

**Community assessment for public health emergency response
(CASPER) following the August 24 South Napa earthquake,
Vallejo, California — October, 2014.**

California Department of Public Health (CDPH)
Solano County Public Health (SCPH)

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BACKGROUND

A magnitude 6.0 earthquake struck approximately five miles northwest of the City of Vallejo, California, on August 24, 2014, at 3:20 AM. An estimated 49 Vallejo residents sustained injuries resulting in presentation to a local emergency department¹. The “South Napa Earthquake” is the largest earthquake to have affected the Bay Area since the 1989 Loma Prieta earthquake. Governor Brown declared a state of emergency on August 24², and President Obama declared the South Napa Earthquake a major disaster on September 11, 2014³.

Solano County Public Health (SCPH) requested assistance from the Emergency Preparedness Team (EP Team) of the Division of Environmental and Occupational Disease Control (DEODC) at the California Department of Public Health (CDPH) to address two key epidemiologic needs within the City of Vallejo: an assessment of community public health preparedness and surveillance of South Napa Earthquake-associated health effects.

The EP Team recommended that Community Assessment for Public Health Emergency Response (CASPER) methodology be used. CASPER is a tool developed by the United States Centers for Disease Control and Prevention (CDC) to assess public health needs in both disaster and non-disaster settings. CASPER uses a two-stage household-based sampling method to provide household-based information about an affected community’s health status, basic needs, and other pertinent information in a timely and representative manner. The CASPER tool allows public health and emergency officials to make informed decisions regarding response, allocation of resources, and other public health action after a disaster or for planning purposes⁴. SCPH agreed that the EP Team assist in using CASPER methodology in the City of Vallejo to assess and determine: (1) the extent of injuries, chronic disease exacerbation,

and mental health issues associated with the South Napa Earthquake, and (2) the degree of disaster preparedness in Vallejo. The EP Team and SCPH conducted a CASPER in Vallejo on October 17, 18, and 20, 2014, to accomplish these goals.

METHODS

CASPER Sample Selection

CASPER uses a two-stage sampling methodology modified from the World Health Organization's Expanded Program on Immunization to select a representative sample of 210 households (7 households from each of 30 clusters) to be interviewed in a sampling frame (detailed methodology described in the CASPER Toolkit Version 2.0)⁵. The sampling frame is an area of interest for the assessment and could be an entire city or county, or any subset thereof. The sampling frame captures the entire population within the selected assessment area from which a CASPER sample is drawn and to which the results would be generalized. A cluster is usually a census block (or block group) that is randomly selected from the sampling frame. The 30 clusters are selected from the sampling frame, with the probability of selection proportional to the number of housing units in the cluster ("probability proportional to size," i.e., the higher the number of housing units in a block, the higher the probability that this block would be selected for CASPER). Interview teams then select 7 households within each cluster, in accordance with systematic random sampling methods. Responses from sampled households are then weighted to produce estimates generalizable to the entire sampling frame.

In consultation with SCPH, a sampling frame was selected representing the western section of the City of Vallejo, including unincorporated areas. This decision to include only a portion of Vallejo was made

based on preliminary reports that most structural damage resulting from the South Napa Earthquake within Vallejo was limited to the areas west of Interstate 80. The selected sampling frame is shown in Figure 1. The population of the incorporated City of Vallejo is estimated at 115,940 according to Census 2010. The sampling frame, which included unincorporated areas within the city boundaries, included 26,017 housing units, 1,434 census blocks, and a population of 66,032.

We used the city boundary shapefile provided by SCPH as the basis for the sampling frame. The Census TIGER/Line 2010 shapefile provided block (cluster) geography and estimates for population and total housing units in the sampling frame and in each cluster⁶. We overlaid Vallejo boundaries with TIGER/Line blocks and selected blocks falling within Vallejo to generate the sampling frame. We performed cluster selection in ArcGIS 10.1 using a custom toolbox provided by the CDC⁷.

In the first stage of sampling, we selected 30 clusters (census blocks) within the west Vallejo sampling frame with probability proportional to size. In the second stage of sampling, interview teams randomly selected 7 households from within the cluster for household interviews. Interviewers were instructed to select a random housing unit within the cluster as a starting point using a street level map. They were then to visit every n^{th} housing unit to systematically select the 7 housing units to interview, where n = the total number of housing units in the cluster divided by 7; e.g., for a cluster with 28 housing units, teams would survey every 4th housing unit. Teams were instructed to make three attempts at each selected household before replacement (i.e., moving on to another unit). Interview teams were permitted to employ convenience sampling in several clusters where systematic random sampling opportunities were exhausted in the final hours of the survey on October 20.

Individual apartments and condominiums in multi-family housing structures are considered independent housing units; therefore, several apartments could be selected from the same building. Some clusters contained large apartment buildings that had either security gates or locked front entrances, precluding the entry of field teams. In those instances, all households that would have been selected in such buildings were deemed inaccessible.

CASPER Data Collection

The EP Team and SCPH collaborated to develop a six-page questionnaire (Appendix I), which was adapted from a CASPER survey conducted in Napa County in September 2014, following the earthquake⁸. The questionnaire included questions on the following: (1) household demographics; (2) earthquake experience; (3) injuries; (4) chronic disease exacerbations; (5) mental health issues; and (6) household disaster preparedness. The questionnaire was translated into Spanish. Questions were either created by the team to fit the unique needs of Napa and Solano Counties or adapted from prior CASPERs in Oklahoma⁹, Alabama¹⁰, and California¹¹; the CDC CASPER toolkit⁵; or PsyStart, a psychological triage system¹².

On October 17, the EP Team provided interview teams with a five-hour, just-in-time training session on the overall purpose of the CASPER, the household selection method, questionnaire administration, interview techniques, safety, and logistics. There were a total of 14 two-person teams on October 17, 12 teams on October 18, and 7 teams on October 20; no interviews were conducted on October 19. The teams consisted primarily of volunteers recruited by SCPH and CDPH staff, as referenced in the Acknowledgements section. Teams conducted interviews between 2 pm and 6 pm PDT on October 17 and between 9 am and 6 pm PDT on October 18 and 20. Each team attempted to conduct 7 interviews

in each of the 30 clusters for a goal of 210 total interviews. One cluster was selected twice (cluster 12); therefore, 14 interviews were attempted in that cluster. Eligible respondents were at least 18 years of age or older and resided in the selected household. If the respondent preferred to conduct the interview in Spanish, we provided a Spanish-speaking interviewer and Spanish informational materials. In the few cases where a household requested that the interview be conducted in Tagalog, a CASPER volunteer translated the questionnaire and administered the interview in Tagalog. All households interviewed by the teams were given an informational packet containing a consent form, an introductory letter by the Solano County Health Officer, and earthquake emergency preparedness information. The interviewers were instructed to complete confidential referral forms whenever they encountered urgent physical or mental health needs. Interviewers were instructed to refer all media inquiries to SCPH.

Data Analysis

We conducted a weighted cluster analysis of the data collected during the CASPER. The weights are based on the total number of housing units in the sampling frame, the number of clusters selected, and the number of housing units interviewed within each cluster. For all interview questions, we report the projected number and proportion of households, along with corresponding 95% confidence intervals (95% CIs), with a particular response in the assessment area.

Analysis was performed in SAS version 9.3 to calculate unweighted and weighted frequencies (projected number of households), unweighted and weighted percentages, and the 95% CIs of all weighted estimates. Unless otherwise stated, the estimates reported in the text are weighted, representing the projected response for the entire sampling frame (i.e., west Vallejo). Estimates are

presented in the text without their corresponding 95% CIs. These were omitted from the text for ease of reading and are presented with the full results in the tables.

Mental health effects based on household reporting were categorized as follows. A *traumatic experience elevating the risk of post-traumatic stress disorder (PTSD)* is defined as any of the following: seeing or hearing a direct threat to the life of oneself or a family member, seeing a serious injury of a non-family member, experiencing the death of a pet, being trapped or delayed in evacuating, having a home not livable due to disaster, or having a child separated from a family member and being unaware of their location or status⁶. An *acute mental health need* was defined as a household member expressing intent to harm self or others. *Other mental health stressors* are defined as feeling fear, anxiety, or distraction, or showing extreme panic. *Any traumatic experience or mental health stressor during or since earthquake* is defined as any of the above (traumatic experience elevating the risk of post-traumatic stress disorder, an acute mental health need, or other mental health stressors).

RESULTS

Interview teams conducted 175 of a possible 210 interviews, for a completion rate of 83.3% (Table 1). We completed interviews in 38.3% of the approached housing units, and at 55.6% of homes where the door was answered. Of the 175 interviews, 10 were conducted in Spanish and 2 were conducted in Tagalog.

Household Demographics and Home Characteristics

Household sizes ranged from 1 – 11, with a weighted mean (95% CI) of 3.0 (2.6, 3.5) and a weighted median (95% CI) of 1.9 (1.7, 2.1). Household age distribution was as follows: 18% (4,751 households)

had at least one member ≤ 4 years old, 31% (8,001 households) had at least one member $\geq 65 - 79$ years old, and 5% (1,330 households) had at least one member ≥ 80 years old (Table 2). Households lived primarily in single family homes (64%); 23% lived in multi-unit complexes. One-third (33%) of households lived in homes that were built before 1960. We estimate that of all households, 61% had a total yearly income of $< \$70,000$, with 28% of households earning a total yearly income $< \$30,000$. In most households (78%), English was the main language spoken in the home. Few (6%) had earthquake insurance.

Damage to Home and Property

The most common types of home damage were cracks to exterior walls (25%; 6,486 households) and damage to interior walls or ceilings (21%; 5,495 households) (Table 3). The residences of 20% of households (5,296 households) were damaged enough to require repair.

Household goods (45%) and heirlooms and items of sentimental value (18%) were the items most commonly damaged; fewer households experienced damage to electronics (10%) and major pieces of furniture (5%). Few (1%) households had a member who stayed at a location other than their home in the week after the earthquake due to the home needing repair. Household financial burden for completing household repairs was expected to be “not difficult” or “not applicable” for most households (73%; 18,992 households). The financial burden of repairs was expected to be “a little difficult” for 11% of households (2,839 households) and “very difficult” for 10% of households (2,682 households).

Injuries to Household Members

A member of the household was injured in 4% of households (1,016 households) (3% if small cuts and bruises excluded [719 households]) as a result of the earthquake or cleanup. Of households reporting an injury, 37% (372 households) had a member with an injury sustained during cleanup within two weeks of the earthquake (Table 4). The most common injuries were deep cut/puncture/large bruise or scrape (46%; 471 households) and strain/sprain (24%; 248 households). The most common causes of these injuries were being hit by an object (46%) and fall/slip/trip (41%). Among households with members who were injured, only in 37% of households (372 households) did all injured household members receive medical treatment. Of those households where not all injured household members received medical treatment, the two reasons given for not receiving treatment were that the injury was not serious enough (73%; 471 households), and that the household was too busy (27%; 173 households).

Chronic Disease Exacerbation

Most households had a member with a chronic disease (72%; 18,829 households); the most common chronic diseases in households were hypertension (46%; 11,846 households), asthma (26%; 6,760 households), and diabetes (25%; 6,595 households) (Table 5). Among households with a member with a chronic disease, 14% (2,662 households) experienced a worsening of their disease following the earthquake. The most common chronic diseases reported by households as having worsened since the earthquake were depression or other mental health condition (28%; 1,324 households), physical disability (19%; 768 households), developmental disability (16%; 173 households), emphysema/COPD (14%; 124 households), and asthma (12%; 793 households). Among households with a member with a worsening chronic disease since the earthquake, 36% (966 households) reported seeking medical

attention outside of their normal care. Among these households that reported a worsening chronic condition following the earthquake, additional medical care was sought for hypertension (44%; 372 households), physical disability (39%; 297 households), asthma (31%; 248 households), diabetes (27%; 124 households), and depression or other mental health condition (22%; 297 households). Few households (1%) had difficulty accessing or acquiring prescribed medication or obtaining medical supplies or services as a result of the earthquake (data not shown).

Mental Health Effects

A majority of households (55%; 14,421 households) had a member who experienced a traumatic experience or mental health stressor during or since the earthquake, the most common being feeling anxiety, fear, or distraction (50%; 13,093 households) (Table 6). A member of 9% of households (2,296 households) suffered a traumatic experience elevating the risk of PTSD, most commonly being separated from a family member and unaware of their location or status (3%; 814 households) and having a child separated from caretakers (2%; 421 households). One percent of households (297 households) expressed an acute mental health need (i.e., intent to harm self or others).

Among those households with a traumatic experience or mental health stressor during or since the earthquake, 28% (4,033 households) sought help. The most commonly sought sources of help were counseling from a religious leader or friend (13%; 1,891 households) and a primary care provider or a clinic (9%; 491 households). The most common reason a household did not seek help for a member who experienced a traumatic experience or mental health stressor during or since the earthquake was that the condition wasn't serious enough or help wasn't needed (72%; 10,351 households).

A household member took time off from work in 4% of households (1,082 households) because of the earthquake (Table 7). Among those households, the most commonly cited reasons were to clean up (64%), to assess damage (62%), and due to feeling anxious or scared (52%).

Emergency and Disaster Preparedness

Households most preferred to receive information during emergencies or disasters by television (39%), text messaging (21%), and cell phone call (13%) (Table 8). Thirty percent of households (7,710 households) had a member with a condition that could create barriers to effective communication during an emergency or disaster. The most common communication barriers were difficulties understanding English (11%; 2,969 households), difficulties understanding written material (8%; 1,988 households), a physical disability (8%; 1,988 households), hearing problems (7%; 1,885 households), and vision problems (6%; 1,629 households). Of the 51% of households with pets or large animals (Table 9), most (90%; 11,949 households) would take their pets with them in the event of an evacuation.

Half of households (50%; 13,054 households) did not have an emergency supply kit prior to the earthquake (Table 10). Among these households, the most common reasons for not having a kit were thinking it was not necessary (42%), not wanting to think about it (32%), and not knowing what to have (29%). Among the 12,963 households with a kit, supplies in the kit included a 3-day supply of non-perishable food (80%), a 3-day supply of water (82%), a battery-operated radio (74%), a first aid kit (94%), a 3-day supply of prescription medication (69%), medical equipment, supplies, or prescription eyeglasses (57%), flashlights with extra batteries (92%), dust masks (44%), and copies of important documents (49%). Twenty-two percent of households (5,794 households) would be able to stay in their

homes for fewer than 3 days before needing to shop for additional supplies.

DISCUSSION AND CONCLUSION

This report presents data from the CASPER survey conducted in the west section of the City of Vallejo on October 17, 18, and 20, 2014, following the South Napa earthquake of August 24, 2014. We completed 175 of 210 target interviews.

Disasters usually strike when people least expect them and with minimal warning. This means preparedness at the governmental, community, and individual household levels is critical to minimize the risk of impact on residents' health and wellbeing. This CASPER was conducted within two months of the South Napa Earthquake and was therefore timely and relevant. Four topic areas formed the basis of this CASPER: (1) earthquake-associated injuries; (2) earthquake-associated exacerbation of chronic diseases; (3) earthquake-associated mental health issues; and (4) disaster and emergency preparedness of the community. We also asked households questions regarding damage to their homes as a result of the earthquake, and a substantial proportion reported damage necessitating repairs.

Injuries (except for minor cuts and bruises) were infrequent among members of west Vallejo households and those injured as a result of the earthquake or cleanup were unlikely to seek medical attention, largely because of a perceived low injury severity. Some previously existing chronic diseases, notably depression or other mental health conditions, were reported as exacerbated by the earthquake. Residents were likely to seek care for these worsened mental health conditions. Data presented here demonstrate that, at the time of this CASPER, members of >300 households sought

medical care (including visits other than emergency department) for injuries sustained as a result of the earthquake or cleanup, far greater than the 49 seeking treatment at an emergency department that was initially reported by the City of Vallejo¹, and >900 sought medical care for worsening chronic conditions.

Traumatic experiences elevating the risk of post-traumatic stress disorder were relatively common (2,296 households) among members of western Vallejo households. Most households reporting a traumatic experience or mental health stressor also reported not seeking help for dealing with this experience, most often because of perceived insufficient severity.

We found that there is not one single method of communication to relay emergency messaging that is preferred by all or most households. Instead, a variety of communication methods were preferred including television, text messaging, and cell phone calls. We also found that approximately one-third of the households had at least one communication barrier, with problems understanding English being the most common. Half of households did not have an emergency kit prior to the earthquake. The most commonly cited reason for not having a kit was thinking it was not necessary.

We also found that half of households in west Vallejo own pets and/or large animals and that most of these households would take their animals with them during an evacuation. This is of particular importance in the context of planning shelter strategies that can accommodate animals.

Based on a preliminary analysis of the data collected during this CASPER, we recommend the following to SCPH:

1. Evaluate Vallejo's medical surge capacity. These preliminary analyses demonstrate that even a non-catastrophic earthquake can result in substantial numbers of injuries and chronic disease exacerbation, with persons seeking care throughout the following days and weeks. A more severe disaster may place greater demands on local medical capabilities for an extended period of time. Consider evaluation and planning exercises with Solano County Office of Emergency Services.
2. Make information available to County residents about the importance of seeking medical evaluation for injuries and chronic disease exacerbations following a disaster. Earlier treatment may reduce the morbidity associated with injuries and chronic disease exacerbations.
3. Continue to offer post-disaster mental health services to Vallejo residents, and encourage residents experiencing earthquake-associated mental health effects to use county or other mental health service providers. These preliminary analyses indicate increased risk of post-traumatic stress disorder in members of 9% of Vallejo households; post-traumatic stress disorder may not manifest immediately. Consider consulting the CDC resources <http://www.bt.cdc.gov/mentalhealth/> and <http://emergency.cdc.gov/mentalhealth/primer.asp>
4. Encourage households to prepare for disasters; consider a public campaign on this topic. Preparedness and disaster planning are essential to reduce the health impact of an earthquake or other public health emergency. We recommend that households:
 - Prepare an emergency kit. The major reported barriers to having an emergency kit were thinking it was not necessary, not knowing what to have, not having time, and not wanting to think about it. An educational campaign may be needed to explain the benefits of having an emergency supply kit.

- Create a disaster plan defining how household members will communicate with the family during and after an emergency and identifying a safe place to meet outside of the home. Having a disaster plan may also lessen the mental health effects of not knowing where a family member is following a disaster.
 - Secure household objects (e.g., TVs, bookshelves, and other furniture) so they do not fall during an earthquake, and secure cabinet doors to prevent glassware from falling out.
5. Consider pets in county disaster planning. Many households have pets, and households will take pets with them after a disaster. Adequate pet-friendly shelters will be necessary.
 6. Consider multiple disaster communication strategies in multiple languages. No single method of communication following a disaster was preferred, and the most common barrier to communication was not having an understanding of English.
 7. Communicate the dangers associated with cleanup following a disaster. For example, members of 372 households in western Vallejo sustained injuries during cleanup within two weeks after the earthquake.

Based on our sampling methodology, we caution against generalizing these estimates to households or areas outside of the defined sampling frames. Specifically, the selected sampling frame only included the west section of the City of Vallejo, west of Interstate 80. However, the recommendations based on these estimates will likely prove applicable to residents of the entire City of Vallejo and to other communities within Solano County. Solano County might consider a public health emergency response assessment of areas outside of Vallejo and a follow-up assessment of emergency preparedness for Vallejo at a later date (e.g., 6-12 months from now) to assess the effectiveness of strategies

recommended above.

The CASPER described here for west Vallejo was a successful collaboration between CDPH and SCPH and helped characterize health effects resulting from the earthquake and emergency preparedness among households in western Vallejo. We hope that the results will be useful in allocating resources for response to the earthquake and strengthening the emergency preparedness capacity of Solano County.

Figure 1. CASPER sampling frame and selected clusters for western Vallejo, California. Unincorporated areas are included in the sampling frame.

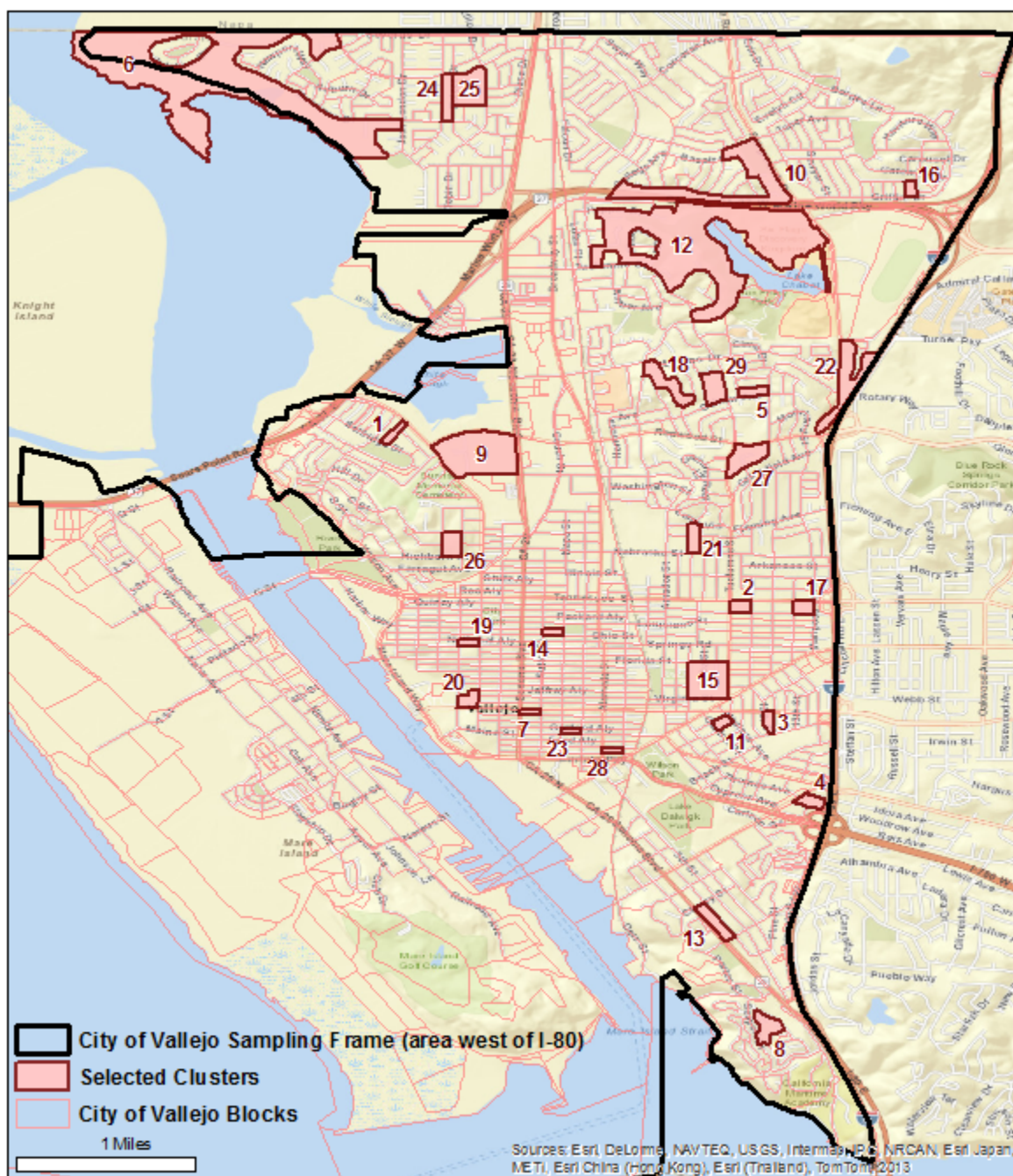


Table 1. CASPER survey response rates in western Vallejo, California.

Rate Type	Rate	
Completion[*]	83.3	(175/210)
Cooperation[†]	55.6	(175/315)
Contact[‡]	38.3	(175/457)

^{*}Percent of surveys completed in relation to the goal of 210

[†]Percent of contacted households that were eligible and willing to participate in the survey

[‡]Percent of randomly selected households that completed an interview

Table 2. Demographics and home characteristics, CASPER, western Vallejo, California

	<u>Unweighted</u>	<u>Weighted</u>	
	n (%)	n (95% CI)	% (95% CI)
Households with at least 1 member in the following age categories			
	(n=175)	(n=26,017)	
0-4 years old	34 (19)	4751 (3147,6355)	18 (12,24)
5-14 years old	49 (28)	6847 (4655,9039)	26 (18,35)
15-24 years old	49 (28)	7167 (5031,9303)	28 (19,36)
25-64 years old	132 (75)	19544 (17046,22041)	75 (66,85)
65-79 years old	52 (30)	8001 (5933,10070)	31 (23,39)
80+ years old	10 (6)	1330 (346,2313)	5 (1,9)
Main language spoken in household¹			
English	137 (78)	20328 (18443,22214)	78 (71,85)
Spanish	24 (14)	3636 (1846,5426)	14 (7,21)
Tagalog	14 (8)	1960 (689,3230)	8 (3,12)
Other ²	6 (3)	950 (197,1702)	4 (1,7)
Home type			
Mobile	12 (7)	1487 (0,3631)	6 (0,14)
Single family	111 (63)	16641 (12726,20555)	64 (49,79)
Duplex	8 (5)	1516 (210,2821)	6 (1,11)
Multi family	42 (24)	6033 (2500,9567)	23 (10,37)
Missing	2 (1)	341 (0,844)	1 (0,3)
Year built (home)			
2000s	9 (5)	1229 (0,2596)	5 (0,10)
1990s	3 (2)	392 (0,841)	2 (0,3)
1980s	8 (5)	1053 (0,2111)	4 (0,8)
1970s	24 (14)	3170 (947,5392)	12 (4,21)
1960s	10 (6)	1474 (498,2451)	6 (2,9)
1950s	20 (11)	3494 (1206,5781)	13 (5,22)
1940s	16 (9)	2189 (759,3618)	8 (3,14)
1930s	9 (5)	1255 (284,2227)	5 (1,9)
1920s	7 (4)	991 (0,2082)	4 (0,8)
1910s	1 (1)	434 (0,1320)	2 (0,5)
1900s or earlier	3 (2)	372 (0,930)	1 (0,4)
Don't Know	65 (37)	9965 (7191,12739)	38 (28,49)
Own or rent home			
Own	94 (54)	14113 (11021,17205)	54 (42,66)
Rent	80 (46)	11780 (8630,14929)	45 (33,57)
Other	1 (1)	124 (0,377)	0 (0,1)
Household annual income			
\$30,000	49 (28)	7297 (4632,9963)	28 (18,38)
\$30,000 - \$70,000	53 (30)	8540 (6201,10879)	33 (24,42)
\$70,000 - \$100,000	31 (18)	4157 (2559,5754)	16 (10,22)
≥ \$100,000	13 (7)	1807 (440,3173)	7 (2,12)

Table 2 (continued). Demographics and home characteristics, CASPER, western Vallejo, California.

	<u>Unweighted</u>	<u>Weighted</u>	
	n (%)	n (95% CI)	% (95% CI)
Don't Know	12 (7)	1848 (472,3224)	7 (2,12)
Refused	17 (10)	2368 (960,3777)	9 (4,15)
Have earthquake insurance			
Yes	11 (6)	1456 (622,2289)	6 (2,9)
No	133 (76)	19705 (17793,21616)	76 (68,83)
Don't Know	31 (18)	4857 (3247,6466)	19 (12,25)

Notes:

¹ Frequencies do not sum to 175, as some households reported two languages spoken at home

² Other languages specified: Chinese, German (2), Hindi, Mandarin, Vietnamese

Table 3. Damage to home and property, CASPER, western Vallejo, California.

	<u>Unweighted</u>	<u>Weighted</u>	
	n (%)	n (%)	% (95% CI)
	(n=175)	(n=26,017)	
Residence was damaged enough to need repair	35 (20)	5296 (3139,7454)	20 (12,29)
Anyone in household stayed elsewhere in the week after the earthquake due to home repair	2 (1)	248 (0,600)	1 (0,2)
Damage to home			
Fire damage	0 (0)	0 (0,0)	0 (0,0)
Collapse of walls or building shift from foundation	20 (11)	2940 (1456,4425)	11 (6,17)
Damage to chimney	9 (5)	1319 (354,2285)	5 (1,9)
Damage to roof	12 (7)	1821 (840,2802)	7 (3,11)
Cracks to exterior walls	44 (25)	6486 (3811,9160)	25 (15,35)
Windows cracked or broken	13 (7)	2088 (930,3245)	8 (4,12)
Damage to interior walls or ceilings	37 (21)	5495 (3529,7460)	21 (14,29)
Bookshelves falling over	35 (20)	5286 (3145,7427)	20 (12,29)
Damage to detached garage	3 (2)	372 (0,795)	1 (0,3)
Damage to property			
Vehicle	0 (0)	0 (0,0)	0 (0,0)
Electronics	18 (10)	2684 (1383,3985)	10 (5,15)
Major pieces of furniture	9 (5)	1185 (401,1970)	5 (2,8)
Heirlooms and items of sentimental value	35 (20)	4803 (3089,6517)	18 (12,25)
Household goods	82 (47)	11813 (8897,14729)	45 (34,57)
Financial difficulty for household to pay for repairs			
Not Applicable	47 (27)	6725 (4423,9027)	26 (17,35)
Not difficult	78 (45)	12267 (9762,14772)	47 (38,57)
A little difficult	20 (11)	2839 (1586,4092)	11 (6,16)
Very difficult	20 (11)	2682 (1496,3869)	10 (6,15)
Don't Know	9 (5)	1379 (442,2317)	5 (2,9)
Missing	1 (1)	124 (0,377)	0 (0,1)

Table 4. Injuries, CASPER, western Vallejo, California.

	Unweighted	Weighted	
	n (%)	n (%)	% (95% CI)
	(n=175)	(n=26,017)	
Reports of Injury			
Households with member(s) injured as a result of the earthquake or cleanup	7 (4)	1016 (67,1965)	4 (0,8)
Injured, except for minor cuts and bruises ¹	5 (3)	719 (98,1339)	3 (0,5)
Injured during cleanup within two weeks after the earthquake	3 (43)	372 (0,793)	37 (0,93)
Injury type	(n=7)	(n=1,016)	
Deep cut/puncture/large scrape/bruise	3 (43)	471 (0,1019)	46 (0,99)
Broken bone/fracture/dislocation	1 (14)	124 (0,468)	12 (0,45)
Head injury	1 (14)	173 (0,655)	17 (0,67)
Strain or sprain	2 (29)	248 (0,669)	24 (0,77)
Burn	0 (0)	0 (0,0)	0 (0,0)
Other ²	3 (43)	421 (0,915)	41 (5,78)
Injury cause	(n=7)	(n=1,016)	
Burn	0 (0)	0 (0,0)	0 (0,0)
Electric shock	0 (0)	0 (0,0)	0 (0,0)
Fall/slip/trip	3 (43)	421 (0,915)	41 (5,78)
Use of machinery or tools	0 (0)	0 (0,0)	0 (0,0)
Hit by object	3 (43)	471 (0,1019)	46 (0,99)
Motor vehicle crash	0 (0)	0 (0,0)	0 (0,0)
Violence/assault	0 (0)	0 (0,0)	0 (0,0)
Other ³	2 (29)	248 (0,669)	24 (0,70)
Did injured members seek medical care?	(n=7)	(n=1,016)	
Yes, all	3 (43)	372 (0,793)	37 (0,93)
Treated by EMS at scene	0 (0)	0 (0,0)	0 (0,0)
Treated and released at hospital/ER/clinic	3 (100)	372 (372,372)	100 (100,100)
Admitted to hospital	0 (0)	0 (0,0)	0 (0,0)
None	4 (57)	644 (0,1537)	63 (7,100)
Why did injured household member(s) not receive treatment?	(n=4)	(n=644)	
Transportation difficulties	0 (0)	0 (0,0)	0 (0,0)
Have insurance but worried about cost of care	0 (0)	0 (0,0)	0 (0,0)
Did not have insurance	0 (0)	0 (0,0)	0 (0,0)
Injury not serious enough	3 (75)	471 (258,684)	73 (0,100)
Too busy	1 (25)	173 (0,920)	27 (0,100)

Notes:

¹ Includes all the listed types of injuries except "other" category

² Other injuries specified: pinched nerve, scrape, small cut from glass

³ Other causes specified: stepped on broken glass, tossed from bed

Table 5. Chronic health conditions and exacerbation, CASPER, western Vallejo, California.

	<u>Unweighted</u>	<u>Weighted</u>	
	n (%)	n (%)	% (95% CI)
Households with member(s) having any of the following conditions	(n=175)	(n=26,017)	
Any chronic condition listed below, except “other”	127 (73)	18829 (17334,20325)	72 (67,78)
Worsened ¹	18 (14)	2662 (1426,3898)	14 (8,20)
Additional medical care ²	7 (39)	966 (254,1679)	36 (11,62)
Hypertension	80 (46)	11846 (9316,14376)	46 (36,55)
Worsened ¹	6 (8)	836 (86,1586)	7 (1,14)
Additional medical care ²	3 (50)	372 (0,793)	44 (0,99)
Congestive heart failure	12 (7)	1869 (700,3038)	7 (3,12)
Worsened ¹	0 (0)	0 (0,0)	0 (0,0)
Additional medical care ²	--	--	--
Diabetes	44 (25)	6595 (4620,8570)	25 (18,33)
Worsened ¹	3 (7)	465 (0,1019)	7 (0,16)
Additional medical care ²	1 (33)	124 (0,657)	27 (0,100)
Compromised immune system (cancer, lupus, HIV)³	11 (6)	1753 (746,2760)	7 (3,11)
Worsened ¹	0 (0)	0 (0,0)	0 (0,0)
Additional medical care ²	--	--	--
Seizures	5 (3)	762 (92,1432)	3 (0,6)
Worsened ¹	1 (20)	124 (0,468)	16 (0,64)
Additional medical care ²	0 (0)	0 (0,0)	0 (0,0)
Stroke	11 (6)	1846 (617,3075)	7 (2,12)
Worsened ¹	0 (0)	0 (0,0)	0 (0,0)
Additional medical care ²	--	--	--
Asthma	46 (26)	6760 (4972,8548)	26 (19,33)
Worsened ¹	6 (13)	793 (191,1395)	12 (3,21)
Additional medical care ²	2 (33)	248 (0,651)	31 (0,84)
Emphysema/COPD	6 (3)	906 (196,1617)	3 (1,6)
Worsened ¹	1 (17)	124 (0,442)	14 (0,50)
Additional medical care ²	0 (0)	0 (0,0)	0 (0,0)
Developmental disability	8 (5)	1111 (400,1821)	4 (2,7)
Worsened ¹	1 (13)	173 (0,584)	16 (0,51)
Additional medical care ²	1 (100)	173	100
Physical disability	27 (15)	3946 (2436,5456)	15 (9,21)
Worsened ¹	5 (19)	768 (0,1604)	19 (0,40)
Additional medical care ²	2 (40)	297 (0,859)	39 (0,100)
Mental health condition	29 (17)	4704 (3174,6233)	18 (12,24)
Worsened ¹	8 (28)	1324 (365,2282)	28 (9,47)
Additional medical care ²	2 (25)	297 (0,776)	22 (0,55)

Table 5 (continued). Chronic health conditions and exacerbation, CASPER, western Vallejo, California.

	<u>Unweighted</u>	<u>Weighted</u>	
	n (%)	n (%)	% (95% CI)
Other⁴	17 (10)	2876 (1499,4254)	11 (6,16)
Worsened ¹	0 (0)	0 (0,0)	0 (0,0)
Additional medical care ²	--	--	--

Notes:

¹ Among households with a member having the specified chronic condition, the frequency and proportion of households in which the member's condition worsened following the earthquake

² Among households with a member having experienced worsening symptoms of the specified chronic condition, the frequency and proportion of households in which the member sought additional medical care

³ For some households, the cancer diagnosis was indicated to have occurred in the past.

⁴ Other conditions specified: allergies, asbestosis, osteoporosis, arthritis, atrial fibrillation, glaucoma, kidney tract infection, trigeminal neuralgia, Parkinson's disease, renal dialysis, vasovagal response

Table 6. Conditions affecting mental health, CASPER, western Vallejo, California.

	Unweighted	Weighted	
	n (%)	n (%)	% (95% CI)
	(n=175)	(n=26,017)	
Households with member(s) having any traumatic experience or mental health stressor during or since earthquake¹	98 (56)	14421 (12509,16333)	55 (48,63)
Acute mental health need¹			
Intent to harm self or others	2 (1)	297 (0,726)	1 (0,3)
Any traumatic experience elevating risk of PTSD²	17 (10)	2296 (1361,3231)	9 (5,12)
Seeing or hearing a <u>direct threat</u> to the life of yourself or a family member	2 (1)	297 (0,726)	1 (0,3)
Suffering significant disaster-related illness or physical injury to self or family member	1 (1)	124 (0,377)	0 (0,1)
Seeing a serious injury of a non-family member	2 (1)	268 (0,651)	1 (0,3)
Experiencing the death of a pet	2 (1)	347 (0,840)	1 (0,3)
Being trapped or delayed in evacuating	4 (2)	496 (16,975)	2 (0,4)
Having a home not livable due to disaster	2 (1)	297 (0,726)	1 (0,3)
Having a child separated from all caretakers	3 (2)	421 (0,908)	2 (0,3)
Being separated from a family member and being unaware of their location or status during the event	6 (3)	814 (188,1439)	3 (1,6)
Other mental health stressor			
Feeling anxiety, fear, or distraction	89 (51)	13093 (11400,14787)	50 (44,57)
Showing extreme panic	39 (22)	5893 (3909,7877)	23 (15,30)
Sought mental health help	(n=98)	(n=14,421)	
Any of the below	26 (27)	4033 (2418,5647)	28 (18,38)
Counseling from a religious leader or friend	11 (11)	1891 (671,3112)	13 (5,21)
Pre-existing support group	4 (4)	545 (10,1080)	4 (0,7)
Community Health Clinic	3 (3)	491 (0,1054)	3 (0,7)
Primary Care Provider or a clinic	9 (9)	1284 (446,2123)	9 (3,14)
Emergency Room	2 (2)	297 (0,727)	2 (0,5)
Social worker or case manager	3 (3)	442 (0,951)	3 (0,7)
Private mental health provider	4 (4)	615 (13,1217)	4 (0,8)
Solano County Mental Health	4 (4)	615 (13,1217)	4 (0,8)
National Suicide Prevention Lifeline	0 (0)	0 (0,0)	0 (0,0)
Solano County Mental Health Crisis Services	0 (0)	0 (0,0)	0 (0,0)
Other	2 (2)	297 (0,727)	2 (0,5)
Reasons mental health help not sought	(n=98)	(n=14,421)	
It wasn't needed or wasn't serious enough	72 (73)	10351 (8512,12191)	72 (62,82)
Did not know where to go	6 (6)	906 (197,1616)	6 (2,11)
Transportation difficulties	2 (2)	268 (0,651)	2 (0,5)
Had no phone service	0 (0)	0 (0,0)	0 (0,0)
Embarrassed or afraid of what people would think	0 (0)	0 (0,0)	0 (0,0)

Table 6 (continued). Conditions affecting mental health, CASPER, western Vallejo, California.

	Unweighted	Weighted	
	n (%)	n (%)	% (95% CI)
Have insurance, but worried about potential cost of care	5 (5)	855 (104,1605)	6 (1,11)
Don't have insurance	3 (3)	372 (0,795)	3 (0,6)
Too busy	6 (6)	836 (0,1819)	6 (0,13)
Other ⁴	7 (7)	981 (114,1848)	7 (1,13)

Notes:

¹ Category includes all subtypes listed below

² Seeing threat to life and all subtypes listed below. Based on the PsySTART Rapid Mental Health Triage and Incident Management System: <http://www.dcms.uci.edu/PDF/PsySTART-cdms02142012.pdf>

³ Other help resources specified: the American Canyon American Legion, family members

⁴ Other reasons specified: "I'm used to earthquakes," "not traditionally sought in Hispanic culture," "worried about cost," "no chance to go," "it went away," "don't have any place to go for shelter or safety"

Table 7. Time taken off work, CASPER, western Vallejo, California.

	<u>Unweighted</u>	<u>Weighted</u>	
	n (%)	n (%)	% (95% CI)
	(n=175)	(n=26,017)	
Took time off work	8 (5)	1082 (303,1861)	4 (1,7)
To clean up	5 (63)	690 (239,1140)	64 (24,100)
To assess the damage	5 (63)	669 (230,1108)	62 (21,100)
To make repairs	0 (0)	0 (0,0)	0 (0,0)
Needed to replace a damaged item	2 (25)	297 (0,776)	27 (0,73)
Kids out of school	0 (0)	0 (0,0)	0 (0,0)
Feeling anxious, scared, distracted	4 (50)	566 (65,1067)	52 (0,100)
Ill or injured	0 (0)	0 (0,0)	0 (0,0)
Could not work because workplace was closed	0 (0)	0 (0,0)	0 (0,0)

Table 8. Communication during an emergency, CASPER, western Vallejo, California.

	<u>Unweighted</u>	<u>Weighted</u>	
	n (%)	n (%)	% (95% CI)
Preferred method for receiving information	(n=175)	(n=26,017)	
Television	64 (37)	10029 (7977,12080)	39 (31,46)
AM/FM Radio	13 (7)	2135 (847,3423)	8 (3,13)
Text message	37 (21)	5513 (3693,7333)	21 (14,28)
NextDoor message	1 (1)	124 (0,377)	0 (0,1)
Cell phone call	24 (14)	3289 (2024,4554)	13 (8,18)
Social media	4 (2)	496 (0,1098)	2 (0,4)
Landline	7 (4)	1053 (209,1897)	4 (1,7)
Internet	17 (10)	2218 (1217,3219)	9 (5,12)
Word of mouth	1 (1)	173 (0,528)	1 (0,2)
Reverse 911	3 (2)	372 (0,795)	1 (0,3)
Other ¹	3 (2)	491 (0,1251)	2 (0,5)
Refused	1 (1)	124 (0,377)	0 (0,1)
Households with at least one communication barrier	53 (30)	7710 (5525,9895)	30 (21,38)
Hearing problems	13 (7)	1885 (655,3116)	7 (3,12)
Vision problems	10 (6)	1629 (625,2634)	6 (2,10)
Difficulty understanding written material	14 (8)	1988 (984,2993)	8 (4,12)
Difficulty understanding English	20 (11)	2969 (1603,4336)	11 (6,17)
Developmental Disability	5 (3)	690 (97,1282)	3 (0,5)
Physical Disability	14 (8)	1988 (984,2993)	8 (4,12)
Other ²	7 (4)	937 (190,1685)	4 (1,6)

Notes:

¹ Other methods specified: call 911, outdoor broadcast announcement

² Other barriers specified: auditory comprehension, behavioral issues, getting to door/walking/energy, getting downstairs, has a walker, stubbornness, mental disability, no cell phone

Table 9. Pet ownership and pet evacuation, CASPER, western Vallejo, California.

	<u>Unweighted</u>	<u>Weighted</u>	
	n (%)	n (%)	% (95% CI)
Have pets or animals	(n=175)	(n=26,017)	
	87 (50)	13227 (10586,15869)	51 (41,61)
What household would do with animals in case of evacuation¹	(n=87)	(n=13,227)	
Take them	78 (90)	11949 (9608,14290)	90 (85,96)
Find a safe place for them	4 (5)	566 (12,1120)	4 (0,8)
Leave behind with food and water	4 (5)	496 (16,975)	4 (0,7)
Would not evacuate because of animals	1 (1)	124 (0,378)	1 (0,3)
Would not evacuate for other reasons	0 (0)	0 (0,0)	0 (0,0)

Notes:

¹Proportions are conditional on household having pets or animals

Table 10. Emergency supplies for an emergency or disaster, CASPER, western Vallejo, California.

	Unweighted	Weighted	
	n (%)	n (%)	% (95% CI)
Days of supplies in home	(n=175)	(n=26,017)	
1 to 3 days	37 (21)	5794 (3801,7787)	22 (15,30)
4 to 6 days	45 (26)	7107 (5174,9040)	27 (20,35)
7 to 9 days	45 (26)	6577 (4993,8160)	25 (19,31)
10 days or more	48 (27)	6539 (4841,8238)	25 (19,32)
Had an emergency kit prior to the earthquake			
Yes	92 (53)	12963 (10593,15333)	50 (41,59)
Supplies set aside for emergency kit¹			
3-day supply for non-perishable food	76 (83)	10413 (8585,12241)	80 (67,93)
3-day supply of water	75 (82)	10589 (8725,12452)	82 (71,92)
Battery-operated radio	69 (75)	9595 (8054,11136)	74 (65,83)
First-aid kit	86 (93)	12170 (10133,14207)	94 (89,99)
3-day supply of prescription medication	63 (68)	8988 (6895,11082)	69 (58,80)
Special medical equipment or supplies	53 (58)	7359 (5531,9187)	57 (44,69)
Flashlights with extra batteries	85 (92)	11947 (9943,13951)	92 (87,98)
Dust masks	42 (46)	5656 (3966,7346)	44 (32,56)
Copies of important documents	45 (49)	6405 (4586,8225)	49 (37,62)
Other ²	37 (40)	5327 (3902,6753)	41 (31,51)
No	83 (47)	13054 (10684,15424)	50 (41,59)
Reasons for not having emergency kit³			
Didn't know what to have	24 (29)	3797 (2011,5583)	29 (17,41)
Didn't have time	21 (25)	2858 (1685,4031)	22 (12,32)
Didn't want to think about it	24 (29)	4126 (2348,5903)	32 (21,42)
Costs too much	7 (8)	1361 (268,2453)	10 (3,18)
Didn't think it was necessary	32 (39)	5426 (3293,7560)	42 (30,54)
Other ⁴	17 (20)	2531 (1448,3615)	19 (11,28)

Notes:

¹ Among those with emergency kit

² Other supplies specified: addresses of relatives, blankets, clothes, soap, cell phone charged by the door, emergency route of travel, communication for people who are not here, medical, cash, eye wash, gloves, hygiene, fire extinguisher, foil thermal blankets, family pictures, filtration system for water, ponchos, sewing kit, food and water for dog, generator, gun, car emergency kit, matches, oxygen, tools, propane, outdoor grill, tool to shut off gas, stove, road flares, extra cell phone, batteries, jumper cables, odds and ends for car, shelter/tarp, sleeping bag in car, emergency safety materials, snacks/non-perishable foods, canned goods, toilet paper, tent, feminine products, pet accessories, cash, crowbar, hardhat, generator

³ Among households without an emergency kit

⁴ Other reasons specified: daughter is neighbor, didn't expect it, didn't think about, didn't know it was important, everything was OK, forgot, did not buy supplies, I need help to put it together, just haven't done it, kept putting it off, kit would not be up to date, never bothered, not prepared, irresponsible, partial emergency kit because some stolen, procrastination, some supply inside the car instead of home, lazy.

Appendix I. Questionnaire used for CASPER household interviews in western Vallejo, California.

To be completed by interview team BEFORE the interview				
Q1. Date (MM/DD/YY):		Q3. Cluster number:		
Q2. Time: ☐ am ☐ pm		Q4. Survey number:		
Q5. Team Member Initials:				
Q6. Is this home a: ☐ Mobile home ☐ Single family home (detached) ☐ Duplex ☐ Multi-unit complex (e.g., apartments) ☐ Other, specify: _____				
First, we would like to ask you some general questions about your household and your home. Please respond for all members of your household.				
Q7. Including yourself, how many people live in your household? _____				
Q8. Including yourself, how many people living in your household are: (list the number in each age group) 0-4 years _____ 5-14 years _____ 15-24 years _____ 25-64 years _____ 65-79 years _____ 80 years and over _____ ☐ DK ☐ R				
Q9. What is the MAIN language spoken in your household? ☐ English ☐ Spanish ☐ Tagalog ☐ Other, specify _____ ☐ DK ☐ R				
Q10. Does your household own or rent your place of residence? ☐ Own ☐ Rent ☐ Other, specify: _____ ☐ DK ☐ R				
Q11. Does your household have earthquake insurance? ☐ Y ☐ N ☐ DK ☐ R				
Q12. In what decade was your home built? [if needed, say "for example, 1920's"] (write decade) _____ ☐ DK ☐ R				
Q13. For this next question, we're trying to understand how the earthquake impacted different families in the area. Which of the following categories best represents your household's total yearly income? ☐ less than \$30,000 ☐ \$30,000 up to \$70,000 ☐ \$70,000 up to \$100,000 ☐ \$100,000 or greater ☐ DK ☐ R				
Next we would like to ask you some questions about the immediate events surrounding the August 24th earthquake that may have impacted your household.				
Q14. Did you or members of your household observe any of the following types of damage to your home?				
Fire damage	☐ Y	☐ N	☐ DK	☐ R
Collapse of walls or building shift from foundation	☐ Y	☐ N	☐ DK	☐ R
Damage to chimney	☐ Y	☐ N	☐ DK	☐ R ☐ NA
Damage to roof	☐ Y	☐ N	☐ DK	☐ R
Cracks to exterior walls	☐ Y	☐ N	☐ DK	☐ R
Windows cracked or broken	☐ Y	☐ N	☐ DK	☐ R
Damage to interior walls or ceilings	☐ Y	☐ N	☐ DK	☐ R
Bookshelves falling over	☐ Y	☐ N	☐ DK	☐ R
Damage to detached garage [for attached garage, mark damage in above categories]	☐ Y	☐ N	☐ DK	☐ R ☐ NA
Q15. Due to the earthquake, was your residence damaged enough to need repairs? ☐ Y ☐ N ☐ DK ☐ R				

Q16. Did you or members of your household have any of the following personal property or belongings damaged during the earthquake?									
Vehicle(s)	☐ Y	☐ N	☐ DK	☐ R					
Electronics (TV, computers, stereo)	☐ Y	☐ N	☐ DK	☐ R					
Major pieces of furniture	☐ Y	☐ N	☐ DK	☐ R					
Heirlooms and items of sentimental value	☐ Y	☐ N	☐ DK	☐ R					
Household goods [if needed, say "such as dishes, glassware, pictures"]	☐ Y	☐ N	☐ DK	☐ R					
Q17. Did anyone in your household have to stay at a location other than your home in the week after the earthquake because the home needed repair?									
	☐ Y	☐ N	☐ DK	☐ R					
Q18. Thinking about all of the damage to your personal property and to the structure of your home, how financially difficult will it be for your household to pay for repairs?									
	☐ Not difficult	☐ A little difficult	☐ Very difficult	☐ NA	☐ DK	☐ R			
Next I will ask you questions about injuries you or someone in your household may have sustained during the earthquake or during recovery.									
Q19. Were you or anyone in your household physically injured as a result of the earthquake or clean up? [if needed, say "For example, from an item falling on you or from tripping over a fallen item"]									
	☐ Y	☐ N (go to Q27)	☐ NA	☐ DK	☐ R				
Q20. Was anyone in your household injured specifically during cleanup within two weeks of the earthquake?									
	☐ Y	☐ N	☐ DK	☐ R					
Q21. In total, how many people in your household were injured? # _____									
Q22. What were the injuries?									
Deep cut or puncture, large scrape or bruise	☐ Y	☐ N	☐ DK	☐ R	Strain or sprain	☐ Y	☐ N	☐ DK	☐ R
Broken bone or fracture or dislocation	☐ Y	☐ N	☐ DK	☐ R	Burn injury	☐ Y	☐ N	☐ DK	☐ R
Head injury	☐ Y	☐ N	☐ DK	☐ R	Other, specify: _____	☐ Y	☐ N	☐ DK	☐ R
Q23. What caused the injuries?									
Burn	☐ Y	☐ N	☐ DK	☐ R					
Electric shock	☐ Y	☐ N	☐ DK	☐ R					
Fall, slip, or trip	☐ Y	☐ N	☐ DK	☐ R					
Use of machinery, tools, or equipment	☐ Y	☐ N	☐ DK	☐ R					
Being hit by an object	☐ Y	☐ N	☐ DK	☐ R					
Motor vehicle crash	☐ Y	☐ N	☐ DK	☐ R					
Violence or assault	☐ Y	☐ N	☐ DK	☐ R					
Other, specify: _____	☐ Y	☐ N	☐ DK	☐ R					
Q24. Did everyone who was injured in your household seek medical care for their injuries?									
	☐ Yes, all	☐ Some	☐ None (go to Q26)	☐ DK	☐ R				
Q25. How were injured household members medically treated?									
By emergency medical personnel at the scene of the injury	☐ Y	☐ N	☐ DK	☐ R					
Treated and released at a hospital, ER, or clinic	☐ Y	☐ N	☐ DK	☐ R					
Admitted to a hospital overnight	☐ Y	☐ N	☐ DK	☐ R					
(If Q24 is "Yes all", go to Q27)									

Q26. If you or a member of your household had an injury but did not seek medical care, what were the reasons?												
Transportation difficulties	☐ Y	☐ N	☐ DK	☐ R								
Have insurance, but worried about potential cost of care	☐ Y	☐ N	☐ DK	☐ R								
Do not have insurance	☐ Y	☐ N	☐ DK	☐ R								
Injury not serious enough	☐ Y	☐ N	☐ DK	☐ R								
Too busy	☐ Y	☐ N	☐ DK	☐ R								
Other, specify _____	☐ Y	☐ N	☐ DK	☐ R								
Q27. Now we will ask you about any chronic conditions members of your household may have.												
Q27. Has a healthcare professional ever told you or any member of your household that he/she has any of the following? (If all N, go to Q30)					Q28. If yes, have any of these conditions gotten worse since the earthquake?				Q29. If any condition has gotten worse, have you sought additional medical attention outside of your normal care since the earthquake?			
Hypertension/ high blood pressure	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Congestive heart failure	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Diabetes	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Compromised immune system, (such as lupus, cancer, or HIV)	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Seizures	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Stroke	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Asthma	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Emphysema or COPD (Chronic Obstructive Pulmonary Disease)	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Developmental disability	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Physical disability	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Depression or other emotional or mental health condition	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Other chronic conditions, specify _____	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R	☐ Y	☐ N	☐ DK	☐ R
Q30. Did anyone in your household have difficulty accessing or acquiring any prescribed medication or obtaining medical supplies or services as a result of the earthquake? ☐ Y ☐ N (go to Q33) ☐ DK ☐ R												
Q31. Which of the following did your household have difficulty accessing?												
Medication (including oral contraceptives)	☐ Y	☐ N	☐ DK	☐ R								
Dialysis	☐ Y	☐ N	☐ DK	☐ R								
Oxygen	☐ Y	☐ N	☐ DK	☐ R								
Other, specify _____	☐ Y	☐ N	☐ DK	☐ R								

Q32. What were the reasons medications, supplies, or services could not be accessed?

Could not get to pharmacy, or pharmacy was closed	☐ Y	☐ N	☐ DK	☐ R
Could not get to clinic, or clinic was closed	☐ Y	☐ N	☐ DK	☐ R
Loss, destruction, or contamination of medication(s)	☐ Y	☐ N	☐ DK	☐ R
Left at home and did not bring	☐ Y	☐ N	☐ DK	☐ R
Other: _____	☐ Y	☐ N	☐ DK	☐ R

Q33. Next I will be asking you about some difficult events your household may have experienced and how you have coped.

Q33. During or since the earthquake, did you or anyone in your household experience any of the following?

Feeling anxiety, fear, or distraction?	☐ Y	☐ N	☐ DK	☐ R
Showing extreme panic?	☐ Y	☐ N	☐ DK	☐ R
Expressing thought or intent to harm self or others?	☐ Y	☐ N	☐ DK	☐ R
Seeing or hearing a <u>direct threat</u> to the life of yourself or a family member?	☐ Y	☐ N	☐ DK	☐ R
Suffering significant disaster-related illness or physical injury to self or family member?	☐ Y	☐ N	☐ DK	☐ R
Seeing a serious injury of a non-family member?	☐ Y	☐ N	☐ DK	☐ R
Experiencing the death of a pet?	☐ Y	☐ N	☐ DK	☐ R
Being trapped or delayed in evacuating?	☐ Y	☐ N	☐ DK	☐ R
Having a home not livable due to disaster?	☐ Y	☐ N	☐ DK	☐ R
Having a child separated from all caretakers?	☐ Y	☐ N	☐ DK	☐ R
Being separated from a family member and being unaware of their location or status during the event?	☐ Y	☐ N	☐ DK	☐ R

(If all "N," go to Q36)

Q34. Did you or anyone in your household seek help for any of the items we've just covered using any of the following services?

Counseling from a religious leader or friend	☐ Y	☐ N	☐ DK	☐ R
Pre-existing support group	☐ Y	☐ N	☐ DK	☐ R
Community health clinic like La Clinica or Family Health Services	☐ Y	☐ N	☐ DK	☐ R
Primary Care Provider or a clinic	☐ Y	☐ N	☐ DK	☐ R
Emergency Room	☐ Y	☐ N	☐ DK	☐ R
Social worker or case manager	☐ Y	☐ N	☐ DK	☐ R
Private mental health provider [if needed, say "such as psychologist or counselor"]	☐ Y	☐ N	☐ DK	☐ R
Solano County Mental Health	☐ Y	☐ N	☐ DK	☐ R
National Suicide Prevention Lifeline	☐ Y	☐ N	☐ DK	☐ R
Solano County Mental Health Crisis Services	☐ Y	☐ N	☐ DK	☐ R
Other, specify: _____ City: _____	☐ Y	☐ N	☐ DK	☐ R

Q35. If you or anyone in your household did not seek help, what were the reasons?

It wasn't needed	☐ Y	☐ N	☐ DK	☐ R
It wasn't serious enough	☐ Y	☐ N	☐ DK	☐ R
Did not know where to go	☐ Y	☐ N	☐ DK	☐ R
Transportation difficulties	☐ Y	☐ N	☐ DK	☐ R
Had no phone service	☐ Y	☐ N	☐ DK	☐ R
Embarrassed or afraid of what people would think	☐ Y	☐ N	☐ DK	☐ R
Have insurance, but worried about potential cost of care	☐ Y	☐ N	☐ DK	☐ R
Don't have insurance	☐ Y	☐ N	☐ DK	☐ R
Too busy	☐ Y	☐ N	☐ DK	☐ R
Other, specify: _____	☐ Y	☐ N	☐ DK	☐ R

Q36. Did anyone in your household take any time off work because of the earthquake? ☐ Y ☐ N (go to Q38) ☐ DK ☐ R ☐ NA

Q37. What were the reasons?

To clean up	☐ Y	☐ N	☐ DK	☐ R	Feeling Anxious, scared, distracted	☐ Y	☐ N	☐ DK	☐ R
To assess the damage	☐ Y	☐ N	☐ DK	☐ R	Ill or injured	☐ Y	☐ N	☐ DK	☐ R
To make repairs	☐ Y	☐ N	☐ DK	☐ R	Could not work because workplace was closed	☐ Y	☐ N	☐ DK	☐ R
Needed to replace a damaged item	☐ Y	☐ N	☐ DK	☐ R	Other, specify: _____	☐ Y	☐ N	☐ DK	☐ R
Kids out of school	☐ Y	☐ N	☐ DK	☐ R					

Q38. Now, I will ask you about your household's general response to emergencies.

Q38. Please tell me your household's most preferred method for receiving information during an emergency event such as the earthquake. (check only one) [hand printed prompt to the responder]

☐ TV ☐ AM/FM Radio ☐ Text message ☐ NextDoor (?) message ☐ Cell phone call ☐ Social media ☐ Landline telephone ☐ Internet

☐ Word of mouth ☐ Ham radio ☐ Reverse 911 ☐ Other: _____ ☐ DK ☐ Refused

Q39. Omitted

Q40. Omitted

Q41. Does anyone in your household have any of the following conditions that could be barriers to effective communication during an emergency or disaster?

☐ Impaired hearing	☐ Developmental disability
☐ Impaired vision	☐ Physical disability
☐ Difficulty understanding written material	☐ Other: _____
☐ Difficulty understanding the English language	☐ None of the above ☐ DK ☐ Refused

Q42. Do you have any pets or large animals? ☐ Y ☐ N (go to Q44) ☐ DK ☐ R

Q43. If your household were asked to evacuate, what would you do with your pets or animals? (check one)

☐ Take them with you ☐ Find a safe place for them ☐ Leave them behind with food and water ☐ Would not evacuate because of pets or animals

☐ Would not evacuate for reasons other than pets or large animals (Specify: _____) ☐ NA ☐ DK ☐ R

Q44. Prior to the earthquake, did your household have an emergency supply kit? ☐ Y ☐ N (go to Q46) ☐ DK ☐ R					
Q45. Which of the following supplies were in your emergency supply kit?					
3-day supply of non-perishable food	☐ Y	☐ N	☐ DK	☐ R	
3-day supply of water (1 gallon/person/day)	☐ Y	☐ N	☐ DK	☐ R	
Battery-operated radio	☐ Y	☐ N	☐ DK	☐ R	
First-aid kit	☐ Y	☐ N	☐ DK	☐ R	
3-day supply of prescription medication for each person who needs it	☐ Y	☐ N	☐ DK	☐ R	☐ NA
Medical equipment, supplies, or prescription eyeglasses	☐ Y	☐ N	☐ DK	☐ R	☐ NA
Flashlights with extra batteries	☐ Y	☐ N	☐ DK	☐ R	
Dust masks	☐ Y	☐ N	☐ DK	☐ R	
Copies of important documents	☐ Y	☐ N	☐ DK	☐ R	
Other, specify _____	☐ Y	☐ N	☐ DK	☐ R	
(go to Q47)					
Q46. If your household did not have an emergency supply kit, what were the reasons?					
You didn't know what you were supposed to have	☐ Y	☐ N	☐ DK	☐ R	
You didn't have the time to put one together	☐ Y	☐ N	☐ DK	☐ R	
You didn't want to think about it	☐ Y	☐ N	☐ DK	☐ R	
It costs too much to put one together	☐ Y	☐ N	☐ DK	☐ R	
You didn't think it was necessary to have an emergency supply kit	☐ Y	☐ N	☐ DK	☐ R	
Other, specify _____	☐ Y	☐ N	☐ DK	☐ R	
Q47. Think about what you have in your home right now. For how many days would you be able to stay in your home, without anyone shopping for additional supplies?					
☐ 1 to 3 days	☐ 4 to 6 days	☐ 7 to 9 days	☐ 10 days or more	☐ DK	☐ R
This is our last question...					
Q48. What is your household's greatest need right now? _____					

[The interview is complete. Please thank the interviewee for their time.]

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