%) or that they were not familiar with it (21.5%).

Those respondents that said that they were familiar with the Patriot Act were asked: *“As you may have heard, many parts of the Patriot Act are due to expire in 2005. Do you feel the Patriot Act should be renewed in its present form, revised after congressional debate, or allowed to expire?”*

The majority of respondents (61.1%) felt the Patriot Act should be revised after congressional debate. About a fifth (20.9%) of respondents felt the act should be allowed to expire, and the remaining 16.9 percent thought that it should be renewed in its present form. See Figure 7-6.

Figure 7-6: Views toward Renewal of the Patriot Act



Once again, there was a significant difference for this item based on where in the National Capital Area one resides. Those respondents who live in DC were much more likely to say that the Patriot Act should be allowed to expire and much less likely to say that it should be

renewed in its present form than were respondents living in Virginia or Maryland.

Those respondents who attend religious services weekly were the most likely to think that the Patriot Act should be revised or debated, whereas those who never attend religious services were the most likely to think that it should be ended or allowed to expire.

Those respondents with children under the age of 18 living at home were much more likely to think that the Patriot Act should be renewed in its present form than were respondents without children under 18.

Similarly, those respondents with a high school degree or less were much more likely to think that the Patriot Act should be renewed in its present form and much less likely to think that it should be allowed to expire.

Summary

Most respondents felt as though it is the federal government's responsibility to keep the US safe from terrorism, but results were mixed when asked about paying for that protection. The majority of respondents said that they would be willing to undergo increased inconveniences if it would help the government protect them, but opinions were mixed when asked if the government had taken away too many individual rights in its efforts to combat terrorism. Those respondents who were familiar with the Patriot Act were asked their opinions about its renewal. The majority said that they felt that it should be revised after congressional debate. Demographic differences on all these items are discussed above.

Chapter 8: Summary & Recommendations

Summary

This survey was conducted by the University of Virginia's Center for Survey Research (CSR) in the spring of 2005, commissioned by the University of Virginia branch of the Critical Incident Analysis Group (CIAG), a consortium of universities in the Washington, D.C. area. This survey was administered to examine public response to potential terrorist threats that may involve evacuation or sheltering in place. To this end, we conducted a telephone survey of 1,071 randomly selected residents of the National Capital Region (NCR). We asked questions about emergency preparedness, trust in sources of information, opinions about anti-terrorism policies, and what residents might do in the event of terrorist attacks requiring periods of voluntary confinement.

Many NCR residents have prepared themselves for an emergency by storing away food, water, and other essentials. However, about a third have no food or water available in the event of an emergency, and about half of residents do not feel they would be able to shelter at home for more than a week.

When evacuation is warranted, more respondents would seek refuge with a friend or relative than would go to a public shelter. People also seem to feel that traveling over 20 miles away from the hazard is preferable to staying nearby. Lower Socio-economic status (SES) households and people more attached to their communities are more likely to stay nearby.

When asked about notifying residents who should evacuate, respondents were split evenly on whether they wanted to be notified by distance from the hazard or by zip code. Since fewer than 30 percent of residents know their 9-digit zip codes, notification by distance may be more practical.

The majority of respondents would follow authoritative advice to shelter in place in the event of a terrorist emergency. However, there remain sizable portions of the NCR population

that are unwilling or unable to shelter. In general, residents who are more strongly attached to their community are more willing to shelter at home in an emergency. Nonetheless, residents need convincing evidence that loved ones are being cared for if families are separated, as many would face danger to be with family and friends. Bringing food, water, and needed supplies directly to confined residents would significantly increase cooperation. The need for information about the crisis and communication with loved ones is also a priority during any shelter-in-place scenario. For situations in which residents must be confined at home for a long period, most do not feel that boredom or restlessness would be a serious problem.

Respondents were most likely to report local television news, local radio, and national television news as sources that they would consult to get more information about what they should do in the event of a terrorist attack. When respondents were asked how reliable they thought different types of information sources were, national news programs and personal physicians were seen as the most reliable, whereas local religious leaders and the city mayor were seen as the least reliable.

When asked if they would use an information booth in a shopping mall to obtain information about what to do in an emergency or terrorist attack, slightly less than half of the respondents said that they would use the booth if it involved a computer screen. Far more than half, however, said that they would use such a booth if it was staffed by a Red Cross volunteer.

In the event of an emergency, respondents showed varying levels of confidence—ranging from about fifty to one-hundred percent—that different services would still be available. It was felt that radio and health care facilities would still be functioning, but public transportation, cell phone, cable TV, and internet access might not be.

Respondents' opinions were mixed about how prior local emergencies had affected their confidence in the ability of local government to manage emergencies. Almost half said that prior

experience had made them more confident but more than a third said that it had made them less confident. The overwhelming majority, however, said that they would strictly follow local government instructions in the event of an emergency.

Most respondents felt as though it is the federal government's responsibility to keep the United States safe from terrorism, but results were mixed when asked about how that protection should be funded. The majority said they would be willing to undergo increased inconveniences if it would help the government protect them, but opinions were divided when asked if the government had taken away too many individual rights in its efforts to combat terrorism. Most respondents who were familiar with the Patriot Act said that it should be revised after congressional debate.

Recommendations

Public preparedness and response to terrorism varies according to the type of attack that might occur. In the event of a crisis that would require temporary confinement in the National Capital Region, this report demonstrates that simply telling the public to shelter in place would not be feasible for everyone. Residents are largely willing to shelter in place and follow the advice of authorities in an emergency, but many do not have the resources to do so.

Survey results indicate that the public would respond favorably to a community shielding approach wherein localities plan to bring food, water, medications, and other needed supplies directly to residents' homes or businesses. To be most successful, such an approach must also attempt to keep families together, or at the very least provide a means to let residents know their loved ones are safe. However, some members of the community can be expected to not cooperate even if provided with basic needs because they would feel safer somewhere else.

Public education efforts are also warranted to make sure the public is prepared for a crisis of this nature. Residents need to be informed of the importance of learning their 9-digit zip code and instructed regarding the type of emergency supplies to have on hand.

Due to various group differences, community shielding requires tailoring to locality-specific needs. Further study is recommended to develop a community shielding and emergency preparedness plan for the NCR. Additional surveys are warranted to assess community response to this concept in other areas of the nation.

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Cover Image: "The West Front of the Capitol." The Architect of the Capitol. 10 June, 2005
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