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Communication, information seeking, and evacuation plans for a disaster using Community Assessment for Public Health Emergency Response in the Gulf Coast counties of Alabama and Mississippi, 2011

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Abstract

Objective: To determine communication, information seeking, and evacuation behaviors of coastal residents in a disaster-prone area.

Design: A two-stage, probability sampling design to select 210 households in each assessment area was used. Data were analyzed using a weighted cluster analysis to report projected households for each assessment area.

Setting: Public health services areas of coastal Alabama and Mississippi.

Participants: Eligible respondents were 18 years of age or older, had lived in the community for at least 30 days, and were residents of the selected household.

Main outcome measures: Evacuation propensity, primary communication forms, primary information forms, and special needs.

Results: Most coastal residents would evacuate if recommended by public health authorities. Fewer residents had landlines (45.9–58.8 percent) compared to residents using cellular or mobile phone service only (84.3–95.8 percent), and these residents were significantly older compared to non-landline owning residents. Most residents own pets (61.9–70.1 percent).

Conclusions: Our assessment suggests that the majority of Alabama and Mississippi coastal residents plan to evacuate during a disaster if recommended by public health authorities. However, public health authorities should strive to evaluate multiple forms of communication to disseminate disaster preparedness and response messages to reach all vulnerable residents, especially in situations where electric services might be compromised. Emergency preparedness personnel should also be prepared for a large pet population in the event of an evacuation.

Keywords

CASPER; emergency preparedness; evacuation; disaster; pet ownership

INTRODUCTION

The majority of morbidity and mortality following a disaster are preventable.[1] Appropriate dissemination of early warning messages, timely evacuation when warranted, and appropriate resources for high-risk populations can minimize disaster-related injuries, illnesses, and deaths.[2] However, significant understanding of target communities is needed to tailor public health messages and prepare for potential evacuation.

The coastal areas of Alabama and Mississippi have a long history of natural and human-caused disasters that have required large-scale public health response. The coastal counties of Mobile and Baldwin, AL, as well as the counties of Hancock, Harrison, and Jackson, MS, were federally declared disaster areas in 2004 and 2005 following hurricanes Ivan and Katrina.[3] During Hurricane Katrina, thousands of residents were unable or unwilling to evacuate before storm landfall, resulting in the loss of hundreds of lives, especially in high-risk populations such as the disabled and elderly.[4,5] Some individuals did not evacuate because they were unable to bring their pets. Residents who did evacuate during Hurricane Katrina were not allowed to bring family pets aboard public transportation and their pets were not allowed in public shelters, resulting in the displacement and deaths of thousands of pets following the evacuation and destruction of homes along the path of the storm. In some areas, emergency response efforts were unable to meet the needs of special-needs populations (such as those with medical needs) immediately following evacuation.[6] These unfortunate situations highlight the need for emergency planners to identify and prepare for potential public health and medical needs in vulnerable populations, including coastal communities, which are especially vulnerable to repeat natural disasters.

Understanding a population's evacuation propensity before a disaster would allow emergency preparedness planners to more accurately anticipate the resources required across response agencies. Identification of specific populations that do not plan to evacuate would allow emergency preparedness planners to target educational messages to those residents as well as more accurately anticipate mass care and medical needs for shelters. Alternately, if residents already plan on evacuating for a natural disaster, resources can be diverted to other preparedness and response activities such as traffic safety during the evacuation and educational public health messaging during the recovery phase. This is especially useful in the face of wide-spread cuts in funding for public health preparedness and state and local health departments.[7]

The majority of existing literature on disaster preparedness is qualitative or empirical.[8] However, planning for large-scale evacuations also requires detailed information on a population's needs and behaviors.[9] Therefore, we sought to characterize information and communication behaviors, evacuation propensity, and disaster preparedness needs of the coastal communities of Alabama and Mississippi to inform disaster preparedness planning. This information can be used to maximize limited public health resources, for example, by targeting public health and emergency messaging and planning for evacuation needs in coastal communities, including the magnitude of special and pet needs during a disaster.

METHODS

Assessment area

The Gulf Coast counties of Alabama and Mississippi were divided into three sampling frames or assessment areas for the purpose of this assessment—Baldwin County, AL; Mobile County, AL; and coastal Mississippi. Divisions were based on public and mental health service districts to tailor information for the manager of each area.

The first two assessment areas consisted of the coastal portions of Alabama's two Gulf Coast counties, Mobile and Baldwin. These counties are served by different health and mental health departments. In Mobile County, the assessment area included the coastal zip codes of 36523, 36509, and 36528, representing the cities of Bayou La Batre, Coden, and Dauphin Island, respectively, with a population of 4,463 for the Mobile County assessment area. The assessment area of Baldwin County, with a population of 33,405, included the area south of state highway 98 and the community of Point Clear.

The assessment area in coastal Mississippi included all three Gulf Coast counties—Hancock, Harrison, and Jackson with a total population of 167,088 people. These three counties are served by the same health and mental health departments (hereafter referred to as Mississippi).

Study design

Centers for Disease Control and Prevention (CDC), in partnership with the states of Alabama and Mississippi, used the Community Assessment for Public Health Emergency Response (CASPER) methodology to assess the general and mental health needs of the Alabama and Mississippi coastal communities 1 year following the Gulf Coast oil spill.

CASPER is an epidemiologic method designed to provide household-based information about a community's needs following a disaster quickly and at low cost.[10] It is also used in nondisaster events to assess the immunization status of the community or health impact assessment (State of KY Disaster Response Team, oral communication, 2012). The decision to use this methodology was made in collaboration with the local area health departments, the state public health department officials, and the CDC disaster response team, and was chosen for CASPER's ability to collect representative information quickly and at low cost that can be generalized to the entire assessment area. The information gained from the CASPER is shared in a simple format with decision makers. For more detailed information on CASPER methodology for emergency response, refer to the CDC CASPER toolkit.[10]

The information presented here is from the preparedness module of the CASPER survey. CASPER used a two-stage probability sampling method to select a sample of 210 households to be interviewed.[10] In the first stage, 30 census blocks (clusters) from the 2010 US Census were selected from each assessment area. To select the 30 clusters, we applied the CASPER Geographic Information System Tool (a program developed by CDC and ATSDR to enhance the cluster sampling and mapping method) in Environmental Systems Research Institute ArcGIS10 software package. The probability of a census block (cluster) being selected was proportional to the number of households in the census block, with those containing larger numbers of households having a higher probability of being selected.

In the second stage, interview teams composed of two individuals each randomly selected seven households from each of the 30 clusters. The interviewers were provided with detailed maps of each selected cluster, and the teams were instructed to select the housing units for the seven interviews using a standardized method for randomization.

We provided the two-person interview teams in each sampling frame with a 3-hour training session on interview techniques, safety issues, household selection, and confidential referrals of participants that request mental health or other resources. In Alabama, teams consisted primarily of state and local public health and mental health personnel, with assistance from graduate psychology students from the University of South Alabama. In Mississippi, teams consisted primarily of state mental health staff and doctoral students from the University of Mississippi, with assistance provided by CDC staff in all three sampling frames. Each team attempted to conduct seven interviews in each of the 30 clusters selected, with a goal of completing 210 total interviews for each sampling frame. Residents were considered eligible respondents if they were at least 18 years of age or older, were residents of the selected household, and had lived within the community sampled for at least 30 days. Selected houses were revisited at least three times before an alternate house was selected for interview using systematic selection to ensure a representative sample. Additionally, the interviewers distributed information on mental and physical health resources in the area. Interviews were conducted on August 26 and 27, 2011, in Baldwin and Mobile Counties, AL, and October 12 and 13, 2011, in Mississippi.

Survey instrument

A two-page questionnaire was developed jointly with the Alabama Department of Public Health, Mississippi State Department of Mental Health, and CDC and included questions

on demographics, communication and evacuation propensities, special needs, and pet ownership (Appendix A). Survey questions were solicited from interested community services and agencies and incorporated into the questionnaire where possible. These questions were part of a larger survey addressing health and mental health needs following the Gulf Coast oil spill.[11,12] Questionnaires were piloted by the authors with CDC colleagues by administering the questionnaire and having the participant evaluate clarity of language, word choice, quality and utility of data collected, and ability to analyze collected data before use in the field. In the field, interviewers tracked the number of households approached and recorded each as either interviewed or inaccessible due to the following; refused to participate, unsafe environment, language barrier, vacant, or unknown.

Analysis

The data entry and analysis was done using Epi Info 3.5.1 (US Department of Health and Human Services, CDC, Atlanta, GA). We conducted weighted cluster analysis to report the estimated number and percent of household responses in each assessment area. Data were weighted to reflect their probability of selection to the sample based on the total population of the sampling frame and interviews completed in each cluster, thus allowing for the provision of projected estimates based on 2010 Census information. In other words, based on the 210 interviews, CASPER data can be weighted to estimate the number of households in the assessment area with a particular need or characteristic of interest. Contact rates were calculated using the following formula: number of completed interviews divided by the number of all houses where contact was attempted. We used a comparison of 95% confidence intervals to test for statistical significance in a comparison of means. Nonoverlapping confidence intervals were considered a significant difference.

RESULTS

Interview teams completed 208 of the goal of 210 interviews (99 percent) in Mobile County, AL, 188 of 210 interviews (90 percent) in Baldwin County, AL, and 200 of 210 (95 percent) in Mississippi. Of the houses approached, interviews were completed in 74 percent of houses where someone was at home in Mobile County, AL, 65 percent of houses in Baldwin County, AL, and 72 percent of houses in Mississippi. Reasons for interviews not being completed included the respondent being ineligible based on time lived in community or being under 18 years of age, or refusal to participate. As shown in Table 1, most respondents were White, non-Hispanic and lived in the community for at least 8 years at the time of assessment. The mean age of respondents ranged from 49 to 56 years across the three assessment areas, with ages ranging from 19 to 91 years. Thirty-four to 41.2 of respondents were unemployed by choice, which included retired individuals and residents who chose to stay at home with children. Mississippi had the highest percentage of households with children below 18 years (42.0 percent). This compares to just 27.1 percent of households having children below 18 years in Mobile County, AL and 25.4 percent of households in Baldwin County, AL.

Between 84.0 and 95.8 percent of households across the three assessment areas had cell phones as a form of communication (Table 2). In contrast, only 45.9–58.8 percent of

households had landline telephone service. Facebook or social media was used as a form of communication from 34.3 to 47.9 percent of households across the three sampling frames. Respondents reporting landline ownership were statistically significantly older than respondents without landlines in each of the three assessment areas (Table 3; $p = 0.05$). Similarly, respondents using Facebook or other social media were younger, on average, than respondents who did not report Facebook or social media use in all three assessment areas (Table 3; $p < 0.05$).

Television was the most common method for obtaining information during a disaster, with approximately 70 percent reporting use of the television as the main source of information about disasters (Table 4). Radio was the second most common source of information. Only 0.9–2.4 percent of households would use Facebook or other social media as a main source of information during a disaster.

Evacuation propensity and plans are shown in Table 5. The majority (78.8–84.4 percent) of households reported they would evacuate during a disaster if recommended by public authorities. Most of these households (59.5–71.6 percent) planned to stay with friends or family if they were evacuated from their homes. Only 2.0–3.4 percent of respondents planned to stay in a public disaster shelter, with an additional 0.5–3.5 percent planning to stay in a medical needs shelter. None of the residents self-identifying as disabled planned on staying in a medical needs shelter. Finally, 61.9–70.1 percent of respondents owned pets, and 82.3–91.1 percent of these households planned on taking their pets with them during an evacuation. Evacuation propensity did not differ by pet ownership, ethnicity, age, or estimated annual income (data not shown).

Of those not evacuating, the most common option cited for not evacuating was concern about leaving property behind (23.8 percent in Mobile) and concern of the inconvenience or expense associated with evacuating (17.4 and 19.1 percent in Baldwin and Mississippi, respectively). Other reported reasons included lack of trust in public officials, concern of leaving pets behind, and safety or health concerns.

DISCUSSION

The application of the CASPER methodology during a nondisaster setting is a relatively recent application. Our study highlights the utility of using this methodology either during a nondisaster setting, or blending preparedness questions into a response CASPER toolkit to gain planning information using fewer resources to gather the information. Detailed information on population needs and demographics, information-seeking behaviors, or region-specific disaster concerns can be obtained quickly and at low cost using CASPER methodology.

Our data suggest that a large percent of residents were retired, unemployed, or disabled, populations that may require additional resources during an evacuation or disaster, and between one-quarter to nearly one-half of households had children. These populations represent different needs and having this information on a management area-specific scale could prove useful in emergency planning. Healthcare implications of these demographic

findings include a greater dependence on Medicare or Medicaid and age-specific concerns such as decreased immunity within a potentially crowded shelter setting.

Our assessment suggests residents of coastal Alabama and Mississippi would evacuate for a disaster if public health authorities recommend evacuation. However, it should be noted that this questionnaire was only able to assess intent to evacuate, not actual evacuation behavior. Changing circumstances or opinions may result in a different proportion of residents actually evacuating should a disaster occur, and this may be further influenced by the nature and severity of the disaster. The majority of households also own pets, which presents a challenging public health situation. The Pet Evacuation and Transportation Standards Act of 2006 requires states that receive Federal Emergency Management Agency assistance to accommodate pets and service animals during evacuation.[13] Although most of the residents in our study plan to stay with family or friends, the challenge of evacuating and sheltering pets remains an issue for those requiring public assistance with transportation. Also, in the event of a large-scale disaster that requires evacuation of areas where residents had planned to stay, the number of pets accompanying residents to public and medical needs shelters will increase. The data presented here suggest the potential scale of pet friendly shelters or evacuation plan needs is large and requires significant planning and resources in public health preparedness, as lack of planning for pet evacuation can impede human evacuation during emergencies.[14]

Previous research on evacuation behavior has identified several factors that influence propensity to evacuate, perceived risk often found to be the most significant predictive factor for hurricane-based evacuation recommendations.[15–17] Individual confidence in the information source in turn greatly influences the perceived risk, with information originating from a family member or authority figure more likely to stimulate evacuation behavior.[18] However, individual factors such as age, gender, race, income level, and household size and type, may play the greatest role in determining how information is interpreted and perceived, regardless of source.[19–21] Several physical constraints such as lack of access to a car or transportation, expense associated with evacuating the household, and access to information are often cited as contributing to evacuation behavior but are often directly related to individual factors of income level and household size. Much of this previous work concurs with many of the barriers and behaviors reported in our study.

Most residents in our study did not have landline telephone service. This has important implications for reverse-9-1-1 public health messaging services as well as community-based surveys and research initiatives in public health. Relying on landline telephones captures less than half the population in some areas and represents a different demographic than users of other communication methods, as those without landlines were younger and may have different evacuation needs than older residents, that is, have young children. In contrast, the vast majority of households had cell phone service. Furthermore, our study suggests use of landline services versus cell phone technology applies to two different populations based on age. This has important implications for landline-based emergency messaging and population research, as a large and demographically different proportion of the population is excluded by using only landline services. Development of wide-spread cell phone alert or text-messaging systems would reach more residents than a landline-based warning system

and may avert some of the problems encountered during an interruption in electricity service, which is a common sequel of many natural disasters that complicates public health and disaster information dissemination.

More than one-third of respondents had Facebook or social media as a means of communication. Although only 1–2 percent of respondents currently use Facebook or social media as a main method for obtaining information during a disaster, the gap between availability and use of these technologies suggests that 1) public health messaging should continue to use traditional means of messaging such as television and radio and 2) social media technologies may hold potential for increased use in public health preparedness and emergency response, but much work is needed to increase visibility and usage before these technologies become a primary route of information. Social media such as Facebook, may be more useful for spreading preparedness or recovery messages to the public during quieter times but less effective in getting emergency messages out during the response phase as most residents are still relying on television for messaging during the response phase. Although the benefits may be limited, the relative cost of posting to a Facebook or Twitter account is low, thus a minimal amount of effort may be worth the gains. To reach a broad public audience during disaster response, existing efforts to use cell phone technology should be expanded.[22]

Few studies exist that address community-wide emergency preparedness and evacuation behaviors. The majority of emergency preparedness studies present in the literature specifically address at-risk or medical needs communities or healthcare facilities. The declining use of landline telephone service and reliance on televisions for news reported in this study is in agreement with other studies showing that fewer and fewer households have landlines and rely on televisions.[23] With this trend, a concomitant rise in social media and cell phone use is reported, and also consistent with our results. Together, these data support our suggestions to diversify messaging and alert techniques used by emergency managers.

This study is subject to certain limitations. Although respondents were asked to answer these questions on behalf of the household, individual respondents' plans and information behaviors may have differed from actual household plans and information behaviors. Additionally, individual disasters can differ greatly in severity and impact on basic services such as electricity, communication systems, and transportation infrastructure. Therefore, timing of information dissemination and evacuation is crucial to enable residents to use their planned information sources and evacuation plan during a disaster. Therefore, it is possible that responses given during our assessment may not be applicable to every disaster. Finally, this assessment represents information and opinions at a single point in time; current events as well as personal experiences in previous disaster or evacuation settings can influence future behaviors and/or plans. However, although the Alabama assessments were completed as Hurricane Irene was receiving significant media coverage and the Mississippi CASPER was conducted at a time with little hurricane coverage in the media, no large differences were seen between Alabama and Mississippi evacuation propensity and plans, suggesting responses to our assessment may not have been strongly influenced by current events at the time of survey.

CONCLUSIONS

Significant understanding of target communities is needed to tailor public health messages and prepare for potential evacuation needs. CASPER methodology can be used by disaster preparedness planners to identify and prepare for potential public health and medical needs in these coastal communities, understand a population's evacuation propensity, and characterize information and communication behaviors. CASPER methodology can also be adapted to specific needs or interests and should be considered a tool for emergency managers.

Our assessment suggests that the majority of Alabama and Mississippi coastal residents plan to evacuate during a disaster if recommended by public health authorities. However, public health authorities should strive to evaluate multiple forms of communication to disseminate disaster preparedness and response messages to reach all vulnerable residents, especially in situations where electric services might be compromised. Emergency preparedness personnel should also be prepared for a large pet population in the event of an evacuation, with more than half of all residents having at least one pet.

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APPENDIX A

33. What forms of communication do you currently have available to communicate with family/friends?
❑ Regular home telephones (landlines) ❑ Cell phones ❑ E-mail ❑ Facebook/social media ❑ Two-way radios ❑ Other: _____ ❑ DK ❑ Refused

34. What would be your main method or way of getting information from authorities in a hurricane?
❑ Television ❑ Radio ❑ Dial-up Internet ❑ Print media ❑ Neighbors ❑ High-speed Internet ❑ Cell phones ❑ Facebook/social media ❑ Other: _____ ❑ DK ❑ Refused

35. If public authorities announced a mandatory evacuation from your community due to a large-scale disaster or emergency, would you evacuate?
❑ Yes **(SKIP TO 37)** ❑ No **(GO TO 36)** ❑ DK **(GO TO 36)** ❑ Refused **(GO TO 36)**

36. What would be the main reason you might not evacuate if asked to do so?
Read only if necessary:
❑ Lack of transportation ❑ Lack of trust in public officials ❑ Concern about leaving property behind
❑ Concern about personal safety ❑ Concern about family safety ❑ Concern about leaving pets
❑ Concern about traffic jams and inability to get out ❑ Health problems (could not be moved)
❑ Inconvenience/expense ❑ Other ❑ Don't know ❑ Refused

37. If you had to evacuate for a hurricane where would you go to stay until you could return home?
❑ Would leave home for a safer structure in your area
❑ Stay with friends or family members outside of your area
❑ Go to a public disaster shelter ❑ Sleep in a car or outdoors
❑ Stay in a hotel or motel ❑ Would not leave home
❑ Medical needs shelter ❑ Don't know ❑ Refused

38. Do you have pets?
❑ Yes ❑ No ❑ D/K ❑ Refused

39. If you were asked to evacuate, what would you do with your pets?
❑ Take it/them with you ❑ Find a safe place for it/them ❑ leave behind with food and water
❑ Would not evacuate because of pets ❑ Would not evacuate ❑ DK ❑ Refused

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Table 1.

Demographics of respondents, Alabama and Mississippi 2011

	Mobile, AL	Baldwin, AL	Mississippi
Mean age (95% CI)	55.7 (52.6–57.4)	56.0 (52.9–59.0)	49.0 (45.4–52.7)
Age range	19–89	20–87	19–91
Median years in community (95% CI)	16.4 (12.9–19.8)	8.6 (6.1–11.2)	14.8 (8.7–20.8)
Demographics	**Weighted percent (95% CI)**	**Weighted percent (95% CI)**	**Weighted percent (95% CI)**
Gender			
Male	44.2 (33.0–55.3)	51.1 (44.0–58.3)	47.5 (37.8–57.3)
Female	55.8 (44.7–67.0)	48.9 (41.7–56.0)	52.5 (42.7–62.2)
Race/ethnicity			
White, non-Hispanic	97.5 (94.8–100.0)	91.8 (86.1–97.5)	76.3 (65.0–87.6)
Black, non-Hispanic	0.5 (0.0–1.5)	2.4 (0.0–4.9)	21.9 (11.0–32.9)
Asian	–	1.0 (0.0–2.37)	–
Hispanic	1.0 (0.0–2.4)	0.5 (0.0–1.5)	1.3 (0.0–2.7)
Other	1.1 (0.0–2.6)	2.9 (0.0–6.6)	0.4 (0.0–1.3)
Don’t know/refused	–	1.4 (0.0–3.7)	–
Employment status			
Employed	43.4 (36.7–50.2)	49.8 (41.7–57.8)	37.3 (29.3–45.3)
Under-employed	4.8 (1.5–8.0)	2.3 (0.0–5.3)	6.5 (0.5–12.6)
Unemployed by choice/retired	41.2 (33.5–49.0)	38.6 (31.8–45.4)	33.6 (25.2–42.0)
Unemployed, seeking work	7.7 (2.9–12.3)	6.5 (3.1–9.9)	12.0 (5.2–18.7)
Disabled	2.9 (0.0–6.6)	2.3 (0.1–4.4)	10.6 (5.3–16.0)
DK/refused	0.0 (−)	0.5 (0.0–1.5)	0.0 (−)
Households with children	27.1 (18.2–36.1)	25.4 (15.6–35.2)	42.0 (31.9–52.0)

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Table 2.

Forms of communication currently available to communicate with friends and family, Alabama and Mississippi 2011

	Mobile, AL		Baldwin, AL		Mississippi	
	Projected number of households	Weighted percent (95% CI)	Projected number of households	Weighted percent (95% CI)	Projected number of households	Weighted percent (95% CI)
Cell phones	4,080	91.4 (87.2–95.7)	30,939	95.8 (92.8–98.8)	140,831	84.3 (78.6–90.0)
E-mail	2,363	53.0 (38.9–67.0)	24,398	75.6 (66.4–84.7)	75,985	45.5 (36.5–54.5)
Landlines	2,176	48.8 (37.5–60.1)	18,976	58.8 (48.4–69.2)	76,648	45.9 (33.3–58.5)
Facebook/social media	1,539	34.5 (24.7–44.3)	15,476	47.9 (37.3–58.6)	57,287	34.3 (24.6–44.0)
Two-way radios	412	9.2 (4.1–14.4)	3,844	11.9 (6.5–17.3)	7,957	4.8 (1.8–7.7)
Other	106	2.4 (0.0–5.3)	954	3.0 (0.0–7.2)	5,570	3.3 (1.0–5.6)

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Table 3.

Average age of respondents by landline and Facebook or social media usage, Alabama and Mississippi 2011

	Yes	No
	Age (95% CI)	**Age (95% CI)**
Landline usage		
Mobile	59.6 (57.1–62.1)	52.1 (49.3–54.8)
Baldwin	61.8 (58.4–65.2	51.4 (46.7–56.2)
Mississippi	57.1 (52.9–61.3)	42.9 (38.1–47.7)
Facebook or social media usage		
Mobile	48.2 (44.7–51.6)	59.6 (57.1–62.1)
Baldwin	51.8 (47.7–55.9)	62.8 (59.8–65.8)
Mississippi	37.1 (32.9–41.4)	56.0 (51.9–60.1)

Table 4.

Main method of obtaining information during disaster setting, Alabama and Mississippi 2011

	Mobile, AL		Baldwin, AL		Mississippi	
	Projected number of households	Weighted percent (95% CI)	Projected number of households	Weighted percent (95% CI)	Projected number of households	Weighted percent (95% CI)
Television	3,039	68.1 (58.6–77.6)	22,707	70.3 (60.8–79.8)	109,403	65.9 (55.4–76.2)
Radio	1,152	25.9 (18.3–33.5)	4,321	13.4 (8.4–18.4)	22,278	13.4 (6.8–20.0)
Cell phones	761	17.1 (12.4–21.9)	4,136	12.8 (4.9–20.7)	6,498	3.9 (1.1–6.7)
Internet	404	9.1 (4.6–13.6)	4,699	14.6 (9.7–19.4)	3,183	1.9 (0.1–3.8)
Neighbors	200	4.5 (1.1–7.9)	159	0.5 (0.0–1.5)	3,315	2.0 (0.1–3.9)
Print media	170	3.8 (0.0–8.5)	477	1.5 (0.0–3.2)	9,681	5.8 (2.2–9.5)
Facebook/social media	106	2.4 (0.2–4.6)	298	0.9 (0.0–2.2)	1,591	1.0 (0.0–2.3)
Other	213	4.8 (1.9–7.7)	1,372	4.2 (1.5–7.0)	8,752	5.3 (0.5–10.0)

Table 5.

Place where residents would seek shelter following evacuation for a disaster, Alabama and Mississippi 2011

County	Mobile, AL		Baldwin, AL		Mississippi	
	Projected number of households	Weighted percent (95% CI)	Projected number of households	Weighted percent (95% CI)	Projected number of households	Weighted percent (95% CI)
Would evacuate	3,655	82.3 (74.5–90.1)	27,260	84.4 (78.8–90.1)	131,018	78.8 (72.9–84.7)
Own pets	3,128	70.1 (63.8–76.5)	20,514	63.5 (54.3–72.8)	103,435	61.9 (53.3–70.5)
Evacuation plans						
Safer structure in area	276	6.3 (1.6–10.9)	2,691	8.7 (0.8–16.7)	9,813	6.0 (2.4–9.5)
Friends/family members' homes	3,009	68.4 (56.2–80.6)	22,065	71.6 (62.0–81.3)	97,998	59.5 (50.4–68.7)
Public disaster shelter	85	2.0 (0.0–3.9)	643	2.1 (0.1–4.1)	5,570	3.4 (0.6–6.1)
Sleep in car or outdoors	106	2.4 (0.0–5.0)	159	0.5 (0.0–1.6)	2,387	1.5 (0.0–3.1)
Motel/hotel	540	12.3 (6.9–17.6)	4149	13.5 (8.5–18.5)	24,002	14.6 (8.7–20.5)
Would not leave	191	4.3 (1.2–7.5)	756	2.5 (0.0–5.0)	14,322	8.7 (3.7–13.7)
Medical needs shelter	43	1.0 (0.0–2.9)	159	0.5 (0.0–1.6)	5,702	3.5 (1.1–5.9)
Don't know/refused	149	3.4 (0.8–6.0)	186	0.6 (0.0–1.8)	4,774	2.9 (0.3–5.5)