UNIVERSITY of VIRGINIA
CENTER for SURVEY RESEARCH

NCR Behavioral Survey 2011
Work, School or Home?
Issues in Sheltering in Place during an Emergency

REPORT OF RESULTS

Prepared for:

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Acknowledgements

This report details the findings of the *2011 NCR Behavioral Survey: Work, School or Home? Issues in Sheltering in Place during an Emergency.*

The idea of a behavioral study to be done in the NCR was originally conceived and described in a 2008 RCPGP grant awarded to a consortium of agencies representing the National Capital Region UASI. Funding for the survey was provided via a contract with the Virginia Department of Emergency Management; the original source of funds was the U.S. Federal Emergency Management Agency (FEMA). Substantive data collection for the first phase was conducted in the last quarter of 2009. The University of Virginia's Center for Survey Research (CSR) worked closely on the project with UVa's Center for Risk Management of Engineering Systems to develop a questionnaire and present the results of findings.

Part of that effort has been to respond to the questions raised by the survey outcome. It has become increasingly evident, however, that the findings have raised additional questions that can only be answered by the NCR residents themselves. A second survey focusing on workplace issues and taking advantage of an extension of the same grant was initially approved in the fall of 2010. We have been grateful for the opportunity to continue this valuable research in the hope that it will contribute to decisions made by emergency planners and responders. Contributors have included representatives of many interested constituencies.

Janet Clements continued in her role as the overall program manager for the NCR Behavioral Study on behalf of the Virginia Department of Emergency Management (VDEM) and the All Hazards Consortium. Ted Costin, Director at the VDEM Preparedness Division served an important advisory role in the project.

Focus group were conducted by the Center for Survey Research at the University of Virginia's Northern Virginia Center in Falls Church, VA and at the facilities of *the polling company*™ in DC. A third group was convened at CSR offices in Charlottesville, VA. The participants were candid and engaged, and we learned much from hearing their reactions to the draft survey questions.

Dr. Joseph E. Trainor, of the University of Delaware Disaster Research Center, was able to add insight into reactions that could be anticipated based on his prior studies of populations under emergency conditions.

Dr. Thomas Guterbock, Director of CSR and Professor of Sociology, was the principal investigator for the 2011 NCR Behavioral Study. He supervised all aspects of the project, including budgeting, questionnaire creation, logistical planning, field production, data analysis, production of this report, and the presentation of the final results. He was CSR's primary liaison to VDEM and principal author of this report.

Robin Bebel, Assistant Director of CSR, served as project coordinator through all phases of this project. She was instrumental in the creation of the instrument, oversaw the data collection and contributed to data analysis and the creation of Power Point presentations. She is a primary author of this report.

James M. Ellis, M.A., Director of Research contributed to the design of the survey instrument.

Dr. James Lambert, Associate Director, Center for Risk Management of Engineering Systems, was co-investigator on the project. He contributed expertise during the development phase of the project, as well as maintaining liaison with the research partners and reporting on our progress to AHC.

John Lee Holmes, M.A, Survey Operations Manager, oversaw the operation of the CATI laboratory during the interviewing phase of this study. Mr. Holmes oversaw the programming of the data collection instrument and drafted the methods report in Appendix B.

Kathy Coker oversaw the coding of text variables and cleaning of open-ended text.

Significant contributions came from CSR Research Analysts David S. Morris, who worked on the creation of the survey instrument and on organizing the focus groups, and Dr. Young-Il Kim, who initiated programming for data analysis. Mark W. Parker, Matthew L. Braswell, Khatantuul Z. Filer, Elizabeth A. Kaknes and Brice McKeever provided support in data analysis, the creation of tables and figures and in writing and editing this report. Mr. Parker provided leadership in organizing the components into a cohesive report; he also handled the recoding of verbatim data. Jessica A. Leach formatted the master questionnaire in Appendix C.

Morgan Ryland, Dagmar Hudson, and Daniel Hivick provided additional assistance with the creation of charts for the report.

CSR would like to thank the telephone interviewers for the hours spent talking to the residents of the NCR, asking the questions and recording the responses that are the basis of this report.

And finally, all those connected with this project are grateful to the residents of the National Capital Region who gave their time to answer many questions about behavior and reactions that may be expected during an emergency in the area.

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 may also be reached by telephone at 434-243-5222; by electronic mail at surveys@virginia.edu, or via the World Wide Web at http://surveys.virginia.edu/.

Executive Summary

This report details the findings of a telephone survey conducted in May-June 2011 by the Center for Survey Research (CSR) at the University of Virginia at the request of the Virginia Department of Emergency Management. The survey represents the culmination of a collaborative effort involving a Regional Catastrophic Team composed of five states (Virginia, Maryland, Pennsylvania, West Virginia, and Delaware) and the District of Columbia that was supported by the FEMA-funded Regional Catastrophic Planning Grant Program (RCPGP) through a grant to the Virginia Department of Emergency Management. The 2011 survey builds upon the 2009 Survey of Behavioral Aspects of Sheltering and Evacuation in the National Capital Region (NCR).

The 2009 survey demonstrated that if a single radiological dispersion device (referred to as a dirty bomb) were to explode in the region during the workday, large numbers of workers would choose to leave work immediately in hopes of heading home, meeting with loved ones, or evacuating to destinations that they thought might be out of harm's way. The present survey was designed to shed further light on the forces that would drive decision-making for workers faced with the choice of staying at work or heading elsewhere in case of a dirty bomb attack.

The final survey instrument was based in part on the 2009 study, as well as on focus groups conducted in early 2011 in Virginia and the District of Columbia. A total of 816 interviews were conducted with residents of the NCR localities in Northern Virginia (Alexandria City, Arlington County, Fairfax County, Fairfax City, Falls Church, Loudoun County, Prince William County, and the cities of Manassas and Manassas Park), the two NCR counties in Maryland (Montgomery and Prince George's Counties) and the District of Columbia. All respondents to the survey were adults who reside in the NCR and work ten or more hours each week outside the home.

A feature of note in this survey is the inclusion of cell-phone respondents. This relatively new methodology is being developed in response to concerns that the increasing growth of cell phone use is a significant factor in the underrepresentation of some demographic groups. Those users are more likely to be young, male, from a minority, and from a lower socio-economic group. Their inclusion resulted in a more balanced survey that is a better reflection of the population being studied.

The survey collected information about respondents' preferred methods of communications, both under normal conditions and in an emergency situation.

- Under normal conditions, the most popular forms of communications are cell phones and e-mails.
- In the event of an emergency, three fourths of the respondents would use cell phone calls to contact loved ones.
- If their preferred form of communication were not available during an emergency, respondents were most likely to rely on landline phones and e-mail for communication.
- Only about half of participants knew that voice calls placed more of a burden on cell phone networks than text messages.

The survey asked respondents about the extent to which their workplaces were prepared for an emergency and how they would react in the event that an emergency occurred while they were at work.

- Almost half of all respondents report that their workplace definitely has an emergency plan prepared and seven in ten say their workplace either definitely or probably has such a plan.
- Two thirds of respondents are very confident that they would be able to shelter at their workplace in the event of an emergency.
- Those who work for the federal, state, or local government are more confident that their workplaces have emergency plans and in their ability to shelter in place than

are other respondents.

- Respondents who work in high-rise buildings are more confident that their workplace has an emergency plan and in their ability to shelter at work than are respondents who work in smaller buildings.
- Confidence in the existence of a workplace emergency plan is roughly correlated with the workplace's proximity to the District of Columbia.

The survey also asked respondents with children under the age of 18 living in their household to gauge the extent to which their children's schools were prepared to handle an emergency.

- Parents most often receive information regarding emergencies at their children's school via telephone communication.
- Eight out of ten parents report that their child's school either definitely or probably has an emergency plan in place.
- The vast majority of parents feel confident that their children's schools could take care of the children for 24 hours or longer.
- The main concerns that parents would have regarding leaving their child at school during an emergency would be that their child would become afraid or that the school would lack necessary resources.

The present survey is designed to further explore the evacuation behaviors at the center of the 2009 Behavioral Survey by limiting respondents to only those who work outside the home ten or more hours per week. This narrowing of focus allows for more detail on the factors that affect a worker's decision to either shelter in place or to evacuate their workplace.

- If phone service remains functional following an emergency, workers are more likely to shelter in place. This finding is consistent across high and low hazard levels.
- Workers who reported that their workplace "definitely" has an emergency plan in place are also twice as likely to shelter in place as those workers who are less certain.
- Workplaces that provide a critical function during an emergency show a statistically significant increase in sheltering in place; however, employment in a job necessary to the functioning of one's workplace has no effect on evacuation behavior.
- Those who thought of an adult as their "loved one" were less likely to leave immediately than those who thought of a child.
- Of the parents surveyed, those who were very confident that their child's school could provide care were much more likely to shelter in place than those who provided other responses.

The purpose of the investigation is to guide policy and planning in the region so that more workers will choose to stay at work in such an emergency. Keeping workers at their jobs serves several purposes simultaneously: it protects those in the path of the bomb's radiation from exposure, prevents them from carrying radioactive particles to other parts of the region, allows for orderly response and decontamination operations by authorities, helps to ensure continuity of operations in critical services, and reduces the severity and extent of traffic gridlock that might otherwise occur. The report concludes with several potentially actionable recommendations that could help to keep more workers on the job in an emergency. The results of the survey will thus serve the information needs of emergency planners, government and non-government organizations, and community stakeholders.

I. Introduction

Overview

The 2011 NCR Behavioral Survey on issues in sheltering in place during an emergency focuses on choices that might be faced by members of the region's workforce if an unexpected terrorist attack involving one or more "dirty bombs" were to occur on a weekday afternoon. The survey builds on the 2009 Survey of Behavioral Aspects of Sheltering and Evacuation in the National Capital Region,[1] which was a collaborative effort involving a Regional Catastrophic Planning Team composed of five states (Virginia, Maryland, Pennsylvania, West Virginia and Delaware) and the District of Columbia. Both efforts were supported by the Regional Catastrophic Planning Grant Program (RCPGP) through a grant to the Virginia Department of Emergency Management. Both surveys focused on understanding sheltering vs. evacuation behaviors under various hypothetical event scenarios, which were presented for consideration by the survey respondents.

The 2009 survey brought to the attention of the region's emergency managers, planners, and first responders an issue that had not been clear before. It showed that if a single radiological dispersion device (referred to as a dirty bomb) were exploded in the region during the workday, large numbers of workers would choose to leave work immediately: some to head home, some to schools to pick up their children, others to meet their spouses, partners, or other dependents, and some headed to evacuation destinations that they thought might be out of harm's way. Depending on the circumstances, as many as forty percent or more of all workers (in areas not subject to direct instructions to shelter in place) said they would leave their workplaces immediately. Further work under the RCPGP grant has shown that that level of exodus from work would completely overwhelm the region's road network, with many important travel arteries carrying loads that far exceed their capacities.[2] This finding also raised concerns about the ability of the region's agencies and companies that provide critical services to maintain continuity of operations in the face of such an attack.

The present survey was designed to shed further light on the forces that would drive decision-making for workers faced with the choice of staying at work or heading elsewhere in case of a dirty bomb attack, a situation of uncertainty and potentially grave risk. The purpose of the investigation is to guide policy and planning in the region so that more workers will choose to stay at work in such an emergency. Keeping workers at their jobs serves several purposes simultaneously: it protects those in the path of the bomb's radiation from exposure, prevents them from carrying radioactive particles to other parts of the region, allows for orderly response and decontamination operations by authorities, helps to ensure continuity of operations in critical services, and—if the large numbers of workers distant from the attack site can be induced to stay in place—reduces the region-wide traffic gridlock that might otherwise occur.

Research questions

The design of the survey was guided by the fundamental insight that decision making by individuals in times of emergency is complex and driven by multiple considerations and an active process of information acquisition. When an emergency occurs, most people who are at work experience, to some degree, the pull of conflicting roles. As employees, they are expected to perform their duties — either normal

[1] Thomas M. Guterbock, James H. Lambert, Robin A. Bebel, James M. Ellis, Jr., and Deborah A. Kermer. *Population Behaviors in Dirty Bomb Attack Scenarios: A Survey of the National Capital Region. Report of Results.* Prepared for the Virginia Department of Emergency Management. University of Virginia, Center for Survey Research and Center for Risk Management of Engineering Systems. April 2010.

[2] James H. Lambert, John S. Miller, Michael D. Fontaine, Thomas M. Guterbock, Ayse I. Parlak, Qian Zhou, and Janet L. Clements. *Scenario-Based Evacuation Estimation Following a Dirty Bomb Attack to the National Capital Region.* University of Virginia, Center for Risk Management of Engineering Systems and Virginia Center for Transportation Innovation and Research. Draft, April 2011.

duties or special responsibilities appropriate to meeting the emergency. Their willingness to do so may depend on whether or not their workplace has a well-designed emergency plan, and whether or not they are familiar with what the plan provides and requires. On the other hand, as family members — husbands, wives, partners, parents, or children of aging adults — they may face competing obligations. They may be called upon to leave work so that they can assist their loved ones, or they may leave in search of information about these loved ones or in an attempt to establish communication with them. Some families have developed emergency plans, but many have not. If the loved ones are children at school or daycare, then the parent's decision on how to respond may depend on their knowledge of emergency plans at the school and their confidence that the school or daycare center can meet their child's needs in the emergency. While individual situations will vary almost infinitely, it is nevertheless possible to generalize about how most people will respond to these different circumstances. It is important to note that some of the variables that affect the decision of the worker on whether to "stay or go" in an emergency could be changed or affected by official planning, actions, and policies. To take but one example, if more workplaces develop emergency plans, if more workers know about these plans, and if these plans emphasize the reasons not to leave work immediately, it is probable that fewer workers will leave in an actual emergency.

We explored some of the issues surrounding worker decision making in a series of focus groups. Details of the focus groups are described below. The final survey questionnaire explores all of these topics. We asked detailed questions about the respondent's workplace and, in particular, about workplace emergency plans. Parents were asked in detail about their schools' emergency plans and about their confidence in the schools' ability to care for their children in an emergency. We asked about how workers normally communicate with their loved ones, how they would communicate in an emergency, and how they might communicate if their normal means of connection were not working.

The heart of the survey was a varied series of hypothetical scenarios, each one involving one or more dirty bombs and asking the worker if he or she would choose to stay at work or leave immediately if that situation were to occur. By randomly varying these scenarios across the respondents and comparing the resulting decisions, we are able to learn a great deal about the factors that affect a worker's decision to stay at work or leave.

All 816 respondents to the survey were adults who reside in the NCR and work ten or more hours each week at a fixed location outside the home. Each respondent was asked to have in mind a "loved one" about whom they would be concerned if an emergency occurred during work hours. Parents were directed to focus on the youngest of their children who is outside the home during the day. Others focused on a person of their choosing — in most cases another adult such as a spouse, partner, or aging parent. We varied the following aspects of the dirty bomb scenario:

- The level of hazard, defined by the number and proximity of the unannounced dirty bomb explosions.
- Whether or not phone and internet connections would be operational during the emergency.
- In the 'moderate' scenario, which involves just one dirty bomb, we varied whether the explosion occurred near the workplace, causing the respondent to be placed under shelter-in-place instructions, or whether instead the explosion was near the loved one's school or other location, placing the loved one under shelter-in-place instructions.

We describe the scenario design in greater detail in Section V.

By analyzing the results of the survey, we are able to paint a clearer picture than ever before about how the workforce of the National Capital Region is covered by workplace emergency plans, and how much parents know about the emergency plans of their schools. We are then able to show how the worker's decision-making in a potentially catastrophic emergency is

governed not only by the level of hazard that the emergency presents to the worker, but by the level of risk to which their loved ones are exposed, and by the available means of communicating with their loved ones. We are further able to relate their decisions about staying at work or leaving to their knowledge of workplace emergency plans, their knowledge of and confidence in the school's emergency plans, and to a number of workplace characteristics such as the type of agency, whether it plays a critical role in an emergency, and whether the worker is employed by various levels of government, the non-profit sector, or private business. The strong, measurable effects of some of these factors suggest a number of practical policy directions that might be adopted in order to limit the number of workers who would evacuate from their workplaces if a terrorist attack were to occur.

Methodology

Questionnaire design

Since one of the goals of this second survey was to probe more deeply into some areas of inquiry that had been identified in the first behavioral survey, researchers started with the questionnaire used for data collection in 2009. Two clear topic areas emerged from a series of e-mails and teleconferences with stakeholders in winter 2010. The issues and priorities that would affect the behavior of workers and the preservation of continuity of operations in the NCR were clearly of interest, which led to an exploration of how dependents, and especially children in school, would influence the decisions workers would make when faced with some community-wide emergency.

A conceptual outline of the topic areas was developed to serve as the basis of a draft questionnaire. It did not include survey questions but only topics for discussion.

In addition, since the use of different scenarios presented to a subset of respondents had been successfully used to maximize response in 2009, it was decided to pursue that questionnaire structure again. Scenarios would be based on a similar escalating hazard level scale, again using the explosion of a dirty bomb in the NCR as a primary reference.

Focus groups

As a first step in refining the key issues that would be faced by workers in the NCR, CSR started with a focus group of parents who worked outside the home. This group met in the Northern Virginia Center in Falls Church, VA in January 2011. Participants were recruited at random from the area and given $35 for their effort, plus $5 reimbursement for parking. A light supper was also made available to attendees. A trained facilitator from the Center for Survey Research guided participants through a series of topics to gather reactions to the scenarios being presented. First, participants considered work-related items, then they were asked to react to potential situations involving their child's school. Topics were general enough that discussion could digress into new areas. Tape recordings and written notes were used to document proceedings and serve as reminders of the group discussion points.

Findings from this "Blue Sky" group contributed to the development of a full draft questionnaire. It is critical to our understanding of potential behaviors in an emergency that we understand the needs and concerns of all NCR residents.

To further that end, an additional focus group was held on April 4, 2011 in Washington, D.C. to present the developed draft questionnaire to a live audience in a locale demographically and geographically different from that of the first group. Participants in this group were randomly recruited from the central D.C. area and given $40. Although ethnically diverse and representing a wide range of ages and length of tenure living in the city, the group did not include any parents. In the first group, potential participants had been screened to ensure that everyone was a parent; but this time, it was considered important to test the questionnaire against respondents from a broader range of circumstances.

The participants completed a paper version of the survey; but in the interest of replicating the telephone interview experience as closely as possible, the description of the fictitious

scenarios to be considered was read aloud to them. Afterward, comments about the clarity, relevance to their lives and their ability to answer the questions in a meaningful way were solicited by the CSR team.

We were able to solicit excellent feedback on the workplace section of the questionnaire in D.C. In order to test the school section of the questionnaire, a third group was held in Charlottesville, VA just a week later. This group was screened for working parents and given $25 as an incentive for their attendance. Light refreshments were also offered and the protocol was the same as that for the D.C. group. Guides for this group took participants more quickly through the scenarios and workplace questions to allow enough time for a comprehensive discussion of the school place questions.

The focus groups were an effective aid in making sure the final survey would be relevant to those living in the area and that the questions and answers they prompted were meaningful and unambiguous. Although the work and school sections were considered by separate groups, it turned out well because both sections prompted so much comment that the full hour and a half was needed for each group despite the shorter questionnaire. Members of the group were forthcoming and honest in their contributions, giving each topic careful consideration. Their feedback was instrumental in the refinement of the survey, bringing important and unanticipated issues to light. Although the survey was long, most comments centered on "thought-provoking," "enlightening," and "scary." Many issues with the questionnaire were related to the assumptions or parameters of the scenarios.

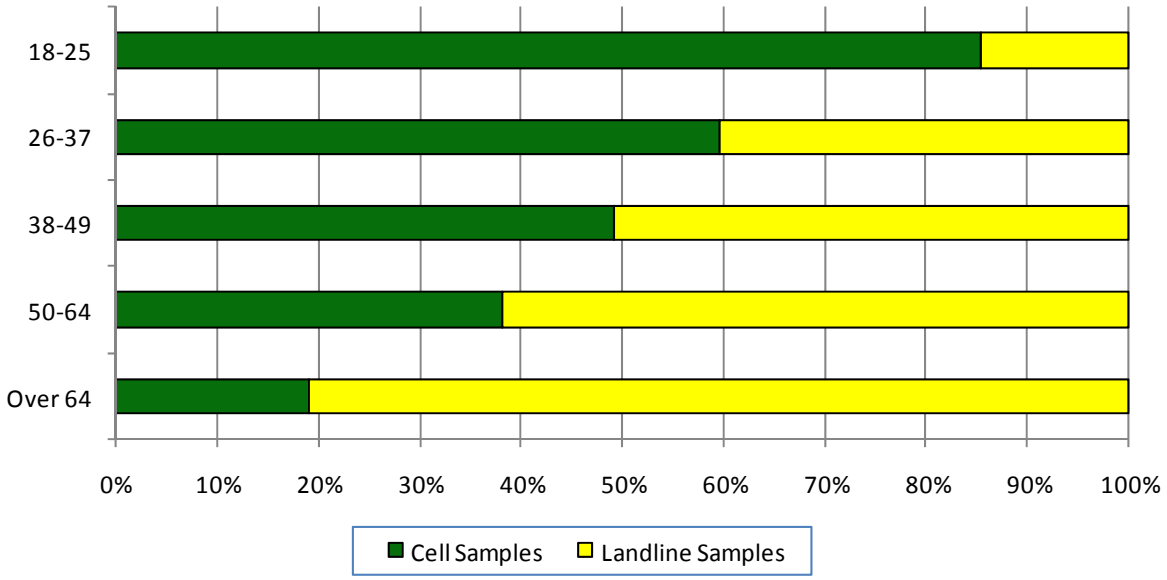
It was increasingly apparent through the focus group discussions that parents were more agitated by the proposal that they could be locked down in their workplace and their child released in a normal schedule from school than by a proposed loss of telephone communication. This observation caused CSR to rearrange the path of progression through the moderate hazard level for some respondents to test that reaction. Details of the scenarios were clarified, answer choices were expanded and more definitions were included to improve the flow of the questionnaire and to help the interviewee provide responses that were relevant to their own situation.

Sample design

The telephone sample for the "Work, School or Home: Issues in Sheltering in Place during an Emergency Event" survey included three types of telephone numbers. The random digit dialing (RDD) method of calling phone numbers randomly generated based on exchanges that are valid in the target geography is the gold standard for contacting households. This method is based on the technique of generating the last two digits for a phone number given the area code, exchange and the first two digits of the number tail; e.g., 434-243-52xx. This method uses numbers listed in the telephone directory to locate hundred series combinations that have been assigned to households in the targeted geographic area. Landline RDD methods are increasingly expensive and have been shown to reach fewer men, minority members and young people. Listed sample was used to augment the RDD sample as it is less expensive to administer. The proportion of numbers that ring in eligible households is much higher and time does not need to be devoted to screening out ineligible or non-working phone numbers.

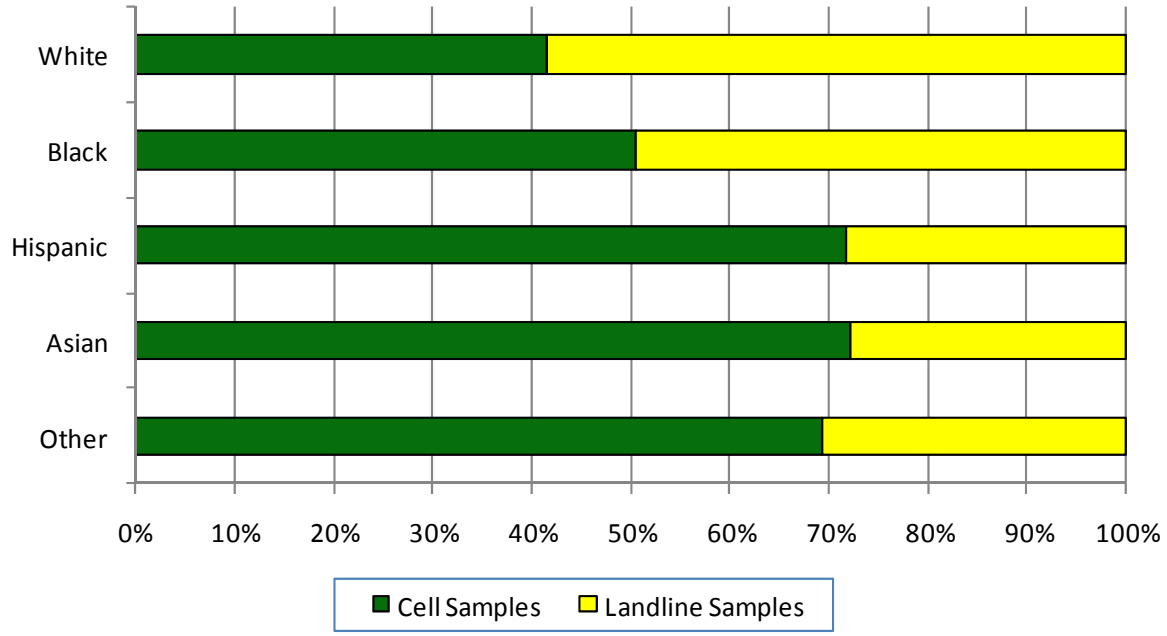
Finally, cell phone numbers were included to provide coverage of cell-only users and to increase representation from groups that would otherwise be under-represented. Research has shown the dramatic effect that the inclusion of cell sample can have on the final demographic results. This was borne out in this survey and demonstrated here by Figure I-1. Well over 8 out of ten young people between the ages of 18 and 25 who responded to the survey were contacted by cell phone. This percentage steps down significantly as respondent age increases; participants reached by cell dropped down to under 20 percent of the over 64 respondents.

Figure I-1: Source of telephone sample by age of respondent



A similar pattern can be seen for race, where Whites and Blacks were more likely reached by traditional landline phones but about seven out of ten Hispanics and Asians were reached by cell.

Figure I-2: Source of telephone sample by race of respondent



Pre-testing

CSR conducted a telephone pretest to test the clarity of the questionnaire on the telephone, verify the length of the instrument, and check the integrity of the WinCATI programming. Pretests are intended to follow the protocol for the data collection as closely as possible, to reveal any unforeseen problems. Findings may indicate an adjustment to procedures is necessary to fulfill expectations. It is also possible for the pretest to indicate the need for altering either the projected outcome or the project budget.

The initial pretest, May 3-4, 2011, confirmed that average survey took just over 25 minutes but more questions were to be added. The target length was 25 minutes. The number of completions per hour (0.52) was lower than the expected but only the less efficient RDD sample had been fielded. Interviewers offered constructive suggestions for wording changes and posed thoughtful questions based on their experience. Researchers were able to streamline some areas of the script, offer helpful prompts and make some cuts to the script based on interviewer feedback and the findings from analysis of the collected data. The revised instrument was reviewed by the project's survey committee and sent for active data collection on May 13. Details about the production interviewing can be found in Appendix B – Survey Methodology.

Weighting

Survey datasets are often statistically adjusted to better reflect the population under study. This adjustment is called weighting the data. One reason for weighting is that surveys tend to under-represent people with lower levels of education and income, those who are more transient, and those who are minorities. Sometimes other demographics are underrepresented depending on the survey topic and population being studied. Weighting brings the demographics of the respondents into line with known parameters for the population.

A second reason for weighting is that the sampling method may, by design, result in over- or under-representing some groups. For example, our use of a directory-listed telephone sample results in under-representation of those with unlisted landline phones, and cell phones are under-represented in the sample because of the expense of reaching them. Weighting the data can correct these imbalances.

The study population for this survey was adults in the National Capital Region who work ten or more hours outside of the home. (Retirees, students, the unemployed, people who work at home, and those with only a few hours of employment each week were excluded.) The best information available on this special "population of interest" is the 2009 American Community Survey, a very large survey conducted by the U.S. Bureau of the Census. We obtained a Public Use Micro Sample file from the 2009 ACS, selected the cities and counties in the NCR study area, and then selected only adults who are employed. For this subset of the population, we thus obtained correct percentages on two key race categories (Black and non-Black) and gender. The number of employed persons in each county and city was obtained directly from ACS summary tables. We also made estimates of the percentage in this population who have access to a cell phone only, and the percentage of landline phones that are not directory-listed.

The data collected for the 2011 Behavioral Survey were then weighted on the type of telephone used by the respondent to participate in the survey, by gender, county area, and race so as to reflect the percentages in the study population. Further details on our weighting procedures are provided in Appendix B.

Margin of error

The margin of error for questions answered by all respondents is +/- 4.45%. The margin of error will be higher for questions answered only by subgroups of the total respondent pool, which is particularly important to note in a survey with a factorial design.

Surveys are subject to sources of error other than sampling error that are difficult or impossible to measure. Survey results should be used with that consideration in mind.

II. Demographic Profile at Home and at Work

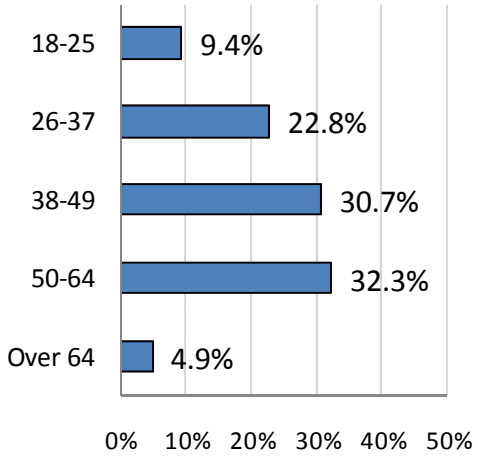
The population of interest for this survey is adults who reside in the National Capital Region and work outside the home at a fixed location at least ten hours per week, whether full-time or part-time. Since prospective respondents were screened to meet this requirement, the characteristics of the study respondents differ from those we would have obtained from a general sample of all adults. CSR weighted the realized sample to match those of the target population as reflected in the Public Use Micro Sample (PUMS) data reported in the American Community Survey of 2009. This section will describe the characteristics of the weighted respondent sample, covering features of their household and their workplace. These aggregated and weighted individual demographic details are the basis of subgroup analysis in this report.

Personal Characteristics

Age of respondents

Almost two-thirds (63%) of the respondents were ages 38 to 64. As Figure II-1 illustrates, 9.4 percent of the respondents were in the youngest age category of 18 to 25 years old, 22.8 percent were 26 to 37, 30.7 percent were 38 to 49, 32.3 percent were 50 to 64 years of age, and only 4.9 percent were 65 and older.

Figure II-1: Age of respondent



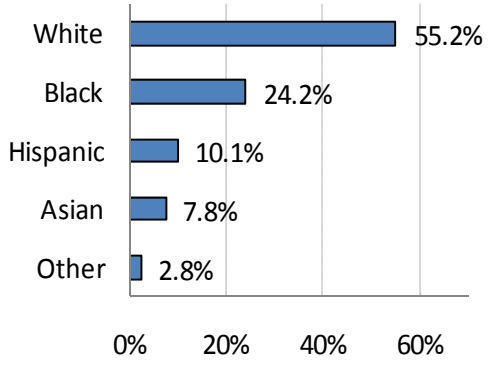
Gender of respondents

Screening for employed representatives of the population seems to have affected the demographic characteristics of the realized sample. It is often the case in telephone surveys that men are under-represented. In this case, respondent gender was nearly split evenly, with 51.3% male and 48.7% female.

Race of respondents

Respondents were first asked if they identified as Hispanic or if they were of Hispanic origin. They were then asked to identify the racial group within which they would classify themselves. As Figure II-2 shows, the majority of respondents, 55.2 percent, identified themselves as White. Another 24.2 percent self-identified as Black or African American, 10.1 percent as Hispanic, 7.8 percent as Asian. Finally, 2.8 percent of respondents identified themselves as belonging to other racial categories (e.g., Native American, Pacific Islander, etc.). Figure II-2 contains the results of both questions, as combined into one response.

Figure II-2: Race of respondent

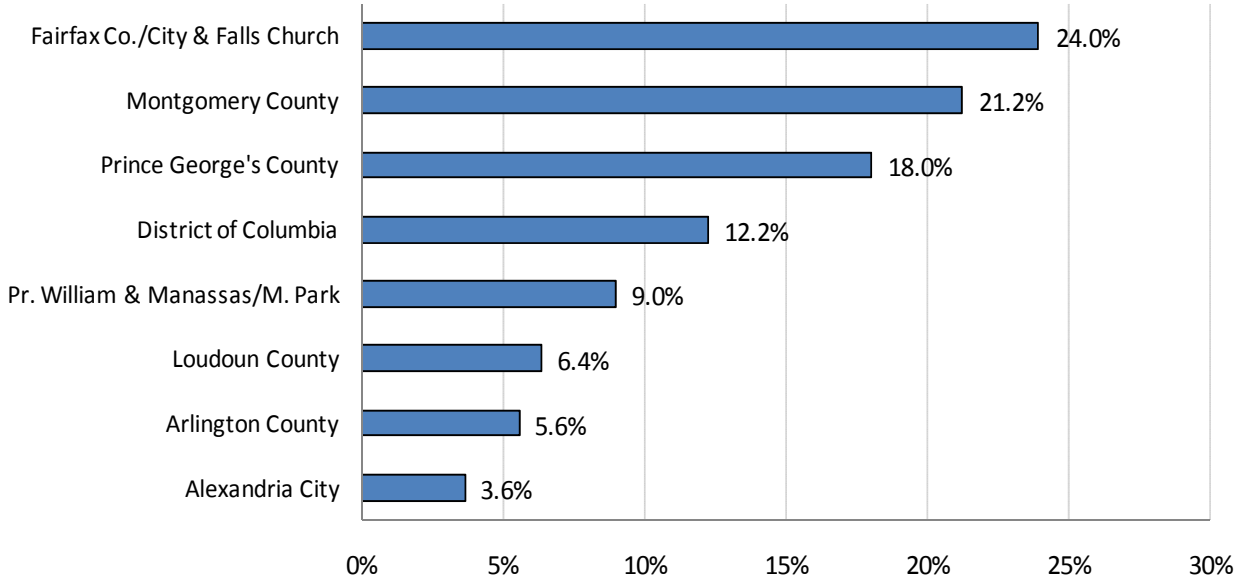


City or county of residence

Nearly one-fourth (24%) of the respondents reported that they lived in Fairfax County, Virginia (including the cities of Fairfax and Falls Church). 21.2 percent lived in Montgomery County, Maryland and 18.0 percent lived in Prince George's County, MD. Nine percent of respondents reported living in Prince William County, VA (including Manassas and Manassas Park); 6.4 percent lived in Loudoun County,

VA; 5.6 percent lived in Arlington County, VA; 3.6 percent lived in Alexandria City, VA (see Figure II-3). When aggregated by state or federal district, 39.3 percent of the total survey sample reported residence in Maryland, 48.5 percent in Virginia, and 12.2 percent in the District of Columbia.

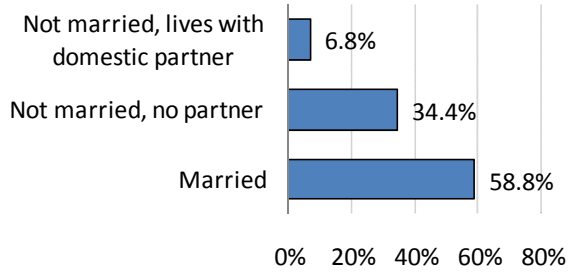
Figure II-3: City or county of residence



Marital and relationship status

Almost seven percent (6.8%) of the sample were unmarried and living with a domestic partner. Over one third of the respondents (34.4%) were currently not married and lived without a domestic partner. Lastly, over half of respondents (58.8%) reported that they were currently married (see Figure II-4).

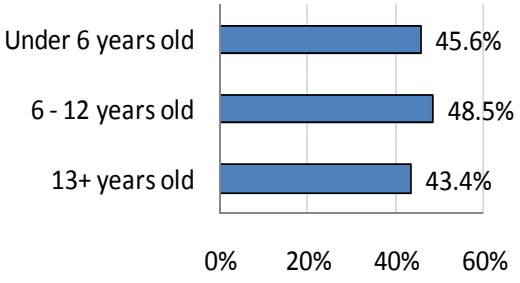
Figure II-4: Marital and relationship status



Children

Over half of respondents (58.9%) reported having no children in their household. Of the respondents who have children, 45.6 percent have at least one child under 6 years old, 48.5 percent have at least one child between the ages of 6 and 12, and 43.4 percent have at least one child aged 13 or older. (Percentages total to greater than 100% because respondents can have more than one child.) These results are reported in Figure II-5.

Figure II-5: Children under 18 in household*

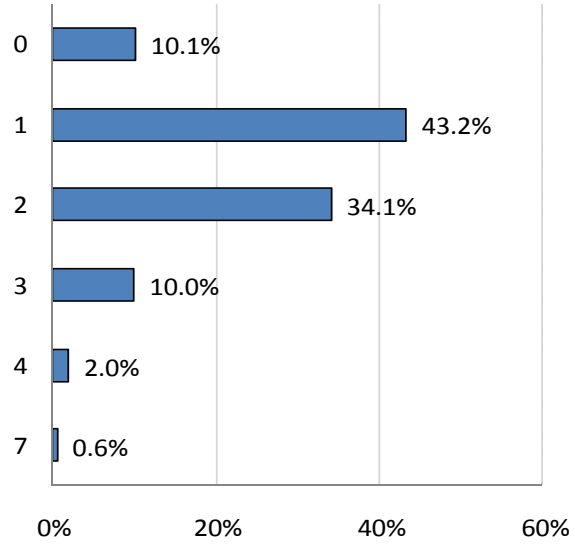


*Percentages in Figure II-5 are for respondents with children only.

Since we asked respondents to focus their thoughts on *the youngest child* in the household, we examined the distribution of children based on the age of the youngest child in each household. Of all respondents, 58.9 percent have no children in their household. 18.8 percent report a youngest child under 6 years old, 12.7 percent report a youngest child between the ages of 6 and 12 years old, and 9.7 percent report a youngest child between 13 and 17 years of age.

The respondents with children were also asked how many of their children attend school, preschool or daycare outside of their home during the day. A little over ten percent (10.1%) of them responded that all of their children spent the day at home. While 43.2 percent of those households had a single child attending school, preschool, or daycare outside the home, another 34.1 percent had two children outside the home during the day. The remainder (12.6%) responded that they had three or more children attending some sort of schooling outside of home during the day (See Figure II-6).

Figure II-6: Number of children at school, preschool or daycare*



*Percentages in Figure II-6 are for respondents with children only.

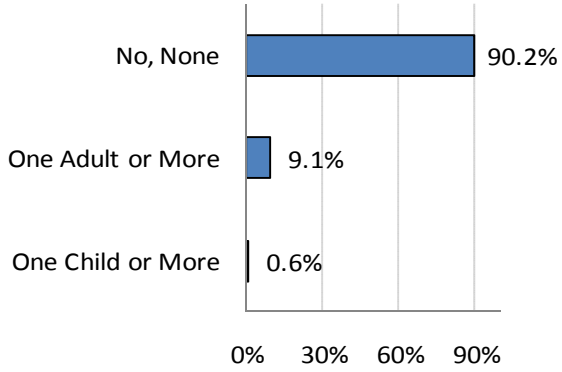
Other dependents

In an emergency situation, there may be other people that do not live with the respondent but still depend on the respondent for care. Respondents were asked:

> *Do you have anyone in the Washington Metro Area that does not live with you but depends on you to provide care? Is that person a child or an adult?*

Over ninety percent (90.2%) of the respondents did not have anyone in the Washington Metro Area that needed them to provide care, but nearly ten percent (9.1%) of the respondents did have one or more adults to take care of outside their home. In addition, 0.6 percent responded that they had a child for which they had to provide care outside their home in the Washington Metro Area (See Figure II-7).

Figure II-7: Dependent adult or child in Washington Metro Area



Of respondents who reported having a person who depended on them for care, 87.7 percent responded that the dependent was a family member. Of those that responded that the dependent was a family member, 32.4 percent reported that the family member was a son or daughter, 30.1 percent responded that the dependent was a parent, and 37.5 reported that the dependent was another relative.

Special needs in household

Other members of the household may also have special needs. Therefore, the respondents were asked:

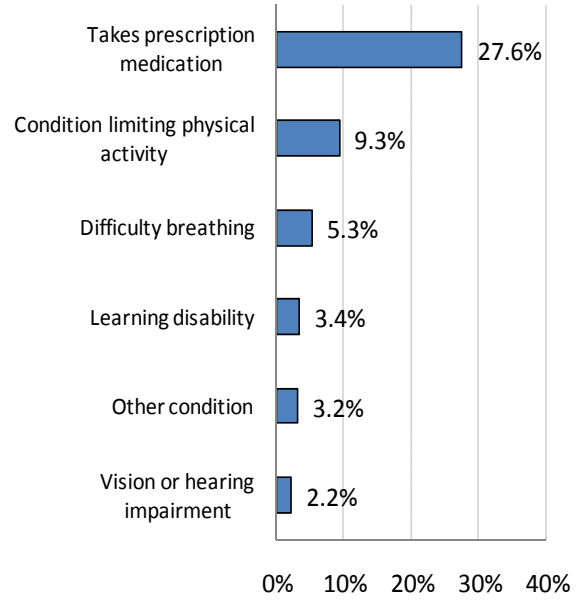
> *Do you or anyone in your household have any of the following conditions that might*

limit the ability to wait out or evacuate from an emergency?

The question specifically asked about all residents of the household, knowing that one member with challenges would most likely affect everyone's response to an emergency. Respondents were offered some broad categories of disability and asked to choose as many categories as were applicable to them.

Sixty-eight percent of the respondents reported "No special needs" in their household. The most common condition that might limit someone's ability to wait out or evacuate was taking prescription drugs (27.6%). About nine percent (9.3%) reported that there was someone in their household with a condition limiting their physical activity. Also, 3.4 percent of the respondents reported that they had someone in their household with difficulty breathing, 2.2 percent reported vision or hearing impairment, and 3.2 percent stated that someone in the household had other conditions that might limit the ability to wait out or evacuate from an emergency (See Figure II-8).

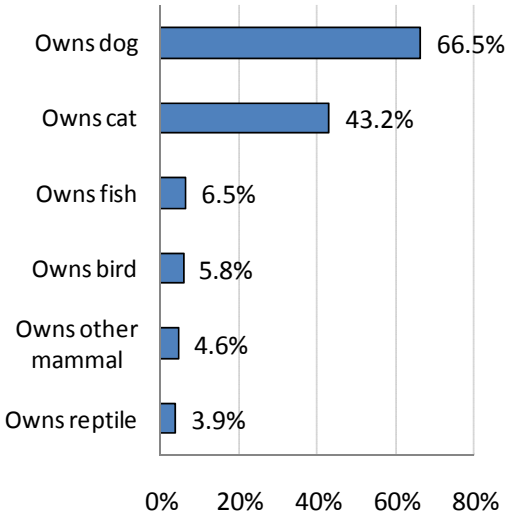
Figure II-8: Limiting conditions that affect decisions during an emergency



Pets

Over forty percent (42%) of the households had pets. Among those who have a pet, the most common pets were dogs (66.5%) and cats (43.2%). The next most commonly mentioned pet was fish (6.5%). There were a variety of other animals mentioned including birds, reptiles and other mammals (See Figure II-9).

Figure II-9: Type of Pet

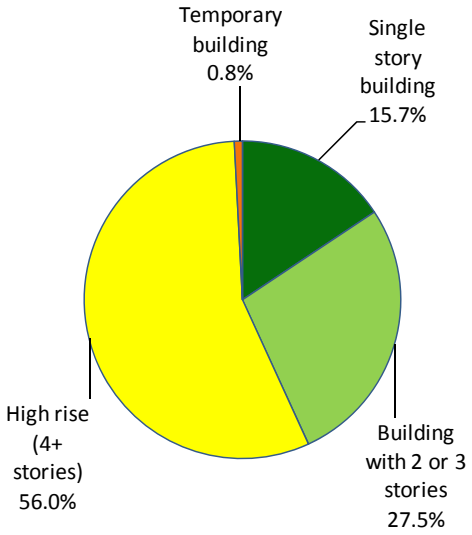


Workplace Characteristics

Building type of workplace

According to the Figure II-10, more than half (56%) of the respondents worked in a high-rise building (defined as having four or more stories). Just over a quarter (27.5%) of respondents worked in a building with 2 or 3 stories, while 15.7 percent of the respondents' primary work location was a single story building. The remainder (0.8%) were working in a temporary building.

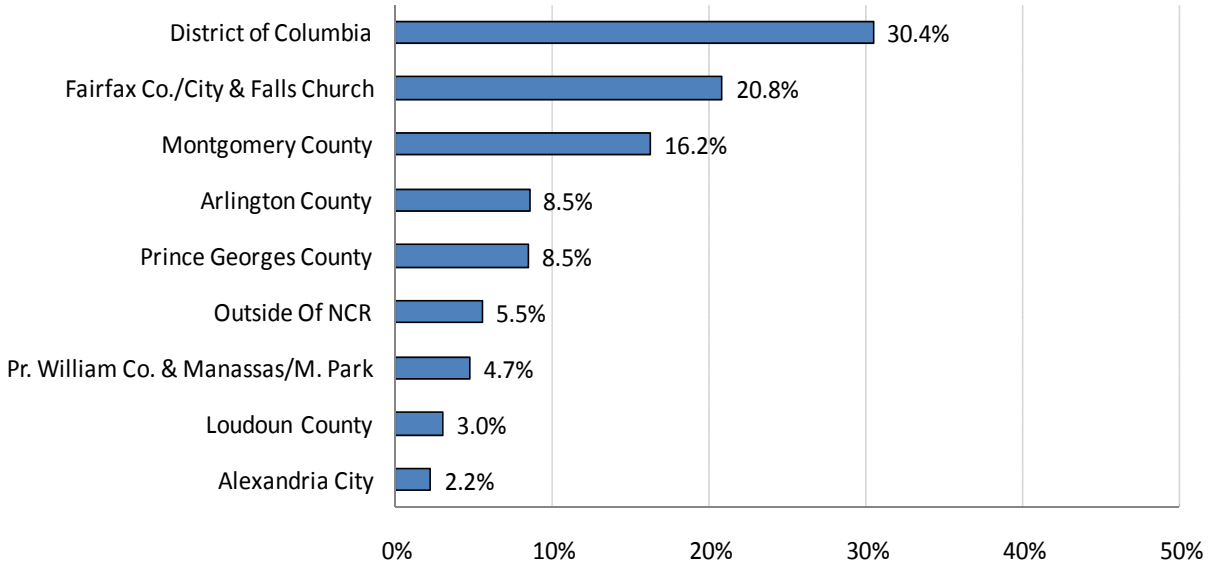
Figure II-10: Type of building at primary work location



Location of workplace

Just less than one-third (30.4%) of the respondents reported that their primary work location is in the District of Columbia. About twenty percent (20.8%) worked in Fairfax County (including the independent cities of Fairfax and Falls Church City), VA; 16.2 percent worked in Montgomery County, MD; 8.5 percent worked in Arlington County , VA; and 8.5 percent worked in Prince George's County, MD. Exactly 4.7 percent of respondents worked in Prince William County, VA (including Manassas and Manassas Park), while three percent worked in Loudoun County, VA and 2.2 percent worked in Alexandria VA. An additional 5.5% worked outside of the National Capital Region (NCR) (See Figure II-11).

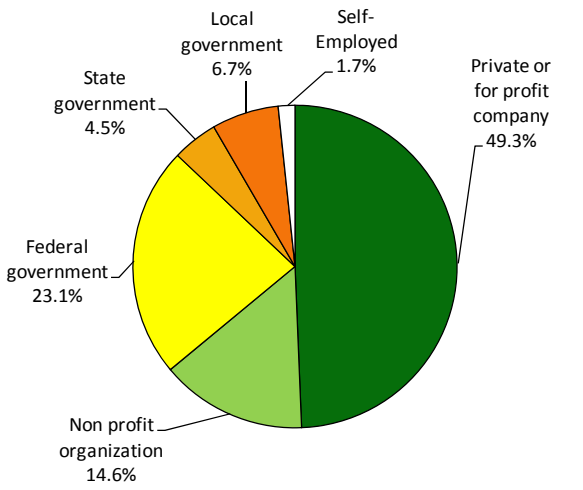
Figure II-11: Which city or county location or primary workplace



Place of employment

The respondents were also asked to report on what type of organization they worked for. Nearly half (49.3%) worked at a private or for-profit organization. Almost fifteen percent (14.6%) worked for a non-profit organization. About twenty three percent (23.1%) worked for the federal government, 4.5 percent worked for a state government, and 6.7% worked for a local government. The remaining 1.7 percent worked for their personal business, professional practice, or farm. Note that respondents had to be working outside of home for this survey; this disqualified many of the self-employed (See Figure II-12).

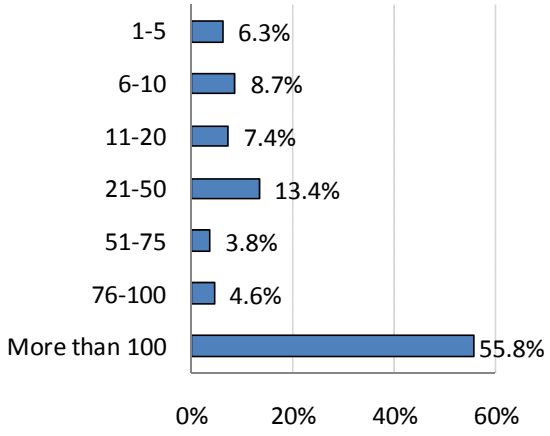
Figure II-12: Type of employer



Number of employees at workplace

More than half (55.8%) of the respondents' work locations had more than one hundred employees. Almost five percent (4.6%) worked at a place with 76 to 100 employees, 3.8 percent worked with fifty to seventy five other employees, and 13.4 percent had twenty to fifty co-workers. About seven percent (7.4%) worked with eleven to twenty other employees, 8.7 percent worked with six to ten employees, and 6.3 percent of the respondents worked with only one to five other employees in their primary work location (See Figure II-13).

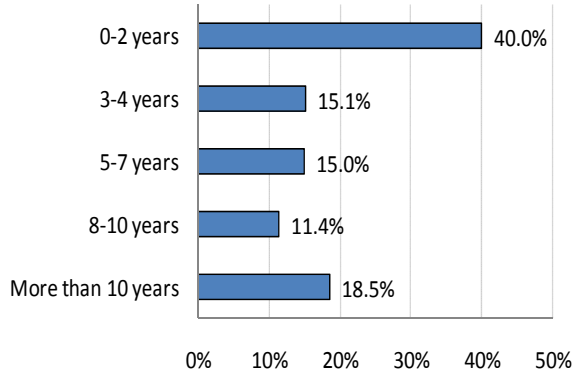
Figure II-13: Number of employees at your primary work location



Length of employment

Forty percent of the respondents reported that they have worked at their current primary work location less than two years. About fifteen percent (15.1%) had worked at their current workplace 3 to 4 years, 15 percent had worked at their current workplace 5 to 7 years, 11.4 percent had worked at their current place 8 to 10 years, and 18.5 percent had worked at their current primary work location more than ten years (See Figure II-14).

Figure II-14: Tenure at primary workplace

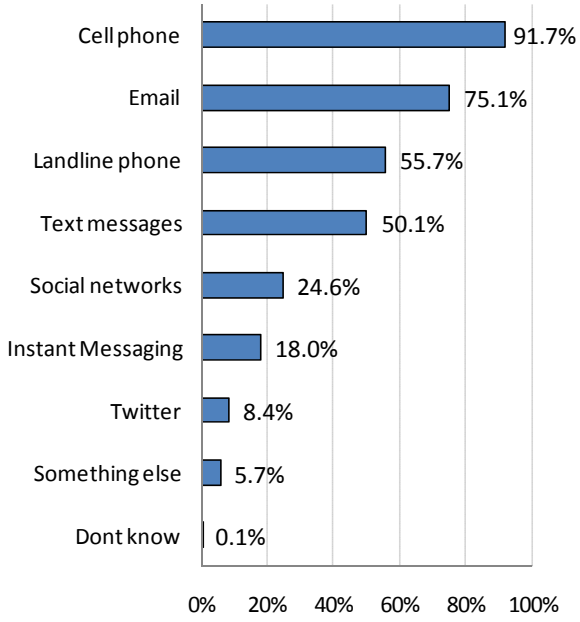


Form of Communication

Respondents were asked to specify what method they typically use to communicate with others. They were allowed to choose more than one option as their main form of communication and the following is the result:

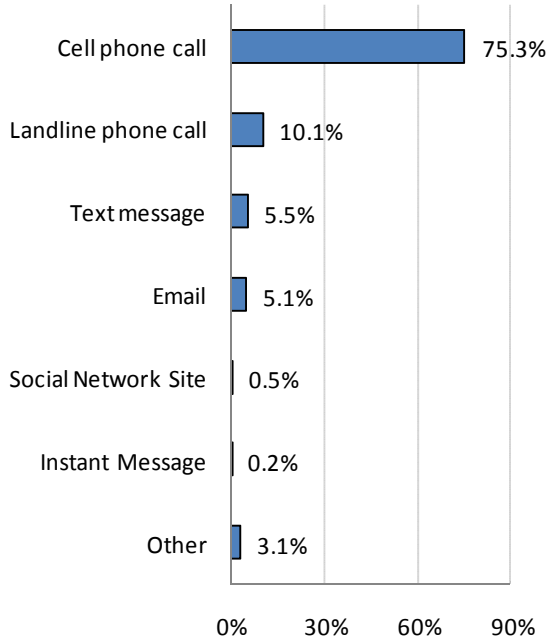
The most common forms of communications were cell phones (91.7%) and e-mails (75.1%). Some people used landline phones (55.7%) while over half of the respondents (50.1%) used text messaging as a form of communication. Nearly one fourth of the respondents (24.6%) used social networks, 18 percent used instant messaging and 8.4 percent used Twitter as a form of communication. Also, 5.7 percent used something else and 0.1 percent did not know what to choose as their typical form of communication (See Figure II-15).

Figure II-15: Forms of communication in use typically



Respondents were also asked to choose one preferred form of communication that they would most likely rely on to contact a loved one during an emergency. Over three fourths of the respondents (75.3%) reported that they would use cell phone calls during an emergency to contact a loved one. Only about ten percent (10.1%) would rely on landline phone calls, 5.5 percent would use text messaging, and 5.1 percent would use e-mails. A very small percentage reported they would use social networking sites (0.5%) and instant messaging (0.2%) as their preferred form of communication during an emergency. Lastly, 3.1 percent would use another form of communication to contact a loved one during an emergency.

Figure II-16: Primary form of contact to reach your loved one during an emergency



Respondents were also asked to mention an alternative form of communication to contact loved ones if their main form of communication were not available. According to Figure II-17, the most common alternative forms of communication were landline phones (42.4%) and e-mail (36.8%). The percentage of those who would use cell phones (15.1%), social networks (6.9%), text messaging (6.4%), Twitter (1.7%) and instant messaging (1.2%) as alternative forms were low. However, over ten percent (11.5%) of the respondents would use something else and 7.9 percent did not know what to use as an alternative form of communication.

Figure II-17: Alternate technology if what you normally use is not available

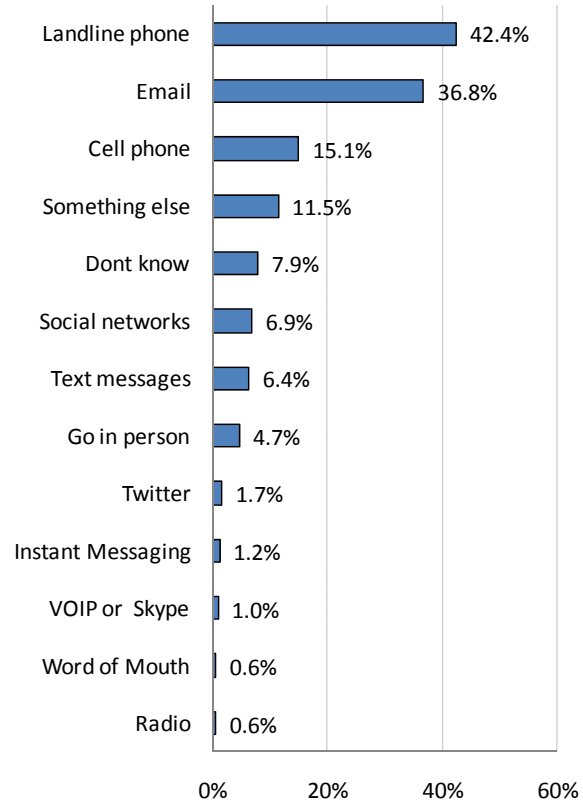
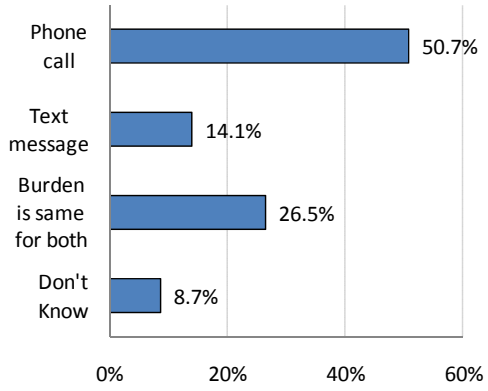


Figure II-18: Greater burden on communication systems, call or text message?



Finally, respondents were asked whether they thought a cell phone call or text message placed a greater burden on the cellular network infrastructure. About half (50.7%) of those interviewed responded that a phone call was more burdensome, while 14.1 percent responded that a text message placed a greater burden on the network. Just over 1 in 4 respondents (26.5%) thought that both methods of communication placed equal burden on the network, while 8.7 percent responded that they did not know or were unsure.

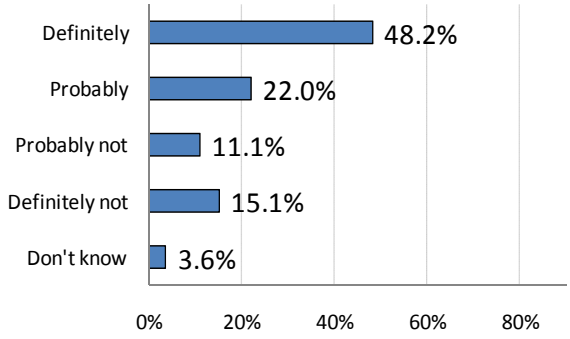
III. Workplace Preparedness

Respondents were asked a variety of questions regarding their workplace as well as their spouse's, and how they would react and behave in the event that a dirty bomb was detonated while they were at work. Cross-tabulations allowed us to examine how workplace-related perceptions would differ based on respondents' demographic characteristics.

Current Levels of Emergency Preparedness at Work

Almost half of all respondents (48.2%) report that their workplace "definitely" has an emergency plan prepared, and a majority (70.2%) report that their workplace either "definitely" or "probably" has an emergency plan prepared.

Figure III-1: Does your workplace have an emergency plan prepared?



Respondents who reported that their workplace "definitely" had an emergency plan prepared were presented with 13 potential features of workplace emergency plans and asked to indicate whether these plans were present at their own workplace. Ten of the thirteen features were described by a majority of respondents as "definitely" part of their workplace's emergency plan, with employee contact lists (91.0%) and 24-hour restroom access (89.5%) being the most commonly selected "definitely" responses. Methods for communication (38.4%), 24-hour bedding access (23.6%), and emergency childcare accommodations (22.1%) were the only features that fewer than half of respondents reported as "definitely" included in their workplace's emergency plan.

Figure III-2: Perceived existence of elements in the respondent's workplace emergency plan

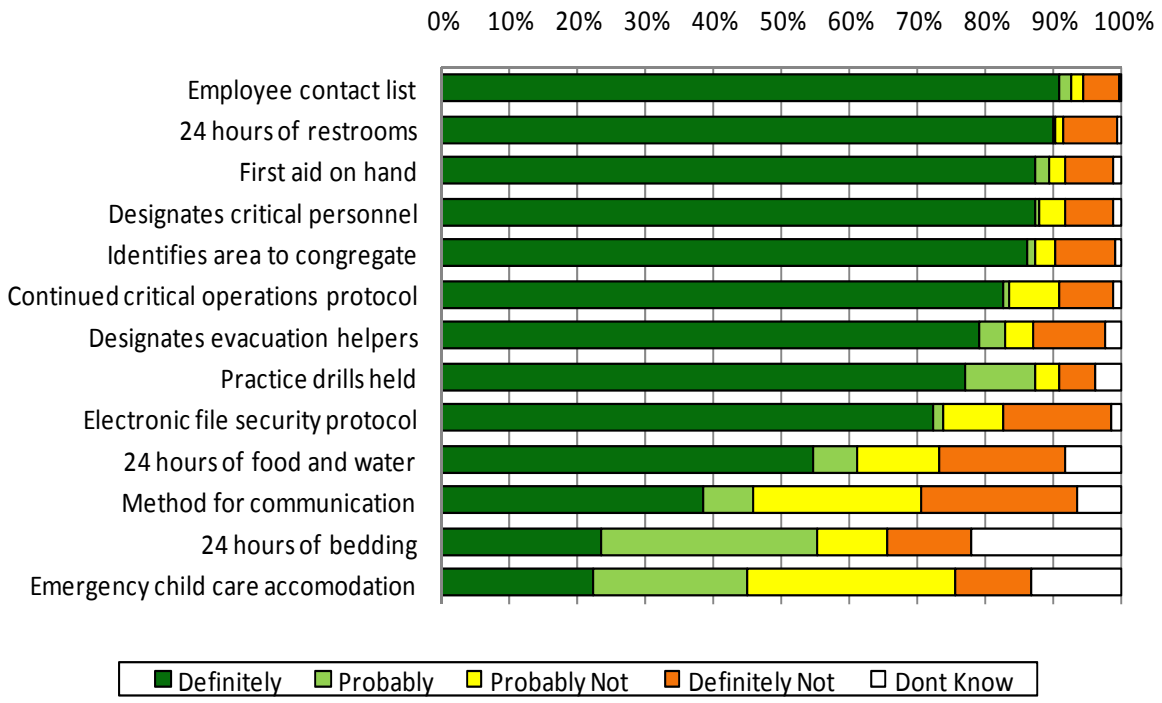
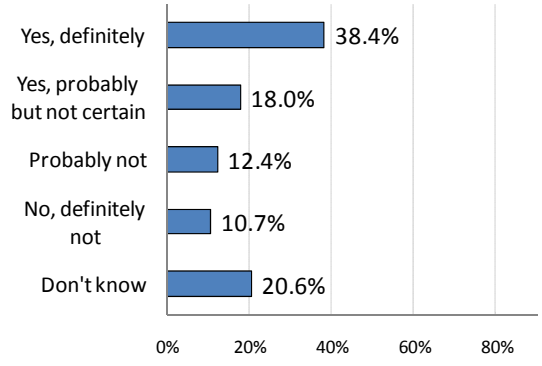


Table III-1: Details of perceived existence of elements in the respondent's workplace emergency plan

	Definitely	Probably	Probably Not	Definitely Not	Don't Know
Has employee contact list	91.0%	1.5%	1.8%	5.5%	0.1%
Has 24 hours of restrooms	89.5%	0.4%	1.1%	7.8%	0.5%
Has first aid on hand	87.5%	1.9%	2.3%	7.1%	1.1%
Designates critical personnel	87.3%	0.5%	4.0%	7.0%	1.1%
Identifies area to congregate	86.2%	1.2%	3.0%	8.8%	0.7%
Has continued critical operations protocol	82.8%	0.9%	7.3%	7.8%	1.2%
Designates evacuation helpers	79.3%	3.7%	4.1%	10.7%	2.2%
Practice drills held	77.0%	10.2%	3.6%	5.5%	3.6%
Has electronic file security protocol	72.5%	1.3%	8.8%	16.0%	1.5%
Has 24 hours of food and water	54.7%	6.3%	12.1%	18.7%	8.1%
Has method for communication	38.4%	7.5%	24.6%	22.9%	6.5%
Has 24 hours of bedding	23.6%	31.8%	10.3%	12.4%	21.9%
Has accommodation for emergency child care	22.1%	22.6%	30.4%	11.2%	13.2%

Over a third of married or partnered respondents (38.4%) indicate that their spouse or partner's workplace "definitely" has an emergency plan prepared, and a majority (56.4%) indicate that their spouse or partner's workplace either "definitely" or "probably" has an emergency plan prepared. These figures are both lower than the corresponding figures for respondents' own workplaces, with a larger percentage of respondents being unsure whether their spouse's workplace has an emergency plan (20.6%) than were unsure whether their own workplace had one (3.6%).

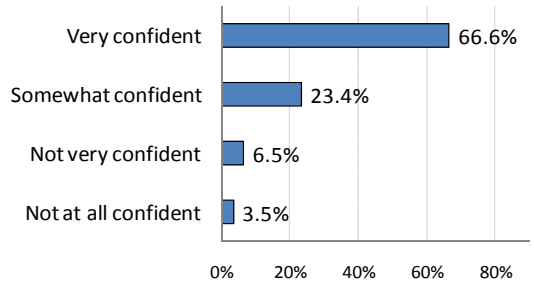
Figure III-3: Does your spouse's workplace have an emergency plan prepared?



Two-thirds of respondents (66.6%) are "very confident" that they would be able to shelter at their workplace, and only 10.0 percent are either

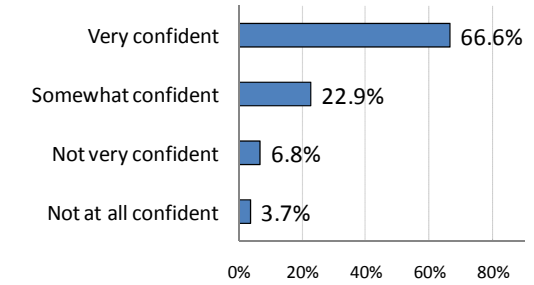
"not very confident" or "not at all confident" that they could do so.

Figure III-4: How confident are you in your ability to shelter at work?



The same percentage of respondents who were "very confident" in their own ability to shelter at work in an emergency are "very confident" in their spouse's ability to do so, and the percentage of respondents who are "not very confident" or "not at all confident" that their spouses could do so (10.5%) is also similar to the corresponding figure for the respondents themselves (10.0%).

Figure III-5: How confident are you in your spouse's ability to shelter at work?



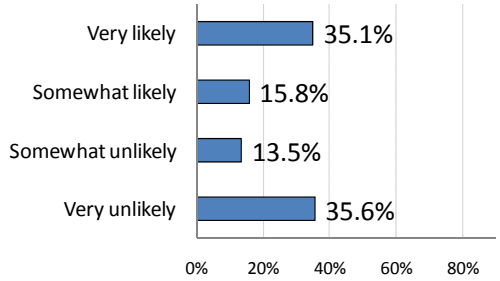
Medication on hand

Just over a quarter (27.1%) of respondents take prescription medications on a daily basis. Within this group of respondents, approximately two-thirds (67.2%) report having enough medication on hand at work to last for at least 24 hours.

Work open for business

The percentage of respondents reporting that it is "very likely" that their workplace would remain open for business during an emergency (35.1%) is similar to the percentage reporting that it is "very unlikely" that their workplace would remain open (35.6%). Fewer respondents report feeling that it is "somewhat likely" or "somewhat unlikely" that the workplace would remain open (15.8% and 13.5% respectively). Overall, respondents are split rather evenly in terms of whether they feel their workplace would remain open, as seen in Figure III-6.

Figure III-6: Would your workplace remain open for business?

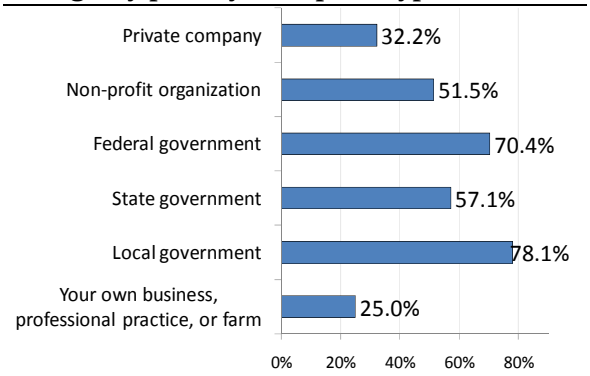


Thirty-four percent of workers report that their workplace provides goods or services that are critical to the functioning of their community during an emergency. Forty-five percent of workers report that their jobs are necessary for the functioning of their workplace.

Effect of Workplace Characteristics on Perceptions

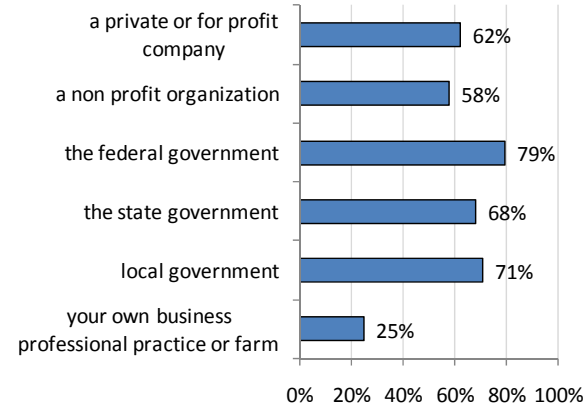
Those who work for the federal, state, or local government are more confident that their workplaces have emergency plans in place than other respondents. Local government employees indicate the most confidence in the existence of an emergency plan (78.1%), while those who work for their own professional practices or farms show the least (25.0%).

Figure III-7: Perceived existence of emergency plan by workplace type



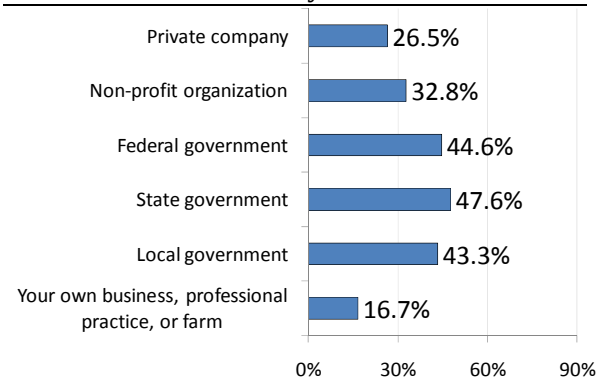
Respondents who work for the federal, state, or local government are also more confident in their ability to shelter in place than other respondents. Federal government employees indicate the most confidence in their ability to shelter at work (79.4%), while those who work for their own professional practices or farms show the least (25.0%).

Figure III-8: Confidence in ability to shelter at work by workplace type (% "very confident")



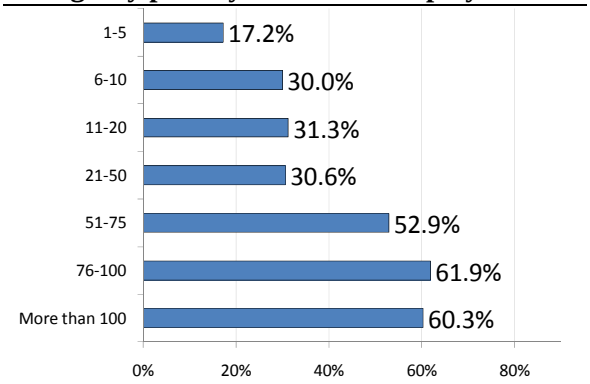
Employees of federal, state, and local government are more likely than employees of non-profit organizations, private companies, and professional practices to report that their workplace performs a function that is critical to the community. Notably, the percentage of respondents indicating that their workplace performs a critical function does not exceed 47.6% in any category.

Figure III-9: Percentage of workers reporting that their workplace provides a function critical to the community



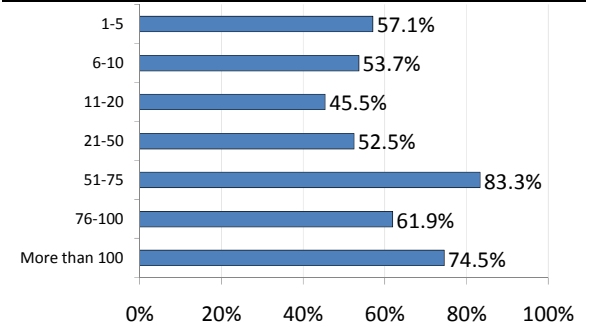
In general, respondents from workplaces with large numbers of employees are more likely to be confident that an emergency plan is in place than are respondents from smaller workplaces, as seen in Figure III-10.

Figure III-10: Perceived existence of emergency plan by number of employees



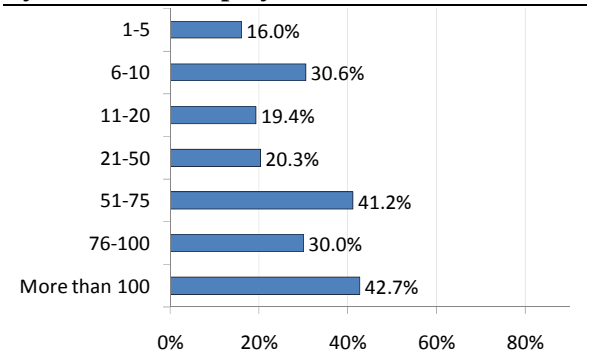
Respondents from workplaces with large numbers of employees tend to be more confident in their ability to shelter at work, but the correlation is not perfect. The percentage of respondents reporting that they are "very confident" is highest (83.3%) among respondents whose workplaces employ between 51 and 75 people, with respondents from larger workplaces less likely to report being "very confident." This suggests that employees from especially large workplaces may have some concerns about crowding affecting their ability to shelter in place.

Figure III-11: Confidence in ability to shelter at work by number of employees



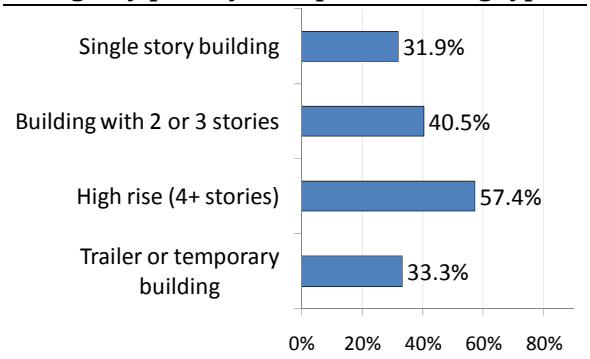
Respondents whose workplaces employ more than 100 or between 51 and 75 employees are more likely to report that their workplaces perform a critical function for the community (with 42.7 percent and 41.2 percent of these workers respectively indicating that this is the case). Only 16.0 percent of respondents whose workplaces employ between 1 and 5 people report that their workplace performs a critical function.

Figure III-12: Critical function of workplace by number of employees



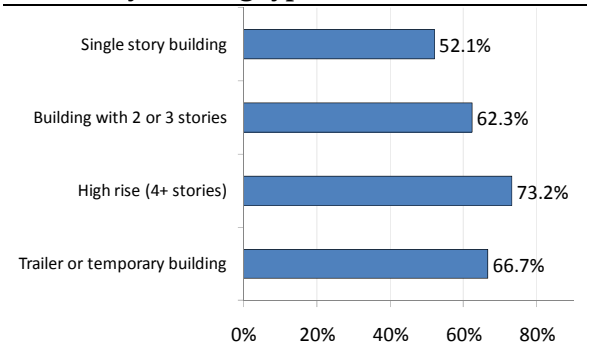
Respondents who work in high-rise buildings (with four or more stories) are more likely to report confidence that their workplace has an emergency plan (57.4%) than are respondents who work in smaller buildings.

Figure III-13: Perceived existence of emergency plan by workplace building type



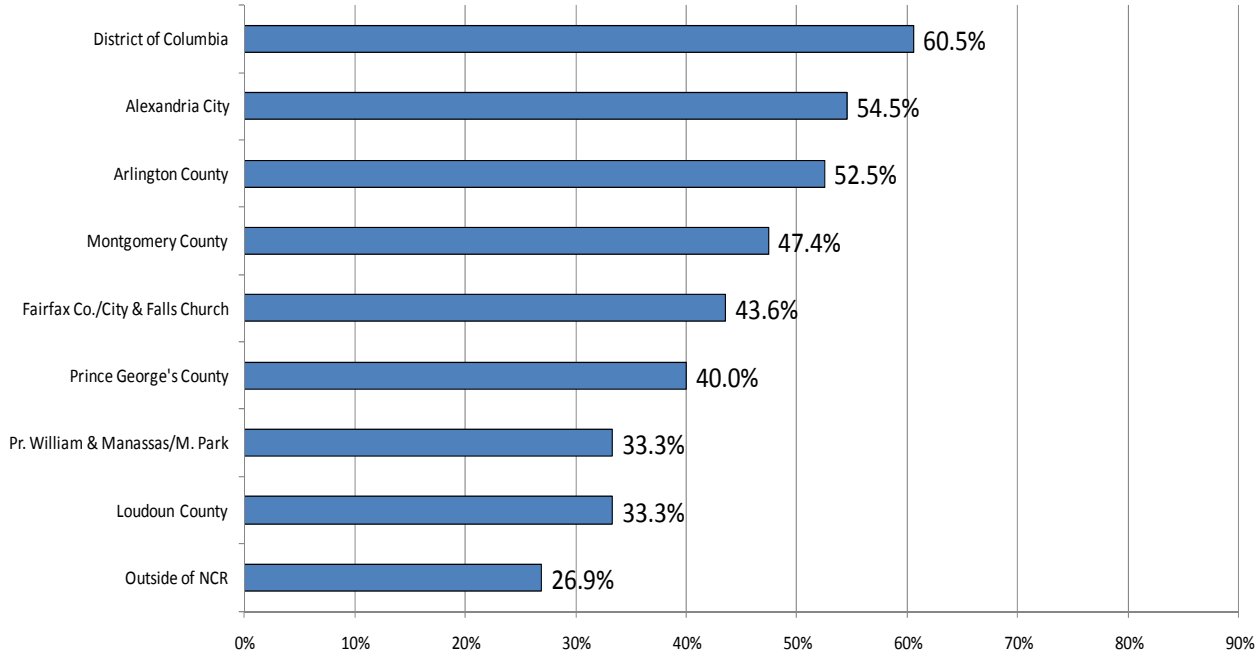
Respondents who work in high-rise buildings are also more confident in their ability to shelter at work (73.2%) than are respondents who work in smaller buildings.

Figure III-14: Confidence in ability to shelter at work by building type



Perceived existence of a workplace emergency plan is highest among respondents who work in the District of Columbia. Perceived existence of a workplace emergency plan is roughly correlated with the workplace's proximity to the District of Columbia.

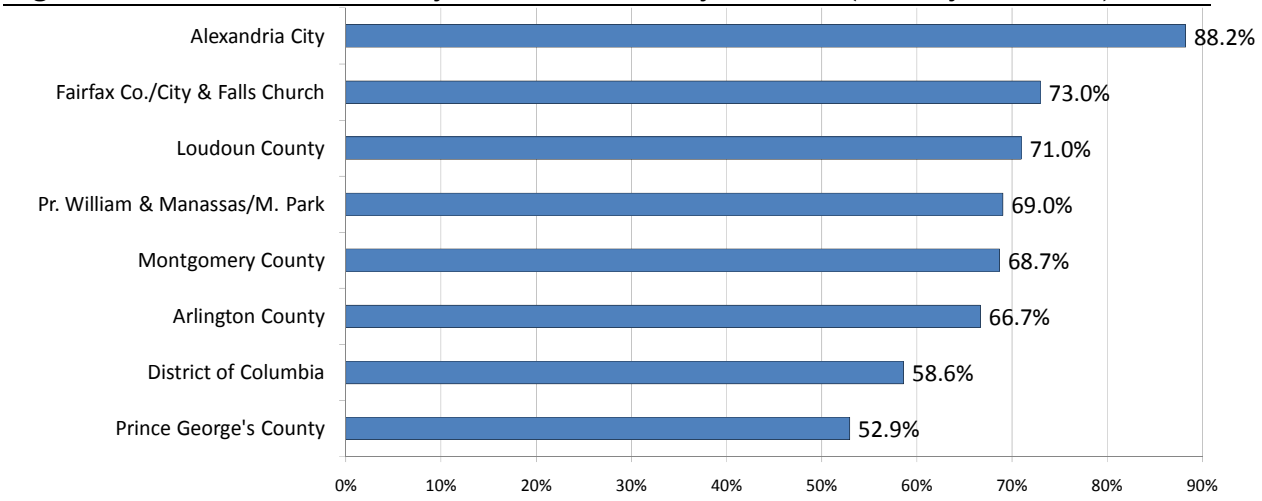
Figure III-15: Perceived existence of emergency plan by workplace location



Effect of Respondent Demographics on Workplace Perceptions

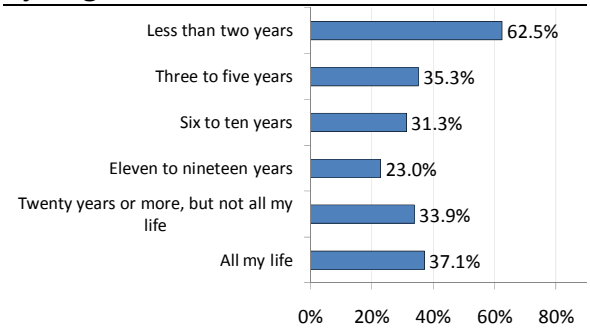
Confidence in the ability to shelter at work is by far the highest among residents of Alexandria, Virginia, where 88.2 percent of respondents report feeling "very confident" that they can do so. Only 58.6 percent of residents of the District of Columbia are "very confident" that they could shelter at work, and only 52.9 percent of residents of Prince George's County, Maryland are "very confident" that they could do so. The District of Columbia and Prince George's County both count higher percentages of African Americans among their residents than do the other cities and counties included in the survey.

Figure III-16: Confidence in ability to shelter at work by residence (% "very confident")



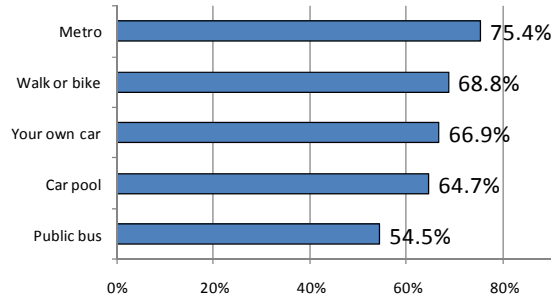
Respondents who have lived in the Washington Metropolitan Area for less than two years are most likely to report that their workplace performs a function that is vital to the community, with 62.5 percent of such respondents reporting that this is the case. The rate is significantly lower among respondents who have lived in the region for longer.

Figure III-17: Critical function of workplace by length of residence



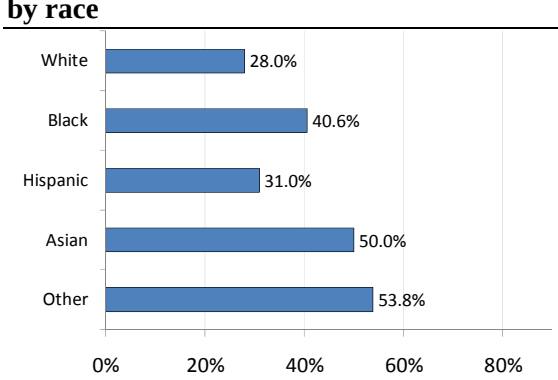
Those respondents who take the Metro to work are most likely to be confident in their ability to shelter at work (75.4%). Respondents who rely on a public bus for transportation are least likely to be confident (54.5%).

Figure III-18: Confidence in ability to shelter at work by mode of transportation



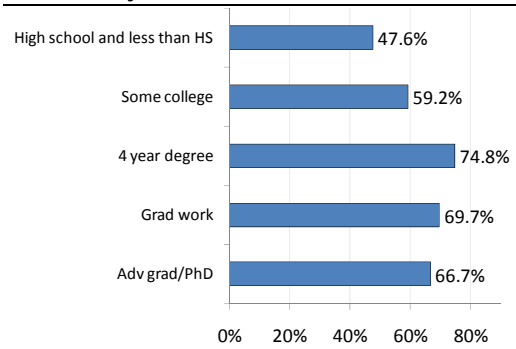
Respondents who identify with a racial group other than White, Black, Hispanic, and Asian are the most likely to report that their workplace performs a critical function, with 53.8 percent of such respondents doing so. Whites, at 28.0 percent, are the racial group least likely to report that their workplace performs a critical function.

Figure III-19: Critical function of workplace by race



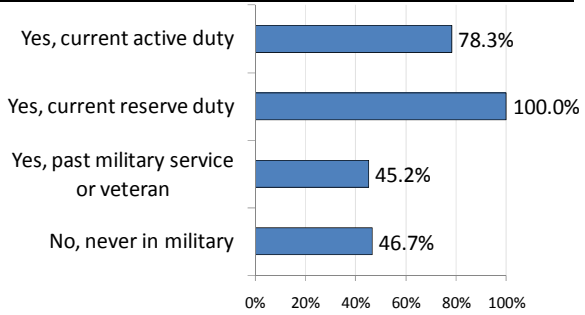
Three-quarters of respondents with a four-year college degree report confidence in their ability to shelter at work, with the figure being lower among respondents with post-graduate studies and lowest among respondents with less than a four-year college degree.

Figure III-20: Confidence in ability to shelter at work by education



Respondents who are currently active-duty or reserve members of the military are more likely to be confident that their workplace has an emergency plan in place than are former members and non-members of the military.

Figure III-21: Perceived existence of emergency plan at work by military status

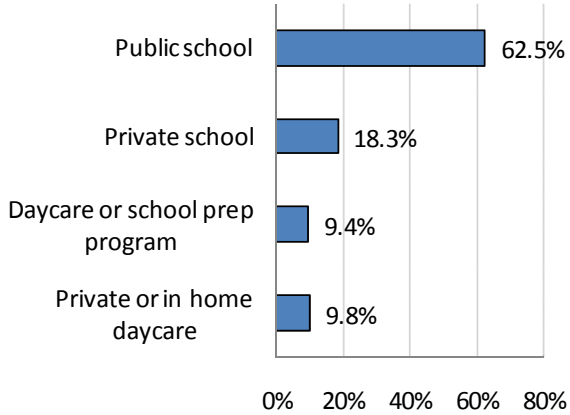


IV. School Preparedness

One of the goals of the survey was to explore the effect that children would have on the decisions made by workers under the various circumstances presented by an emergency such as a dirty bomb detonation. Potential worry over the child(ren)'s safety, the ability of the schools to care for the children over a long period of time and concerns over the reaction of the child(ren) could all play a part in determining the actions of those employed. This section will present some demographic data that describes those we interviewed, then looks at the response to questions that detail what behaviors to expect from employed parents.

First, we asked respondents if they had children. Of all respondents in the survey, 41.1 percent have children under the age of 18 living in their household. Of those respondents with children, 95.8 percent have children who spend the day outside the home in school, daycare, or preschool. Just under two-thirds (62.5%) of those children attend public school, while 18.3 percent attend private school. Nearly equal percentages of children attend either a commercial daycare (9.4%) or a private or in-home daycare (9.8%.).

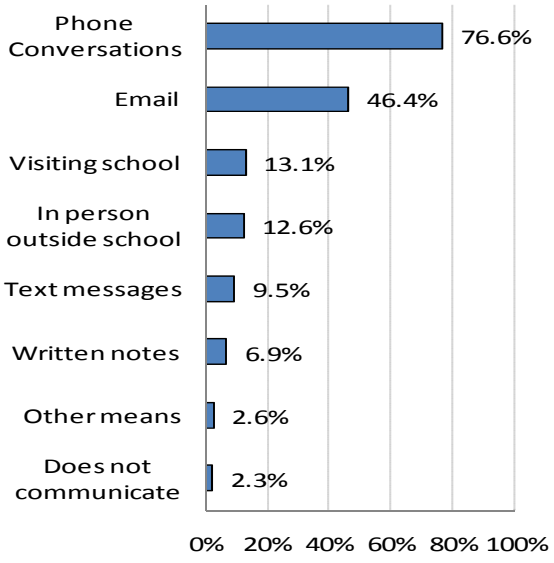
Figure IV-1: Child attends public or private school or daycare.



Communication with the School

When asked which methods of communication the parents used to communicate with their child's school (respondents could indicate that they utilized more than one method), by far the favored method of communication for parents was the telephone (76.6%). The survey did not differentiate on this question between landline and cell phone. Almost half of the parents (46.4%) responded that e-mail was their preferred method of communication. A little more than one in ten parents preferred in-person methods of communication, either by visiting the school (13.1%), or in-person off the school's campus (12.6%). One in ten parents (9.5%) preferred to have contact with the school via text message. Another 6.9 percent preferred to communicate via written notes. Under 3 percent of parents either prefer communications via other means (2.6%), or do not communicate with their children's school (2.3%). Responses to this question were not mutually exclusive.

Figure IV-2: Parent's preferred method of communication with their child's school.

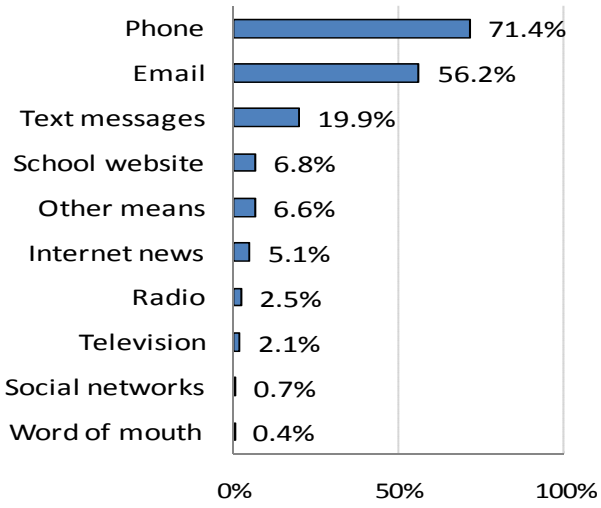


As a contrast, each parent was also asked how he or she receives information regarding emergencies at their children's school (as above, responses were not mutually exclusive for this question). The majority again replied that they received such information via telephone communication (71.4%).[3] Over half of parents

[3] The survey question does not differentiate between individually dialed calls and automated phone call systems.

(56.2%) replied that they received this information via e-mail. One in five parents (19.9%) receive emergency information via text messages. Another 6.8 percent of parents reported receiving such information from the school website. One in twenty parents (5.1%) receive emergency information from Internet news, while less than three percent of parents reported receipt of emergency information via radio (2.5%), television (2.1%), social networking sites (0.7%), or word of mouth (0.4%). Another 6.6 percent of parents report receiving information via other means.

Figure IV-3: How do you receive information about emergencies at your child's school?



Parents were also asked whether they are signed up to receive emergency notifications from their children's school. A large majority (80.2%) receive such notifications, while 15 percent are not signed up.

Awareness of School Emergency Plans

When asked whether their children's school has an emergency plan in place, 45.3 percent of parents reported that this was "definitely" the case. Over one third of parents (34.9%) reported that the school "probably" had a plan in place for emergencies. Ten percent of parents reported that the school either "probably did not" (8.9%) or "definitely did not" (1.1%) have a plan in place. Just under 10 percent did not know if the school had a plan.

Figure IV-4: Does your child's school have a plan in place for emergencies?

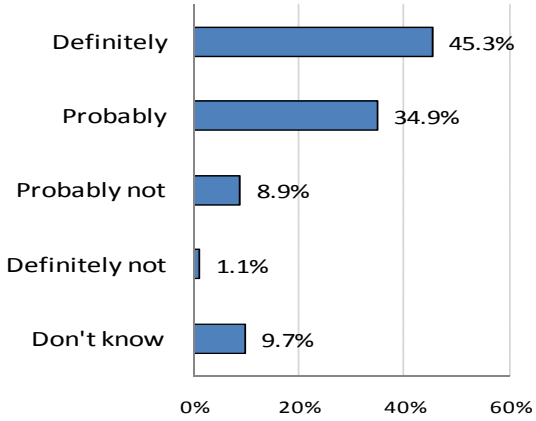


Figure IV-5 shows the breakdown of reported components of the school plan. This question was asked only of parents who had reported that their child(ren) either "definitely" or "probably" had a plan, and that the parents were "somewhat" or "very" familiar with it. It was noted that many items may be part of a school's emergency plan. Then parents were read a list of possible items that might be included in an emergency plan at the parent's child's school. Items were rated based on the parents' perception that the item "definitely," "probably," "probably did not" or "definitely did not" appear in a plan for emergencies like that just described.

The components include:

- 24 hour availability of restrooms,
- First aid on hand,
- Practice security drills,
- Electronic file security protocol,
- Communication plan for contacting staff,
- 24 hours of food and water,
- Different plans for different threats,
- [Designated] command post,
- Communication plan for contacting parents.

The items on this graph have been sorted to show the order of ranking for the items based on parents perception that the item would *definitely* be part of a plan. This makes it easier to see that

over fifty percent of parents reported that the school "definitely" had the particular component in all cases but one. Over three quarters (86.2%) were definite that schools could provide restrooms for 24 hours and had first aid on-hand (83.7%).

Only when asked whether the school has a communication plan for contacting parents, did less than half of parents report that the school "definitely" had this component. This item also had the highest percentage of parents who were unsure about its inclusion and chose to say "don't know" to the question.

For several items very few respondents chose to say that the item was probably or definitely not included in a plan. Either parents had a positive response or they did not know when asked about first aid, electronic file security protocol, and a plan for contacting staff.

Figure IV-5: Components of school emergency plan

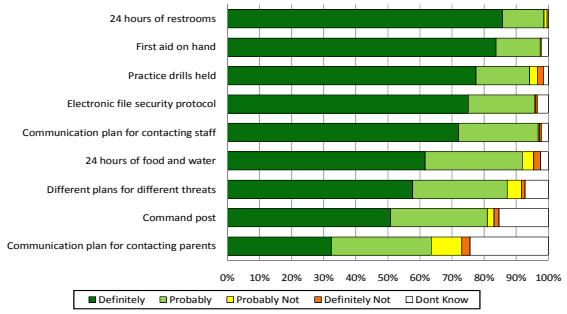
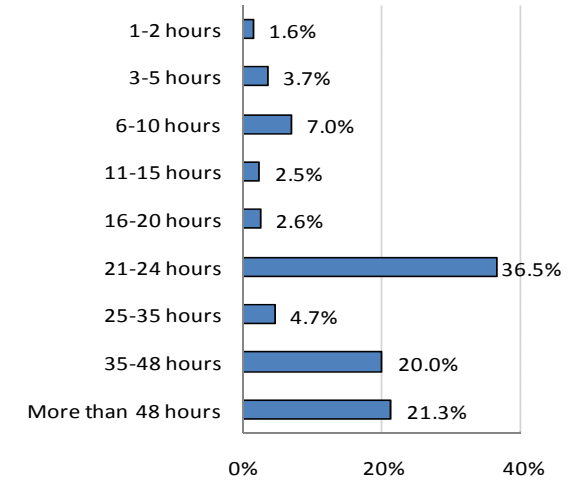


Table IV-1: Components of school emergency plan, by parents' perception of appearance

	Definitely	Probably	Probably Not	Definitely Not	Don't Know
Has 24 hours of restrooms	85.4%	12.8%	1.0%	0.0%	0.4%
Has first aid on hand	83.4%	13.7%	0.3%	0.0%	2.2%
Practice drills held	76.8%	16.6%	2.4%	1.8%	1.5%
Has electronic file security protocol	74.8%	20.4%	0.4%	0.6%	3.4%
Has communication plan for contacting staff	71.7%	24.7%	0.4%	0.6%	2.2%
Has 24 hours of food and water	61.4%	30.2%	3.5%	2.1%	2.4%
Has different plans for different threats	57.3%	29.1%	4.4%	1.2%	7.2%
Has command post	50.2%	29.9%	2.1%	1.5%	15.2%
Has communication plan for contacting parents	32.2%	31.1%	9.4%	2.5%	24.3%

Figure IV-6 shows that when asked the length of time parents felt the school could take care of their children, the vast majority of parents reported lengths of time greater than 20 hours. Specifically, over one-third of parents (36.5%) reported that the school could care for their children for 21-24 hours. While only 3.7 percent of parents felt the school could provide care for a period of 25-35 hours, one-fifth (20.0%) of parents reported the school's ability to care for their children for 35-48 hours. Similarly, 21.3 percent of parents reported that the school could care for children for more than 48 hours.

Figure IV-6: Length of time school could care for your child



Types of Schools Attending

Figure IV-7 shows the types of schooling (public school, private school, public daycare or private daycare) by county of residence. In Loudoun, Montgomery, Prince George's, and Fairfax counties, over 60 percent of parents' children go to public schools. (Note that pre-school children are included in the base for these percentages.) This contrasts with Arlington, Manassas and Prince William, the District of Columbia and Alexandria, in which the majority of parents' children attend other types of schools or facilities.

Figure IV-7: Type of school by residence

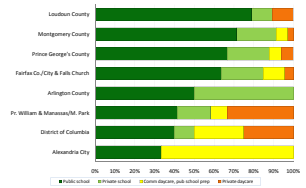
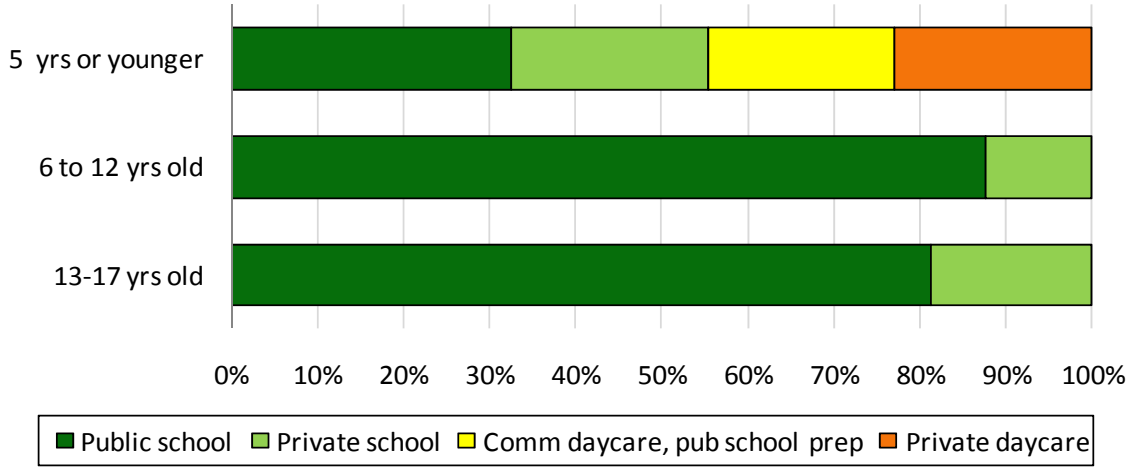


Figure IV-8 shows the type of school attended by the youngest child in the household. In the two oldest age categories, between 6 and 12 years old and 13-17 years old, the great majority of parents' children, over 80 percent, attend public school. This can be compared to percentage of children in the youngest age category – children 5 years or younger – who attend public school which is around one third. Interestingly, school attendance for that age category is almost equally split among all possible school types.

Figure IV-8: Type of school by age of youngest child



Variations in Plan Awareness

Figure IV-9 shows the percentage of parents who report that their children's school "definitely" had an emergency plan, sorted by the number of years the parent has lived in the National Capital Region. Forty-three percent of those parents who have lived in the NCR for two years or less report that their children's school definitely has a plan for emergencies. The percentage drops to roughly one third for those parents who have lived in the NCR for three to five years (33.0%) and six to ten years (32.0%). The percentage of parents who report that their children's school has an emergency plan is highest among those who have lived in the NCR for at least twenty years, as it approaches two thirds of parents. Generally, the length of time a parent has lived in the NCR correlates with a higher probability of knowledge of the school's emergency plan, with the exception of those newly arrived, who may have more recently researched local schools.

Figure IV-9: Perception of emergency plan at school by length of residence in NCR

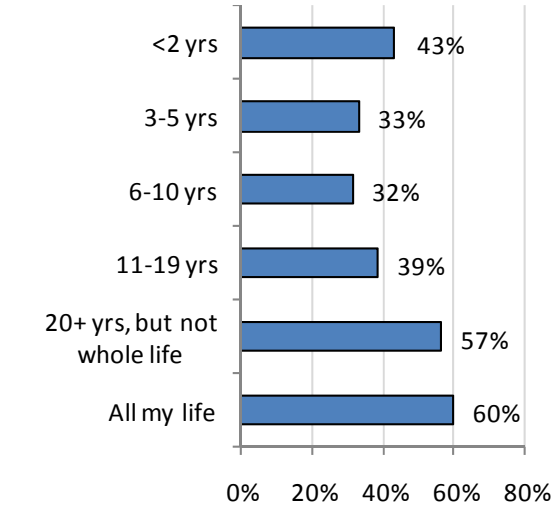
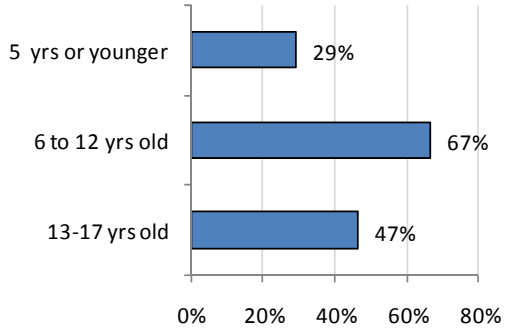


Figure IV-10 shows the percentage of parents who report that their children's school "definitely" had an emergency plan, broken down by the age of the youngest child in the household. Twenty-nine percent of parents whose youngest child is less than five years old report that their children's school has an emergency plan. Fully two thirds of parents whose youngest child is between six and twelve years of age report that their children's school has an emergency plan. This rate drops for parents whose youngest child is between thirteen and seventeen years of age, for whom 47 percent of parents report the definite existence of an emergency plan at their children's school.

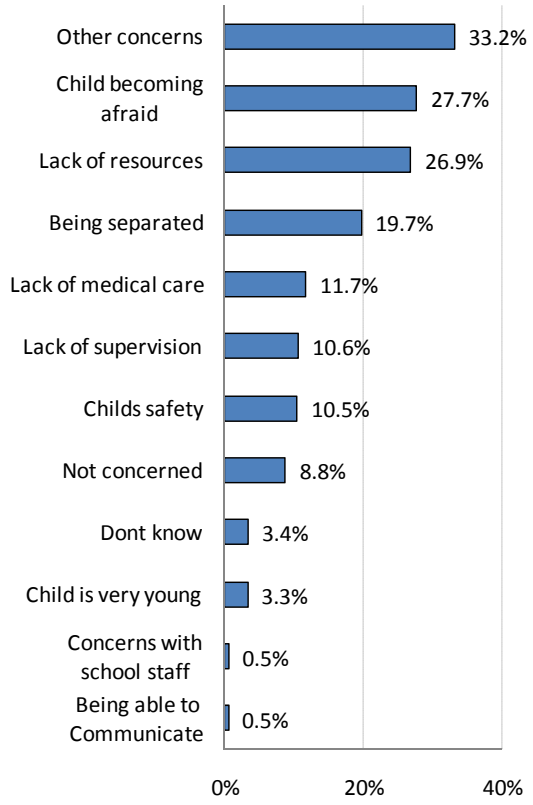
Figure IV-10: Emergency plan at school by age of youngest child



Parent Concerns and Perception of School Goals

When asked their main concern about leaving their child at school (Figure IV-11), just over one quarter of parents reported concerns either that the child would become afraid (27.7%) or that the school had a lack of resources (26.9%). One in five (19.7%) parents reported that their greatest concern is being separated from their children. Less than 12 percent of parents reported concerns regarding the lack of medical care (11.7%), the lack of supervision (10.6%), or their child's safety (10.5%). Responses to this question were not mutually exclusive.

Figure IV-11: Concerns about leaving child at school



The survey asked those with children about their views on the following question:

> *Should the school's primary goal in an emergency be to keep children in their care and take care of them to the best of their ability, or should it be to reunite children with parents?*

Parents with school-age children overwhelmingly felt that the children should be kept in the school's care. Only 13.8 percent of parents reported that they would prefer that the schools reunite children with their parents.

Table IV-2: Goal of school during an emergency

Keep children in their care	76.2%
Reunite children with parents	13.8%

Similar results obtain when parents were asked what the school would do if the instructions given to the school were to shelter in place. The great majority, 78.9 percent, of parents reported their belief that the school would lock down, trying to keep all doors sealed and not release children until notification of the "all clear." Nearly one in five parents reported that they believed the school would release children only to parents or guardians, while only two percent of parents believed that their children's school would release the children normally as they would for a snow storm.

Table IV-3: Perception of school's reaction if instructions were to shelter in place.

Release your child as they normally would for an emergency like a snow storm	2.0%
Only release your child to you, the child's parent or guardian	19.1%
Lock down the school, try to keep doors sealed and not release any children until "all clear"	78.9%

An open-ended question was asked of all parents to give them the opportunity to add comments that they felt had not been covered by the previous questions.

> *What would schools need to do so that you felt confident that your child would be cared for?*

When asked to elaborate about what their children's schools could do to improve parents' confidence, 28.1 percent of parents reported that schools should maintain communication during a crisis. Roughly equal percentages of parents reported that the school should either provide information about the emergency plan prior to the crisis (19.0%) or have adequate supplies on hand (19.8%). In a similar vein, 12.2 percent report that schools should have adequate crisis personnel. Finally, roughly equal percentages of parents report that their confidence would be enhanced if the school had a plan in place (10.0%) or that they are currently happy with the existing state of affairs (10.8%). It is clear from these responses and those above that improved communication is the most pressing concern for parents and guardians.

V. Public Response to a Dirty Bomb Attack while at Work

The core of the 2011 Behavioral Survey of the NCR is the presentation of scenarios to the respondent. Each scenario describes an unannounced terrorist attack on the area, in which one or more "dirty bombs" are detonated while the respondent is at work. As will be described in more detail below, the scenarios varied by hazard level, by whether or not phone service was available at the time of the emergency, and by whether the respondent or their "loved one" was instructed to shelter in place. After listening to each scenario, the respondent was asked if they would stay at work or leave immediately. Most of the follow-up questions were the same as those used in the 2009 Behavioral Survey of the NCR, but we did not ask for the same degree of detail about evacuation behaviors and destinations. This section reviews the design of the various scenarios that were tested, discusses the percentages who would shelter in place versus those who would depart their workplace under different scenarios, and explores factors that significantly predict how many people will shelter in place and how many will leave work immediately.

The Scenarios: Experimental Design

As in the 2009 Behavioral Survey of the NCR, we tested scenarios at three levels of hazard. In this survey, however, we did not ask any respondent to imagine themselves to be at home during the attack: all were asked to imagine themselves to be at their primary workplace during a weekday afternoon when the attack occurred. In the "minimum" hazard level, a single radiological dispersion device (referred to in the survey as a "dirty bomb") explodes at a location far away from the respondent's work location. For those who work in Maryland or in Washington, D.C., the location was described as Tyson's Corner, VA. For those who work in Virginia, the location was described as College Park, MD. The respondent is told that people in the area near the explosion have been instructed to shelter in place, but no instructions have been issued for people in the respondent's area. In this sense, the minimum hazard scenario is *not* a 'shelter-in-place' scenario for the respondent.

In the "moderate" hazard level, the dirty bomb explodes in a building just a mile away. We tested two different versions of this scenario: in one version, the bomb explodes a mile away from the respondent's own workplace location, with the wind blowing in the direction of the workplace. Authorities have asked people in the respondent's area to seek shelter indoors (i.e., to shelter in place) for 24 hours or until the "all clear" is given. In the second version, the bomb explodes a mile away from the location of their loved one — be it a child's school, a spouse's workplace, or the home of an aging parent. Again, the wind is blowing in the direction of the loved one's location, and people in the loved one's area have been instructed to shelter in place.

The moderate scenario was presented in two different sequences. Some respondents were asked first about the scenario in which the bomb explodes near their place of work, and then asked to consider the scenario when the bomb location is near to the loved one. Other respondents were asked in the reverse order, considering first the scenario in which the loved one has been told to shelter in place, then moving on to the scenario where their own workplace is under orders to shelter.

In the "maximum" scenario, several bombs have gone off around the region, including one just a mile from the respondent. Both the respondent and the loved one are in areas where authorities have asked everyone to shelter in place.

For the minimum and maximum hazard scenarios, we added one further variable. Respondents were asked what they would do in a scenario where we did not specify whether phone service was available — implicitly, most respondents assumed they could use their landline or cell phone to contact loved ones or to seek further information. We then repeated the scenario with a significant change: landline and cell phones are not working, and the cell phone

cannot be used to send text messages or to access e-mail or the internet.

There were thus a total of six different scenarios that were presented to respondents in the survey, as seen in Table V-1. Since the order of presentation of the two moderate scenarios was randomly varied, there were four different paths through the scenario sequence, as displayed in Table V-2. Every respondent thus considered two scenarios, and the four paths were randomly assigned to respondents in equal proportions. In all, the 816 survey respondents gave their reactions to 1,625 hypothetical scenarios.

Table V-1. Hazard level variations

Hazard Level		Asked to shelter	Phone Service
Minimum	A	No one	Yes
	B	No one	No
Moderate	A	Respondent	Not specified
	B	Loved One	Not specified
Maximum	A	Everyone	Yes
	B	Everyone	No

Table V-2. Four paths through the survey

Paths through scenarios
Path 1: Minimum with phone→ Minimum no phone
Path 2: Moderate respondent SIP→ Moderate loved one SIP
Path 3: Moderate loved one SIP → Moderate Respondent SIP
Path 4: Maximum with phone→ Maximum no phone
Each respondent randomly assigned to hazard level and hears both scenarios. *In this report, path 2 and path 3 are combined.*

Our experiment in sequencing the two moderate scenarios (path 2 compared to path 3) yielded only small differences due to the sequencing. When respondents were presented first with the situation where they were asked to shelter in place but their loved one was not, they were a little more likely to shelter in place than when they heard this scenario second. Similarly, they were a little more likely to shelter in place when first hearing that their loved one was under SIP instructions (but they were not) than they were when this was the second scenario presented. The differences due to sequencing were small, so in the remainder of this section we combine the results for each scenario from asking about it first and second. This yields a total of six scenarios to consider, two for each hazard level, as was seen in Table V-1 above.

A Glance at our 2009 Results

The 2011 Behavioral Survey was designed to investigate more deeply the expected behavior of people who would find themselves at work when a terrorist dirty bomb attack occurred. In the 2009 Behavioral Survey, we randomly assigned respondents to imagine themselves either at home or at work during the incident. (Those incidents were also randomly varied by hazard level, by whether or not there was prior warning, and by the source of the official instructions.)

We summarized our key 2009 results about workplace responses as follows:

> *[I]f the event were to happen while the respondent was at work, and the bomb was detonated far away from the work location, less than half of respondents would stay at the workplace. . . . If the bomb were detonated a mile away from the workplace, the majority would shelter in place at work, although the percentage doing so was less than for those experiencing the event at home.*[4]

A table in our report on the 2009 survey gave more specific percentages for behavioral responses at each hazard level; these results are reproduced in Table V-3 below.

[4] Guterbock et al., *Population Behaviors in Dirty Bomb Attack Scenarios,* p. 31.

Table V-3. *From the 2009 survey:* Shelter or evacuate--at work or other building[5]

Work or Other Building	Hazard Level		
	Min	Mod	Max
Stay at work	41.3	67.8	71.2
Go home	32.6	12.2	4.7
Go to another place	10.6	10.3	17.7
Continue with activities	3.9	9.7	--
Something else	11.6	--	6.4

While these results were fairly encouraging in the degree to which they suggested people would comply with direct instructions to shelter in place (as seen in the moderate and maximum scenarios), it is of great concern that so many workers would leave their workplace immediately if the attack occurred far away from them and they were not instructed to stay in place. As has been clearly shown by our concurrent work that integrates those survey results with data from metropolitan transportation models,[6] a mass exodus from work at this scale, across the region, would subject key parts of the regional road network to loads that greatly exceed their carrying capacity.

However, an important difference between the 2009 survey and the present one is that the 2009 study sample was not limited to those who actually work outside the home. For that reason, in the 2009 survey some respondents (those randomly assigned to the non-home scenario who did not have place of work) were asked to imagine themselves to be in another building outside of their community when the incident occurred. For many, this was a shopping center, a school, or some other public building. Therefore, the 2009 data on non-home scenarios summarized in Table V-3 include responses from some people who were imagining themselves to be in fairly unfamiliar surroundings at the time of the incident. Closer examination of the 2009 data revealed that these people were less likely to say they would shelter in place than those who were actually imagining themselves to be at their workplace. We avoided this difficulty in the 2011 survey by limiting participation to those who actually work outside of the home ten or more hours per week.

Decision to Stay or Go

The results of our 2011 Behavioral Survey are fundamentally similar to those of 2009, but provide far greater detail on factors that will affect a worker's decision whether to shelter in place or evacuate in case of a terrorist dirty bomb attack. As in the 2009 survey, we find that a large proportion of workers will leave the workplace if the bomb explodes far away from their workplace and they are not instructed to shelter at work. However, the percent saying they would leave immediately is not as great as we reported in 2009, most probably because this survey includes only actual workers and no respondent was imagining themselves to be at a non-work location. We also find in 2011 that workplace compliance with a shelter-in-place instruction is fairly high, with far smaller percentages leaving work immediately if they have been told to shelter. In the sections that follow, we examine some of the key factors that affect the decision of the worker to stay or go.

Key Factors in Decision to Stay or Go

Phone service working?

It was clear in the focus groups that we conducted with parents and non-parents alike that a key concern of workers in an emergency situation is whether or not they can obtain good information on the safety of their loved ones who are not with them at work, whether these be children at school or a spouse or partner either at another workplace or at home. If a worker is unable to reach their loved ones to determine that they are safe, he or she may feel compelled to travel to their loved one's location to ensure

[5] *Ibid*. Table III-5, p. 26.

[6] Lambert et al., *Scenario-Based Evacuation Estimation*.

their safety.[7] Our survey design allows us to examine directly the effect of phone and Internet service on a worker's shelter-in-place decision.

As noted above, those respondents assigned to the minimum or to the maximum hazard level were first asked what they would do in the scenario. In the first presentation of the scenario, no direct reference was made to the availability of phone service; it can be presumed that most respondents imagined that phone service was available to them. In the second presentation of the minimum or maximum hazard-level scenario, respondents were told:

> *I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now there is no phone service. Landline phones and cell phones, including text messaging, are not working. Internet features are not accessible by either computer or smart phone. Remember, we are imagining you are at work when you get this news. Please consider how that might affect your decisions.*

As seen in Table V-4, the availability of phone and internet service makes a substantial difference in a worker's decision on whether to stay or go in the minimum hazard situation. When a dirty bomb explodes far away, the worker has not been told to shelter in place, and phones and Internet are working normally, about one-third of all workers (32.6%) say they would leave immediately. But when told explicitly that cell phones, landlines and Internet services are not working, more than half of all workers (55.8%) say they would leave immediately.

Table V-4: Stay/Go response by: Phone service working (Minimum Hazard Level)

Minimum Hazard Level	Phone	No Phone
Stay or Continue with Activities	58.7	41.3
Call, Seek Info, Depends on Situation	8.7	2.9
Leave immediately	32.6	55.8

A similar effect is seen in the maximum hazard-level scenario (see Table V-5). When multiple bombs have exploded around the region, including one just a mile away from work, and both the worker and his or her loved one have been instructed to shelter in place, only one in five workers (20.4%) say they would nonetheless leave immediately. In contrast, if there is no phone or internet service available, half again as many (30.8%) will leave immediately.

Table V-5: Stay/Go response by: Phone service working (Maximum Hazard Level)

Maximum Hazard Level	Phone	No Phone
Stay or Continue with Activities	76.5	64.3
Call, Seek Info, Depends on Situation	3.2	4.9
Leave immediately	20.4	30.8

In Table V-6, the results from the minimum and maximum hazard level scenarios are combined for a more detailed look at how workers will respond with and without phone service. Lack of such services increases the percent leaving from 25.7 percent to 41.5 percent. In the original scenario, which is silent about phone service, 3.8 percent mention that they would try

[7] Some focus group participants specifically recounted their experiences during the September 11, 2001 attack on the Pentagon, when cell phone service was largely unavailable for most of the day.

to call to find out if their loved one is safe, but this drops to zero (as it ought to) when phone service is not working. In the no-phone scenarios, the same percentage (3.8%) say their decision would hinge on other information, which would necessarily be obtained through public media or other sources.

Table V-6: Stay/ Go response by: Phone Service Working

Min and Max Hazard Levels	Phone	No Phone
Stay	67.2	53.3
Continue with Activities	1.5	1.0
Call about Loved One	3.8	0.0
Depends on Other Info	1.8	3.8
Something Else	0.0	0.5
Leave immediately	25.7	41.5

These results show that when the phones go dead, regional traffic gridlock will be greatly worsened as workers leave their jobs and seek to get home or to the school to find out if their loved ones are safe. There are several clear, practical implications. If emergency planners want to minimize the gridlock that would occur in a terrorist dirty bomb attack, provisions should be made to (1) expand the capacity of the cell phone system in an emergency and (2) educate the public about the need to use text messaging instead of voice phone calls on wireless telephones, to lessen the load on the network during the emergency.

Who was asked to shelter: respondent or 'target'?

Those respondents who were presented with the moderate hazard level scenarios were each asked to consider two quite different situations, each involving just one dirty bomb explosion. In one scenario, the dirty bomb has exploded just a mile from the workplace, and people in the area of the respondent's workplace have been instructed to shelter inside a building for 24 hours or until an "all clear" has been announced. The respondent's loved one, however, is in an area where no instructions to shelter have been announced. In the alternative scenario, the bomb has exploded just a mile from the loved one's location, and people in that area have been instructed to shelter, while the respondent's workplace is not under any shelter-in-place instruction.[8]

As can be seen in Table V-7, these two situations yield substantially different responses from workers. If the worker is told to shelter in place and he or she knows that the loved one has not been instructed to shelter, fewer than one in six workers (15.7%) will leave immediately, and about 80 percent will stay at the workplace. When the situation is reversed, the worker is under no restriction and he or she knows that the bomb has gone off near the loved one, workers are about evenly split between those who will leave immediately (43.9%) and those who will stay in place (44.6%) with one in nine (11.5%) basing their decision on further information they would try to obtain.

Table V-7: Stay/Go response by: Who is sheltering in place?

Moderate Hazard Level	Respond. SIP	Loved One SIP
Stay or Continue with Activities	79.9	44.6
Call, Seek Info, Depends on Situation	4.4	11.5
Leave immediately	15.7	43.9

[8] As noted above, we randomly varied the sequence in which these two scenarios were presented. Since differences due to sequence were small, we present here the combined results for each scenario, taking together the results obtained when each was considered first or second by the respondent.

Work plan

As discussed in Section III, each respondent was asked, after responding to the randomly selected pair of scenarios:

> *Some workplaces have made extensive plans for an emergency and the continuity of operations and for others it may not seem as necessary.*
>
> *This section will ask about **your** workplace.*
>
> *Does your workplace have an emergency plan prepared so that employees know what is expected of them in situations such as we just described?*

As can be seen in Table V-8, the existence of an emergency plan at the workplace (or the worker's awareness of such a plan) has a significant effect on the worker's response to a terrorist dirty bomb attack. In this table, we combine results from all six scenarios that we asked about. The percentage who say they would leave immediately nearly doubles from 24.0 percent of those who say their workplace definitely has a plan to 47.1 percent of those who say their workplace definitely does not have a plan. The percentage who would leave trends upward as uncertainty about the plan increases. Similarly, the percent who would stay at work drops from nearly 70 percent of those who definitely have a workplace emergency plan to less than half (48.8%) of those who definitely do not.

Table V-8: Stay/Go response by: Presence of an emergency plan at work

All Hazard Levels	Definitely	Probably	Don't Know	Probably Not	Definitely Not
Stay or Continue with Activities	69.8	58.2	55.2	54.3	48.8
Call, Seek Info, Depends on Situation	6.3	7.6	10.3	6.9	4.1
Leave immediately	24.0	34.2	34.5	38.9	47.1

Critical function of the workplace or the worker

Not all jobs are of equal importance in a time of emergency. It is useful to distinguish employees who work in critically important agencies or companies, as well as those whose positions might be considered critical within their agency or company. This is of interest for two reasons. First, it can help to explain why some workers are more likely to stay at the workplace in an emergency, despite the pull of other obligations. Second, it is of direct interest for the community as a whole from the point of view of continuity of operations in an emergency. Will people in critically important positions stay on the job when an emergency happens?

We asked two questions related to this point, each of which could be answered "yes" or "no":

> *Does your workplace provide goods or services that are critical to the functioning of your community during an emergency?*
>
> *Is your job necessary to the short-term functioning of your place of business?*

The results were only partly as we expected. As can be seen in Table V-9, those who say their workplace performs critical functions are far more likely (across all hazards combined) to stay

at work (70.6% stay) than those who say no to this question (57.3% stay).[9]

Table V-9. Stay/Go response by: Critical workplace

All Hazard Levels	Critical	Not Critical
Stay and/or Continue with Activities	70.6	57.3
Call, Seek Info, Depends on Situation	6.7	5.9
Leave immediately	22.7	36.8

However, as Table V-10 shows, there is no significant difference in the decision to stay or go according to whether or not the worker sees his or her job as being necessary to the short-term functioning of the organization. In results not shown here, we combined these two questions to identify persons whose job is necessary to an organization that carries out critical functions, expecting these to be the workers most likely to stay. However, the respondent's perception of his or her job as necessary to the organization had no effect on the stay/go decision among those in critical organizations or among those in non-critical organizations.

[9] Similar effects for working in a critical organization are seen when these results are broken out for the different levels of hazard.

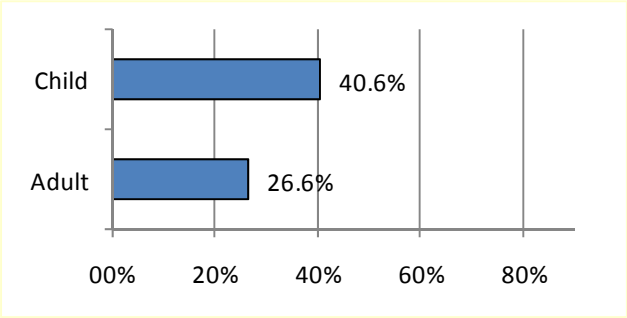
Table V-10: Stay/Go response by: Necessary job

All Hazard Levels	Necessary	Not Necessary
Stay or Continue with Activities	61.9	60.3
Call, Seek Info, Depends on Situation	5.5	6.4
Leave immediately	32.6	33.3

Characteristics of the loved one: child vs. adult, age of child, alternative care

We know that, in an emergency situation, the decision of the worker on whether or not to stay at work is based not only on assessments of risk but also on how he or she balances the competing obligations of work on the one hand, and family and loved ones on the other. We expect that the pull of obligations to a child will typically be stronger than the obligation to take care of an adult, who might be expected in many cases to have other resources of aid available. Figure V-1 bears out this notion. Respondents who had a child in mind as their "loved one" when considering the scenarios were more likely to leave immediately (40.6% across all scenarios) than those who had an adult in mind (26.6%).

Figure V-1: Percent leaving immediately by: Is a loved one a child or an adult?



We also expected that a worker would be less likely to leave the workplace if they had

someone else they could rely upon to fill the caretaker role while they remained at work. We asked:

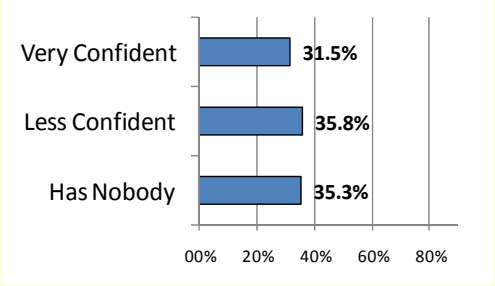
> *These next questions have to do with the support you might get from others during an emergency. Do you have someone that you can count on to take care of your loved one for a day or two if you weren't able to?*

We further asked:

> *How confident are you that this person would be able and willing to care for your loved one on a workday afternoon?*

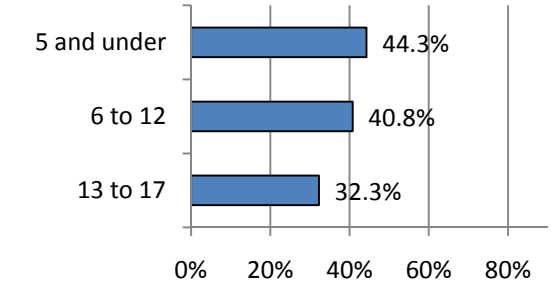
Somewhat surprisingly, the answers to these questions did not have a significant effect on the decision to stay or go. Those who have someone to care for the loved one were only slightly less likely to leave the workplace than those who had no one, as seen in Figure V-2. Those who had someone to take care of their loved one, but said they were not 'very confident' about that person's availability to give care, were just as likely to leave (35.8%) as those without anyone available (32.0%) . Again, these differences, while in the direction expected, were small and not statistically significant.

Figure V-2: Percent leaving immediately by: Someone else who can provide care? Confident that person willing and able?



Turning the focus on just those respondents who had a child in mind as their "loved one," and again summarizing across all types of scenarios, we see in Figure V-3 that the age of that child makes a significant difference in the likelihood of a worker leaving the workplace. Most likely to leave immediately are those with pre-school children who are out of the home during the workday (44.3% leaving immediately). Those with elementary-school aged children from 6 to 12 are next most likely (40.8%), and those with teenagers 13 to 17 years old are least likely to leave their workplace (only 32.3% saying they would leave). It is noteworthy that all of these percentages are higher than the 27 percent reported among those whose "target" or "loved one" is an adult.

Figure V-3: Percent leaving immediately by: Age of the target child



Awareness of school emergency plans and perceptions of the school's role and preparedness

In this section, we focus only on respondents who were parents of children who are outside the home during the day, either at school or at day care outside the home.

As noted in section IV, we asked parents whether their school or childcare center has an emergency plan. They could answer "definitely," "probably," "probably not," or "definitely not," or they could say they "don't know." As can be seen in Table V-11, which summarizes results across all types of scenarios we asked about, working parents are less likely to leave work in an emergency if they "definitely" think their school has an emergency plan in place (36.2% would leave) than if they only think there "probably" is a plan in place (46.1% would leave). This result suggests that the number of people leaving work in an emergency could be reduced if more parents were better informed about the emergency plans in place at their schools or daycare centers.

Table V-11: Stay/Go response by: Presence of Emergency Plan at Child's School

All Hazard Levels	Definitely	Probably	No Plan or DK
Stay or Continue with Activities	53.2	57.6	57.1
Call, Seek Info, Depends on Situation	16.6	6.3	1.8
Leave immediately	36.2	46.1	41.1

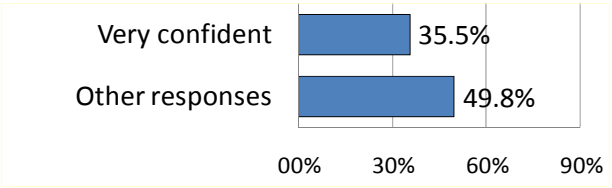
We asked parents who said that their school "definitely" or "probably" has an emergency plan how familiar they were with the plan. However, their self-reported familiarity with the plan did not significantly affect their decision to stay or leave work in an emergency.

We asked further:

> *How confident are you that the school can take care of children for up to 24 hours?*

Answers to this question had a strong effect on whether a parent would choose to leave the workplace immediately. Averaging across all types of scenarios, just over a third of parents (35.5%) who were "very confident" that the school could take care of their child say they would leave work immediately. Among those who expressed less confidence on this question, half of the parents (49.8%) would leave work immediately. This result indicates that the number of people leaving work in an emergency could be reduced if one could increase the confidence that parents have in the ability of the school or childcare center to take care of their child.

Figure V-4: Percent leaving immediately by: Confidence that child will be cared for at school

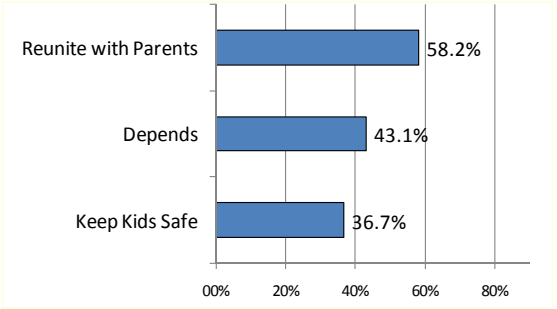


We also asked parents to give us their opinion on what the primary goal of the schools should be in an emergency:

> *Should the school's primary goal in an emergency be to keep children in their care and take care of them to the best of their ability, or should it be to reunite children with parents?*

As seen in Figure V-5, answers to this question were strongly predictive of whether a parent would choose to leave the workplace in an emergency. Well over half of the parents (58.2%) who felt that the schools' primary goal should be to reunite children with parents say they would leave work in a dirty bomb scenario. This contrasts with the 37 percent leaving among those who think the schools should focus on safety of the children as their primary goal.

Figure V-5: Percent leaving immediately by: primary goal of school in emergency



Other Factors

We asked respondents whether they were taking any daily medications that they would need to take even in an emergency (27 percent said yes). We asked those who said "yes" if they had sufficient supply of that medicine at work to last for 24 hours, and two thirds (67.2%) said they did, while the others did not. However, when

these groups were compared across all types of scenario, there was no significant difference in the likelihood of their leaving work immediately.

We also asked respondents if they had pets at home, and about 43 percent said they did. However, there was no significant effect of pet ownership on the decision to stay or leave work, when compared across all types of scenarios.

The gender of the respondent was also not significantly related to the decision to stay or go. Persons with less education and with lower incomes were somewhat more likely to leave the workplace in an emergency, but these differences are probably attributable to effects (reviewed above) that different types of workplaces have on the decision to stay or leave.

Summary of Findings

As in the 2009 survey, many will leave work if a dirty bomb attack occurs and they are not asked to shelter.

- About 44% would leave work immediately if the incident is near their loved one and they are not told to shelter.
    - The great majority of workers will comply with direct instructions to shelter in place
- About 80% will stay at work if told to shelter and loved one is not in danger from the incident
    - If telephone service is not available, the number leaving work increases from about 20 percent to about 30 percent
    - This effect occurs for those not told to shelter (minimum hazard level scenario) and those told to shelter (maximum scenario)
- Workers are more likely to leave immediately if:
    - They don't think their workplace has an emergency plan in place
    - Their workplace does not have a critical function in an emergency
    - Their loved one is a child
- Parents are more likely to leave work if:
    - The child is pre-school or elementary aged
    - They are not sure about the school's emergency plan
    - They are not "very confident" that the school can care for the child
    - They think the school's primary goal should be reuniting children with their parents

VI. Overall Summary of Findings

The 2011 NCR Behavioral Survey on issues in sheltering in place during an emergency focused on choices that might be faced by members of the region's workforce if an unexpected terrorist attack involving one or more "dirty bombs" were to occur on a weekday afternoon. The study is based on telephone interviews with 816 adults who reside in the region and who work outside the home ten or more hours per week. Building on and extending the results of the 2009 survey, the present survey was designed to shed further light on the forces that would drive decision-making for workers faced with the choice of staying at work or heading elsewhere in case of a dirty bomb attack. It is clear from the 2009 survey results that planning and policy actions are needed that would lessen the number of workers who would leave work immediately if such an emergency were to occur during business hours.

The survey asked detailed questions about the respondent's workplace and, in particular, about workplace emergency plans. We asked about how workers normally communicate with their loved ones, how they would communicate in an emergency, and how they might communicate if their normal means of connection were not working. Parents were asked in detail about their schools' emergency plans and about their confidence in the schools' ability to care for their children in an emergency.

The heart of the survey was a varied series of hypothetical scenarios, each one involving one or more dirty bombs and asking the worker if he or she would choose to stay at work or leave immediately if that situation were to occur. By randomly varying these scenarios across the respondents and comparing the resulting decisions, we have learned a great deal about the factors that affect a worker's decision to stay at work or to leave. Here we will briefly review the survey findings and address their potential implications for policy.

Workplace Emergency Plans

About half (48.2%) of the area's workers say that they "definitely" have an emergency plan at their place of employment, and another 22 percent say they "probably" have such a plan. However, the coverage by workplace emergency plans varies considerably by various workplace characteristics.

- People working for local, state, or federal government are much more likely to be aware of a workplace emergency plan compared to individuals working in the private sector or in small enterprises.
- People in workplaces with more than 50 employees are much more confident in their ability to shelter in place at work.
- People working in high rises (4+ stories) are more aware of a workplace emergency plan and are more confident in their ability to shelter in place compared to those working in other building types.
- The closer people work to the District of Columbia, the more likely they are to be aware of their workplace emergency plan.

There are demographic differences in who is confident in their ability to shelter at work:

- Those who take the metro to work are most confident (75%) in their ability to shelter in place at work, while bus riders (55%) are least confident.
- Asians are most likely to believe that their job is critical to the functioning of the community compared to whites, blacks, and Hispanics.
- Those with college degrees are more confident in their ability to shelter at work compared to workers without a college degree.

How Workers Communicate with their Loved Ones

Cell phones and e-mail are the main means of communication that area workers use in normal circumstances. In an emergency, the vast majority of workers (75.3%) would use a cell

phone to contact their loved ones. If their primary means of communication were unavailable, most say they would use landline phones (42.4%) or e-mail (36.8%) to contact their loved ones.

Only half of the region's workers (50.6%) are aware that sending a text message puts less burden on the phone network than placing a cell phone call.

Awareness of School Emergency Plans and Attitudes about the School's Role

Most parents in the region report that the school or childcare center which their youngest child attends does have an emergency plan in place. Close to half (45.3%) say there is "definitely" a plan in place at the school, while 34.9 percent say there "probably" is such a plan.

- Parents of pre-school children cared for outside the home are much less likely to say that the daycare center "definitely" has a plan in place (29%) than are parents of elementary school children (67%). Parents of older children (13-17) fall in between, with 47 percent saying the school "definitely" has a plan.
- Overall about 65% of respondents are very confident that the school could care for their children for up to 24 hours.
- There were no significant differences among counties in that confidence.
- 70% of Whites and Hispanics are very confident whereas about 50% of Blacks and Asians express confidence that the school could care for their child.
- Blacks are the only group in which some parents (7%) indicated a complete lack of confidence in the school's ability to care for their child.

When asked what the primary goal of the schools should be in the event of an emergency, three quarters of parents (76.2%) said the goal should be to keep the children safe. Just 13.8 percent said the primary goal should be to reunite children with their parents.

The Decision to Stay at Work or to Leave

As in the 2009 survey, workers would largely be compliant with direct instructions from authorities to shelter in place at work. In 2011 about 80% will stay at work if told to shelter and their loved one is not in danger from the incident

However, if a terrorist attack occurred elsewhere in the region and they were not under instructions to shelter, large numbers of workers would choose to leave work immediately. About 44% would leave work immediately if the incident is near their loved one and they are not told to shelter.

If telephone service is not available, the number leaving work increases from about 20 percent to about 30 percent. This effect occurs for those not told to shelter (minimum hazard level scenario) and those told to shelter (maximum scenario).

Workers are more likely to leave immediately if:

- The phones and internet stop working,
- They don't think their workplace has an emergency plan in place,
- Their workplace does not have a critical function in an emergency,
- Their loved one is a child.

Parents are more likely to leave work if:

- The child is pre-school or elementary aged,
- They are not sure about the school's emergency plan,
- They are not "very confident" that the school can care for the child,
- They think the school's primary goal should be reuniting children with their parents.

Some Directions for Future Planning and Policy

The 2009 survey results and the transportation modeling that followed have shown that if large numbers of people leave work when a daytime terrorist attack occurs, the result will be a virtually total gridlock of the region's highway network. Reducing the number who choose to leave in the event of a dirty bomb attack is important for several reasons: it protects those in the path of the bomb's radiation from exposure, prevents them from carrying radioactive particles to other parts of the region, allows for orderly response and decontamination operations by authorities, helps to ensure continuity of operations in critical services, and — if the large numbers of workers distant from the attack site can be induced to stay in place — reduces the region-wide traffic gridlock that might otherwise occur. The results of the present study suggest several lines of intervention and education that could be pursued in an effort to reduce the number of workers who would choose to leave their workplaces.

- This survey shows that workers are much more likely to leave the workplace if the telephone network ceases to operate. But many are unaware that sending a text message puts a far lesser burden on the cell phone network than does placing a voice call. These findings suggest that it would be helpful to educate the public about minimizing calls and using text messages instead of voice calls to communicate in an emergency.
- It would also be useful to consider providing temporary capabilities that could boost the capacity of the cell phone network in a time of emergency.
- Workers are more likely to leave if their workplace does not have an emergency plan in place, or if the worker is unaware of it. Larger enterprises and bigger buildings are more likely to have plans in place. Planning agencies could target their efforts toward helping smaller enterprises create emergency plans, and helping larger employers make their employees aware of the plans they do have in place.
- Parents are more likely to leave work in an emergency if they aren't certain that the school or daycare center has emergency plans in place and if they aren't confident that the school can take care of their child. School emergency planners should be encouraged to reach out to parents more regularly to make them aware of the school's plans and capabilities for an emergency that would require children to shelter in place at the school. Daycare centers may need assistance in formulating such plans.
- Plans should be made (or technologies developed) for assisting parents in knowing that their children are secure, and that they can stay at work until the "all clear" is given without undue concern about the safety of the children.
- Schools can also drive home the message that their primary concern in such an emergency is to ensure the safety of the children, and that immediately reuniting children with their parents cannot be the primary concern in a scenario that requires sheltering in place at the school.

This survey has increased our understanding of how workers make the complex decision to shelter at work or to leave the workplace when a serious emergency situation suddenly arises. We hope that the study results will be of assistance to the National Capital Region's policy makers, planners, emergency managers, and first responders as they continue their work to ensure public safety and welfare in the event of a major terrorist event.

Appendix A:
Questionnaire

Work, School or Home:
Issues in Sheltering in Place during an Emergency
Questionnaire – Production

{Q: INTRO}

Hello. I am calling from the University of Virginia. We're conducting a survey to learn about the reactions that residents of the Washington Metro Area might have when faced with a regional emergency, such as a terrorist attack.

IF FINISHING INCOMPLETE SURVEY
IV: "PARTIAL"
IF APPROPRIATE, SAY: We had started a survey with someone in your home but were unable to complete it. Would this be a good time to finish up the questions?

{Q:INTRO1B}

We're conducting a survey to learn about the reactions that residents of the Washington Metro Area might have when faced with a regional emergency, such as a terrorist attack.

If you are currently doing any activity that requires your full attention, I need to call you back at a later time.

1 NO ANSWER/TEMP UNAVAIL
2 BUSY /NETWORK BUSY
3 ANS MACH/VOICEMAIL/SYSTEM MSG
4 BAD NUMBER / WRONG PHONE TYPE
5 IMMEDIATE HANGUP
6 IMMEDIATE REFUSAL
7 CALLBACK/CALL LANDLINE
8 GO ON (F5 FOR CASE INFO)

{Q:INTRO2}

You may have recently received a postcard about our project. The survey is part of work being done by state and local governments in the area. My name is _____ and it will just take a moment to randomly select someone from your household to participate in the research.

Qualified respondents will be compensated $10 for answering our questions.

If you would prefer, I would be happy to call you back on a landline phone to conduct this interview at a time that is convenient for you.

IF APPROPRIATE: We can conduct the interview in English or Spanish.

Which would you prefer?

1 ENGLISH - GO ON
2 SPANISH - GO ON
3 CALL BACK
4 CALL BACK WITH SPANISH SPEAKER
9 REFUSED

IV: IF NECESSARY - We're not selling anything or asking for money. The Univ. of Virginia Center for Survey Research is conducting a survey on behalf of the Virginia Department of Emergency Management.

IV: IF ASKED: The survey is sponsored by a consortium of state and local governments in the national capital region and by the Department of Homeland Security.

{Q: ADULTRES}

First, I need to confirm that you are at least 18 years old, and that you live at the residence I am calling. [IF NECESSARY SAY: Your answers are confidential, and we don't use anybody's name.]

1 R IS RESIDENT ADULT, PROCEED [GO TO CONFIRM]
2 R IS NOT RESIDENT OR ADULT, WE NEED TO GET ONE [GO TO REINTRO]
3 REFUSED

{Q:ADULTCEL}

First, I need to confirm that you are at least 18 years old.
1 YES
2 NO
3 DON'T KNOW/REFUSED
IV: IF PERCEIVE THAT MAY NOT BE CONDITIONS FOR AN INTERVIEW, ASK: Are you in a position to answer some questions without distraction or in conditions that are comfortable to you?

{Q:ADGO}

INTERVIEWER: IF NEED TO CALLBACK SELECT 2

OTHERWISE, SELECT 1 AND MOVE ON TO RANDOMIZATION
1 R1 READY, PROCEED
2 R1 CALLBACK [WON'T NEED NAME]
3 R1 REFUSES

{Q:ADCOME}

Can you ask someone 18 or older who lives in your house to come to the phone?
1 YES, ASKING RESIDENT ADULT TO COME TO THE PHONE
2 NO, CAN'T ASK RESIDENT ADULT TO COME TO THE PHONE
3 REFUSES TO ASK RESIDENT ADULT TO COME TO PHONE

{Q:ADCALLBK}

Would it be possible to reach an adult at another time?
1 YES, SCHEDULE CALLBACK
2 NO (OR NOT SURE), ADULT NOT AVAILABLE DURING STUDY PERIOD
3 REFUSED

{Q:REINTRO}

Hello. My name is _____. I am calling from the University of Virginia. We're conducting a survey to learn about the reactions that residents of the Washington Metropolitan Area might have when faced with a regional emergency, such as terrorist attack.
You may have recently received a postcard about our project.
If you're ready we can go ahead and select a participant for the survey.
1 R1 READY, PROCEED
2 R1 CALLBACK [WON'T NEED NAME]
3 R1 REFUSED
IV: IF ASKED: The survey is sponsored by a consortium of state and local governments in the national capital region and by the Dept of Homeland Security.

{Q: COUNTY}

Which city or county do you live in?
1 Arlington County, VA
2 Alexandria City, VA
3 District of Columbia or Washington D.C.
4 Fairfax City, VA
5 Fairfax County, VA
6 Falls Church City, VA
7 Loudoun County, VA
8 Manassas City, VA
9 Manassas Park City, VA
10 Montgomery County, MD
11 Prince George's County, MD
12 Prince William County, VA
13 Other (please specify) _____
14 Don't Know/Refused

{Q:COUNTOTH}

Is that in the Washington Metropolitan area?
IV, IF NECESSARY: THE WASHINGTON METROPOLITAN AREA INCLUDES THE DISTRICT OF COLUMBIA; PRINCE GEORGE'S COUNTY, MD; MONTGOMERY COUNTY, MD; ALEXANDRIA CITY,VA; ARLINGTON COUNTY, VA; FAIRFAX COUNTY, VA; LOUDOUN COUNTY, VA; PRINCE WILLIAM COUNTY, VA; AND ALL INDEPENDENT, INCORPORATED TOWNS AND OTHER TOWNS WITHIN THE BOUNDARIES OF THOSE COUNTIES.

1 YES
2 NO
3 DON'T KNOW
4 REFUSED

Work Location

{Q:OUTSIDE}

Do you work outside your home during the day, that is morning or afternoon, for pay?

1 Yes
2 No, does not work outside the home
8 Does Not Know
9 Refused

IF NO to Q:OUTSIDE

{OUTSIDE2}

Okay, then, is there another adult living in the household who does?

IV: IF NEC: I mean an adult over 18 in the household who works for pay outside the home during the day, that is morning or afternoon?

1 YES
2 NO, NO ONE HERE WHO WORKS OUTSIDE THE HOME DURING THE DAY
8 DON'T KNOW
9 REFUSED

IF NO to Q:OUTSIDE2

{Q:HOWMANY}

To ensure a valid survey, I need to randomly select an adult in your household to complete the interview with.

[IV: IF NECESSARY --> If we always interview the person who answers the phone the survey will not accurately reflect the opinions of the whole population.]

So could you please tell me how many adults 18 and over there are in your household including yourself?

{Q:LASTBDAY}

The computer has randomly determined that one of the adults other than yourself should be selected for the rest of the interview.

To help us select this person, do you know who has had the most recent birthday among these adults?

[IF NECESSARY SAY: I don't mean the youngest person in your house; I mean the last one other than yourself to have had a birthday according to the calendar.]

1 R1 says YES, I HAD LAST BIRTHDAY
4 R1 says YES, KNOWS OTHER ADULT HAD LAST BIRTHDAY
8 R1 SAYS DOESN'T KNOW WHO HAD LAST BIRTHDAY
9 REFUSED TO SAY WHO HAD LAST BIRTHDAY / R1 REFUSES TO CONTINUE

IF YES Q:OUTSIDE:

{Q:WRKHRS}

How many hours per week do you work on average?

1 Less than 10
2 10-20 hours
3 20-30
4 35 hours or more
5 DON'T KNOW
6 REFUSED

{Q:WORK}

Then to sum up, which of the following categories best describes you?

IV, PAUSE AFTER READING FIRST 2 CATEGORIES - DAY AND NIGHT ARE IMPORTANT

1 Working outside the home full time during the day [35 HRS/WK OR MORE]
2 Working outside the home part time during the day
3 Work at home full time
4 Work at home part time
5 Work nights full time
6 Work nights part time
7 Looking for work
8 Homemaker/Stay at home parent
9 Retired
10 Student
A TEMPORARILY LAID OFF OR DISABLED (VOLUNTEERED)
B PERMANENTLY DISABLED (VOLUNTEERED)
D OTHER [SPECIFY:]
E DON'T KNOW/REFUSED

IV: IF NEC, EXPLAIN: The focus of the survey is the issues and priorities of both home and workplace during a regional emergency, and so we need a few questions about your work area to see if your situation fits into the study objectives.

IF NO OR <10 HOURS OUTSIDE HOME, ASK:

{Q: OTHWORK}

It looks like the study would not apply to your situation. Is there another adult 18 or older in your household who works for pay outside the home in the daytime at least 10 hours per week? This person must spend most of their time inside one building or have a central location as part of their work.

(IF MORE THAN ONE: LAST BIRTHDAY)

1 R says YES, KNOWS OTHER ADULT RESIDENT IN THAT SITUATION
3 R SAYS MORE THAN 1 OTHER ADULT RESIDENT IN THAT SITUATION
5 R SAYS NO ADULT RESIDENT WHO FITS THAT SITUATION
9 REFUSED TO SAY / SAYS DOESN'T KNOW OR REFUSES TO CONTINUE

IV: IF NEC, EXPLAIN: The focus of the survey is the issues and priorities of both home and workplace during a regional emergency, and so we need a few questions about your work area to see if your situation fits into the study objectives.

{Q: WBDAY}

Then we'll need to randomly select among these adults to complete the interview. To help us select the person, do you know who has had the most recent birthday among the adults who work outside the home during the day?

IV: IF NECESSARY SAY: I don't mean the youngest among these adults; I mean the last one to have had a birthday according to the calendar.

1 R1 says YES, KNOWS OTHER ADULT HAD LAST BIRTHDAY
2 R1 SAYS DOESN'T KNOW WHO HAD LAST BIRTHDAY
3 REFUSED TO SAY WHO HAD LAST BIRTHDAY / R1 REFUSES TO CONTINUE

IV: IF NEC, EXPLAIN:

The focus of the survey is the issues and priorities of both home and workplace during a regional emergency, and so we need a few questions about your work area to see if your situation fits into the study objectives.

{Q: WKYMOF}

Then let's use a different selection method. Among those other eligible adults, that is, over 18 years of age and working outside the home during the day for 10 hours or more: may I speak to the youngest one who is*at home now*. Is that adult available?

1 ANOTHER R IS NOW SELECTED, PROCEED
2 NO ELIGIBLE ADULT AVAILABLE RIGHT NOW, CALL BACK
3 REFUSED

IV: IF NECESSARY: If we always interview the person who answers the phone the survey will not accurately reflect the opinions of the whole population.

{Q: BLDMOST}

Is there one building where you spend most of your work time?

1 YES
2 NO
8 NOT SURE
9 REFUSED

IV: IF NEC, SAY: This would be the work location outside your home where you spend most of the time or at least ten hours per week.

IV: IF NEC, EXPLAIN: The focus of the survey is the issues and priorities of both home and workplace during a regional emergency, and so we need a few questions about your work area to see if your situation fits into the study objectives.

IF NO to *Q: BLDMOST*:

{Q: BLDMOST2}

Okay, then is there one building where you spend more than ten hours per week?

1 YES
2 NO
8 NOT SURE
9 REFUSED

IV: IF NEC, DEF: This would be the work location outside your home where you spend most of the time or at least ten hours per week.

IV: IF NEC, EXPLAIN: The focus of the survey is the issues and priorities of both home and workplace during a regional emergency, and so we need a few questions about your work area to see if your situation fits into the study objectives.

IF YES to *Q: BLDMOST*:

{Q: PICKBLDG}

We're going to call that your primary work location during this survey.

Can I have a short name for that building to refer to it as?

TYPE NAME OR DESCRIPTION:

IV, IF R DOESN'T WANT TO TELL YOU THE NAME, SAY: Okay, we'll just refer to it as "your work building.

IF NO: *Disqualified* - Exit

{Q: R1GO}

Okay, let’s move on to the rest of the survey, and I want to remind you that all of your answers are confidential, and you can decline to answer any question at any time. This survey is being conducted by the Center for Survey Research at the University of Virginia. If you have any questions as we go along, please feel free to ask.

1 R1, READY, PROCEED
2 R1 CALLBACK [GET NAME OF R1 CALLBACK MESSAGE LINE]

3 R1 REFUSES
4 RETURN TO PREVIOUS SCREEN WITHOUT SELECTING ANOTHER ADULT

WORK LOCATION

{Q:DCLIVE}

How long have you lived in the Washington Metropolitan Area?

1 Less than one year
2 One to two years
3 Three to five years
4 Six to ten years
5 Eleven to nineteen years
6 Twenty years or more, but not all my life
7 All my life
8 NOT SURE/ DON'T KNOW
9 REFUSED
A AREA IS OUTSIDE THE WASHINGTON METROPOLITAN AREA

{Q: HOWFAR}

Since the focus of the survey is the issues and priorities of both home and workplace during a regional emergency, we are asking about your job and where you work.

How far is it from your home to your primary work location? (in miles)

1 0-1 mile
2 2-3 miles
3 4-5 miles
4 6-10 miles
5 11-15 miles
6 16-20 miles
7 21-30 miles
8 31-40 miles
9 41-50 miles
10 More than 50 miles
11 DON'T KNOW
12 REFUSED

{Q:COMMUTE}

On a typical day, about how long does it take you to get to work, one way in normal traffic? (in minutes)

1	HALF HOUR	= 30 MINUTES
2	THREE QUARTERS HOUR	= 45 MINUTES
3	ONE HOUR	= 60 MINUTES
4	HOUR AND 15 MINUTES	= 75 MINUTES
5	ONE AND A HALF HOURS	= 90 MINUTES
6	ONE AND THREE QUARTER HRS	= 105 MINUTES
7	TWO HOURS	= 120 MINUTES
8	TWO AND A QUARTER HOURS	= 135 MINUTES
9	TWO AND A HALF HOURS	= 150 MINUTES
777	(ALWAYS) WORK AT HOME	

[IV: IF TELECOMMUTE, ASK HOW LONG IT TAKES IF/WHEN THEY DO DRIVE]

888 DON'T KNOW
999 REFUSED

{Q: GETWRK}

How do you normally get to work?

1 Your own car
2 Car pool
3 Public bus
4 Metro
5 Bike
6 Walk
7 OTHER (SPECIFY)
8 DON'T KNOW
9 REFUSED

IV: IF MORE THAN ONE: PROBE: Which would you consider your primary means or mode?

{Q: BLDTYPE}

What type of building is your primary location?

1 Single story building
2 Building with several stories (2-3 stories)
3 High rise (4 or more stories)
4 Trailer or temporary building
5 OTHER (SPECIFY)
8 DON'T KNOW
9 REFUSED

{Q: JOBCITY}

And could you tell me what county or city is your job located?

1 Arlington County, VA
2 Alexandria City, VA
3 District of Columbia or Washington D.C.
4 Fairfax City, VA
5 Fairfax County, VA
6 Falls Church City, VA
7 Loudoun County, VA
8 Manassas City, VA
9 Manassas Park City, VA
10 Montgomery County, MD
11 Prince George's County, MD
12 Prince William County, VA
13 Fanquier County, VA
14 Warrenton, VA
15 Elsewhere in Virginia
16 Elsewhere in Maryland
17 Another Location
18 Works all over (Volunteered)
19 DON'T KNOW/NO ANSWER/ REFUSAL

{Q: WRKZIPA-B}

Do you happen to know the zipcode at your primary work location?

99998 FOR NO / DON'T KNOW
99999 FOR REFUSED

{Q:STATCONF}

So I have your work zipcode as and that puts your work place in

Is that correct?

1 YES, RESPONDENT CONFIRMS LOCATION OF BUSINESS
2 NO, THAT'S INCORRECT (GO BACK AND CORRECT ZIPCODE IF THAT'S THE PROBLEM)
8 DON'T KNOW
9 REFUSED

{Q:JOBINT}

Please think of the nearest major intersection to your workplace. Could you tell me the names or route numbers of the roads that cross there?

[IF NECESSARY: We've dialed your number at random and we don't want to know your address--all your answers on this survey are confidential.]

1 RESPONDENT PROVIDES INTERSECTION
2 REFUSED TO GIVE

If WORKING FULL TIME or WORKING PART TIME to WORK, ASK

{Q: JOB1B}

I'd like to ask you some questions about your primary job.

First, what kind of work do you do at your job?

If WORKING FULL TIME or WORKING PART TIME to WORK, ASK

{Q: JOB2B}

What is the main business or industry of the organization that you work for?

IF NECESSARY: We don’t need to know the name of the business, just the type of work the company or organization does. [OPEN END]

{Q: JOB3B}

So are you employed in…

1 A private company,
2 A non-profit organization,
3 The federal government,
4 The state government,
5 Local government
6 Or your own business, professional practice, or farm?
8 DON’T KNOW/NO ANSWER
9 REFUSED

{Q: WRKYRS}

How long have you worked at your current primary work location?

1 0-2 years
2 3-4 years
3 5-7 years
4 8-10 years
5 More than 10 years
8 DON’T KNOW
9 REFUSED

{Q: NUMEMP}

How many people are employed there (at your primary location)?
IV: PAUSE BEFORE READING CATEGORIES

1 1-5
2 6-10
3 11-20
4 21-50
5 51-75
6 76-100
7 More than 100
8 DON'T KNOW
9 REFUSED

FAMILY and DEPENDANTS

{Q: MARITAL}

What is your current marital status? Are you married, separated, divorced, widowed, or have you never been married?

1 Married
2 Separated
3 Divorced
4 Widowed
5 Never Married
9 Refused

If not married…..

{Q: PARTNER}

Do you currently live with a partner with whom you share a domestic relationship?

1 Yes
2 No
8 DON'T KNOW
9 REFUSED

{Q: CHILDREN}

How many children under the age of 18 are there in your household? _____
DON'T KNOW/REFUSED = 99

If Q: CHILDREN >0

{Q: UNDER6}

How many are age 5 or younger?

{Q: SIXUP}

How many are 6 to 12?

{Q:TEENS}

How many are age 13 to 17?

{Q:CHILDOUT}

How many of your children attend school, preschool or daycare outside of your home during the day?

{Q: DEPEND}

Do you have any people in the Washington Metro area that do not live with you but depend on you to provide care?

0 No, None **(SKIP TO Q:DEPEND2 BELOW)**
1 One Person
2 Two or More
8 Don't Know
9 Refused

{Q:DEPEND2}

The next several questions are about the person you would most need to be in contact with if there were an emergency during the day when you are at work. This should be someone you might need to be in touch with, but is not present at your workplace.
IV: IF INSISTS UNABLE TO PICK ONE, ASK THEM TO CHOOSE THE YOUNGEST CHILD OR THE OLDEST ADULT.

{Q: CHLDADLT}

Is that person a child or adult?

1 Child (<18)
2 Adult (18 or older)
8 DON'T KNOW
9 REFUSED

{Q: FAMILY}

Is this person a family member?

1 Yes
2 No
8 DON'T KNOW
9 REFUSED

IF YES to Q:FAMILY

{Q: RELATED}

How is this person related to you?

1 Son
2 Daughter
3 Mother
4 Father
5 Aunt
6 Uncle
7 Grandmother
8 Grandfather
9 Other Relative
10 Other Guardian
11 DON'T KNOW/REFUSED

{Q: FARWRK}

How far away from your work is this person you take care of? (in miles)

1 1 mile or less
2 2-5 miles
3 6-10 miles
4 11-15 miles
5 16-20 miles
6 21-30 miles
7 31-40 miles
8 41-50 miles
9 More than 50 miles

{Q: PETS}

And do you have any pets at home?

1 YES (IF YES, Q:PETTYPE)
2 NO
8 DON'T KNOW/ NOT SURE
9 REFUSED

If Yes to Q:PETS

{Q: PETTYPE}

What kind of pets?

1 Dog
2 Cat
3 Other mammal
4 Bird
5 Reptile
6 Fish
7 Other (specify) _____
8 NO PETS
9 DON'T KNOW/REFUSED

SPECIAL NEEDS

{Q: CNDITION}

Do you or anyone in your household have any of the following conditions that might limit the ability to wait out or evacuate from an emergency?

(READ LIST, CHECK ALL THAT APPLY)

1 Severe vision or hearing impairment (including, blindness, deafness, etc.)
2 Condition that limits physical activity such as walking, climbing, reaching, lifting, carrying or driving
3 Difficulties learning, remembering, or concentrating
4 Difficulty breathing
5 Condition that requires prescription medication
6 Other (specify) _____
7 No special need
8 DON'T KNOW
9 REFUSED

{Q: MEDCTN}

Do you take any medications on a daily basis that you would need to take even in an emergency?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

If YES, ASK Q:MEDCTN24:

{Q: MEDCTN24}

Do you have enough medication on hand *at work* to last for 24 hours?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q: LEAVE}

If you were asked to stay at work for 24 hours, would you need to leave work to give medication to anyone?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

COMMUNICATION

{Q: COMMOA}

Next, we'd like to know: What forms of communication do you typically use?
(IV: READ AS NECESSARY / PROBE: Is there anything else?)
(CHECK ALL THAT APPLY)

1 Landline phone call
2 Cell phone call
3 Text message
4 Email
5 Instant Message (IM)
6 Twitter
7 Social Network (Such as Facebook or MySpace)
8 Or Something else? (SPECIFY)
9 DON'T KNOW
10 REFUSED

{Q: TECH1A}

What technology would you rely on the most to contact your loved one in an emergency?
(IV: READ ONLY AS NECESSARY) (SELECT ONLY ONE)

1 Landline phone call
2 Cell phone call
3 Text message
4 Email
5 Instant Message (IM)
6 Twitter
7 Social Network (Such as Facebook or MySpace)
8 Other (SPECIFY)
9 Would go to the school
10 DON'T KNOW
11 REFUSED
12 (VOL) Would go in person to speak directly

{Q: ALTECHB}

If the technology you normally would use was not available, what would you use instead to contact loved ones?
(IV: READ ONLY AS NECESSARY) (Check all that apply)

1 Landline phone call
2 Cell phone call
3 Text message
4 Email
5 Instant Message (IM)
6 Twitter
7 Social Network (Such as Facebook or MySpace)
8 Other (SPECIFY)
9 Would go to school
10 DON'T KNOW
11 REFUSED
12 (VOL) Would go in person to speak directly

{Q:BURDNB}

Which do you think puts a greater burden on the communications system, sending a text message or completing a phone call? Or is the burden on the system the same for both?

1 TEXT MESSAGE
2 PHONE CALL
3 BURDEN IS SAME FOR BOTH
8 DON'T KNOW
9 REFUSED

LOVED ONE

{Q:TARGCHLD}

For this next set of questions, I will be asking you to consider what you might do in an emergency situation that could happen while you are at work. I will start by describing a terrorist attack that might or might not happen in the future. After I've read this imaginary situation, I will ask you some questions about it. When you respond I would like you to focus on your youngest child who is not at home all day. So do you have in mind the child that we will focus on?

1 YES, R HAS A CHILD IN MIND
2 R SAYS HAS NO QUALIFIED CHILD
3 DON'T KNOW/REFUSE

{Q:CNAME}

Can you tell me that child's first name?
IV: IF NOT COMFORTABLE: We could just refer to the child by an initial or as your "youngest son" or "youngest daughter" if you prefer.

{Q:CGEND}

IV: CODE CHILD'S GENDER OR IF NECESSARY, ASK: And, is this a boy or a girl?

3 BOY
4 GIRL
9 REFUSED

{Q:TARGET1}

For this next set of questions, I will be asking you to consider what you might do in an emergency situation that could happen while you are at work. I will start by describing a terrorist attack that might or might not happen in the future. After I've read this imaginary situation, I will ask you some questions about it.
When you respond I would like you to focus on the person you would most need to be in contact with, if there were an emergency during the day when you are at work. This should be someone you might need to be in touch with, but is not present at your workplace.
Can you tell me that person's relation to you?
IV: IF R PICKS A WORK COLLEAGUE OR BOSS, SAY: We mean someone from your personal or family life.

IV: IF RELEVANT IN DISCUSSING WHO TO FOCUS ON YOU COULD MENTION THAT EARLIER RESPONDENT MENTIONED A PERSON DEPENDED ON THEM; BUT WE DO NOT HAVE TO PICK THAT PERSON.

1 HUSBAND
2 WIFE
3 PARTNER
4 PARENT
5 OTHER RELATIVE
6 OTHER PERSON
7 NONE OF THESE CIRCUMSTANCES FIT YOUR SITUATION
8 DON'T KNOW / REFUSED
A Mother
B Father

{Q:TNAME}

Can you tell me that person's first name or some other brief way to refer to them?

{Q:TNAME2}

For the purposes of this survey, we will refer to your [LOVED ONE] when going through the scenarios.

{Q:TGEND}

IV: CODE LOVED ONE'S GENDER ONLY IF NECESSARY, ASK: And, the survey requires that you confirm the gender of your loved one for me.

3 MALE
4 FEMALE
9 REFUSED

SCENARIO A

{Q: MIN_1A}

(LOVED ONE DETERMINED BY VARIABLE LOVEDONE)

SCENARIO 1A (Respondent NOT ASKED to shelter in place, loved one NOT asked to shelter in place, phone service available)

Please imagine that today while you're at work, you hear that a bomb has just exploded in [FAR LOCATION]. The building where the bomb exploded has been mostly destroyed. 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.

A large dust cloud containing some radiation is in that area. People who are outside will be exposed to the radiation. The radiation is unlikely to harm them right away, but some people who get exposed to the radiation could get cancer from it many years from now.

Radioactive material falling to the ground could contaminate that area. A state of emergency has been declared, and residents in that area have been instructed to take shelter where they are, since this will provide significant protection from radioactive dust created by the blast. They want everyone in that area to stay in their place of shelter for up to 24 hours or until an "all clear" is given. Remember, we're imagining that you are at work when you get this news and no special instructions have been issued for your area.

{Q: MOD_2A}

Please imagine that it is a weekday afternoon and you are at work. You hear that a bomb has just exploded one mile away. The building where the bomb exploded has been mostly destroyed. 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.

A large dust cloud containing some radiation has begun to blow slowly across the area you are in, moving in your direction. People who are outside will be exposed to the radiation. The radiation is unlikely to harm them right away, but some people who get exposed to the radiation could get cancer from it many years from now.

Radioactive material falling to the ground could contaminate the area.

A state of emergency has been declared, and people in your area are instructed to take shelter within a building.

A building will provide significant protection from radioactive dust created by the blast. They want everyone in the affected area to stay in place for up to 24 hours or until an "all clear" is given. Your workplace is in the affected area, so the instructions to shelter in place apply to you, but your loved one is outside the path of the cloud and is not affected by the instructions.

{Q: MOD_3A}

Please imagine that it is a weekday afternoon and you are at work. You hear that a bomb has just exploded one mile away from your loved one. The building where the bomb exploded has been mostly destroyed. 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. A large dust cloud containing some radiation has begun to blow across that area, moving in the direction of your loved one.

People who are outside will be exposed to the radiation. The radiation is unlikely to harm them right away, but some people who get exposed to the radiation could get cancer from it many years from now. Radioactive material falling to the ground could contaminate that area.

A state of emergency has been declared, and people in that area are instructed to take shelter where they are. Staying inside a building will provide significant protection from radioactive dust created by the blast. They want everyone in the affected area to stay in place for up to 24 hours or until an "all clear" is given.

You are outside the immediately affected area and have *not* been asked to shelter in place, but your loved one is within the cloud's path and has been asked to remain where they are.

{Q: MAX_4A}

Please imagine that it is a weekday afternoon and you are at work when you hear that multiple bombs have exploded [National Capital Region: DC/MD, DC/VA or MD/VA].

And just now, another bomb has exploded one mile away. Authorities believe they were all "dirty bombs". The building where the nearest bomb exploded has been mostly destroyed. 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.

A large dust cloud containing some radiation has begun to blow slowly across the area, moving in your direction. People who are outside will be exposed to the radiation. The radiation is unlikely to harm them right away, but some people who get exposed to the radiation could get cancer from it many years from now. Radioactive material falling to the ground could contaminate the area.

A state of emergency has been declared, and people in your area are instructed to take shelter at work. Staying inside a building will provide significant protection from radioactive dust created by the blast. They want everyone in the affected area to stay in place for up to 24 hours or until an "all clear" is given. Both you and your loved one are within the cloud's path and have been asked to shelter in place.

{Q:STAYGOA}

Based on this information, would you stay at work, would you leave immediately to go somewhere else, would you continue with your activities, or would you do something else?

1 STAY
2 LEAVE IMMEDIATELY
3 CONTINUE WITH YOUR ACTIVITIES
4 SOMETHING ELSE [SPECIFY]
8 DON'T KNOW
9 REFUSED

{Q: HOWLNGA}

How long would you be willing to remain at work, without going outside, in this situation?

1 One hour or less
2 Several hours
3 Until tomorrow morning
4 Until tomorrow evening
5 Full 24 hours
6 Longer than 24 hrs, if necessary/indefinitely/as long as instructed
7 Other (specify) _____
8 DON'T KNOW
9 REFUSED

{Q: YGOA}

If you chose to leave work without getting an ‘all clear’ signal, *why* would you leave?

(CHECK ALL THAT APPLY/ PROBE: “Anything else”)

1 To find or take care of my children
2 To find or take care of adult family members

3 To find or take care of other people not in my family
4 To find or take care of pets
5 To meet job responsibilities
6 Workplace not set up to be a shelter
7 To get medications
8 To get food or water
9 To get other needed supplies (SPECIFY)
10 Would feel safer someplace else
11 Do not feel the situation is dangerous
12 Not concerned about getting cancer sometime in the future
13 Could avoid danger when going outside
14 Do not trust the advice of the authorities
15 Other (*specify* _____)
16 DON'T KNOW
17 REFUSED

{Q:YGOA_opn}

To get what other needed supplies?_____

{Q:EVCGOA1}

Where would you go?
[READ ANSWER CHOICES AS NEEDED]

1 home
2 a family member or relative's home
3 a friend's home
4 a public shelter
5 a motel or hotel
6 another home I own
7 a place of work or office
8 OTHER [SPECIFY:]
9 DON'T KNOW
A REFUSED
B (VOL) To child's school

{Q:EVCGOA2}

Are there other stops along the way?

1 SCHOOL
2 CHILDCARE/ DAYCARE
3 SPOUSE'S OFFICE
4 HOME
5 GROCERY STORE
6 GAS STATION
7 K-MART, WALMART, SAM'S – TARGET TYPE STORE
8 A FRIEND'S HOUSE
9 OTHER a → 1ST OTHER MENTIONED
10 OTHER B → 2ND OTHER MENTIONED
11 OTHER C → 3RD OTHER MENTIONED
12 OTHER D → 4TH OTHER MENTIONED
13 DON'T KNOW
14 REFUSED
15 No other stops

{Q:DB2PLN1}

If you knew that the building where you were had made plans to keep people fed and safe for several days in this kind of situation, would you decide NOT to leave the building, or would you still leave the building?

1 LEAVE THE BUILDING
2 NOT LEAVE THE BUILDING
8 DON'T KNOW
9 REFUSED

{Q:DBKIDS1}

If you were informed by authorities that your loved ones were being cared for and kept safe where they were, how long would you be willing to remain at work and wait for the 'all clear' signal?

1 ONE HOUR OR LESS
2 SEVERAL HOURS
3 UNTIL TOMORROW MORNING
4 UNTIL TOMORROW EVENING
5 UNTIL THE MORNING AFTER NEXT
6 FULL 24 HOURS
7 LONGER THAN 24 HRS, IF NECESSARY / INDEFINITELY / AS LONG AS INSTRUCTED
8 DON'T KNOW
9 REFUSED

{Q:EFORT1}

If there were people who could safely bring to your building any food, water, or medications you might need in this situation, how long would you be willing to remain at work and wait for the 'all clear' signal?

1 ONE HOUR OR LESS
2 SEVERAL HOURS
3 UNTIL TOMORROW MORNING
4 UNTIL TOMORROW EVENING
5 UNTIL THE MORNING AFTER NEXT
6 FULL 24 HOURS
7 LONGER THAN 24 HRS, IF NECESSARY / INDEFINITELY / AS LONG AS INSTRUCTED
8 DON'T KNOW
9 REFUSED

{Q:NEEDS1}

Are there any other needs or conditions that would help you to stay at work for 24 hours?
[PROBE: What else would you need? OR Can you tell me what you mean by that?]

1 YES (Specify)
2 NO/NOTHING/NOT APPLICABLE
8 DON'T KNOW
9 REFUSED

{Q:TRYRTNA}

Would you try to return to work before the all clear is given?

1 YES →SKIP TO GOLOVA
2 NO
8 DON'T KNOW
9 REFUSED

{Q:TRYRTN2A}

If so, after how long?
IV: IF NEC: How long would wait before trying to return.

{Q:GOLOVA}

Would you go to your loved one even if it meant driving through the dust cloud containing dangerous radioactive particles?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

SCENARIO B

{Q:MIN_1B}

I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now there is no phone service. Landline phones and cell phones, including text messaging, are not working. Internet features are not accessible by either computer or smart phone.
Remember, we are imagining you are at work when you get this news. Please consider how that might affect your decisions.
IV: THIS IS THE MINIMUM DANGER SCENARIO: ONE BOMB FAR AWAY NEITHER RESPONDENT NOR THEIR LOVED ONE GIVEN INSTRUCTIONS TO SHELTER IN PLACE

{Q:MOD_2B}

I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now the large dust cloud containing some radiation has begun to blow slowly across the area you are in, moving in your direction. Your workplace is in the affected area, so the instructions to shelter in place apply to you, but your loved one is outside the path of the cloud and is not affected by the instructions.
Remember, we are imagining you are at work when you get this news.
Please consider how that might affect your decisions.
IV, IF NECESSARY, SUMMARIZE: THIS IS THE MODERATE SCENARIO: ONE BOMB ONE MILE AWAY RESPONDENT IS ASKED TO SHELTER IN PLACE BUT THEIR LOVED ONE HAS BEEN GIVEN NO SPECIFIC INSTRUCTIONS

{Q:MOD_3B}

I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now a large dust cloud containing some radiation has begun to blow across another area, moving in the direction of your loved one.
You are outside the immediately affected area and have *not* been asked to shelter in place, but your loved one is within the cloud's path and has been asked to remain where they are.
Remember, we are imagining you are at work when you get this news.
Please consider how that might affect your decisions.
IV, IF NECESSARY, SUMMARIZE: THIS IS THE MODERATE SCENARIO: ONE BOMB ONE MILE AWAY RESPONDENT HAS BEEN GIVEN NO SPECIFIC INSTRUCTIONS BUT THEIR LOVED ONE IS ASKED TO SHELTER IN PLACE.

{Q:MAX_4B}

I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now there is no phone service. Landline phones and cell phones, including text messaging, are not working. Internet features are not accessible by either computer or smart phone.
Remember, we are imagining you are at work when you get this news.
Please consider how that might affect your decisions.
IV, IF NECESSARY, SUMMARIZE: THIS IS THE MAXIMUM DANGER SCENARIO: MULTIPLE BOMBS FAR AWAY PLUS ONE BOMB ONE MILE AWAY BOTH RESPONDENT AND THEIR LOVED ONE HAVE BEEN GIVEN SPECIFIC INSTRUCTIONS TO SHELTER IN PLACE.

{Q:STAYGOB}

Based on this information, would you stay at work, would you leave immediately to go somewhere else, would you continue with your activities, or would you do something else?

1 STAY
2 LEAVE IMMEDIATELY
3 CONTINUE WITH YOUR ACTIVITIES
4 SOMETHING ELSE [SPECIFY:]
8 DON'T KNOW
9 REFUSED

IF NEC, SAY: Imagine you've reached a point where you know you should make a decision about what action to take"

{Q:HOWLNGB}

How long would you be willing to remain at work, without going outside, in this situation?

1 ONE HOUR OR LESS
2 SEVERAL HOURS
3 UNTIL TOMORROW MORNING
4 UNTIL TOMORROW EVENING
5 FULL 24 HOURS
6 LONGER THAN 24 HRS, IF NECESSARY / INDEFINITELY / AS LONG AS INSTRUCTED
7 OTHER (SPECIFY)
8 DON'T KNOW
9 REFUSED

{Q:YGOB}

If you chose to leave work without getting an 'all clear' signal, why would you leave?

1 TO FIND OR TAKE CARE OF MY CHILDREN
2 TO FIND OR TAKE CARE OF ADULT FAMILY MEMBERS
3 TO FIND OR TAKE CARE OF OTHER PEOPLE NOT IN MY FAMILY
4 TO FIND OR TAKE CARE OF PETS
5 TO MEET JOB RESPONSIBILITIES
6 WORKPLACE NOT SET UP TO BE A SHELTER
7 TO GET MEDICATIONS
8 TO GET FOOD OR WATER
9 TO GET OTHER NEEDED SUPPLIES
10 WOULD FEEL SAFER SOMEPLACE ELSE
11 DO NOT FEEL THE SITUATION IS DANGEROUS
12 NOT CONCERNED ABOUT GETTING CANCER SOME TIME IN THE FUTURE
13 COULD AVOID DANGER WHEN GOING OUTSIDE
14 DO NOT TRUST THE ADVICE OF THE AUTHORITIES
15 OTHER [SPECIFY:]
16 DON'T KNOW
17 REFUSED

{Q:YGOB_opn}

To get what other needed supplies?_____

{Q:EVCGO2}

Where would you go?

1 home
2 a family member or relative's home
3 a friend's home
4 a public shelter
5 a motel or hotel
6 another home I own
7 a place of work or office
8 OTHER [SPECIFY:]
9 DON'T KNOW
A REFUSED
B (VOL) To child’s school

{Q:EVCGOB2}

Are there other stops along the way?

1 SCHOOL
2 CHILDCARE / DAYCARE
3 SPOUSE'S OFFICE
4 HOME
5 GROCERY STORE
6 CONVENIENCE STORE
7 PHARMACY
8 HARDWARE STORE
9 GAS STATION
10 K-MART, WALMART, SAM'S - TARGET TYPE STORE
11 A FRIEND'S HOUSE
12 OTHER A --> 1ST OTHER MENTIONED
13 OTHER B --> 2ND OTHER MENTIONED
14 OTHER C --> 3RD OTHER MENTIONED
15 OTHER D --> 4TH OTHER MENTIONED
16 DON'T KNOW
17 REFUSED
18 NO OTHER STOPS

{Q:DB2PLN2}

If you knew that the building where you were had made plans to keep people fed and safe for several days in this kind of situation, would you decide NOT to leave the building, or would you still leave the building?

1 LEAVE THE BUILDING
2 NOT LEAVE THE BUILDING
8 DON'T KNOW
9 REFUSED

{Q:DBKIDS2}

If you were informed by authorities that your loved ones were being cared for and kept safe where they were, how long would you be willing to remain at work and wait for the 'all clear' signal?

1 ONE HOUR OR LESS
2 SEVERAL HOURS
3 UNTIL TOMORROW MORNING
4 UNTIL TOMORROW EVENING
5 UNTIL THE MORNING AFTER NEXT
6 FULL 24 HOURS
7 LONGER THAN 24 HRS, IF NECESSARY / INDEFINITELY / AS LONG AS INSTRUCTED
8 DON'T KNOW
9 REFUSED

{Q:EFORT2}

If there were people who could safely bring to your building any food, water, or medications you might need in this situation, how long would you be willing to remain at work and wait for the 'all clear' signal?

1 ONE HOUR OR LESS
2 SEVERAL HOURS
3 UNTIL TOMORROW MORNING
4 UNTIL TOMORROW EVENING
5 UNTIL THE MORNING AFTER NEXT
6 FULL 24 HOURS
7 LONGER THAN 24 HRS, IF NECESSARY / INDEFINITELY / AS LONG AS INSTRUCTED
8 DON'T KNOW
9 REFUSED

{Q:NEEDSB}

Are there any other needs or conditions that would help you to stay at work for 24 hours?

[PROBE: What else would you need? OR Can you tell me what you mean by that?]

1 YES (Specify)
2 NO/NOTHING/NOT APPLICABLE
8 DON'T KNOW
9 REFUSED

{Q:TRYRTNB}

Would you try to return to work that same day?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q:TRYRTN2B}

If so, after how long?
IV: IF NEC: How long would wait before trying to return.

{Q:GOLOVB}

Would you go to your loved one even if it meant driving through the dust cloud containing dangerous radioactive particles?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

SUPPORT

{Q:SOMEONE}

These next questions have to do with the support you might get from others during an emergency.

Do you have someone that you can count on to take care of your loved one for a day or two if you weren't able to?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q:RELATION}

What type of relationship do you have with this person?

PAUSE BEFORE READING CATEGORIES

1 Spouse
2 Parent or sibling
3 Family friend
4 Neighbor
5 Teacher or daycare provider
6 OTHER, (SPECIFY)
8 DON'T KNOW
9 REFUSED

{Q:FARLOVED}

How far away do they live from your loved one?

PAUSE BEFORE READING CATEGORIES

1 1 mile or less
2 2-5 miles
3 6-10 miles
4 11-15 miles
5 16-20 miles
6 21-30 miles
7 31-40 miles
8 41-50 miles
9 More than 50 miles
A More than an hour away
B DON'T KNOW
C REFUSED
D LIVE TOGETHER/SAME LOCATION (VOLUNTEERED)

{Q:CONFCARE}

How confident are you that this person would be able and willing to care for your loved one on a workday afternoon?

1 Very confident
2 Somewhat confident
3 Not very confident
4 Not at all confident
5 NOT APPLICABLE

8 DON'T KNOW
9 REFUSED

WORK PLACE DURING THE DISASTER

{Q:WORKPLAN}

Some workplaces have made extensive plans for an emergency and the continuity of operations and for others it may not seem as necessary.

This section will ask about *your* workplace.

Does your workplace have an emergency plan prepared so that employees know what is expected of them in situations such as we just described?

Would you say . . .
1 Definitely
2 Probably
3 Probably not, or
4 Definitely not
8 DON'T KNOW
9 REFUSED

{Q:WRKPLN}

Some plans are very short and others have a great deal of detail.

I'm going to read a short list of possible items that may be covered in the plan. For each one please tell me if it is Definitely, Probably, Probably not, or Definitely not a part of your work place's plan. If you don't know, we can just go to the next one.
1 Some personnel have been designated as critical to the continuity of
2 There is a central area to congregate during an emergency
3 An employee list with contact information
4 A designated person for each section or floor to aid evacuation
5 A protocol to guard access and security for electronic files
6 A protocol for continued critical operations
7 First aid or medical supplies on-hand
8 Adequate food and water for 24 hours
9 Adequate bedding available for 24 hours
10 Adequate restroom facilities for 24 hours
11 A method or plan for communication if no phone or email is available
12 Practice drills are held
13 Accommodations for emergency child care have been made

Would you say . . .
1 Definitely
2 Probably
3 Probably not, or
4 Definitely not
8 DON'T KNOW
9 REFUSED

{Q:SHELTERC}

Suppose authorities gave instructions to take shelter at work. How confident are you that you would be able to shelter there?

1 Very confident
2 Somewhat confident
3 Not very confident
4 Not at all confident
5 NOT APPLICABLE
8 DON'T KNOW
9 REFUSED

{Q:OPENWRK}

How likely is it that your work place would try to remain open for business during an emergency?

1 Very likely
2 Somewhat likely
3 Somewhat unlikely
4 Very unlikely
8 DON'T KNOW
9 REFUSED

{Q:WRKCRIT}

Does your workplace provide goods or services that are critical to the functioning of your community during an emergency?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q:JOBNEC}

Is your job necessary to the short-term functioning of your place of business?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q:SPSEMP}

Is your spouse or partner employed outside the home, either full or part-time?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q:SPSPLN}

Does your spouse or partner's workplace have an emergency plan prepared so that employees know what is expected of them in situations such as we just described?

[DO NOT READ / PROBE FROM RESPONSE]

1 YES, DEFINITELY
2 YES, PROBABLY BUT NOT CERTAIN
3 PROBABLY NOT
4 NO, DEFINITELY NOT
5 NOT APPLICABLE
8 DON'T KNOW
9 REFUSED

{Q:SPSSIP}

How confident are you that your spouse or partner would be able to shelter at work if instructed to do so?

1 Very confident
2 Somewhat confident
3 Not very confident
4 Not at all confident
5 NOT APPLICABLE
8 DON'T KNOW
9 REFUSED

SCHOOLS DURING A DISASTER

{Q:PUBPRIV}

Reaction from the schools may be an important factor in a worker's response to an emergency situation. The following section will look into issues that are commonly faced by schools and by parents.

Remember to concentrate on your focus child for this section, that is, your youngest child who is outside your home for at least part of the day.

IV: IF NECESSARY: We had identified this child as

First, does this child attend a public or private school or daycare?

1 Public school
2 Private school
3 Commercial daycare, or school preparatory program that is part of a public school system
4 Private or in-home daycare
9 DON'T KNOW/REFUSED

IF NO KIDS IN SCHOOL OR DAYCARE SKIP THIS SECTION AND GO ON TO DEMOGRAPHICS SECTION

{Q:COMSCHL}

How do you normally communicate with your child's school? (CHECK ALL THAT APPLY)

1 Phone conversations with faculty and staff
2 Text messaging
3 Email communication
4 Visits to the school
5 Written notes or letters
6 Face-to-Face or in person (outside of school)
7 Or some other means? (SPECIFY)
8 I DON'T COMMUNICATE WITH MY CHILD'S SCHOOL
9 REFUSED

{Q:SCHNOTI}

Are you signed up for an emergency notification system from your child's school that contacts parents in case of an emergency situation?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

IV, IF ASKED: This is information sent out from the child's school to parents subscribed to a list requesting emergency alerts.

{Q:GETINFO}

Do you have a way to get information about an emergency that involves your child's school?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q:GETINF}

How do you receive information about emergencies at your child's school? (IV: READ ONLY AS NECESSARY) (Choose all that apply)

1 PHONE CALLS
2 TEXT MESSAGES
3 EMAILS
4 SCHOOL WEBSITE
5 TELEVISION
6 RADIO
7 INTERNET NEWS SITES
8 WORD OF MOUTH (FRIENDS, NEIGHBORS)
9 TWITTER
10 SOCIAL NETWORK (FACEBOOK, MYSPACE, ETC.)
11 OTHER (specify)
12 DON'T KNOW
13 REFUSED

{Q:SCHPLAN1}

Does your child's school have a plan to deal with emergencies such as that described earlier? Would you say . . .

1 Definitely
2 Probably
3 Probably not, or
4 Definitely not
8 DON'T KNOW
9 REFUSED

{Q:PLANFAM}

How familiar are you with your child's school emergency plan? Would you say . . .

1 Very familiar
2 Somewhat familiar
3 Not at all familiar
8 DON'T KNOW
9 REFUSED

{Q:LRNPLAN}

How did you learn about your school's emergency plan?

{Q:LOCKDOWN}

If instructions for the area of your child's school were to shelter in place, what do you think your child's school would do?

Would they . . .

1 Release your child as they normally would for an emergency like a snow storm,
2 Only release your child to you, the child's parents or guardians (OR OTHER ADULT ON THE EMERGENCY CONTACT LIST), or
3 Lock down the school, try to keep doors sealed and not release any children until the "all clear"?
8 DON'T KNOW

9 REFUSAL

{Q:SCHLGOAL}

Should the school's primary goal in an emergency be to keep children in their care and take care of them to the best of their ability, or should it be to reunite children with parents?

1 Keep children in their care
2 Reunite children with parents
3 DEPENDS (VOLUNTEERED, SPECIFY)
8 DON'T KNOW
9 REFUSAL

{Q:CONFSCHL}

How confident are you that the school can take care of children for up to 24 hours?

1 Very confident
2 Somewhat confident
3 Not very confident
4 Not at all confident
5 NOT APPLICABLE
8 DON'T KNOW
9 REFUSED

{Q:SCHPLN}

Many items may be part of a school's emergency plan. I will read a list of items that might have been included at your child's school. Please tell me if you think it is definitely, probably, probably not or definitely not part of your school's plan for emergencies like what we've just described.

1 First aid or medical supplies on-hand
2 Adequate food and water for 24 hours
3 Adequate restroom facilities for 24 hours
4 Communication plan for contacting parents
5 Communication plan for contacting employees and staff
6 Protocol to guard access and security for electronic files
7 Practice drills
8 Command post for the emergency management team to work from
9 Different plans for different types of threats or emergencies

Would you say . . .

1 Definitely
2 Probably
3 Probably not, or
4 Definitely not
8 DON'T KNOW
9 REFUSED

{Q:SCHCARE}

How long do you think the schools can effectively take care of your child in case of an emergency?

1 1-2 hours
2 3-5 hours
3 6-10 hours
4 11-15 hours
5 16-20 hours
6 21-24 hours
7 25-35 hours
8 35-48 hours
9 More than 48 hours
A DON'T KNOW
B REFUSED

{Q:CONCRN}

What would be your main concerns when leaving your child at his or her school?

1 A LACK OF MEDICAL CARE
2 A LACK OF RESOURCES (FOOD, BEDDING, ETC)
3 LACK OF SUPERVISION
4 YOUR CHILD BECOMING AFRAID
5 JUST BEING SEPARATED FROM YOUR CHILD
6 I WOULDN'T BE CONCERNED ABOUT LEAVING MY CHILD AT SCHOOL DURING AN EMERGENCY
7 MY CHILD IS VERY YOUNG (MORE CONCERN FOR YOUNGER CHILDREN)
8 OTHER (PLEASE SPECIFY)
9 DON'T KNOW
10 REFUSAL

{Q:SCHLDO}

What would schools need to do so that you felt confident that your child would be cared for? _____

DEMOGRAPHICS

{Q:DEMOGRPH }

We are almost done. There are just a few final questions remaining for statistical purposes. As I mentioned, all of your answers are strictly confidential, and you can skip any questions you don't wish to answer.

{Q:OLDER18}

How many persons live in your household who are age 18 or older, including yourself?

{Q:ZIPCODE}

And what is your zip code?

{Q:CELLCOMP}

You mentioned before that you have a landline telephone at home as well as a cell phone. Thinking about ALL the telephone calls that you and other members of your household make and receive, would you say that . . .

1 Almost all are on a landline phone,
2 Most of them are on a landline phone,
3 Amount of calls on a landline and cell phone are about equal,
4 Most of the calls are on a cell phone, or
5 Almost all of them are on a cell phone?
8 DON'T KNOW/UNABLE TO RATE
9 REFUSE

{Q:PHONE1A}

As far as you know, is the landline or regular phone for your household listed in the current telephone book?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q:PHONE1B}

As far as you know, is the number I dialed listed in the current telephone book?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

IV, IF ASKED: Our center is doing some research on listed and unlisted telephone households.

{Q:PHONE2}

Is the number not in the phone book because you chose to have an unlisted number, or because you got this number after the current phone book came out?

1 UNLISTED OR UNPUBLISHED
2 GOT NUMBER AFTER PHONE BOOK CAME OUT
3 OTHER [SPECIFY:]
8 DON'T KNOW
9 REFUSED

{Q:RGENDER}

IV: CODE GENDER, OR IF UNCERTAIN, SAY: The survey requires that you confirm your gender for me.

3 MALE
4 FEMALE
9 DON'T KNOW/REFUSED

{Q:YRBORN}

In what year were you born?

{Q:DUTY}

Are you currently serving, or have you ever served in the U.S. military, on either active duty or in the reserves?

1 YES--CURRENT ACTIVE DUTY
2 YES--CURRENT RESERVE DUTY
3 YES--PAST MILITARY SERVICE / VETERAN
4 NO-NEVER IN MILITARY
8 DON'T KNOW/NO ANSWER
9 REFUSED

{Q:EDUC}

What is the highest level of education you have completed?

1 ELEMENTARY SCHOOL ONLY
2 SOME HIGH SCHOOL, DID NOT FINISH
3 COMPLETED HIGH SCHOOL
4 SOME COLLEGE BUT DIDN'T FINISH
5 2 YEAR COLLEGE DEGREE /A.A./A.S.
6 4 YEAR COLLEGE DEGREE /B.A./B.S.
7 SOME GRADUATE WORK
8 COMPLETED MASTERS OR PROFESSIONAL DEGREE
9 ADVANCED GRADUATE WORK OR PH.D.
10 DON'T KNOW
11 REFUSED

{Q:INCOME}

I am going to read a list of income ranges. Please stop me when I read the range that best describes your annual household income from all sources in 2010.

This is before taxes and other deductions.

[PRECISE CATEGORIES:]

1	Less than 15 thousand	[$0 -$14,999]
2	Fifteen to 35 thousand	[$15,000 - $34,999]
3	Thirty-five to 50 thousand	[$35,000 - $49,999]
4	Fifty to 75 thousand	[$50,000 - $74,999]
5	Seventy-five to 100 thousand	[$75,000 - $99,999]
6	One hundred to 150 thousand	[$100,000 - $149,999]
7	150 to 250 thousand	[$150,000 - $250,000]
8	Over 250 thousand	[$250,000 +]
9	DON'T KNOW	
A	REFUSED	

{Q:LANG}

Is there anyone in your household who has difficulty communicating in English because they speak a different language?

1 YES [IF YES, PLEASE SPECIFY LANGUAGE SPOKEN ON NEXT SCREEN:]
2 NO
8 DON'T KNOW
9 REFUSED

{Q: LANG2}

What language would that be?

1 AMHARIC
2 ARABIC
3 CHINESE
4 FRENCH (INCL. PATOIS, CAJUN)
5 GERMAN
6 GREEK
7 HINDI
8 ITALIAN
9 JAPANESE
10 KOREAN
11 PERSIAN / FARSI
12 RUSSIAN
13 SPANISH OR SPANISH CREOLE
14 TAGALOG
15 TIGRINYA
16 TURKISH
17 URDU
18 VIETNAMESE
19 OTHER (SPECIFY: ASK RESPONDENT TO SPELL FOR YOU)
20 DK/REF

{Q:HISPANIC}

Do you consider yourself to be of Hispanic origin?

1 YES
2 NO
8 DON'T KNOW
9 REFUSED TO ANSWER

{Q:RACE}

Finally, I am going to read a list of racial categories. Would you tell me what category best describes you?

1 White,
2 [READ ONE:] African American / Black,
3 Asian? [INCLUDING SOUTH ASIAN]
4 American Indian? [NATIVE AMERICAN; INCLUDES ESKIMO, ALEUT]
5 Pacific Islander?
6 MULTI-RACIAL [RECORD IN THE ORDER GIVEN BY RESPONDENT]
7 OTHER [SPECIFY]
8 HISPANIC ONLY: PLEASE PROMPT (BELOW) BEFORE SELECTING
9 REFUSED / NO ANSWER

{Q:CELLBILL}

Some people these days have unlimited minutes on their cell phones. Some have high limits and others pay by the minute. Do you expect to actually pay a higher bill this month as a result of doing this survey on your cell phone?

1 DEFINITELY (YES)
2 PROBABLY WILL (YES)
3 PROBABLY NOT
4 DEFINITELY NOT

5 DEPENDS [SPECIFY:]
8 DON'T KNOW
9 REFUSED

{Q:RECALL}

Finally, we are planning to follow up in several months with a small number of the people who helped us with this survey. Could we call you back if we wanted to ask you about your opinions in more detail or invite you to a follow-up discussion about these issues? People we re-contact will be offered a small payment for their time.

1 YES
2 NO
8 DON'T KNOW
9 REFUSED

{Q:RCOMM}

Those are all the questions I have for you. Are there any other comments you'd like to make?

{Q:RECRUIT}

Since you said it would be OK for you to be possibly contacted again, let me be sure we have correct information for you. I want to reassure you that all this information is held confidential by researchers on the study. No names are used, no names are sold.

Do I have your correct phone number?

1 YES, NUMBER IS FINE
2 YES, BUT PLEASE DON'T CALL THIS NUMBER
3 NO [TYPE IN A BETTER NUMBER ON NEXT SCREEN]
4 REFUSES TO PARTICIPATE IN ANY FURTHER STUDY

{Q:TEL2}

Is there another phone number where we might reach you?

{Q:SENDGIFT}

As a token of our thanks, we would like to send you a $10 gift card. May I get your name and address so we can send it to you?

This information will not be associated with any of the other responses you have given.

IF YES: Would you prefer a gift card from Wal*Mart or Target?

1 YES, SEND GIFT CARD FROM WAL*MART
2 YES, SEND GIFT CARD FROM TARGET
3 YES, SEND GIFT CARD - DOESN'T MATTER WHICH ONE
4 NO, RESPONDENT DECLINES GIFT CARD

IF ASKED: The gift card was paid for by the Virginia Dept of Emergency Management but will be sent to you by the Center for Survey Research in Charlottesville, VA.

{Q:GIVENAME}

What is your first name?

{Q:FAMNAME}

What is your last name? [READ BACK SPELLING]

{Q:ADD1}

What is your street address or P. O. Box?

{Q:CITY}

And now, what is your city or town? [CONFIRM STATE ON NEXT SCREEN]

[READ BACK / ASK FOR SPELLING OF FULL ADDRESS OR P. O. BOX / INCLUDING

TOWN AND ZIP CODE. AFTER READING BACK AND CONFIRMING: HIT ENTER ESCAPE BACK TO MAKE CHANGES]

{Q:STAT}

IV: RESPONDENT GAVE LOCATION AS CONFIRM THAT THEY ARE MAILING TO AND THEN TYPE THE APPROPRIATE STATE ABBREVIATION HERE:
IV: USE THESE ABBREVIATIONS

VIRGINIA = VA
MARYLAND = MD
DISTRICT OF COLUMBIA = DC

{Q:ADDR3}

Finally, what is the zip code there?

{Q:THANKYOU}

We really appreciate the time you've taken to help in answering these important questions. If you'd like to know more about getting prepared please visit the following website: www.makeaplan.org (IV: SPELL OUT)

Thank you very much and have a good night.

IV: IF ASKED: We also have another website with a little more detail at

www.ncrhomelandsecurity.org (SPELL OUT) If you have any questions about the

Center for Survey Research you may visit our website at

www.virginia.edu/surveys (SPELL OUT).

Thanks again. Goodbye

{Q:ANSMACH}

INTERVIEWERS: IF 1st CALLING ATTEMPT, LEAVE MESSAGE. ALSO, IDENTIFY THIS AS AN ANSWERING MACHINE OF A HOUSEHOLD/INDIVDUAL OR A BUSINESS.

1 ANS MACHINE/VOICE MAIL OF A HOUSEHOLD/INDIVIDUAL (Leave MSG 1st time)
2 ANS MACH./VOICE MAIL OF A HOUSEHOLD/INDIVIDUAL (DID NOT leave message)
3 ANS. MACH. INDICATES BUSINESS / OTHER NON-RESIDENCE (DO NOT leave msg)
4 UNKNOWN/CAN'T TELL/GENERIC MSG OR TEL NUMBER (Leave message 1st time)
5 UNKNWN/CANT TELL/GENERIC OPERATOR MESSAGE (DIDNT/CANNOT leave message)
6 SPANISH SPEAKING (DO NOT LEAVE MESSAGE)

Hello, I am calling from the Univ. of Virginia for a survey of residents of the
Washington Metro Area sponsored by state and local governments in your region.
Your cell phone number was randomly selected to be part of our sample this year.
Qualified respondents will be compensated $10 for answering our questions.
We will try to call you again later or you may return our call toll free to 1-800 277 7655. Thank you for your time.
Goodbye.

{Q:REFUSAL}

INTERVIEWERS SAY SOMETHING LIKE THE FOLLOWING:

"Well, thank you for your time anyway. Good Night."

{Q:REFTYPE}

INTERVIEWER: PLEASE RECORD THE FORM OF THE REFUSAL

1 ROUTINE REFUSAL ENGLISH - MIGHT TRY TO CALL AGAIN
2 STRONG OR EMOTIONAL REFUSAL - DO NOT ATTEMPT AGAIN
3 IMMEDIATE HANGUP
4 SPANISH LANGUAGE - ROUTINE REFUSAL /IMMEDIATE HANGUP
5 REQUESTS "DO NOT CALL LIST"

{Q:NOTAVAIL}

"Thanks for your time, sorry to bother you."

{Q:Q16OUT}

I'm sorry, but the questions I wanted to ask would not apply to you.

We're just talking to adult residents of the Washington Metropolitan Area who work at least 10 hours inside a building located outside their home during the daytime. Thank you very much for your time. Goodbye.

{Q:Q16GEND}

PLEASE RECORD GENDER OF PERSON ON PHONE IF KNOWN

1 MALE
2 FEMALE
8 DON'T KNOW

{Q:Q16AGE}

PLEASE ESTIMATE AGE CATEGORY OF PERSON ON PHONE TO THE BEST OF YOUR ABILITY

1 YOUNGER RESPONDENT (under 25)
2 MIDDLE AGE RESPONDENT (25-60)
3 OLDER RESPONDENT (over 60)
4 DON'T KNOW / UNABLE TO ESTIMATE

Survey and Sampling Methodology

The 2011 survey of the National Capital Region (NCR) was conducted by the Center for Survey Research (CSR) at the University of Virginia using a Computer Assisted Telephone Interviewing (CATI) system and a triple frame sample design.[1] The questionnaire focused on choices that might be faced by members of the region's workforce if an unexpected terrorist attack involving one or more "dirty bombs" were to occur on a weekday afternoon. A discussion of the general methodology appears in the introduction of this report. This appendix provides additional details on how the questionnaire was developed, how the sample was created, how the survey was administered, how the data were weighted, and how statistical testing was used to evaluate the results.

Sample

A good representative sample should allow contact with a balanced cross-section of the population, and require minimal adjustment of the final results to appropriately reflect the entire population. For this study, the population of interest was all adult residents of the NCR who currently work outside the home at a fixed location, 10 or more hours per week. Traditionally, CSR and other research organizations have employed random-digit dialing (RDD) to reach a random sample of the households in a defined geography. Landline RDD methods have been used in the past to produce a more representative sample of the population than other available sampling methods. Households are selected for contact at random so that all households with a working landline telephone can be reached. Listed and unlisted residential landline telephones have equal probability of being included in an RDD study. In recent years, the growth in the use of cell phones has been increasingly evident during data collection.

Recent research, including a pilot study of cell phones fielded by CSR in January-February 2008[2] and subsequent work in Virginia counties**,** has shown not only the feasibility of cell phone calling, but demonstrated that the demographics of those reached via cell phone are quite different from those currently reachable via landline phone. Analysis of the occurrence of key demographic groups through the years has shown decreased representation of key groups, particularly younger respondents in landline RDD samples. Including cell phone contact serves to increase the under-represented groups in the final sample and ensures that completed interviews accurately reflect the actual population of the target areas. In 2008 our cell phone experiment demonstrated that using a $10 incentive with cell phones increases the completions per hour (cph) rate and makes calling more affordable. This year we have been testing whether this remains true. Accordingly, we split the cell phone sample into two groups, one receiving a $10 incentive and another receiving no incentive. We are testing to see if an increased calling efficiency still exceeds the cost of the incentive as well as whether there are any significant differences in responses or in demographic characteristics between the two groups.

With or without an incentive, it is still 2-3 times more expensive to call cell phones than landlines because of the inefficiency of the number blocks, compared to list-assisted landline random digit dialing. To partially offset the added cost of cell phone calling, the sample was augmented by numbers taken randomly from telephone directory listings. Listed sample is cheaper to administer because the proportion of numbers that are eligible households is much higher and time does not need to be devoted to screening out ineligible or non-working phone numbers. When conjoined with cell phone RDD, use of listed sample

[1] Thomas M. Guterbock, James Ellis, Abdoulaye Diop, Kien Le, and John Lee Holmes. "From Dual-Frame to Triple Frame: An Assessment of Coverage Bias in a Telephone Survey Design Combining RDD, Directory-Listed And Cellphone Samples. Paper presented at the Annual Meetings of the American Association for Public Opinion Research, Phoenix, May 2011.

[2] Abdoulaye Diop, Young-Il Kim, John Lee Holmes, and Thomas M. Guterbock. *Prince William County Cell Phone Pilot Survey [A Supplement to the 2007 Citizen Satisfaction Survey]: Summary Report of Results.* Center for Survey Research, March 2008.

in place of landline RDD has minimal effect on sample representativeness.[3] In addition, we back-matched our RDD sample to the electronic white pages so that these respondents could be mailed a postcard. All RDD with a back-matched address and directory listed respondents were contacted with a postcard indicating that they would receive a call about the study, and indicating that the survey would also be conducted in Spanish.

In summary, a landline RDD (Random B) sample of 3,853 telephone numbers (24.7% of the total) randomly generated from five-digit call groups known to be in operation in the NCR, and a second, general directory-listed sample from electronic white pages of 5,630 telephone numbers (36.2% of the total) were combined with a cell phone sample of 6,089 numbers (39.1% of the total) in an effort to ensure greater targeting of harder to reach populations and geographies. The cell phone numbers were randomly drawn from telephone exchanges assigned to cell phone usage at the rate centers which serve the localities in the study area. The cell phone sample does not attempt to distinguish working and nonworking number blocks. Again, this year only half of the respondents contacted by cell phone were offered a $10 gift card to either Target or Wal*Mart stores as compensation for any telephone charges incurred by participating in the interview.

All samples were purchased from Survey Sampling, Inc. of Fairfield, CT, a commercial sampling company that uses state-of-the-art methodologies. Table B-1 summarizes the sample purchased and the numbers of completions for the different sample types.

Table B-1: Summary of Survey Sample Types Used, 2011

Phone Type	Sample	(%)	Completed	(%)	Ratio (sample: completes)
RDD – No address	1659	10.7%	54	6.8%	31:1
RDD – Address match	2194	14.1%	182	22.8%	13:1
Directory Listed	5630	36.2%	411	51.4%	14:1
Cell – $10 incentive	2784	17.9%	75	9.4%	38:1
Cell – No incentive	3305	21.2%	78	9.8%	43:1
TOTAL	**15,572**	**100.0%**	**800**	**100.0%**	**20:1**

Potential respondents reached by telephone were screened for eligibility, first for residence in an NCR county or city, and then for being employed 10 or more hours per week at a fixed location outside the home. Telephone surveys risk biases owing to variation among members of a household in the likelihood of answering the telephone. For example, persons who do not work may be more likely to be available to answer the phone than are those who are employed. Various methods have been developed to randomize respondents within households in order to reduce these biases. On this survey, however, since the target respondent was a person working outside the home at a fixed location for at least ten hours per week, CSR only used a selection method when the initial respondent did not qualify and more than one other resident was eligible for the study. In that case CSR first used the "last-birthday" method, in which interviewers ask to speak to the eligible working adult in the household who had the most recent birthday

[3] Thomas M. Guterbock, Abdoulaye Diop, James M. Ellis, John Lee Holmes and Trung Kien Le. "Who Needs RDD? Combining Directory Listings with Cell Phone Exchanges for an Alternative Telephone Sampling Frame." *Social Science Research* 40:3 (May 2011): 860-872.

or, if last birthday is unknown, asked for the youngest eligible working adult who was at home at the time of the phone call. This protocol was applied to all households reached via the landline RDD or listed landline samples. Cell phone adults, however, were considered to be sampled as individuals. Prior research by others has shown that the percentage of cell phones actively shared by more than one adult is low and that it is very difficult in practice to accomplish a 'hand-off' of the cell phone from one adult to another randomly selected user of the phone.[4] Therefore, no within-household selection was attempted in the cell phone interviews for this study.

Landline and cell phone sample can include numbers that fall outside the boundaries of the NCR, so each number was screened for location at the beginning of the interview to exclude ineligible contacts. Persons under 18 years of age were not interviewed.

Questionnaire Development

The survey builds on the 2009 Survey of Behavioral Aspects of Sheltering and Evacuation in the National Capital Region,[5] The 2009 survey brought to the attention of the region's emergency managers, planners, and first responders an issue that had not been clear before. It showed that if a single radiological dispersal device (referred to below as a "dirty bomb") were exploded in the region during the workday, large numbers of workers would choose to leave work immediately: some to head home, some going to schools to pick up their children, others going to meet their spouses, partners, or other dependents, and some headed to evacuation destinations that they thought might be out of harm's way. One of the goals of this second survey was to probe more deeply into these areas of inquiry that had been identified in the first behavioral survey, prompting researchers to start with the questionnaire used for data collection in 2009. Two clear topic areas emerged from a series of e-mails and teleconferences with stakeholders in winter 2010. The issues and priorities that would affect the behavior of workers and the preservation of continuity of operations in the NCR were clearly of interest, and this led to an exploration of how dependents, and especially children in school, would influence the decisions workers would make when faced with some community-wide emergency.

A conceptual outline of the topic areas was developed to serve as the basis of a draft questionnaire. It did not include survey questions but only topics for discussion.

In addition, since the use of different scenarios presented to a subset of respondents had been successfully used to maximize response in 2009, it was decided to pursue that questionnaire structure again. Scenarios would be based on a similar escalating hazard level scale, again using the explosion of one or more dirty bombs in the NCR as a primary reference.

Focus groups

As a first step in refining the key issues that would be faced by workers in the NCR, CSR started with a focus group of parents who worked outside the home. This group met in the UVa/VT Northern Virginia Center in Falls Church, VA in January 2011. Participants were recruited at random from the area and given $35 for their effort, plus $5 reimbursement for parking and a light supper. A trained facilitator from the Center for Survey Research guided participants through a series of topics to gather reactions to the scenarios being presented. First, participants considered work-related items, and then they were asked to react to potential situations involving their child's school. Topics were general enough that discussion could digress into new areas. Tape recordings and written notes were used to document proceedings and

[4] J. Michael Brick, W. Sherman Edwards, and Sunghee Lee."Sampling Telephone Numbers and Adults, Interview Length, and Weighting in The California Health Interview Survey Cell Phone Pilot Study." *Public Opinion Quarterly (* 2007) 71: 793-813.

[5] Thomas M. Guterbock, James H. Lambert, Robin A. Bebel, James M. Ellis, Jr., and Deborah A. Kermer. *Population Behaviors in Dirty Bomb Attack Scenarios: A Survey of the National Capital Region. Report of Results.* Prepared for the Virginia Department of Emergency Management. University of Virginia, Center for Survey Research and Center for Risk Management of Engineering Systems. April 2010.

serve as reminders of the group discussion points. Findings from this "Blue Sky" group contributed to the development of a full draft questionnaire.

It is critical to our understanding of potential behaviors in an emergency that we appreciate the needs and concerns of all NCR residents. To further that end, an additional focus group was held on April 4, 2011 in Washington, D.C. to present the developed draft questionnaire to a live audience in a locale demographically and geographically different from that of the first group. The Polling Company hosted the focus group meeting, with CSR conducting the group session. Participants in this group were randomly recruited from the central D.C. area and given $40 as well as up to $10 in parking reimbursement and light refreshments. Although ethnically diverse and representing a wide range of ages and length of tenure living in the city, the recruited group did not include any parents. In the first group, potential participants had been screened to ensure that everyone was a parent, but this time, testing the questionnaire using respondents from a broader range of circumstances was given primacy.

The participants completed a paper version of the survey but in the interest of replicating the telephone interview experience as closely as possible the description of the fictitious scenarios to be considered was read aloud to them. Afterward, comments about the clarity, relevance to their lives and their ability to answer the questions in a meaningful way were solicited by the CSR team.

We were able to gather excellent feedback on the workplace section of the questionnaire in D.C. In order to test the school section of the questionnaire, a third group was held at CSR offices in Charlottesville, VA just a week later. This group was screened for working parents and given $25 as an incentive for their attendance. Light refreshments were also offered and the protocol was the same as that for the D.C. group. Guides for this group took participants more quickly through the scenarios and workplace questions to allow enough time for a comprehensive discussion of the school place questions.

The focus groups were an effective aid in making sure the final survey would be relevant to those living in the area and that the questions and answers they elicited were meaningful and unambiguous. Although the work and school sections were considered by separate groups, this division proved effective as both sections prompted extensive comments easily filling the full hour and a half allotted for each group despite the shorter questionnaire. Participants were forthcoming and honest in their contributions, giving each topic careful consideration. Their feedback was instrumental in the refinement of the survey, bringing important and unanticipated issues to light. Although the survey was long, most comments described the time spent and issues raised as "thought-provoking," "enlightening," and "scary."

Many issues raised with respect to the questionnaire concerned the assumptions or parameters of the scenarios. It became increasingly apparent through these focus group discussions that parents were more agitated by the proposal that they could be locked down in their workplace and their child released on a normal schedule from school than they were by any proposed loss of telephone communication. This observation led the principal investigators to rearrange the path of progression through the moderate hazard level for some respondents to test that reaction specifically (Table B-2). Details of the scenarios were clarified, answer choices were expanded and more definitions were included to improve the flow of the questionnaire and to help the interviewee provide responses that were relevant to their own situation.

Questionnaire design

The heart of the survey was a varied series of hypothetical scenarios, each one involving one or more dirty bombs and asking the worker if he or she would choose to stay at work or leave immediately if that situation were to occur. By randomly varying these scenarios across the respondents and comparing the resulting decisions, we are able to learn a great deal about the factors that affect a worker's decision to stay at work or leave.

Each respondent was asked to have in mind a "loved one" about whom they would be concerned if an emergency occurred during work hours. Parents were directed to focus on the youngest of their children who would be outside the home during the day. Others focused on a person of their choosing – in most cases another adult such a spouse, partner, or aging parent. We varied the following aspects of the dirty bomb scenario:

- The level of hazard, defined by the number and proximity of the unannounced dirty bomb explosions.
- Whether or not phone and internet connections would be operational during the emergency.
- In the 'moderate' scenario, which involves just one dirty bomb, we varied whether the explosion occurred near the workplace, causing the respondent to be placed under shelter-in-place instructions, or whether instead the explosion was near the loved one's school or other location, placing the loved one under shelter-in-place instructions.

Each respondent is presented with two versions of the scenario at the same randomly assigned hazard level. Introducing this design allowed CSR to collect data on 1,625 scenarios varied across eight combinations of conditions and sequences. A summary of the defined paths is below. In addition, for a rare case where a respondent did not identify a loved one the narrative switched to only discussing the respondent's side of the events in their scenario.

Table B-2: Summary of Survey Scenarios Randomly Assigned, 2011

Hazard Level	Question Path	Asked to shelter	Phone Service
Minimum	1st	No one	Yes
	2nd	No one	No
Moderate	Version A: Respondent shelters 1st then switch	Respondent	Not specified
	Version B: Loved one shelters 1st then switch	Loved One	Not specified
Maximum	1st	Everyone	Yes
	2nd	Everyone	No

Telephone Interviewing Procedures

CSR conducted the telephone interviews from its Computer-Assisted Telephone Interviewing (CATI) Laboratory at the University of Virginia. CATI is a system in which computers are employed to increase the efficiency, accuracy, and flexibility of telephone surveys conducted by trained interviewers. Questions appear on the computer screen in programmed sequence as the interviewer presses the keys on the keyboard to record the respondent's answers. Accurate, instantaneous data entry is assured by the system. The computer system stores the database of telephone numbers and is used to control the sampling process, dial each sampled number, schedule call-backs, and record the disposition of each attempted call. CSR's CATI laboratory also allows for audio-visual monitoring of calls by lab supervisors.

Pretest of the Survey Instrument

To test the clarity of the new questions and to verify the length of the instrument, CSR conducted a telephone pre-test. Pretests are intended to follow the protocol for the data collection as closely as possible to reveal any unforeseen problems. Findings may indicate that an adjustment to procedures is

necessary to fulfill expectations. It is also possible at this time to recommend altering either the projected scope or the project budget.

The initial pretest on May 3-4, 2011 confirmed that the instrument was slightly too long and needed work on transitions. At 24.7 minutes average, the questionnaire was under the target length of 25 minutes but adjustments to the questionnaire were being made that were expected to lengthen the interview. In addition, the rate of completions per hour at .52 was lower than the budgeted target rate of .65 per hour. So changes in the questionnaire's introduction and respondent selection language were made to bolster efficiency in identifying a potential respondent and obtain cooperation. Accordingly, some "question rationing" was implemented so that certain questions would be randomly asked of fewer than all respondents in order to ask a larger number of questions overall and still obtain a sufficiently large sample of responses to each question without making the survey substantially longer for any individual respondent. Finally, our team of experienced interviewers offered constructive suggestions, wording changes and posed thoughtful questions based on their experience. Researchers were able to streamline some areas of the script, offer helpful prompts and make some cuts to the script based on this debriefing and the findings from analysis of the collected data. This amended script was reviewed by the investigators and returned to active data collection for production interviewing within ten days.

Production Calling

Production calling for the survey was carried out from May 13 through June 12, 2011. Numbers were dialed automatically by the WinCATI computer system except for cell phones, which were manually dialed to conform to Federal telecommunications regulations. Calling was done regularly on Sunday through Friday evenings, Sunday afternoons, and occasionally on Saturday and weekday afternoons. The interviewers received at least six hours of training prior to production interviewing. Many had prior interviewing experience on similar studies. Each phone number was given a maximum of 12-14 call attempts for landline and 8-10 attempts for cell before it was treated as a "no answer" or "busy" number. Residential phones answered by automatic answering machines were treated the same as "no answer" calls (although counted separately).

With respect to landline phones, CSR interviewers did not leave messages on the answering machines of potential respondents but simply returned the phone number to the sample pool for another calling attempt at a later time. However, cell phone users were left a message on the first attempt so that they would understand the purpose of the call and could arrange for a callback at a convenient time. Answering machine announcements that identified the phone number as a place of business, however, were recorded as such and not re-attempted on the landline sample. Because many cell phones are used for business and personal reasons, business messaged-phones were reattempted three times without leaving a message and then automatically finalized as a business. As with landlines, cell phones identified by the person answering as a business were not surveyed.

Non-response bias in surveys results when qualified respondents do not complete a survey, usually because they refuse to cooperate. In order to reduce non-response, CSR augmented its calling in two ways. First, all cases with a postal address available were sent a postcard that explained the purposes of the study and provided CSR's toll free number. The postcard serves to reinforce the study's legitimacy and is timed to arrive 1-2 days prior to the first telephone contact. The card also briefly indicated in Spanish that a Spanish language version was available. Of the 5,630 directory listed cases and 2,194 back-matched (to the electronic white pages) random digit dialing landline cases that were sent a postcard, 253 cards returned as undeliverable. Within the directory listed sample, 1.5% of the postcards returned whereas within the back-matched RDD sample 3.2% of the postcards are known to have failed delivery. However, it is likely that a far larger number of postcards were undeliverable. The postcards have no "Return Service Requested" imprint and tend to return at lower rates than do first class envelopes. But it is noteworthy that a higher proportion of the back-matched RDD cases returned as bad mail than the directory listed cases.

In addition, approximately 3-4 days after initial phone contact, CSR conducts "conversion calling," wherein highly trained, more experienced interviewers call back households in which a respondent had

previously declined to take the survey. First, CSR kept track of the "tone" of initial refusals. "Hard" refusals, those in which people explicitly asked not to be called again or were noticeably agitated or upset about receiving a phone call, were not called back at all. "Soft" refusals, those for which it seemed that interviewers only caught someone at a bad time, were called back and contacted again after an interval of at least three days. Respondents were removed from calling after three "soft" refusals.

Productivity and Response Rates

A total of 15,572 phone numbers were attempted in the course of the survey, resulting in 800 completions and 42 partial cases, of which 16 were sufficiently complete to be used for analysis in the final dataset for a total of 816 interviews. The interviews took an average of 22.8 minutes to complete once a qualified respondent was identified through final respondent comments, with a median time of 21.7 minutes. Interviews completed in the Spanish language took 29.3 minutes on average (median of 28.8 minutes) to complete once a qualified respondent was identified, compared to 22.7 minutes in English (21.7 median time). Some of this difference may be accounted for because a higher proportion of Spanish language surveys were conducted by cell phone (64%) than was the case in English (18%). Cell phone surveys tend to be slightly shorter at the beginning because of the simpler selection process but longer at the end because of the need to obtain information for providing the incentive.

Landline surveys have a more complex selection whereas for the cell phone it was assumed that the person answering the phone was the primary user unless stated otherwise by the respondent. Nevertheless, overall on this survey, there was no significant difference between the cell phone and the landline surveys in the duration of the respondent selection stage of the survey, as is normally the case. This is probably a result of our decision to accept any qualified adult at the start of the survey, instead of conducting fully random within-household selection from among all who might have qualified. However, there was a difference in duration at the end. The average length from greeting to goodbye on a landline interview was 24.9 minutes whereas for the cell phone it was 27.9 minutes. If we look at the time from the point at which a qualified respondent was selected until hang-up, the cellular telephone survey took 24.8 minutes on average compared to 22.3 minutes for the landline.[6]

The final disposition of each of the attempted phone numbers is shown in two tables at the end of this Appendix. The disposition report is presented in a format that has been recommended as an industry standard by the American Association for Public Opinion Research. The AAPOR rate was calculated by a custom analysis of the complete call history of each attempted number, using a program written in SPSS by CSR technical staff. CSR completed a total of 800 complete and 42 partial interviews, for an overall response rate of 17.7%. Of the 42 partials, 16 were retained for use in the final dataset. Eleven interviews were conducted in Spanish. The response rate is a way of expressing the proportion of completed interviews against the number of eligible possible contacts. It does not include failures to interview at the number dialed because the number has not been assigned to an eligible participant or is not working. It does include eligible respondents who refuse cooperation and other numbers whose eligibility cannot be determined (busy or never answered numbers).

The true response rate depends on how one estimates the percentage of working residential phones that exist among the numbers that never answered our many call attempts. An estimate of 16.6% for the landline only RR3 response rate (not shown in the table) is based on the most conservative assumption (equivalent to the CASRO rate) that the percentage of residential households with respondents eligible for our study among unreachable numbers is the same as the percentage among those we reached, i.e.,

[6] The median time from 'hello to hang-up' was 25.8 minutes for cellular, 23.8 for landline.

50.3%.[7] However, because CSR completed multiple attempts to nearly all of the no-answer numbers and based upon prior experimentation with listed and RDD samples in Virginia, we estimate that the residency rate alone is around 20% of no-answer numbers and that our true response rate (adjusted RR3) for landlines is closer to 17.0%. Within the landline sample the adjusted RR4 for RDD production was 17.6% and the unadjusted RR4 for listed production was 17.9%. For the cell phone portion of the sample, the estimated response rate is 17.4% and as with directory-listed sample the adjustment is not used.

The disposition rate calculations were also adjusted to the particular circumstances of eligibility for this study. In addition to residing in the household called or using a cellular telephone, the respondent had to work at least ten hours per week at a fixed location. This meant that whereas normally refusals are considered to be eligible, in this case we divided between refusals where eligibility was not yet determined and those where it was. The survey instrument recorded and saved this information. Other changes included considering persons physically and mentally unable as ineligible, considering as 'unknown eligible' persons who were never available to confirm their eligibility, and people who were language and otherwise unable.

Finally, the efficiency of the calling can be expressed in terms of number of completions per hour of calling (CPH). The overall interview production rate was 0.49 interviews per hour. It is noteworthy that cell phone productivity was .31 for both those receiving and not receiving an incentive. However, the ratio of sample to completions was different for the two groups (see Table B-1). When fielding the survey, the RDD sample was divided to separately track productivity for those numbers that were able to be back-matched to a directory listing in the electronic white pages and for those which were not matched. The back-matched sample had a productivity of .58 completions per hour (cph) in contrast to the unmatched sample which, at .29 cph, proved even less productive than the cell phone sample (compare figures in Table B-3 below). There is an expected loss of productivity associated with using a higher proportion of cell phones in the total sample when combined with the declining rates of RDD productivity nationwide. In addition, the lower response rate and productivity for this survey can in large measure be accounted for by the length of the questionnaire, the need to search for workers only, and the nature of the topic. These led to higher rates of refusal than is normally the case.

Table B-3: Completion Rates and Completions per Hour by Sample Type

	Completions + Partials collected*	Interview Length**	Rate/hr	Response Rate (rr4)
Landline Random Digit Dialing (RDD)	252	25.2	0.47	17.6
Electronic White Pages (Directory Listed)	429	24.7	0.63	17.9
Wireless (Cellular) RDD	161	27.9	0.31	17.4
Landline only	681	24.9	0.56	17.9
Overall	**842**	**25.5**	**0.49**	**17.7**

***Includes some cases ultimately excluded from analysis in estimate

****Interview length: average number of minutes from 'hello to hang-up'

[7] Calculated according to AAPOR suggested formula RR4 adjusted by comparison of listed and RDD telephone no-answer rates used to estimate the proportion of RDD no-answer numbers that are actually non-working or unassigned numbers, with *e1*=.108 and *e2*=.541. We estimated *e2* by dividing households determined to be eligible by the N of households overall (including cell phone numbers for the overall estimate where the actual rates of eligibility are unknown but likely to be much lower than our estimate). The estimated *e2* was also applied to housing units where eligibility could not be determined. We derived *e1* by taking the product of *e2* and the estimated residency rates calculated by the CASRO method. Partial interviews are not counted in the numerator of the RR3 formula but are counted in RR4 formula (see Table B-9 at the end of this appendix for details).

Geographic Representation

When RDD and cell phone sampling are employed, the surveying organization does not have any exact prior information on the location of the household. To protect respondent confidentiality and preserve a sense of privacy in the interview, CSR does not usually ask respondents to supply their address except for those randomly asked to participate in a follow-up study and cell phone participants who were asked for the address to send their $10 gift card. This address data is kept separate from their questionnaire responses. Interviewers asked respondents to identify which city or county they lived and worked in. Respondents who indicated they were from specific locations in Virginia (Arlington County, Alexandria City, Fairfax City, Fairfax County, Falls Church City, Loudoun County, Manassas City, Manassas Park City, and Prince William County), Maryland (Montgomery County and Prince George's County) as well as the District of Columbia were included in the survey. Later in the interview, respondent inclusion was confirmed by requesting their zip code information for both work and home. Respondents who could not supply an area name, or who gave a name not on the list were excluded from the sample. When a respondent was uncertain of whether their town was located in one of the eligible counties, the interviewer would ask the calling lab supervisor to look it up on the internet before proceeding. This procedure allowed CSR to code respondents into one of twelve geographic areas that are included in the analysis of the National Capital Region. This information was then used to group respondents into eight predefined geographic regions (see Table B-5) that would serve as a demographic variable in analyzing responses. This method helps inform our understanding of the representation of response from different areas of the NCR**.**

While this procedure has a satisfactory degree of accuracy for the purposes of comparison, it includes some inevitable inaccuracies due to errors on the part of respondents or interviewers. Apart from the District of Columbia and Prince George's County, MD, the geographic distribution was very close to population estimates for the region and thus geographic weighting was relatively minimal. Table B-4 summarizes the broad geographic distribution of the respondents by sample type.

Table B-4: Respondents by Sample Type and Area – Unweighted

Area	Random Digit Dialing		Directory Listed		Cell phone		State Totals	
District of Columbia	25	35.7%	30	42.9%	15	21.4%	**70**	**8.6%**
Virginia	133	28.2%	247	52.3%	92	19.5%	**274**	**57.8%**
Maryland	83	30.3%	144	52.6%	47	17.2%	**470**	**33.6%**
Sample Totals	**241**	**29.5%**	**421**	**51.6%**	**154**	**18.9%**	**816**	

Weighting

The inclusion of cell phones in the 2011 sample required a disproportionate sampling scheme; therefore the 2011 data are weighted on the type of sample from which each case was selected. Also, as is usual when using telephone survey methods, the sample composition did not exactly match the composition of the entire population of households in the NCR. Accordingly, statistical weighting of the survey results was designed to accomplish three objectives: (1) to correctly represent the geographic areas, (2) to properly represent certain demographic characteristics of the population, and (3) to properly represent different types of phone service in the National Capital Region population (cell phone-only cases, landline-only cases, and those with both kinds of telephone service), as well as the correct proportion of unlisted landline telephones.

Demographic weighting

This is the most common type of weighting that is done with a dataset. Random sampling error, systematic differences in rates of refusal between different groups, and differences among households in the amount of time that someone is home to answer the phone can result in a sample that somewhat over-represents females, under-represents homeowners, and under-represents African Americans. To correct these imbalances, CSR weighted the sample data on demographic characteristics. Statistical weighting is larger for those respondents who are in underrepresented groups, and smaller for those who are in overrepresented groups, so that the aggregate result is what we would have obtained from a fully uniform, random sample of the whole population.

In order to calculate the correct weights, CSR drew upon information from the 2009 ACS (American Community Survey) in order to get the correct proportions of the adult population in the National Capital Region and calculated dichotomous weights for race (Black/non-Black) and gender (proportion of male/female in the NCR). Note that we did not weight the data with respect to age or homeownership.[8]

Geographic weighting

In addition to demographics, statistical weighting was applied to correct geographic representation within the National Capital Region. Table B-5 shows the percentage in the area of the population of workers employed in the labor force, 16 years of age and older, taken from the 2009 American Community Survey compared to its percentage in the sample. The geographic weight is the amount each case would need to be multiplied by in order to have the sample percentage for each area equal to its actual population proportion. In practice, the geographic weight is combined with the other weights through an iterative process called "raking."

Table B-5 Distribution of National Capital Region, and Geographic Weight Values

NCR areas	Working Population, ACS 2009		2011 Unweighted Sample		Geographic Weight[9]
	(count)	(%)	(count)	(%)	
District of Columbia	291,830	12.31%	70	8.6%	1.435
Arlington County, VA	130,093	5.49%	44	5.4%	1.018
Alexandria County, VA	84,984	3.58%	30	3.7%	0.975
Fairfax & Falls Church, VA	562,567	23.73%	225	27.6%	0.860
Loudoun County, VA	148,676	6.27%	80	9.8%	0.640
Manassas & Prince William, VA	210,915	8.90%	93	11.2%	0.781
Montgomery County, MD	503,212	21.22%	161	19.8%	1.076
Prince George's County, MD	438,762	18.51%	113	13.9%	1.336
Total	2,371,039	100%	816	100%	

[8] CSR's standard homeownership question was inadvertently omitted from the final questionnaire.

[9]Calculated from population percentage divided by sample percentage, the weight is applied prior to the raking procedure. Presented in the Table are the geographic weights in theory but those actually applied were slightly different because two partial cases from Prince William County were not included. The difference is insignificant particularly when taking into account the raking procedure that also adjusts the geographic weights so that they converge with other weights. For the record, the pre-raking applied weights using 814 cases were: 1.431 (District of Columbia), 1.015 (Arlington), 0.973 (Alexandria), 0.858 (Fairfax and Falls Church), 0.638 (Loudoun), 0.796 (Manassas and Prince William), 1.073 (Montgomery) and 1.333 (Prince George).

Cell phone weighting

Current research on cell phone interviewing is still in flux, and there are no standard, accepted methods for weighting the results of a 'dual frame' sample that combines completed interviews from landline samples with completed interviews from cell phone samples. Dr. Guterbock has been working on the development of appropriate methods, and our approach to the current study applies his latest research to the available local data. Here we treat RDD and listed samples as one "landline" sample, thus treating our triple-frame design as a dual-frame sample (cell phone and landline sampling frames).

The heart of the weighting problem is simple: there is no available external source that will tell us the percentage of the area population that has cell phone-only service, landline only, or both. Authoritative data are collected at the national level by the Centers for Disease Control in the National Health Interview Survey, a very large, continuous, in-person data collection focused on health issues.[10] That survey determines the phone-service status of each household in a representative national sample, and results from as recently as the first half of 2010 are currently available. However, these data are available only at the national or broad regional level. It is doubtful that these broad averages across regions are directly applicable to the National Capital Region. Moreover, our study population does not include all adults but only those who work outside the home.

The estimation problem is made somewhat more difficult by the fact that rates of survey response are not even across different phone-use segments. That is, cell phone-only adults are much more likely to answer their cell phones than are those who have both kinds of phones. This is understood to reflect differences in telephone behavior between cell phone-onlies and dual-phone users. Cell phone-onlies are presumably more likely to have their phones with them, to have their phones turned on, and to accept calls from unknown numbers than are those who continue to rely primarily on landline phones. For these reasons, the percentage of cell phone-only cases encountered in actual cell phone surveys is much higher than their actual share among all cell phone users. It is probably also the case that landline-only households are somewhat overrepresented within landline samples, as compared to those who have both kinds of phone. The latter group is referred to below as the *overlap sample*, because the households having both landline and cell phones lie at the intersection of the cell phone frame and the landline frame.

In order to estimate the degree of under-representation of the overlap sample segment in the cell phone sample and in the landline sample, we compared results from the 2009 California Health Interview Survey (a telephone survey combining RDD sample with cell phone-only households) with the California state estimates of phone usage from NHIS (July 2009 – June 2010 results).[11] Using algebraic formulas developed by Dr. Guterbock, we were able to determine the values for two *response rate ratios:* r1, the ratio of the response rate to cell phone calling in the overlap sample compared to the response rate of cell phone-onlies, and r2, the ratio of the response rate to landline calling in the overlap sample to the response rate of landline-onlies. The NHIS reports that the estimated phone-service proportions in the state of California were: 18.4% cell phone-only, 68.9% dual-phone (overlap), and 11.6% landline only. If response rates were equal (r1 = r2 = 1.0) then the CHIS 2009 would have found 20.8% of the cell phone completions to be cell phone-onlies. Instead, CHIS 2009 reports 33.7% percent cell phone-onlies. CHIS should have found 14.3% landline-onlies in the landline sample, but actually had 23.0% landline-onlies in its landline RDD sample. Applying Guterbock's formulas to these data results in an estimate of r1 = .519 and r2 = .558.

Table B-6 shows the initial sampling weights for phone-service segments. The "estimated true" values are derived by application of the values for r1 and r2 estimated above to the data from our 2011 survey completions in the NCR.

[10]Blumberg SJ, Luke JV, Ganesh N, et al. Wireless substitution: State-level estimates from the National Health Interview Survey, January 2007–June 2010. National health statistics reports; no 39. Hyattsville, MD: National Center for Health Statistics. 2011.

[11]Thanks to Michael Brick of Westat for sharing a tabulation of results from CHIS 2009 for this purpose.

Table B-6: Initial estimates of the phone-service segments in the NCR 2011

	Cell phone sample		Landline sample		Combined samples		Est. true	Weight	Weighted N	
Cell Only	69	43.4%	0	0.0%	69	8.4%	28.25%	3.361	232	28.3%
Overlap (Both)	89	56.0%	622	94.0%	711	86.6%	69.27%	0.800	569	69.3%
LL Only	1	0.6%	40	6.0%	41	5.0%	2.48%	0.497	20	2.5%
	159		**662**		**821**		**100%**		**821**	

Once these estimates were made, a further decision needed to be made about weighting the overlap sample. By design, we did not complete a very large number of cell phone cases because of their greater expense. In theory, if all phones in the area had been called with equal likelihood, we would have reached one half of the overlap sample through their cell phone and one half through their landline. This would call for weighting the portion of the overlap sample reached through cell phone up by a very large weight to bring their share of the overlap to 50%, which could potentially have distorted the results and also increased the 'design effect' in the study, reducing the precision of the estimates. We decided to apply a weight of 2.0 to the cell phone cases in our overlap sample, allowing the weight on the landline cases in the overlap sample to take a value that would result in an overall overlap percentage in the weighted sample of 69.3%. Table B-7 shows these weights as applied to the completions in the final sample. When data were subjected to final cleaning, the final number of usable cases decreased slightly, but the weights shown below were applied to all usable cases in each phone-usage segment.

Table B-7: Final estimates of the phone-service segments in the NCR 2009

	Cell phone sample		Landline sample		Combined samples		Est. true	Weight	Weighted N	
Cell only	69	43.4%	0	0.0%	69	8.4%	28.25%	3.3614	232	28.3%
Overlap: Cell	89	56.0%	0		89	10.8%	21.68%	2.0000	178	21.7%
Overlap: LL	0		622	94.0%	622	75.8%	47.58%	0.6281	391	47.6%
LL only	1	0.6%	40	6.0%	41	5.0%	2.48%	0.4974	20	2.5%
	159		**662**		**821**	**100%**	**100%**		**821**	**100%**

Listed status weighting

We also weighted the results to accurately represent unlisted landline cases. These are somewhat underrepresented because the directory-listed sample has only a small percentage of unlisted households. To correct for this, we weighted all unlisted landline households reached on either the RDD or EWP (listed) samples so that, in total, they represent 15.7 percent of all completions and 21.9% of the landline completions, corresponding to the unlisted percentage as reported by respondents in the landline RDD sample.

Combining the weights

The final step in the weighting process was "raking," a statistical procedure used to produce combined weights for the five weighting factors: gender, race, geography, phone service type, and listed versus unlisted telephone status. The percentages for geographical areas in Table B-5 were used along with the

weights for phone usage from Table B-7 in an iterative process that produced a final weight for each of the 256 design cells (2 genders × 2 race categories × 4 phone-service segments × 8 areas × 2 listed statuses [unlisted landline versus all others]) that would best fit with the given marginal population distribution for each weighting factor. This procedure necessarily treats the distribution of phone-service segments as being equal across the geographic areas.

A more complete description of the cell phone estimation procedures used here, along with algebraic formulas needed to calculate and apply the response rate ratios, is available upon request.[12]

Sampling Error and Statistical Testing

Our final sample includes 816 respondents. If these cases had been drawn by simple random sample, the survey would have a margin of error of plus or minus 3.44 percent. However, in addition to sampling error there is a design effect that impacts the total margin of error which we calculate by introducing the weights derived by the "raking" process described above into the Complex Sampling module of SPSS statistical software. This tool allows calculation of a "design effect" for the survey. The design effect shows how the variance of sample estimates is increased by the effect of post-stratification weighting. We base our estimate of the overall margin of error on a key survey question, in this case the question a respondent was very likely to have answered to be included in the final dataset (PETS). For that question, 813 respondents provided an answer (3 refused). The design effect is 1.679, meaning that the margin of error in our sample is equivalent (because of the weighting) to the margin of error we would have obtained from a simple random sample of 484 (813/1.679), the effective sample size for that question. The margin of error is increased by the square root of the design effect, a factor in this case of 1.30. The final margin of error is 4.45%. This means that in 95 out of 100 samples of this size drawn from the National Capital Region, the results obtained in the sample would fall in a range of ± 4.45 percentage points of what would have been obtained had every household in the area with a working landline or cellular telephone been interviewed. Larger sampling errors are present when analyzing subgroups of the sample or questions that were not asked of all respondents; smaller sampling errors are present when a lopsided majority gives the same answer (e.g., 80 percent of the sample are satisfied with a given service).

Statistical significance tests were used to verify the existence of differences among various subgroups. We used independent-sample t-tests for differences in means and the Pearson Chi-Square test of independence for differences in proportions. In chi-square tests of some items, the several response categories were collapsed into two. We report in these pages differences that yield a "p-value" of .05 or less. A level of .05 indicates that there is only a 5 percent chance that the difference we find is due to sampling error, rather than reflecting a real relationship within the study population.

In the 2009 survey, statistical significance was calculated using the SPSS Complex Sampling module and hence took into account the "design effect." The 2011 survey uses a modified procedure, whereby an "effective sample weight" was calculated by dividing the standard weighting variable by the survey sample design effect of 1.679 (described above). This reduces the sample size underlying tests of significance from 813 to 484 cases (the effective sample size described above). This effective sample weight was used for all cross-tabulations. The 2011 method was chosen for its expediency as compared to the Complex Sampling module, though it is less accurate because it uses a single design effect for the entire survey rather than calculating a separate design effect for each variable. However, the practical implication is the same as the method used in the 2009 survey: tests of significance become more conservative, requiring a larger difference between groups to achieve significance at the 95% confidence level.

The statistics for evaluating statistical significance do not measure error from sources other than random sampling error. Such error can occur in any poll or survey.

[12]Thomas M. Guterbock. "Estimating Phone Service and Usage Percentages: How to Weight the Data from a Local, Dual-Frame Sample Survey of Cellphone and Landline Telephone Users in the United States." Paper presented at the Annual Meetings of the American Association for Public Opinion Research, Hollywood, Florida, May 14, 2009.

The following disposition reports detail the final resolution to every attempted phone number in the sample. The report form is arranged for calculation of AAPOR standard rates.

Table B-8: Sample Disposition Report

NCR 2011 – Disposition Listing for All Samples

[dispositions arranged for calculation of AAPOR standard rates]

Disposition Code	Disposition Description	All Samples Total	Random Digit Dialing	Directory Listed	Cellular (Wireless)
1100	Complete	800	236	411	153
1200	Partial	42	16	18	8
2110	Unkn Eligible: Refusal	1801	494	749	558
2120	Eligible: Refusal & Break-off	73	28	35	10
2210	Unkn Eligible: Resp Never Avail	395	66	121	208
2221	Unkn Elig: Ans Mach, No Mess	3890	1138	2305	447
2222	Unkn Elig: Ans Mach, Message	1368			1368
2310	Eligible: Dead	0			
2320	Inelig: Phys/Mentally Unable	11	4	6	1
2330	Unkn Elig: Language Unable	129	34	42	53
2340	Unkn Elig: Misc. Unable	56	15	6	35
3120	Busy	188	38	21	129
3130	No Answer	597	317	60	220
3140	Ans Mach (Don't Know if HU)	737	81	139	517
3150	Technical Phone Problems	315	43	43	229
3210	HU, Unknown Eligible: No Scrnr	1707	266	708	733
3220	HU, Unknown Eligible: Other	2		1	1
4100	Out of Sample	931	195	386	350
4200	Fax/Data Line	395	272	96	27
4310	Non-working Number	888	185	183	520
4320	Disconnected Number	214	60	111	43
4410	Number Changed	18	7	6	5
4420	Cell Phone	N/A			
4430	Call Forwarding	0			
4510	Business/Govt/Other Org	535	319	77	139
4520	Institution	0			
4530	Group Quarter	0			
4700	No Eligible Respondent	480	39	106	335
4800	Quota Filled	0			
	Total	**15572**	**3853**	**5630**	**6089**

Table B-9: Sample Disposition Report

NCR 2011 – AAPOR Standard Rates Calculation

[Dispositions summary for all Telephone Samples]

AAPOR Standard Rates and Dispositions Summary	OVERALL Ave	Random Digit Dialing	Directory Listed	LANDLINE Ave	Cellular (Wireless)
*Estimated Residency 1**	0.134	0.108	0.213	0.170	0.076
Estimated Residency 2	0.392	0.541	0.482	0.503	0.200
Response Rate 1	0.093	0.107	0.121	0.116	0.050
Response Rate 2	0.098	0.114	0.127	0.122	0.053
Response Rate 3 *	0.168	0.165	0.171	0.170	0.165
Response Rate 4 *	0.177	0.176	0.179	0.179	0.174
Response Rate 5	0.259	0.257	0.254	0.255	0.270
Response Rate 6	0.273	0.275	0.265	0.268	0.284
Cooperation Rate 1	0.874	0.843	0.886	0.870	0.895
Cooperation Rate 2	0.920	0.900	0.925	0.915	0.942
Cooperation Rate 3	0.874	0.843	0.886	0.870	0.895
Cooperation Rate 4	0.920	0.900	0.925	0.915	0.942
Refusal Rate 1	0.006	0.010	0.008	0.008	0.002
Refusal Rate 2 *	0.014	0.020	0.015	0.017	0.011
Refusal Rate 3	0.011	0.019	0.012	0.014	0.005
Contact Rate 1	0.076	0.101	0.100	0.100	0.037
Contact Rate 2 *	0.109	0.140	0.126	0.133	0.067
Contact Rate 3	0.139	0.189	0.161	0.170	0.078
Complete Interview	800	236	411	647	153
Partial Interview	42	16	18	34	8
Elig: Refusal and Break-off	73	28	35	63	10
Unkn Elig: Refusals	1801	494	749	1243	558
Non-contact	5653	1204	2426	3630	2023
Unkn eligible: unable	196	53	54	107	89
Unknown if household	1837	479	263	742	1095
Unknown if other	1698	262	703	965	733
Ineligible Numbers	3472	1081	971	2052	1420
Total Dialed Attempts	78252	23530	30028	53558	24694
TOTAL	**15,572**	**3,853**	**5,630**	**9,483**	**6,089**
% of Landline		40.6%	59.4%	100.0%	
% of Overall	100.0%	24.7%	36.2%	60.9%	39.1%

**Contains CSR adjustment rate for Virginia residency for RDD portion of the sample. Estimated residency rate for cellular (wireless) sample derives from Landline assumptions. No adjustment estimates available for cellular samples at this time.*

Appendix C:
Master Questionnaire

NCR Behavioral Questionnaire

Work, School or Home:
Issues in Sheltering in Place During an Emergency Event

Table of Contents

n = count
% = valid percent
means = average of responses numbered 1 (low) to 4 (high).
ALL CAPS = Items not read to participants

Note: Not all text of the interview script is reproduced here. Some questions are abbreviated and some interviewer instructions are omitted.

A. HOUSEHOLD LOCATION

1. Which city or county do you live in? {county8}

	n	%
ARLINGTON COUNTY VA	44	5.6%
ALEXANDRIA CITY VA	29	3.6%
DISTRICT OF COLUMBIA	97	12.2%
FAIRFAX & CITY & FALLS CHURCH VA	191	24.0%
LOUDOUN COUNTY VA	51	6.4%
MANASSAS & PRINCE WILLIAM COUNTY	72	9.0%
MONTGOMERY COUNTY MD	169	21.2%
PRINCE GEORGES COUNTY MD	143	18.0%
Total	795	

B. WORK LOCATION

2. How many hours per week do you work on average? {wrkhrs}

	n	%
10-20 hours	49	6.0%
20-40 hours	79	9.7%
40 hours or more	685	84.4%
Total	812	

3. Which of the following categories best describes you? {work}

	n	%
Working outside the home full-time during the day	675	83.1%
Working outside the home part-time during the day	137	16.9%
Total	812	

4. How long have you lived in the Washington Metropolitan Area? {dclive}

	n	%
LESS THAN ONE YEAR	11	1.3%
ONE TO TWO YEARS	51	6.3%
THREE TO FIVE YEARS	67	8.2%
SIX TO TEN YEARS	124	15.2%
ELEVEN TO NINETEEN YEARS	134	16.5%
TWENTY YEARS OR MORE, BUT NOT ALL MY LIFE	304	37.4%
ALL MY LIFE	122	15.0%
REFUSED	1	.0%
Total	812	

5. How far is it from your home to your primary work location? {howfar}

	n	%
0-1 mile	46	5.8%
2-3 miles	66	8.4%
4-5 miles	95	12.1%
6-10 miles	201	25.6%
11-15 miles	128	16.3%
16-20 miles	97	12.3%
21-30 miles	102	13.0%
31-40 miles	33	4.2%
41-50 miles	13	1.6%
More than 50 miles	5	.7%
DONT KNOW	26	.0%
REFUSED	1	.0%
Total	812	

6. On a typical day, about how long does it take you to get to work, one way in normal traffic? (in minutes) {commute}

	n	%
Less than 30 mins	487	60.0%
31-60 mins	267	32.8%
61-89 mins	31	3.8%
More than 90 mins	28	3.4%
Total	812	

7. How do you normally get to work? {getwrk}

	n	%
Your own car	582	72.9%
Car pool	28	3.5%
Public bus	57	7.1%
Metro	105	13.1%
Bike	12	1.5%
Walk	15	1.9%
OTHER	13	.0%
Total	812	

8. What type of building is your primary location? {bldtype}

	n	%
Single story building	126	15.7%
Building with 2 or 3 stories	220	27.5%
High rise (4+ stories)	449	56.0%
Trailer or temporary building	7	.8%
OTHER	12	.0%
Total	812	

9. What county or city is your job located? {jobcity9}

	n	%
ARLINGTON COUNTY, VA	69	8.5%
ALEXANDRIA CITY, VA	18	2.2%
WASHINGTON, D.C.	246	30.4%
FAIRFAX COUNTY & CITY & FALLS CHURCH, VA	169	20.8%
LOUDOUN COUNTY, VA	24	3.0%
MANASSAS CITY & PRINCE WILLIAM COUNTY, VA	38	4.7%
MONTGOMERY COUNTY, MD	131	16.2%
PRINCE GEORGE'S COUNTY, MD	68	8.5%
OUTSIDE OF NCR	45	5.5%
Total	809	

10. So you are employed in? {job3b}

	n	%
A private or for profit company	391	49.3%
A non profit organization	116	14.6%
The federal government	183	23.1%
The state government	36	4.5%
Local government	53	6.7%
Your own business professional practice or farm	13	1.7%
DONT KNOW or NO ANSWER	15	.0%
REFUSED	4	.0%
Total	812	

11. How long have you worked at your current primary work location? {wrkyrs}

	n	%
0-2 years	324	40.0%
3-4 years	123	15.1%
5-7 years	121	15.0%
8-10 years	92	11.4%
More than 10 years	150	18.5%
REFUSED	1	.0%
Total	812	

12. How many people are employed there (at your primary location)? {numemp}

	n	%
1-5	49	6.3%
6-10	68	8.7%
11-20	57	7.4%
21-50	104	13.4%
51-75	30	3.8%
76-100	35	4.6%
More than 100	434	55.8%
DONT KNOW	29	.0%
REFUSED	7	.0%
Total	812	

C. FAMILY

13. What is your current marital status? Are you married, separated, divorced, widowed, or have never been married? {marital}

	n	%
MARRIED	473	58.6%
SEPARATED	13	1.6%
DIVORCED	80	10.0%
WIDOWED	23	2.9%
NEVER MARRIED	218	26.9%
REFUSED	5	.0%
Total	812	

14. [IF not married] Do you currently live with a partner with whom you share a domestic relationship? {partner}

	n	%
YES	56	16.6%
NO	280	83.4%
REFUSED	4	.0%
Total	339	

15. How many children under the age of 18 are there in your household? {children}

	n	%
0	469	58.4%
1	138	17.2%
2	131	16.3%
3	53	6.6%
4	10	1.3%
5	1	.1%
7	2	.2%
Total	803	100.0%

16. [IF CHILDREN>0] How many are age 5 or younger? {under6}

	n	%
0	181	54.3%
1	107	32.1%
2	43	12.8%
3	3	.8%
Total	334	100.0%

17. [IF CHILDREN > 0] How many are age 6 to 12? {sixup}

	n	%
0	87	34.8%
1	104	41.8%
2	52	20.7%
3	5	2.1%
4	2	.6%
Total	249	100.0%

18. [IF CHILDREN > 0]
And how many are age 13 to 17? {teens}

	n	%
1	108	74.0%
2	35	23.9%
3	3	2.1%
Total	145	100.0%

19. [IF CHILDREN > 0]
And how many are age 13 to 17? {teens}

	n	%
1	108	74.0%
2	35	23.9%
3	3	2.1%
Total	145	100.0%

20. [IF CHILDREN>0]
How many of your children attend school, preschool or daycare outside of your homw during the day? {childout}

	n	%
0	34	10.1%
1	144	43.2%
2	114	34.1%
3	33	10.0%
4	7	2.0%
7	2	.6%
Total	334	100.0%

21. [SKIP if no, none]
Do you have any people in the Washington Metro area that do not live with you but depend on you to provide care? {depend}

	n	%
NO, NONE	732	90.2%
ONE PERSON	49	6.0%
TWO OR MORE	30	3.8%
DONT KNOW	1	.0%
REFUSED	0	.0%
Total	812	

22. Pick a person you would most need to be in contact with if there were an emergency during the day when you are at work. This should be someone you need to be in touch with, but is not present at your workplace. Is that person a child or adult? {chldadlt}

	n	%
Child	5	6.5%
Adult	74	93.5%
Total	79	

23. Is this person a family member? {family}

	n	%
YES	70	87.7%
NO	10	12.3%
Total	79	

24. [IF FAMILY=1]
How is this person related to you?
{related}

	n	%
SON	11	16.4%
DAUGHTER	11	16.0%
MOTHER	13	18.3%
FATHER	8	11.8%
AUNT	1	1.2%
GRANDMOTHER	1	1.7%
OTHER RELATIVE	21	30.9%
OTHER GUARDIAN	3	3.7%
Total	70	

25. How far away from your work is this person you take care of? (in miles)
{farwrk}

	n	%
1 mile or less	10	12.1%
2-5 miles	11	13.5%
6-10 miles	4	4.8%
11-15 miles	10	12.3%
16-20 miles	14	17.4%
21-30 miles	13	16.6%
31-40 miles	5	6.1%
41-50 miles	5	6.2%
More than 50 miles	9	11.0%
Total	79	

26. And do you have any pets at home? {pets}

	n	%
YES	348	42.9%
NO	463	57.1%
REFUSED	1	.0%
Total	812	

27. [if YES (PETS=1) then continue, otherwise skip to next question] What kind of pets? {pettype1 - pettype9}

	n	%
Owns dog	231	66.4%
Owns cat	150	43.1%
Owns other mammal	16	4.6%
Owns bird	20	5.8%
Owns reptile	14	3.9%
Owns fish	23	6.5%
Owns other pet	9	2.5%
Total	348	

Percentages may total more than 100% because multiple responses were permitted.

D. SPECIAL NEEDS

28. Do you or anyone in your household have any of the following conditions that might limit the ability to wait out or evacuate from an emergency? {cnditio1 - cnditio9}

	n	%
Vision or hearing impairment	18	2.2%
Condition limiting physical activity	76	9.3%
Learning disability	28	3.4%
Difficulty breathing	43	5.3%
Takes prescription medication	224	27.6%
Other condition	26	3.2%
No special needs	555	68.4%
Don't know	4	.5%
Refused	1	.1%
Total	812	

Percentages may total more than 100% because multiple responses were permitted.

29. Do you take any medications on a daily basis that you would need to take even in an emergency? {medctn}

	n	%
YES	220	27.3%
NO	585	72.7%
DONT KNOW	4	.0%
REFUSED	3	.0%
Total	812	

30. [IF MEDCTN=1]
Do you have enough medication on hand at work to last for 24 hours? {medctn24}

	n	%
YES	147	67.2%
NO	71	32.8%
DONT KNOW	0	.0%
REFUSED	2	.0%
Total	220	

31. If you were asked to stay at work for 24 hours, would you need to leave work to give medication to anyone? {leave}

	n	%
YES	30	3.8%
NO	774	96.2%
DONT KNOW	8	.0%
Total	812	

E. COMMUNICATION

32. What forms of communication do you typically use? {commoa_1 - commoa10}

	n	%
Landline phone	453	55.7%
Cell phone	745	91.7%
Text messages	407	50.1%
Email	610	75.1%
Instant Messaging	146	18.0%
Twitter	68	8.4%
Social networks	200	24.6%
Something else	47	5.7%
Don't know	1	.1%
Refused	1	.1%
Total	812	

Percentages may total more than 100% because multiple responses were permitted.

33. What technology would you rely on the most to contact your loved one in an emergency? {tech1a}

	n	%
Landline phone call	82	10.1%
Cell phone call	608	75.3%
Text message	45	5.5%
Email	41	5.1%
Instant Message	2	.2%
Social Network Site	4	.5%
OTHER	25	3.1%
DONT KNOW	5	.0%
Would go in person to speak directly volunteered	0	.1%
Total	812	

34. If the technology you normally would use was not available, what would you use instead to contact loved ones? {altechb1 - altech12}

	n	%
Landline phone	344	42.4%
Cell phone	122	15.1%
Text messages	52	6.4%
Email	299	36.8%
Instant Messaging	10	1.2%
Twitter	14	1.7%
Social networks	56	6.9%
Something else	93	11.5%
Go to childs school	1	.1%
Don't know	65	7.9%
Would go in person to speak directly	6	.7%
Word of mouth	5	0.6%
Radio	5	0.6%
VOIP or Skype	8	1.0%
Total	812	

Percentages may total more than 100% because multiple responses were permitted.

35. Which do you think puts a greater burden on the communications system, sending a text message or completing a phone call? Or is the burden on the system the same for both? {burdnb}

	n	%
Text message	114	14.1%
Phone call	410	50.7%
Burden is same for both	214	26.5%
'DONT KNOW'	70	8.7%
REFUSED	4	.0%
Total	812	

F. TARGET DEPENDENT

36. I will be asking you to consider what you might do in an emergency situation that could happen while you are at work. I will start describing a terrorist attack that might or might not happen in the future. After I've read this imaginary situation, I will ask you some questions about it. When you respond, I would like you to focus on your youngest child who is not at home all day. So do you have in mind the child that we will focus on? {targchld}

	n	%
YES, R HAS A CHILD IN MIND	300	99.8%
R SAYS HAS NO QUALIFIED CHILD	1	.2%
Total	300	

37. And is this a boy or a girl? {cgend}

	n	%
BOY	159	53.9%
GIRL	136	46.1%
REFUSED	4	.0%
Total	300	

38. I will be asking you to consider what you might do in an emergency situation that could happen while you are at work. I will start describing a terrorist attack that might or might not happen in the future. After I've read this imaginary situation, I will ask you some questions about it. When you respond, I would like you to focus on the person you would most need to be in contact with, if there were an emergency during the day when you are at work. This should be someone you might need to be in touch with, but is not present at your workplace. Can you tell me that person's relation to you (someone from your personal or family life)? {target1}

	n	%
HUSBAND	88	17.2%
WIFE	130	25.4%
PARTNER	38	7.4%
PARENT	53	10.4%
OTHER RELATIVE	114	22.2%
OTHER PERSON	30	5.9%
None of these circumstances fit your situation	25	4.8%
MOTHER	32	6.3%
FATHER	2	.3%
Total	513	

39. And what is the gender of your loved one? {tgend}

	n	%
MALE	181	37.2%
FEMALE	306	62.8%
REFUSED	1	.0%
Total	488	

G. DIRTY BOMB SCENARIOS

SCENARIO A

{Q: MIN_1A}

(LOVED ONE DETERMINED BY VARIABLE LOVEDONE)
SCENARIO 1A (Respondent NOT ASKED to shelter in place, loved one NOT asked to shelter in place, phone service available)
Please imagine that today while you're at work, you hear that a bomb has just exploded in [FAR LOCATION]. The building where the bomb exploded has been mostly destroyed. 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.

A large dust cloud containing some radiation is in that area. People who are outside will be exposed to the radiation. The radiation is unlikely to harm them right away, but some people who get exposed to the radiation could get cancer from it many years from now.

Radioactive material falling to the ground could contaminate that area. A state of emergency has been declared, and residents in that area have been instructed to take shelter where they are, since this will provide significant protection from radioactive dust created by the blast. They want everyone in that area to stay in their place of shelter for up to 24 hours or until an all clear is given. Remember, we're imagining that you are at work when you get this news and no special instructions have been issued for your area.

{Q: MOD_2A}

Please imagine that it is a weekday afternoon and you are at work. You hear that a bomb has just exploded one mile away. The building where the bomb exploded has been mostly destroyed. 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.

A large dust cloud containing some radiation has begun to blow slowly across the area you are in, moving in your direction. People who are outside will be exposed to the radiation. The radiation is unlikely to harm them right away, but some people who get exposed to the radiation could get cancer from it many years from now.

Radioactive material falling to the ground could contaminate the area.

A state of emergency has been declared, and people in your area are instructed to take shelter within a building.

A building will provide significant protection from radioactive dust created by the blast. They want everyone in the affected area to stay in place for up to 24 hours or until an all clear is given. Your workplace is in the affected area, so the instructions to shelter in place apply to you, but your loved one is outside the path of the cloud and is not affected by the instructions.

{Q: MOD_3A}

Please imagine that it is a weekday afternoon and you are at work. You hear that a bomb has just exploded one mile away from your loved one. The building where the bomb exploded has been mostly destroyed. 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. A large dust cloud containing some radiation has begun to blow across that area, moving in the direction of your loved one.

People who are outside will be exposed to the radiation. The radiation is unlikely to harm them right away, but some people who get exposed to the radiation could get cancer from it many years from now. Radioactive material falling to the ground could contaminate that area.

A state of emergency has been declared, and people in that area are instructed to take shelter where they are. Staying inside a building will provide significant protection from radioactive dust created by the blast. They want everyone in the affected area to stay in place for up to 24 hours or until an all clear is given.

You are outside the immediately affected area and have *not* been asked to shelter in place, but your loved one is within the cloud's path and has been asked to remain where they are.

{Q: MAX_4A}

Please imagine that it is a weekday afternoon and you are at work when you hear that multiple bombs have exploded [National Capital Region: DC/MD, DC/VA or MD/VA].

And just now, another bomb has exploded one mile away. Authorities believe they were all dirty bombs. The building where the nearest bomb exploded has been mostly destroyed. 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.

A large dust cloud containing some radiation has begun to blow slowly across the area, moving in your direction. People who are outside will be exposed to the radiation. The radiation is unlikely to harm them right away, but some people who get exposed to the radiation could get cancer from it many years from now. Radioactive material falling to the ground could contaminate the area.

A state of emergency has been declared, and people in your area are instructed to take shelter at work. Staying inside a building will provide significant protection from radioactive dust created by the blast. They want everyone in the affected area to stay in place for up to 24 hours or until an all clear is given. Both you and your loved one are within the cloud's path and have been asked to shelter in place.

40. Based on this information would you stay at work, would you leave immediately to go somewhere else, would you continue with your activities, or would you do something else? {staygoa}

	n	%
STAY	526	64.8%
LEAVE IMMEDIATELY	208	25.6%
CONTINUE WITH YOUR ACTIVITIES	22	2.7%
SOMETHING ELSE	6	.7%
Would call or check on loved one before deciding	40	5.0%
Depends on additional information	10	1.2%
DONT KNOW	1	.0%
Total	812	

41. How long would you be willing to remain at work, without going outside, in this situation? {howlnga}

	n	%
ONE HOUR OR LESS	6	1.0%
SEVERAL HOURS	57	9.5%
UNTIL TOMORROW MORNING	6	1.0%
UNTIL TOMORROW EVENING	5	.8%
FULL 24 HOURS	95	15.7%
LONGER THAN 24 HRS, IF NECESSARY, INDEFINITELY, or AS LONG AS INSTRUCTED	375	61.9%
OTHER Specify	21	3.5%
DONT KNOW	5	.0%
REFUSED	2	.0%
Would stay until end of workday/work shift	26	4.2%
Depends on safety/whereabouts of loved ones	14	2.3%
Total	613	

42. If you chose to leave work without getting an 'all clear' signal, why would you leave? {ygoa_1 - ygoa_17}

	n	%
Find or take care of kids	149	42.5%
Find or take care of adult family members	92	26.3%
Find or take care of people not in family	9	2.5%
Find or take care of pets	19	5.3%
Meet job responsibilities	12	3.3%
Because workplace not set up as shelter	5	1.4%
Get medications	5	1.6%
Get food or water	5	1.5%
Get other supplies	2	.6%
Feel safer somewhere else	47	13.5%
Do not feel the situation is dangerous	2	.6%
Not concerned about cancer	1	.2%
Could avoid danger outside	6	1.7%
Do not trust authorities	5	1.4%
Other reason	113	32.2%
Don’t know	3	.9%
Total	351	

Percentages may total more than 100% because multiple responses were permitted.

43. Where would you go? {evcgoa1}

	n	%
Home	185	52.9%
A family member or relatives home	37	10.7%
A friends home	6	1.8%
A public shelter	7	1.9%
A motel or hotel	1	.2%
Another home I own	1	.4%
A place of work or office	4	1.2%
OTHER SPECIFY	15	4.4%
DONT KNOW	2	.7%
Childs school or daycare	39	11.1%
Away from source of danger or Wherever is safe	31	8.9%
Wherever loved one is	21	6.1%
Total	351	

44. Are there other stops along the way? {evcgoa21 - evcgoa29}

	n	%
First stop on way to final destination (with phones)	23	100.0%
Total	23	

Percentages may total more than 100% because multiple responses were permitted.

45. If you knew that the building where you were had made plans to keep people fed and safe for several days in this kind of situation, would you decide NOT to leave the building, or would you still leave the building? {db2pln1}

	n	%
Leave Building	215	67.5%
Not Leave Building	104	32.5%
Don't Know	31	.0%
Total	351	

46. If you were informed by authorities that your loved ones were being cared for and kept safe where they were, how long would you be willing to remain at work and wait for the 'all clear' signal? {dbkids1}

	n	%
ONE HOUR OR LESS	39	19.3%
SEVERAL HOURS	27	13.6%
UNTIL TOMORROW MORNING	6	2.8%
UNTIL THE MORNING AFTER NEXT	1	.5%
FULL 24 HOURS	19	9.5%
LONGER THAN 24 HRS, IF NECESSARY, INDEFINITELY, or AS LONG AS INSTRUCTED	109	54.2%
DONT KNOW	9	.0%
REFUSED	2	.0%
Total	210	

47. If there were people who could safely bring to your building any food, water, or medications you might need in this situation, how long would you be willing to remain at work and wait for the 'all clear' signal? {efort1}

	n	%
One hour or less	3	31.6%
Longer than 24hrs/ Indefinitely/ As long as instructed	6	68.4%
Total	9	

48. Are there any other needs or conditions that would help you to stay at work for 24 hours? {needs1}

	n	%
YES	159	45.4%
NO	187	53.4%
DON'T KNOW	4	1.2%
Total	351	

49. [if NO, DON'T KNOW, or REFUSED then continue, otherwise skip to golova]
Would you try to return to work before the all clear is given? {tryrtna}

	n	%
YES	26	7.9%
NO	307	92.1%
DONT KNOW	15	.0%
REFUSED	2	.0%
Total	351	

50. If so, after how long? {tryrtna}

	n	%
YES	26	7.9%
NO	307	92.1%
Total	334	100.0%

51. Would you go to your loved one even it it meant driving through the dust cloud containing dangerous radioactive particles? {golova}

	n	%
YES	19	70.2%
NO	8	29.8%
Total	26	

SCENARIO B

{Q:MIN_1B}

I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now there is no phone service. Landline phones and cell phones, including text messaging, are not working. Internet features are not accessible by either computer or smart phone.

Remember, we are imagining you are at work when you get this news. Please consider how that might affect your decisions.

IV: THIS IS THE MINIMUM DANGER SCENARIO: ONE BOMB FAR AWAY NEITHER RESPONDENT NOR THEIR LOVED ONE GIVEN INSTRUCTIONS TO SHELTER IN PLACE

{Q:MOD_2B}

I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now the large dust cloud containing some radiation has begun to blow slowly across the area you are in, moving in your direction. Your workplace is in the affected area, so the instructions to shelter in place apply to you, but your loved one is outside the path of the cloud and is not affected by the instructions.

Remember, we are imagining you are at work when you get this news.

Please consider how that might affect your decisions.
IV, IF NECESSARY, SUMMARIZE: THIS IS THE MODERATE SCENARIO: ONE BOMB

ONE MILE AWAY RESPONDENT IS ASKED TO SHELTER IN PLACE BUT THEIR LOVED ONE HAS BEEN GIVEN NO SPECIFIC INSTRUCTIONS

{Q:MOD_3B}

I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now a large dust cloud containing some radiation has begun to blow across another area, moving in the direction of your loved one.

You are outside the immediately affected area and have *not* been asked to shelter in place, but your loved one is within the cloud's path and has been asked to remain where they are.

Remember, we are imagining you are at work when you get this news.

Please consider how that might affect your decisions.

IV, IF NECESSARY, SUMMARIZE: THIS IS THE MODERATE SCENARIO: ONE BOMB ONE MILE AWAY RESPONDENT HAS BEEN GIVEN NO SPECIFIC INSTRUCTIONS BUT THEIR LOVED ONE IS ASKED TO SHELTER IN PLACE.

{Q:MAX_4B}

I'd like to consider a slightly different scenario. Everything is as I just described a few minutes ago, except now there is no phone service. Landline phones and cell phones, including text messaging, are not working. Internet features are not accessible by either computer or smart phone.

Remember, we are imagining you are at work when you get this news.

Please consider how that might affect your decisions.

IV, IF NECESSARY, SUMMARIZE: THIS IS THE MAXIMUM DANGER SCENARIO: MULTIPLE BOMBS FAR AWAY PLUS ONE BOMB ONE MILE AWAY BOTH RESPONDENT AND THEIR LOVED ONE HAVE BEEN GIVEN SPECIFIC INSTRUCTIONS TO SHELTER IN PLACE.

52. Based on this information would you stay at work, would you leave immediately to go somewhere else, would you continue with your activities, or would you do something else? {staygob}

	n	%
Stay	432	54.2%
Leave Immediately	303	38.1%
Continue with your activities	14	1.8%
Something Else	11	1.3%
Would call or check on loved one before deciding	16	2.0%
Depends on additional information	21	2.6%
DONT KNOW	15	.0%
REFUSED	1	.0%
Total	812	

53. How long would you be willing to remain at work, without going outside, in this situation? {howlngb}

	n	%
One hour or less	11	2.1%
Several hours	28	5.6%
Until tomorrow morning	2	.4%
Until tomorrow evening	4	.7%
Full 24 hours	71	14.1%
Longer than 24 hrs, if Necessary, indefinitely, or as Long as instructed	360	72.1%
Other specify	13	2.7%
DONT KNOW	14	.0%
REFUSED	1	.0%
Would stay until end of workday/work shift	8	1.6%
Depends on safety/whereabouts of loved ones	4	.7%
Total	515	

54. If you chose to leave work without getting an 'all clear' signal, why would you leave? {ygob_1 - ygob_17}

	n	%
Find or take care of kids	159	41.1%
Find or take care of adult family members	119	30.7%
Find or take care of people not in family	18	4.6%
Find or take care of pets	15	3.8%
Meet job responsibilities	3	.7%
Because workplace not set up as shelter	1	.2%
Get medications	4	1.1%
Get food or water	6	1.5%
Get other supplies	3	.7%
Feel safer somewhere else	58	14.9%
Do not feel the situation is dangerous	10	2.7%
Not concerned about cancer	2	.4%
Could avoid danger outside	10	2.6%
Do not trust authorities	7	1.8%
Other reason	110	28.4%
Don’t know	4	1.1%
Refused	1	.1%
Total	388	

Percentages may total more than 100% because multiple responses were permitted.

55. Where would you go? {evcgob21 - evcgob29}

	n	%
First stop on way to final destination (no phones)	12	100.0%
Total	12	

Percentages may total more than 100% because multiple responses were permitted.

56. If you knew that the building where you were had made plans to keep people fed and safe for several days in this kind of situation, would you decide NOT to leave the building, or would you still leave the building? {db2pln2}

	n	%
Leave Building	92	66.3%
Not Leave Building	47	33.7%
Don't Know	14	.0%
Total	153	

57. If you were informed by authorities that your loved ones were being cared for and kept safe where they were, how long would you be willing to remain at work and wait for the 'all clear' signal? {dbkids2}

	n	%
ONE HOUR OR LESS	9	10.3%
SEVERAL HOURS	5	6.4%
UNTIL TOMORROW MORNING	0	.4%
UNTIL TOMORROW EVENING	1	.8%
FULL 24 HOURS	15	17.5%
LONGER THAN 24 HRS, IF NECESSARY, INDEFINITELY, or AS LONG AS INSTRUCTED	55	64.6%
DONT KNOW	5	.0%
Total	89	

58. If there were people who could safely bring to your building any food, water, or medications you might need in this situation, how long would you be willing to remain at work and wait for the 'all clear' signal? {efort2}

	n	%
Several hours	1	19.4%
Longer than 24hrs/ Indefinitely/ As long as instructed	3	80.6%
Total	3	

59. Are there any other needs or conditions that would help you to stay at work for 24 hours? {needsb}

	n	%
YES	55	36.1%
NO	91	59.7%
DON'T KNOW	6	4.2%
Total	152	

60. Would you return to work that same day? {tryrtnb}

	n	%
YES	41	11.3%
NO	321	88.7%
DONT KNOW	21	.0%
REFUSED	3	.0%
Total	386	

61. If so, after how long? {tryrtnb}

	n	%
YES	41	11.3%
NO	321	88.7%
Total	362	100.0%

62. Would you go to your loved one even it it meant driving through the dust cloud containing dangerous radioactive particles? {golovb}

	n	%
YES	24	65.9%
NO	13	34.1%
DONT KNOW	4	.0%
Total	41	

H. SUPPORT

63. Do you have someone that you can count on to take care of your loved one for a day or two if you weren't able to? {someone}

	n	%
YES	655	86.5%
NO	102	13.5%
DONT KNOW	23	.0%
REFUSED	2	.0%
Total	782	

64. What type of relationship do you have with this person? {relation}

	n	%
Spouse	118	23.8%
Parent or sibling	160	32.4%
Family friend	142	28.8%
Neighbor	62	12.7%
Teacher or daycare provider	11	2.3%
OTHER	162	.0%
REFUSED	1	.0%
Total	655	

65. How far away do they live from your loved one? {farloved}

	n	%
1 mile or less	255	39.4%
2-5 miles	119	18.3%
6-10 miles	68	10.4%
11-15 miles	48	7.4%
6-20 miles	24	3.8%
21-30 miles	15	2.4%
31-40 miles	1	.1%
41-50 miles	7	1.0%
More than 50 miles	6	1.0%
More than an hour away	2	.3%
DONT KNOW	5	.0%
REFUSED	1	.0%
Live together/Same location (VOLUNTEERED)	103	15.9%
Total	655	

66. How confident are you that this person would be able and willing to care for your loved one on a workday afternoon? {confcare}

	n	%
Very confident	567	87.4%
Somewhat confident	74	11.4%
Not very confident	5	.8%
Not at all confident	3	.4%
NOT APPLICABLE	6	.0%
DONT KNOW	1	.0%
Total	655	

I. WORKPLACE DURING THE DISASTER

67. Does your workplace have an emergency plan prepared so that employees know what is expected of them in situations such as we just described? {workplan}

	n	%
Definitely	388	48.2%
Probably	177	22.0%
Probably not	89	11.1%
Definitely not	122	15.1%
DONT KNOW	29	3.6%
Total	805	

68. I am going to read a short list of possible items that may be covered in the plan. For each one please tell me if Definitely, Probably, Probably not, or Definitely not a part of your work place's plan. {wrkpln_1 - wrkpln13}

	1 Definitely		2 Probably		3 Probably Not	4 Definitely Not	
	n	%	n	%	n	%	Mean
Designates critical personnel	339	91.1%	4	1.1%	2	.5%	1.11
Identifies area to congregate	335	89.0%	3	.7%	5	1.2%	1.14
Has employee contact list	353	92.7%	1	.1%	6	1.6%	1.11
Designates evacuation helpers	307	82.6%	9	2.3%	15	3.9%	1.28
Has electronic file security protocol	281	79.5%	6	1.6%	5	1.4%	1.25
Has continued critical operations protocol	321	89.3%	5	1.3%	3	.9%	1.14
Has first aid on hand	340	89.6%	4	1.1%	7	1.9%	1.15
Has 24 hours of food and water	212	62.3%	31	9.2%	24	7.2%	1.61
Has 24 hours of bedding	91	26.3%	85	24.4%	123	35.5%	2.69
Has 24 hours of restrooms	347	91.1%	2	.5%	2	.4%	1.10
Has method for communication	149	51.0%	25	8.6%	29	10.0%	1.78
Practice drills held	299	80.0%	14	3.8%	40	10.6%	1.45
Has accommodation for emergency child care	86	32.0%	51	19.1%	88	32.7%	2.53

69. Suppose authorities gave instructions to take shelter at work. How confident are you that you would be able to shelter there? {shelterc}

	n	%
Very confident	534	66.6%
Somewhat confident	188	23.4%
Not very confident	52	6.5%
Not at all confident	28	3.5%
DONT KNOW	2	.0%
Total	805	

70. How likely is it that your work place would try to remain open for business during an emergency? {openwrk}

	n	%
Very likely	272	35.1%
Somewhat likely	122	15.8%
Somewhat unlikely	105	13.5%
Very unlikely	276	35.6%
DONT KNOW	27	.0%
REFUSED	2	.0%
Total	804	

71. Does your work place provide goods or services that are critical to the functioning of your community during an emergency? {wrkcrit}

	n	%
YES	257	34.2%
NO	493	65.8%
DONT KNOW	51	.0%
REFUSED	3	.0%
Total	804	

72. Is your job necessary to the short-term functioning of your place of business? {jobnec}

	n	%
YES	340	44.5%
NO	425	55.5%
DONT KNOW	33	.0%
REFUSED	6	.0%
Total	804	

73. Is your spouse or partner employed outside the home, either full or part-time? {spsemp}

	n	%
YES	369	72.4%
NO	141	27.6%
DONT KNOW	7	.0%
REFUSED	6	.0%
Total	523	

74. Does your spouse or partner's workplace have an emergency plan prepared so that employees know what is expected of them in situations such as we just described? {spspln}

	n	%
YES, DEFINTELY	141	38.4%
YES, PROBABLY BUT NOT CERTAIN	66	18.0%
PROBABLY NOT	45	12.4%
NO, DEFINITELY NOT	39	10.7%
NOT APPLICABLE	2	.0%
DONT KNOW	75	20.6%
Total	369	

75. How confident are you that your spouse or partner would be able to shelter at work if instructed to do so? {spssip}

	n	%
Very confident	235	66.6%
Somewhat confident	81	22.9%
Not very confident	24	6.8%
Not at all confident	13	3.7%
NOT APPLICABLE	6	.0%
DONT KNOW	9	.0%
Total	368	

J. SCHOOLS DURING A DISASTER

76. Focus on your youngest child who is outside your home for at least part of the day. Does this child attend a public or private school or daycare? {pubpriv}

	n	%
Public school	184	62.5%
Private school	54	18.3%
Commercial daycare, or school preparatory program that is part of a public school system	28	9.4%
Private or in home daycare	29	9.8%
DONT KNOW or REFUSED	0	.0%
Total	294	

77. How do you normally communicate with your child's school? {comschl1 - comschl9}

	n	%
Phone	226	76.6%
Text messages	28	9.5%
Email	137	46.4%
Visiting school	39	13.1%
Written notes	20	6.9%
In person outside school	37	12.6%
Other means	8	2.6%
Does not communicate	7	2.3%
Total	294	

Percentages may total more than 100% because multiple responses were permitted.

78. Are you signed up for an emergency notification system from your child's school that contacts parents in case of an emergency situation? {schnoti}

	n	%
YES	236	80.2%
NO	47	16.1%
DONT KNOW	11	3.7%
Total	294	

79. Do you have a way to get information about an emergency that involves your child's school? {getinfo}

	n	%
YES	269	91.3%
NO	22	7.4%
DONT KNOW	4	1.3%
Total	294	

80. How do you receive information about emergencies at your child's school? {getinf_1 - getinf12}

	n	%
Phone	205	69.5%
Text messages	57	19.4%
Email	161	54.7%
School website	19	6.6%
Television	6	2.1%
Radio	7	2.4%
Internet news	15	5.0%
Word of mouth	1	.4%
Social networks	2	.7%
Other means	19	6.5%
GETINF12	8	2.6%
Total	294	

Percentages may total more than 100% because multiple responses were permitted.

81. Does your child's school have a plan to deal with emergencies such as that described earlier? {schplan1}

	n	%
Definitely	133	45.3%
Probably	103	34.9%
Probably not	26	8.9%
Definitely not	3	1.1%
DONT KNOW	29	9.7%
Total	294	

82. How familiar are you with your child's school emergency plan? {planfam}

	n	%
Very familiar	38	15.9%
Somewhat familiar	108	45.6%
Not at all familiar	91	38.4%
Total	236	

83. If instructions for the area of your child's school were to shelter in place, what do you think your child's school would do? {lockdown}

	n	%
Release your child as they normally would for an emergency like a snow storm	5	2.0%
Only release your child to the childs parents	52	19.1%
Lock down the school trying to keep doors sealed and not releasing any children until the all clear	215	78.9%
DONT KNOW	22	.0%
Total	294	

84. Should the school's primary goal in an emergency be to keep children in their care and take care of them to the best of their ability, or should it be to reunite children with parents? {schlgoal}

	n	%
Keep children in their care	220	76.2%
Reunite children with parents	40	13.8%
DEPENDS, if volunteered	29	10.0%
DONT KNOW	5	.0%
Total	294	

85. How confident are you that the school can take care of children for up to 24 hours? {confschl}

	n	%
Very confident	187	64.6%
Somewhat confident	80	27.6%
Not very confident	16	5.4%
Not at all confident	7	2.4%
DONT KNOW	4	.0%
Total	294	

86. How familiar are you with your child's school emergency plan? {planfam}

	n	%
Very familiar	38	15.9%
Somewhat familiar	108	45.6%
Not at all familiar	91	38.4%
Total	236	

87. Many items may be part of a school's emergency plan. I will read a list of items that might have been included at your child's school. Please tell me if you think it is definitely, probably, probably not or definitely not part of your school's plan for emergencies like what we've just described. {schpln_1-schpln_9 }

	1 Definitely		2 Probably		3 Probably Not		4 Definitely Not	
	n	%	n	%	n	%	n	%
Has first aid on hand	122	83.7%	20	13.8%	0	.3%	0	.0%
Has 24 hours of food and water	90	61.7%	44	30.3%	5	3.5%	3	2.1%
Has 24 hours of restrooms	125	85.8%	19	12.9%	1	1.0%	0	.0%
Has communication plan for contacting staff	105	72.0%	36	24.8%	1	.4%	1	.6%
Has electronic file security protocol	109	75.1%	30	20.5%	1	.4%	1	.6%
Has communication plan for contacting parents	47	32.4%	45	31.2%	14	9.5%	4	2.5%
Practice drills held	112	77.4%	24	16.7%	4	2.5%	3	1.8%
Has command post	73	50.8%	44	30.2%	3	2.1%	2	1.5%
Has different plans for different threats	84	57.8%	43	29.4%	6	4.4%	2	1.2%

88. How long do you think the schools can effectively take care of your child in case of an emergency? {schcare}

	n	%
1-2 hours	5	1.6%
3-5 hours	10	3.7%
6-10 hours	20	7.0%
11-15 hours	7	2.5%
16-20 hours	7	2.6%
21-24 hours	101	36.5%
25-35 hours	13	4.7%
35-48 hours	56	20.0%
More than 48 hours	59	21.3%
DONT KNOW	16	.0%
Total	293	

89. What would be your main concerns when leaving your child at his or her school? {concrn_1 - concrn10}

	n	%
Lack of medical care	34	11.7%
Lack of resources	79	26.9%
Lack of supervision	31	10.6%
Child becoming afraid	81	27.7%
Being separated	58	19.7%
Not concerned	26	8.8%
Child is very young	10	3.3%
Other concerns	97	33.2%
Don't know	10	3.4%
Child's safety	31	10.5%
Being able to communicate	1	0.5%
Concerns with school stuff	2	0.5%
Total	293	

Percentages may total more than 100% because multiple responses were permitted.

K. DEMOGRAPHICS

90. How many persons live in your household who are age 18 or older, including yourself? {older18}

	n	%
1	145	18.6%
2	433	55.5%
3	111	14.2%
4	71	9.1%
5	13	1.7%
6	5	.7%
7	1	.1%
Total	780	100.0%

91. You mentioned before that you have a landline telephone at home as well as a cell phone. Thinking about ALL the telephone calls that you and other members of your household make and receive, would you say that . . . {cellcomp}

	n	%
Almost all are on a landline phone,	33	6.0%
Most of them are on a landline phone,	80	14.5%
Amount of calls on a landline and cell phone are about equal,	158	28.6%
Most of the calls are on a cell phone	188	34.1%
Almost all of them are on a cell phone	93	16.9%
DONT KNOW or UNABLE TO RATE	4	.0%
REFUSED	0	.0%
Total	556	

92. As far as you know, is the landline or regular phone for your household listed in the current telephone book? {phone1a}

	n	%
YES	89	73.4%
NO	32	26.6%
DONT KNOW	17	.0%
REFUSED	2	.0%
Total	140	

Gender {rgender}

	n	%
MALE	410	51.3%
FEMALE	389	48.7%
DONT KNOW or REFUSED	0	.0%
Total	799	

93. In what year were you born? {agecat5}

	n	%
18-25	68	9.4%
26-37	165	22.8%
38-49	222	30.7%
50-64	234	32.3%
Over 64	35	4.9%
Total	724	100.0%
REFUSED/MISSING	89	10.9%
Total	812	100%

94. Are you currently serving, or have you ever served in the U.S. military, on either active duty or in the reserves? {duty}

	n	%
YES CURRENT ACTIVE DUTY	38	4.8%
YES CURRENT RESERVE DUTY	2	.2%
YES PAST MILITARY SERVICE or VETERAN	70	8.9%

NO NEVER IN MILITARY	684	86.1%
DONT KNOW or NO ANSWER	4	.0%
REFUSED	1	.0%
Total	799	

95. What is the highest level of education you have completed? {educ}

	n	%
ELEMENTARY SCHOOL ONLY	5	.7%
SOME HIGH SCHOOL DID NOT FINISH	6	.8%
COMPLETED HIGH SCHOOL	59	7.5%
SOME COLLEGE BUT DIDNT FINISH	99	12.7%
2 YEAR COLLEGE DEGREE like A.A. or A.S.	67	8.5%
4 YEAR COLLEGE DEGREE like B.A. or B.S.	218	27.9%
SOME GRADUATE WORK	24	3.0%
COMPLETED MASTERS OR PROFESSIONAL DEGREE	238	30.4%
ADVANCED GRADUATE WORK OR PHD	67	8.6%
DONT KNOW	4	.0%
REFUSED	12	.0%
Total	799	

96. What is the range that best describes your annual household income from all sources in 2010? This is before taxes and other deductions. {income}

	n	%
$0 to $14,999	10	1.5%
15,000 to $34,999	39	5.9%
$35,000 to $49,999	61	9.2%
$50,000 to $74,999	91	13.8%
$75,000 to $99,999	104	15.8%
$100,000 to $149,999	148	22.5%

$150,000 to $250,000	157	23.7%
$250,000 or more	50	7.6%
DONT KNOW	22	.0%
REFUSED	117	.0%
Total	799	

97. Is there anyone in your household who has difficulty communicating in English because they speak a different language? {lang}

	n	%
YES	50	6.2%
NO	749	93.8%
DONT KNOW	0	.0%
Total	799	

98. What language would that be? {lang2}

	n	%
AMHARIC	0	.8%
CHINESE	3	8.4%
FRENCH includes PATOIS and CAJUN	1	2.0%
GERMAN	1	3.3%
KOREAN	4	9.6%
SPANISH OR SPANISH CREOLE	25	63.9%
TAGALOG	4	10.6%
URDU	1	1.3%
OTHER	10	.0%
Total	50	

99. Do you consider yourself to be of Hispanic origin? {hispanic}

	n	%
YES	77	9.7%
NO	716	90.3%
DONT KNOW	0	.0%
REFUSED TO ANSWER	5	.0%
Total	799	

100. I am going to read a list of racial categories. Would you tell me what category best describes you? {race}

	n	%
White	452	58.7%
African American or Black	188	24.4%
Asian	60	7.8%
American Indian	2	.3%
Pacific Islander	8	1.0%
MULTI-RACIAL	1	.2%
OTHER	19	2.4%
HISPANIC ONLY	40	5.2%
REFUSED or NO ANSWER	30	.0%
Total	799	

101. Some people these days have unlimited minutes on their cell phones. Some have high limits and others pay by the minute. Do you expect to actually pay a higher bill this month as a result of doing this survey on your cell phone? {cellbill}

	n	%
DEFINITELY WILL	14	3.8%
PROBABLY WILL	10	2.8%
PROBABLY NOT	45	12.7%
DEFINITELY NOT	285	80.0%
DEPENDS	3	.7%
DONT KNOW	7	.0%
Total	364	