

**Community assessment for public health emergency response
(CASPER) following the August 24, 2014 South Napa earthquake,
Napa and American Canyon, California—September, 2014.**

California Department of Public Health (CDPH)
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BACKGROUND

A magnitude 6.0 earthquake struck approximately 3.7 miles northwest of American Canyon in Napa County, California, on August 24, 2014, at 3:20 AM. One person was killed and an estimated 280 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 24, 2014². President Obama declared the South Napa Earthquake a major disaster on September 11, 2014³.

Napa County Public Health (NCPH) 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: an assessment of community public health preparedness and assistance with 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 information about the health status, basic needs, and other pertinent information about an affected community 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. NCPH agreed that the EP Team assist in using CASPER methodology in the cities of Napa and American Canyon 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 of these communities. The EP Team and NCPH conducted a CASPER in Napa and American Canyon September 16 – 18, 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 randomly 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 in the fields, in accordance with systematic random sampling methods. Responses from sampled households are then weighted to produce estimates generalizable to the entire sampling frame.

In order to adequately and proportionately address sampling two communities simultaneously, the decision was made to conduct a CASPER within Napa using a standard 30 X 7 design (target

representative sample of 210 households), and a modified CASPER within American Canyon using a 6 X 7 design (target sample of 42 households). This decision was based on the availability of volunteers between September 16 – 18, 2014 and the relative populations of Napa and American Canyon. The American Canyon modified CASPER would provide information on the relative experiences of that community; however a statistical generalization to the entire City of American Canyon would not be possible.

In consultation with NCPH, sampling frames were selected to be (1) the city boundary of Napa including unincorporated areas within city boundaries and (2) the city boundary of American Canyon. The sampling frames of Napa and American Canyon are shown in Figures 1 – 3. The population of the incorporated City of Napa is estimated at 76,915 according to Census 2010. At the request of NCPH, unincorporated areas within the city boundaries were included within the sampling frame, resulting in 30,005 housing units in the City of Napa, 1,241 census blocks, and a population of 77,185. The American Canyon sampling frame contained 5,997 total housing units, 251 census blocks, and a population of 19,490.

We used the city boundary shapefile downloaded from Napa County GIS as the basis for the cities of Napa and American Canyon sampling frames, Census TIGER/Line 2013 shapefile for block (cluster) geography⁶, and Census 2010 redistricting data for estimating population and total housing units in the sampling frames and each cluster⁷. We overlaid city boundaries with TIGER/Line blocks and selected blocks falling within each city boundary to generate the sampling frame (note: we excluded some blocks on the periphery that had no housing units)⁸. We performed cluster selection in ArcGIS 10.1, using a custom toolbox provided by the CDC⁹.

For the first stage of sampling, we selected 30 clusters (census blocks) within the Napa sampling frame and 6 clusters within the American Canyon sampling frame by probability proportional to size. In the second stage of sampling, interview teams randomly selected 7 households from each of the selected clusters to conduct household interviews. The interviewers were provided with street level maps of each selected cluster, were instructed to select a random housing unit as the starting point, then go to every n^{th} housing unit to systematically select the 7 housing units to interview (n^{th} unit = 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 September 18.

CASPER data collection

The EP Team and NCPH collaborated to develop a six-page questionnaire (Appendix I). 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 County or adapted from prior CASPERs in Oklahoma¹⁰, Alabama¹¹, and California¹²; the CDC CASPER toolkit⁵; or PsyStart, a psychological triage system¹³.

On September 16, the EP Team provided interview teams with a five-hour, just-in-time training session on the overall purpose of the CASPER, household selection, questionnaire, interview techniques, safety, and logistics. There were a total of 22 two-person teams on September 16, 19 teams on

September 17, and 15 teams on September 18. The teams primarily consisted of volunteers recruited by NCPH, staff from other health jurisdictions, and CDPH staff, as referenced in the Acknowledgements section. Teams conducted interviews between 2 pm and 7 pm PDT on September 16, and 9 am and 7 pm PDT on September 17 and 18. Each team attempted to conduct 7 interviews in each of the 30 clusters selected for the Napa sample and 6 clusters for the American Canyon sample, with a goal of 210 and 42 total interviews, respectively. Two clusters in Napa were randomly selected twice (clusters 11 and 23); therefore, 14 interviews were attempted in each of those clusters. All households interviewed by the teams were given an informational packet containing a consent form, an introductory letter by the Napa County Health Officer, the Napa County Local Assistance Center informational sheet, and earthquake emergency preparedness information. 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. Additionally, 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 NCPH.

Data analysis

We conducted a weighted cluster analysis of the data collected within City of Napa. 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 estimated percent and projected number of households, along with corresponding 95% confidence intervals (95% CIs) with a particular response in the assessment area. We did not calculate weighted frequencies and percentages for American Canyon data due to the statistical considerations of the

sampling design (6 clusters is not sufficient to provide reliable estimates).

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 the weighted estimates. Unless otherwise stated, the frequencies and percentages in the text represent the weighted percentages when referring to Napa, and unweighted percentages when referring to American Canyon. Estimates are presented in the text without their corresponding 95% CIs; these were omitted from the text for ease of reading but are presented with the full results in the tables. We first present weighted results from Napa and then follow with unweighted results from American Canyon.

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, having a child separated from a family member and being unaware of their location or status¹³. 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

City of Napa

Interview teams conducted 201 of a possible 210 interviews, for a completion rate of 95.7% (Table 1). We completed interviews in 41.2% of the approached housing units, and at 62.2% of homes where the door was answered. Fifteen percent of interviews were conducted in Spanish.

Household demographics and home characteristics of the surveyed households

Household sizes ranged from 1 – 10, with a weighted mean (95% CI) of 3.0 (2.7, 3.4) and a weighted median (95% CI) of 2.0 (1.8, 2.1). Household age distribution was as follows: 17% (5,048 households) had at least one member \leq 4 years old, 30% (9,140 households) had at least one member \geq 65 – 79 years old, and 7% (2,000 households) had at least one member \geq 80 years old (Table 2). Households lived primarily in single family homes (62%); 24% lived in multi-unit complexes. A small proportion of households (18%) lived in homes that were built before 1960. Of all households, it was estimated that 51% had a total yearly income of $<$ \$70,000, with 22% of households having a total yearly income $<$ \$30,000. In most households (76%), English was the main language spoken in the home. Few (7%) reported having earthquake insurance.

Damage to home and property as a result of the South Napa Earthquake

The most common types of home damage were damage to interior walls or ceilings (40%; 11,878 households) and cracks to exterior walls (29%; 8,630 households) (Table 3). The residences of 42% of households (12,669 households) were damaged enough to require repair.

Household goods (89%) and heirlooms and items of sentimental value (57%) were the most common

items damaged; fewer households experienced damage to electronics (47%), major pieces of furniture (31%), and vehicles (14%). Few (4%) households had members stay at a location other than their home in the week after the earthquake because their home needed repair. Household financial burden for completing household repairs was expected to be “not difficult” or “not applicable” for most households (60%; 17,983 households). The financial burden of repairs was expected to be “a little difficult” for 30% of households (8,878 households) and “very difficult” for 10% of households (3,001 households).

Injuries to household members as a result of the South Napa Earthquake

A member of the household was injured in 23% of households (6,906 households) (19% if small cuts and bruises excluded [5,620 households]) as a result of the earthquake or cleanup (Table 4). Of households reporting an injury, 48% (3,286 households) had an injury sustained during cleanup within two weeks of the earthquake. The most common injuries were deep cut/puncture/large bruise or scrape (71%; 4,906 households) and strain/sprain (14%; 1,000 households). The most common causes of these injuries were being hit by an object (27%) and fall/slip/trip (15%). Among households with members who were injured, only in 15% of households (1,024 households) did all injured household members receive medical treatment. Of those households where not all injured household members received medical treatment, the most common reason given for not receiving treatment was that the injury was not serious enough (76%; 4,453 households).

Chronic disease exacerbation as a result of the South Napa Earthquake

Most households had a member with a chronic disease (64%; 19,160 households); the most common chronic diseases in households were hypertension (35%; 10,540 households), asthma (21%; 6,225

households), depression or other emotional or mental health condition (17%; 5,058 households), and diabetes (15%; 4,596 households) (Table 5). Among households with a member with a chronic disease, 26% (4,939 households) reported experiencing a worsening of their disease following the earthquake. The most common chronic diseases having worsened since the earthquake were depression or other emotional or mental health condition (49%; 2,486 households), asthma (19%; 1,167 households), diabetes (16%; 714 households), and hypertension (15%; 1,572 households). Among households with a member reporting a worsening chronic disease since the earthquake, 57% (2,796 households) sought medical attention outside of their normal care. Among these households with a member experiencing a worsening chronic condition, additional medical care was sought for depression or other emotional or mental health condition (66%; 1,629 households), asthma (27%; 310 households), diabetes (60%; 429 households), and hypertension (45%; 2,796). Few households (1%) had difficulty in accessing or acquiring prescribed medication or obtaining medical supplies or services as a result of the earthquake (Table 6).

Mental health effects as a result of the South Napa Earthquake

A majority of households (78%; 23,409 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 (75%; 22,551 households) (Table 7). A member of 27% (8,106 households) suffered a traumatic experience elevating the risk of PTSD, most commonly being separated from a family member and being unaware of their location or status (12%; 3,596 households) and being trapped or delayed in evacuating (11%; 3,167 households). One percent of households (200 households) had a member with 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, 41% (9,578 households) sought help. The most commonly sought sources of help were counseling from a religious leader or friend (24%; 5,568 households) or a pre-existing support group (15%; 3,424 households). The most common reason a household did not seek help for a member who had 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 (73%; 17,036 households).

A household member took time off from work in 33% (9,902 households) of households because of the earthquake (Table 8). Among those households, the most commonly cited reasons were to clean up (84%), to assess damage (71%), to make repairs (50%), to replace a damaged item (44%), feeling anxious or scared (40%), and not being able to work because a workplace was closed (39%).

Emergency and disaster preparedness

Households most preferred to receive information during emergencies or disasters by text messaging (26%), AM/FM radio (21%), cell phone call (20%), and television (15%) (Table 9). Thirty-five percent of households (10,421 households) had a household 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 (17%; 4,972 households), vision problems (12%; 3,543 households), and hearing problems (12%; 3,510 households). Almost half of households (43%; 12,969 households) had heard about the Napa County Local Assistance Center (NapaLAC); of these households, more had heard about the NapaLAC by the newspaper (35%) than any other method (Table 10). Of the 59% of households owning pets or large animals, most (87%; 15,384 households) would take their pets with them in the event of an evacuation (Table 11).

Most households (63%; 18,851 households) did not have an emergency supply kit prior to the earthquake (Table 12). Among households that did not have an emergency supply kit prior to the earthquake, the most common reasons for not having a kit were thinking it was not necessary (52%), not wanting to think about it (32%), not knowing what to have (26%), and not having time (24%). Among households with a kit, supplies in the kit included at least a 3-day supply of non-perishable food (68%), a 3-day supply of water (72%), a battery-operated radio (71%), a first aid kit (95%), a 3-day supply of prescription medication (58%), medical equipment, supplies, or prescription eyeglasses (54%), flashlights with extra batteries (94%), dust masks (41%), and copies of important documents (41%). Thirty-six percent of households (10,997 households) would be able to stay in their homes for less than 3 days before needing to shop for additional supplies.

City of American Canyon

Interview teams conducted 40 of a possible 42 interviews, for a completion rate of 95.2% (Table 1). We completed interviews in 32.8% of the approached housing units, and at 52.6% of homes where the door was answered. One household interview (2.5%) was conducted in Spanish. The following results correspond to the responses of the 40 interviewed households and have not been generalized to the entire city of American Canyon.

Household demographics and home characteristics of the surveyed households

Household sizes ranged from 1 – 6, with a mean of 3.4 and a median of 3.5. Household age distribution was as follows: 30% (12 households) had at least one member \leq 4 years old, 13% (5 households) had at least one member \geq 65 – 79 years old, and 8% (3 households) had at least one member \geq 80 years old

(Table 2). Households lived primarily in single family homes (58%); 38% lived in multi-unit complexes. A small proportion of households (8%) lived in homes that were built before 1960. Of all households, it was estimated that 78% had a total yearly income of <\$70,000, with 33% of households having a total yearly income <\$30,000. In most households (78%), English was the main language spoken in the home. Few (5%) reported having earthquake insurance.

Damage to home and property as a result of the South Napa Earthquake

The most common types of home damage were damage to interior walls or ceilings (23%; 9 households), collapse of walls or building shift from foundation (13%; 5 households), and cracks to exterior walls (13%; 5 households) (Table 3). The residences of 18% of households (7 households) were damaged enough to require repair.

Household goods (70%) and heirlooms and items of sentimental value (35%) were the most common items damaged; fewer households experienced damage to electronics (18%), major pieces of furniture (8%), and vehicles (5%). Few (8%) households had members stay at a location other than their home in the week after the earthquake because their home needed repair. Household financial burden for completing household repairs was expected to be “not difficult” or “not applicable” for most households (65%; 26 households). The financial burden of repairs was expected to be “a little difficult” for 15% of households (6 households) and “very difficult” for 15% of households (6 households).

Injuries to household members as a result of the South Napa Earthquake

Only one interviewed household reported an injury as a result of the earthquake or cleanup (Table 4); because no additional data was offered by this household on the injury type(s) and cause(s), no

additional results on sustained injuries, related causes, or seeking medical care can be presented for this household or for American Canyon.

Chronic disease exacerbation as a result of the South Napa Earthquake

Most households had a member with a chronic disease (83%; 33 households); the most common chronic diseases in households were hypertension (33%; 13 households), asthma (33%; 13 households), diabetes (30%; 12 households), and depression or other emotional or mental health condition (18%; 7 households) (Table 5). Among households with a member with a chronic disease, 33% (11 households) reported experiencing a worsening of their disease following the earthquake. The most common chronic diseases having worsened since the earthquake were depression or other emotional or mental health condition (86%; 6 households) and diabetes (25%; 3 households). Among households with a member reporting a worsening chronic disease since the earthquake, 27% (3 households) sought medical attention outside of their normal care. Among these households with a member experiencing a worsening chronic condition, additional medical care was sought for diabetes (33%; 1 household) and depression or other emotional or mental health condition (17%; 1 household). No interviewed households had difficulty in accessing or acquiring prescribed medication or obtaining medical supplies or services as a result of the earthquake (Table 6).

Mental health effects as a result of the South Napa Earthquake

A majority of households (73%; 29 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 (68%; 27 households) (Table 7). A member of 15% (6 households) suffered a traumatic experience elevating the risk of PTSD, most commonly being trapped or delayed in

evacuating (8%; 3 households), and being separated from a family member and being unaware of their location or status (5%; 2 households). No interviewed households had a member with 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% (8 households) sought help. The most commonly sought sources of help were counseling from a religious leader or friend (17%; 5 households) or from a primary care provider or clinic (10%; 3 households). The most common reason a household did not seek help for a member who had 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 (31%; 9 households).

A household member took time off from work in 25% (10 households) of households because of the earthquake (Table 8). Among those households, the most commonly cited reasons were feeling anxious or scared (70%), to clean up (50%), to assess damage (40%), kids were out of school (40%), and not being able to work because a workplace was closed (30%).

Emergency and disaster preparedness

Households most preferred to receive information during emergencies or disasters by television (58%), text message (20%), and cell phone call (13%) (Table 9). Twenty-five percent of households (10 households) had a household member with a condition that could create barriers to effective communication during an emergency or disaster; the most common communication barrier was difficulty understanding English (10%; 4 households). Approximately one-third of households (33%; 13 households) had heard about the NapaLAC; of these households, more had heard about the NapaLAC

by word of mouth (31%) than any other method (Table 10). Of the 60% of households owning pets or large animals, most (71%; 17 households) would take their pets with them in the event of an evacuation (Table 11).

Most households (55%; 22 households) did not have an emergency supply kit prior to the earthquake (Table 12). Among households that did not have an emergency supply kit prior to the earthquake, the most common reasons for not having a kit were thinking it was not necessary (55%), not knowing what to have (41%), and not having time (36%). Among households with a kit, supplies in the kit included at least a 3-day supply of non-perishable food (53%), a 3-day supply of water (71%), a battery-operated radio (59%), a first aid kit (100%), a 3-day supply of prescription medication (59%), medical equipment, supplies, or prescription eyeglasses (47%), flashlights with extra batteries (76%), dust masks (35%), and copies of important documents (47%). Twenty-five percent of households (10 households) would be able to stay in their homes for less than 3 days before needing to shop for additional supplies.

DISCUSSION AND CONCLUSIONS

This report presents data from the CASPER surveys conducted in the Cities of Napa and American Canyon on September 16 – 18, 2014, in Napa County, following the South Napa earthquake of August 24, 2014. We completed 201 of 210 target interviews in Napa and 40 of 42 in American Canyon.

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 a month of the South Napa Earthquake, and was therefore extremely 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 (42% and 18% in the Cities of Napa and American Canyon, respectively) reported damage necessitating repairs.

Injuries (excepting minor cuts and bruises) were reported among members of 19% of Napa households but were not reported among members of American Canyon households, which is consonant with our findings that damage to homes was more often reported among Napa households than American Canyon households. Members of Napa households injured as a result of the earthquake or cleanup were unlikely to seek medical attention, largely because of a perceived low injury severity. Some chronic diseases were reported as exacerbated by the earthquake, notably including depression or other emotional or mental health condition; among City of Napa households reporting worsening depression or other emotional or mental health condition, 66% reported seeking additional care. Data presented here demonstrate that, at the time of this CASPER, members of >1,000 City of Napa 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 280 seeking treatment at an emergency department as initially reported by NCPH, and >2,800 sought medical care for worsening chronic conditions.

Any traumatic experience during or since the earthquake, including those elevating the risk of post-traumatic stress disorder, were relatively common among members of both Napa and American Canyon households (>23,000 City of Napa households having a traumatic experience and >8,000 having

a traumatic experience elevating risk of PTSD). Most households reporting a traumatic experience also report not seeking help for dealing with this experience, most often because of perceived insufficient severity.

We found that there is not one single universal communication method which all households preferred. Instead the households preferred a variety of communication methods during a disaster including television, text messaging, AM/FM radio, and cell phone calls. We also found that approximately one-third of the households had at least one communication barrier, with difficulty understanding English being the most common in both Napa and American Canyon. Most households did not have an emergency kit prior to the earthquake. The most commonly cited reason for not having a kit, in both Napa and American Canyon, was thinking it was not necessary.

We also found that most households in both Napa and American Canyon own pets and/or large animals, and most of these households reported that they 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 NCPH:

1. Evaluate Napa County'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 Napa 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. Eighty-one percent of City of Napa households reporting an injury did not seek medical care for all injured household members, and 43% of City of Napa households with a member experiencing worsening chronic disease did not seek additional medical care. Earlier treatment may reduce the morbidity associated with injuries and chronic disease exacerbations.
3. Continue to offer post-disaster mental health services to both Napa and American Canyon 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 27% of City of Napa households; post-traumatic stress disorder may not manifest immediately. Consider consulting 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:
 - o 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 (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. Most 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. Forty-eight percent of injuries among City of Napa households occurred 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. However, the recommendations based on these estimates will likely prove applicable to residents of Napa County outside of the Cities of Napa and American Canyon. Napa County might consider a public health emergency response assessment of areas outside of the Cities of Napa and American Canyon, and also consider a follow-up assessment of emergency preparedness for Napa and American Canyon at a later date (e.g., 6 – 12 months from now) to assess the effectiveness of strategies recommended above.

The CASPER described here for Napa and American Canyon was a successful collaboration between CDPH and NCPH, and helped characterize health effects resulting from the earthquake and emergency preparedness among households in Napa and American Canyon. We hope that the results presented here will be useful in allocating resources for response to the earthquake and strengthening the emergency preparedness capacity of Napa County.

Figure 1. Napa County CASPER sampling frames and selected clusters for the City of Napa and City of American Canyon, California.

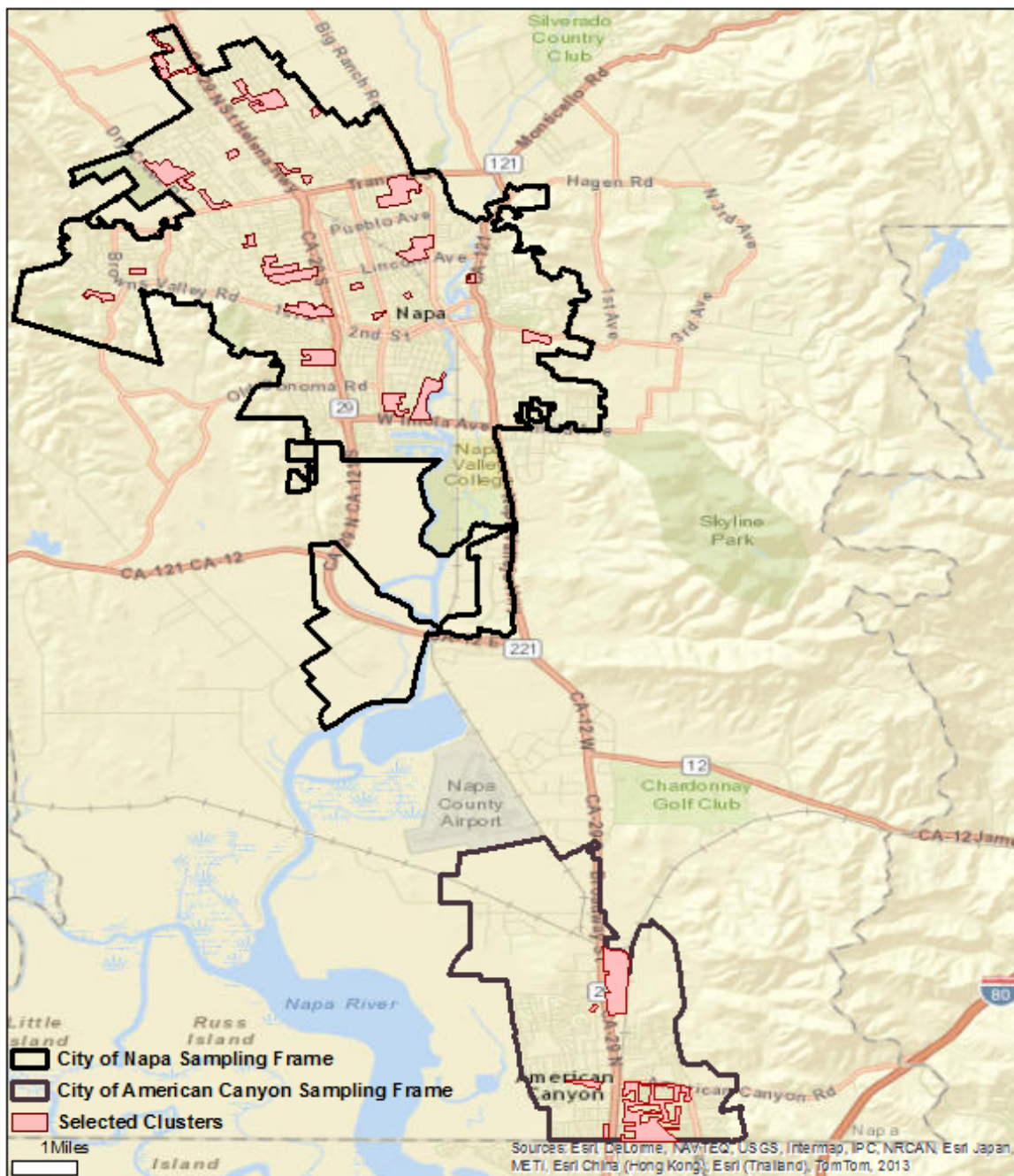


Figure 2. CASPER sampling frame and selected clusters for the City of Napa, California. Unincorporated areas of Napa are included in the sampling frame.

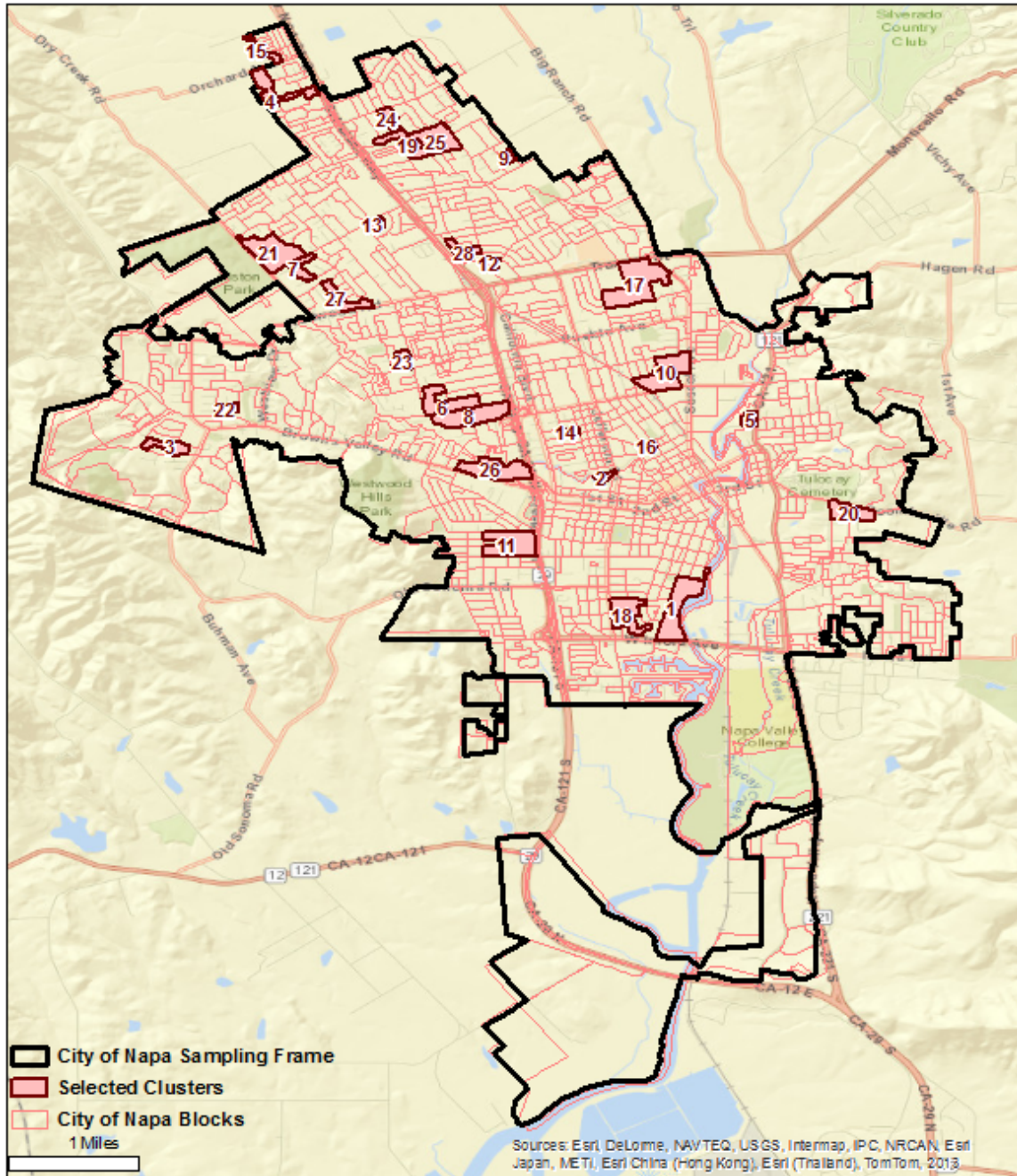


Table 1. CASPER survey response rates in Napa County, California.

Rate Type	<u>Napa</u>		<u>American Canyon</u>	
	Rate		Rate	
Completion *	95.7	(201/210)	95.2	(40/42)
Cooperation †	62.2	(201/323)	52.6	(40/76)
Contact ‡	41.2	(201/488)	32.8	(40/122)

*Percent of surveys completed in relation to the goal of 210 for Napa and 42 for American Canyon

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

‡Percent of randomly selected households which completed an interview

Table 2. Demographics and home characteristics, CASPER, Napa County, California

	Napa			American Canyon
	<u>Unweighted</u> n (%)	<u>Weighted</u> n (95% CI)	<u>Weighted</u> % (95% CI)	<u>Unweighted</u> n (%)
Households with at least one member in the following age categories				
	(n=201)	(n=30,005)		(n=40)
0-4 years old	35 (17)	5048 (2769,7328)	17 (9,24)	12 (30)
5-14 years old	50 (25)	7420 (5026,9815)	25 (17,33)	18 (45)
15-24 years old	48 (24)	6996 (4614,9379)	23 (15,31)	12 (30)
25-64 years old	150 (75)	22637 (20265,25009)	75 (68,83)	35 (88)
65-79 years old	63 (31)	9140 (6402,11877)	30 (21,40)	5 (13)
80+ years old	14 (7)	2000 (758,3243)	7 (3,11)	3 (8)
Main language spoken in household¹				
English	152 (76)	22785 (19640,25930)	76 (65,86)	31 (78)
Spanish	47 (23)	6934 (3781,10088)	23 (13,34)	6 (15)
Tagalog	0 (0)	0 (0,0)	0 (0,0)	5 (13)
Other ²	3 (1)	429 (0,917)	1 (0,3)	1 (3)
Home type				
Mobile	13 (6)	1857 (0,4333)	6 (0,14)	2 (5)
Single family	122 (61)	18717 (14462,22973)	62 (48,77)	23 (58)
Duplex	9 (4)	1286 (0,2625)	4 (0,9)	0 (0)
Multi family	51 (25)	7287 (3230,11344)	24 (11,38)	15 (38)
Other ³	2 (1)	286 (0,692)	1 (0,2)	0 (0)
Missing	4 (2)	572 (18,1125)	2 (0,4)	0 (0)
Year built (Home)				
2010s	2 (1)	286 (0,692)	1 (0,2)	0 (0)
2000s	11 (5)	1572 (211,2933)	5 (1,10)	9 (23)
1990s	8 (4)	1143 (36,2250)	4 (0,7)	1 (3)
1980s	18 (9)	2572 (859,4284)	9 (3,14)	4 (10)
1970s	44 (22)	6287 (3444,9129)	21 (11,30)	4 (10)
1960s	21 (10)	3858 (1255,6461)	13 (4,22)	2 (5)
1950s	20 (10)	3067 (1229,4906)	10 (4,16)	3 (8)
1940s	3 (1)	452 (0,1119)	2 (0,4)	0 (0)
1930s	4 (2)	629 (11,1246)	2 (0,4)	0 (0)

1920s	2 (1)	286 (0,692)	1 (0,2)	0 (0)
1900s or earlier	6 (3)	857 (0,2337)	3 (0,8)	0 (0)
Don't know	62 (31)	8997 (5356,12637)	30 (18,42)	15 (38)
Missing	0 (0)	0 (0,0)	0 (0,0)	2 (5)
Own or rent home				
Own	116 (58)	17746 (13548,21943)	59 (45,73)	15 (38)
Rent	84 (42)	12116 (7870,16363)	40 (26,55)	25 (63)
Other ⁴	1 (0)	143 (0,435)	0 (0,1)	0 (0)
Household annual income				
< \$30,000	46 (23)	6573 (3351,9794)	22 (11,33)	13 (33)
\$30,000 - \$70,000	59 (29)	8625 (6165,11086)	29 (21,37)	18 (45)
\$70,000 - \$100,000	37 (18)	5368 (3602,7133)	18 (12,24)	4 (10)
≥ \$100,000	33 (16)	5677 (3177,8178)	19 (11,27)	2 (5)
Don't Know	9 (4)	1310 (440,2179)	4 (1,7)	2 (5)
Refused	17 (8)	2453 (837,4068)	8 (3,14)	1 (3)
Have earthquake insurance				
Yes	15 (7)	2143 (831,3456)	7 (3,12)	2 (5)
No	167 (83)	25123 (23210,27037)	84 (77,90)	35 (88)
Don't know	18 (9)	2596 (828,4363)	9 (3,15)	3 (8)
Refused	1 (0)	143 (0,435)	0 (0,1)	0 (0)

Notes:

¹ Frequencies do not sum to 201 (Napa) or 40 (American Canyon), as some households reported two languages spoken at home

² Other languages specified: Napa - Chinese (1), Nepali (1), Portuguese (1); American Canyon - Arabic (1);

³ Other home types specified: Napa - town home (1), converted residential home (1)

⁴ Other option specified: "father-in-law"

Table 3. Damage to home and property, CASPER, Napa County, California.

	Napa		American Canyon
	<u>Unweighted</u> n (%) (n=201)	<u>Weighted</u> n (95% CI) (n=30,005)	<u>Unweighted</u> n (%) (n=40)
Residence was damaged enough to need repair	82 (41)	12669 (9499,15838)	42 (32,53)
Anyone in household stayed elsewhere in the week after the earthquake due to home repair	9 (4)	1286 (332,2240)	4 (1,7)
Damage to home			
Fire damage	0 (0)	0 (0)	0 (0)
Collapse of walls or building shift from foundation	21 (10)	3048 (1005,5092)	10 (3,17)
Damage to chimney	18 (9)	2667 (648,4687)	9 (2,16)
Damage to roof	16 (8)	2310 (1061,3559)	8 (4,12)
Cracks to exterior walls	54 (27)	8630 (6084,11176)	29 (20,37)
Windows cracked or broken	11 (5)	1572 (587,2556)	5 (2,9)
Damage to interior walls or ceilings	76 (38)	11878 (9139,14617)	40 (30,49)
Bookshelves falling over	114 (57)	17479 (14242,20716)	58 (47,69)
Damage to detached garage	16 (8)	2343 (1082,3604)	8 (4,12)
Damage to property			
Vehicle	28 (14)	4115 (2139,6091)	14 (7,20)
Electronics	91 (45)	14169 (11551,16787)	47 (38,56)
Major pieces of furniture	58 (29)	9282 (6700,11865)	31 (22,40)
Heirlooms and items of sentimental value	111 (55)	17027 (13638,20416)	57 (45,68)
Household goods	178 (89)	26719 (25108,28329)	89 (84,94)
Financial difficulty for household to pay for repairs			
Not difficult	79 (39)	11530 (9519,13542)	38 (32,45)
A little difficult	55 (27)	8878 (6064,11691)	30 (20,39)
Very difficult	21 (10)	3001 (1729,4272)	10 (6,14)
Don't know	1 (0)	143 (0,435)	0 (0,1)
Not applicable	45 (22)	6453 (3707,9199)	22 (12,31)
Missing	0 (0)	0 (0)	0 (0)

Table 4. Injuries, CASPER, Napa County, California.

	Napa		American Canyon
	<u>Unweighted</u> n (%) (n=201)	<u>Weighted</u> n (95% CI) (n=30,005)	<u>Unweighted</u> n (%) (n=40)
Households with member(s) injured as a result of the earthquake or cleanup	42 (21)	6906 (4255,9557)	23 (14,32)
Injured except for minor cuts and bruises¹	33 (16)	5620 (3083,8157)	19 (10,27)
Injured during cleanup within two weeks after the earthquake	23 (55)	3286 (1868,4705)	48 (25,70)
Injury type	(n=42)	(n=6,906)	(n=1)
Deep cut/puncture/large scrape/bruise	28 (67)	4906 (2782,7029)	71 (54,88)
Broken bone/fracture/dislocation	3 (7)	452 (0,972)	7 (0,14)
Head injury	2 (5)	286 (0,698)	4 (0,10)
Strain or sprain	7 (17)	1000 (219,1782)	14 (2,27)
Burn	1 (2)	143 (0,443)	2 (0,6)
Other ³	11 (26)	1596 (791,2400)	23 (10,36)
Injury cause	(n=42)	(n=6,906)	(n=1)
Burn	1 (2)	143 (0,443)	2 (0,6)
Electric shock	0 (0)	0 (0,0)	0 (0,0)
Fall/slip/trip	7 (17)	1024 (228,1820)	15 (2,28)
Use of machinery or tools	0 (0)	0 (0,0)	0 (0,0)
Hit by object	13 (31)	1881 (895,2868)	27 (11,43)
Motor vehicle crash	0 (0)	0 (0,0)	0 (0,0)
Violence/assault	0 (0)	0 (0,0)	0 (0,0)
Other	0 (0)	0 (0,0)	0 (0,0)
Did injured members seek medical care?	(n=42)	(n=6,906)	(n=1)
Yes, all	7 (17)	1024 (228,1820)	15 (2,27)
Some	2 (5)	286 (0,886)	4 (0,13)
Treatment method	(n=9)	(n=1,310)	(n=1)
Treated by EMS at scene	3 (33)	429 (0,923)	33 (2,64)

Treated and released at hospital/ER/clinic	6 (67)	881 (517,1245)	67 (22,100)	M
Admitted to hospital	0 (0)	0 (0,0)	0 (0,0)	M
None	33 (79)	5596 (3631,7562)	81 (67,95)	M
Why did injured household member(s) not receive treatment?	(n=35)	(n=5,882)		(n=1)
Transportation difficulties	0 (0)	0 (0,0)	0 (0,0)	M
Have insurance but worried about cost	3 (9)	429 (0,919)	7 (0,16)	M
Did not have insurance	1 (3)	167 (0,517)	3 (0,9)	M
Injury not serious enough	31 (89)	4453 (3066,5841)	76 (46,100)	M
Too busy	6 (17)	881 (237,1525)	15 (3,27)	M
Other	0 (0)	0 (0,0)	0 (0,0)	M

Notes:

¹ Includes all of the listed injury types except for "other"

² M=missing data

³ Other injuries specified: cuts, knee bursitis, minor bumps and bruises, back pain, headache, swollen eye

Table 5. Chronic health conditions and exacerbation, CASPER, Napa County, California.

	Napa		American Canyon
	<u>Unweighted</u> n (%)	<u>Weighted</u> n (95% CI) % (95% CI)	<u>Unweighted</u> n (%)
Households with member(s) having any of the following conditions	(n=201)	(n=30,005)	(n=40)
Any chronic condition listed below, except "other"	132 (66)	19160 (16583,21737)	64 (55,72)
Worsened ¹	34 (26)	4939 (3359,6518)	26 (18,34)
Additional medical care ²	19 (56)	2796 (1649,3942)	57 (37,76)
Hypertension	72 (36)	10540 (8119,12961)	35 (27,43)
Worsened ¹	11 (15)	1572 (698,2445)	15 (6,23)
Additional medical care ²	5 (45)	714 (176,1253)	45 (7,84)
Congestive heart failure	11 (5)	1629 (707,2551)	5 (2,9)
Worsened ¹	1 (9)	143 (0,466)	9 (0,29)
Additional medical care ²	1 (100)	--	--
Diabetes	32 (16)	4596 (2866,6326)	15 (10,21)
Worsened ¹	5 (16)	714 (0,1450)	16 (1,30)
Additional medical care ²	3 (60)	429 (0,883)	60 (0,100)
Compromised immune system (cancer, lupus, HIV)³	16 (8)	2391 (1316,3465)	8 (4,12)
Worsened ¹	1 (6)	143 (0,452)	6 (0,19)
Additional medical care ²	1 (100)	--	--
Seizures	8 (4)	1143 (309,1977)	4 (1,7)
Worsened ¹	0 (0)	0 (0,0)	0 (0,0)
Additional medical care ²	--	--	--
Stroke	9 (4)	1286 (244,2328)	4 (1,8)
Worsened ¹	0 (0)	0 (0,0)	0 (0,0)
Additional medical care ²	--	--	--
Asthma	43 (21)	6225 (4020,8430)	21 (13,28)
Worsened ¹	8 (19)	1167 (241,2092)	19 (4,33)
Additional medical care ²	2 (25)	310 (0,815)	27 (0,68)
Emphysema/COPD	12 (6)	1772 (749,2794)	6 (2,9)

Worsened ¹	1 (8)	143 (0,466)	8 (0,27)	--
Additional medical care ²	1 (100)	--	--	--
Developmental disability	4 (2)	629 (11,1246)	2 (0,4)	3 (8)
Worsened ¹	1 (25)	200 (0,837)	32 (0,100)	0 (0)
Additional medical care ²	1 (100)	--	--	--
Physical disability	22 (11)	3143 (1314,4972)	10 (4,17)	5 (13)
Worsened ¹	2 (9)	286 (0,710)	9 (0,23)	1 (20)
Additional medical care ²	1 (50)	143 (0,1958)	50 (0,100)	0 (0)
Mental health condition	35 (17)	5058 (3320,6796)	17 (11,23)	7 (18)
Worsened ¹	17 (49)	2486 (1207,3765)	49 (29,69)	6 (86)
Additional medical care ²	11 (65)	1629 (714,2543)	66 (39,92)	1 (17)
Other⁴	31 (15)	4558 (3124,5992)	15 (10,20)	3 (8)
Worsened ¹	7 (23)	1048 (190,1905)	23 (6,40)	0 (0)
Additional medical care ²	5 (71)	762 (0,1536)	73 (23,100)	--

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: Alzheimer's Disease, attention deficit hyperactivity disorder, back pain, chronic lung disease, Ehlers–Danlos syndrome, fibromyalgia, irritable bowel syndrome, migraines, Parkinson's Disease, scoliosis, traumatic brain injury, vertigo, allergies, vascular ulcer, arthritis, insomnia, sleep apnea

Table 6. Access to medication, supplies, and services, CASPER, Napa County, California.

	Napa		American Canyon
	<u>Unweighted</u> n (%) (n=201)	<u>Weighted</u> n (95% CI) (n=30,005)	<u>Unweighted</u> n (%) (n=40)
Households having difficulty accessing medical supplies			
Medication ¹	3 (1)	429 (0,917)	0 (0)
Dialysis ¹	3 (100)	429 (429,429)	0 (0)
Oxygen ¹	0 (0)	0 (0,0)	0 (0)
Other ¹	0 (0)	0 (0,0)	0 (0)
Reason	(n=3)	(n=429)	(n=0)
Couldn't get to pharmacy or closed ¹	2 (67)	286 (0,901)	--
Couldn't get to clinic or closed ¹	1 (33)	143 (0,758)	--
Lost or unusable medications ¹	1 (33)	143 (0,758)	--
Left behind ¹	0 (0)	0 (0,0)	--
Other ^{1,2}	1 (33)	143 (0,758)	--

Notes:

¹ Among households having difficulty accessing medical supplies

² Other reasons specified: relocation of post office due to earthquake

Table 7. Conditions affecting mental health, CASPER, Napa County, California.

	Napa			American Canyon
	<u>Unweighted</u> n (%) (n=201)	<u>Weighted</u> n (95% CI) (n=30,005)	% (95% CI)	<u>Unweighted</u> n (%) (n=40)
Households with member(s) having any traumatic experience or mental health stressor during or since earthquake¹	155 (77)	23409 (21158,25659)	78 (71,86)	29 (73)
Acute mental health need²				
Intent to harm self or others	1 (0)	200 (0,609)	1 (0,2)	0 (0)
Any traumatic experience elevating risk of PTSD	56 (28)	8106 (6247,9965)	27 (21,33)	6 (15)
Saw/heard a <u>direct threat</u> to the life of self or family member	7 (3)	1057 (210,1905)	4 (1,6)	2 (5)
Suffered significant disaster-related illness or physical injury to self or family member	3 (1)	486 (0,1048)	2 (0,3)	0 (0)
Saw a serious injury of a non-family member	12 (6)	1738 (826,2651)	6 (3,9)	2 (5)
Experienced the death of a pet	4 (2)	572 (18,1125)	2 (0,4)	0 (0)
Trapped or delayed in evacuating	22 (11)	3167 (1839,4496)	11 (6,15)	3 (8)
Home not livable due to disaster	6 (3)	857 (206,1508)	3 (1,5)	0 (0)
Child separated from all caretakers	2 (1)	310 (0,751)	1 (0,3)	0 (0)
Separated from a family member and unaware of their location or status during the event	25 (12)	3596 (2258,4933)	12 (8,16)	2 (5)
Other mental health stressor				
Felt anxiety, fear, or distraction	149 (74)	22551 (20218,24885)	75 (67,83)	27 (68)
Showed extreme panic	55 (27)	8020 (5977,10063)	27 (20,34)	15 (38)
Sought mental health help	(n=155)	(n=23,409)		(n=29)
Any of the below	59 (38)	9578 (6938,12218)	41 (31,51)	8 (28)
Counseling from a religious leader or friend	32 (21)	5568 (3088,8047)	24 (14,34)	5 (17)
Pre-existing support group	17 (11)	3424 (1046,5803)	15 (5,24)	1 (3)
Community Health Clinic Ole	8 (5)	1143 (309,1977)	5 (1,8)	1 (3)

Primary Care Provider or a clinic	10 (6)	1534 (568,2500)	7 (3,11)	3 (10)
Emergency Room	7 (5)	1000 (193,1807)	4 (1,8)	0 (0)
Social worker or case manager	2 (1)	343 (0,837)	1 (0,4)	1 (3)
Private mental health provider	7 (5)	1057 (321,1793)	5 (1,8)	1 (3)
Napa County Mental Health	1 (1)	143 (0,435)	1 (0,2)	1 (3)
North Bay Suicide Prevention Hotline	0 (0)	0 (0,0)	0 (0,0)	0 (0)
Napa County Mental Health Crisis Services	0 (0)	0 (0,0)	0 (0,0)	0 (0)
Other ³	9 (6)	1343 (451,2235)	6 (2,9)	0 (0)
Reasons help not sought	(n=155)	(n=23,409)		(n=29)
It wasn't serious enough or help not needed	112 (72)	17036 (14409,19663)	73 (63,82)	9 (31)
Did not know where to go	17 (11)	2453 (1208,3697)	10 (5,16)	3 (10)
Transportation difficulties	4 (3)	572 (18,1125)	2 (0,5)	2 (7)
Had no phone service	13 (8)	1857 (692,3023)	8 (3,13)	0 (0)
Embarrassed or afraid of what people would think	7 (5)	1000 (312,1689)	4 (1,7)	0 (0)
Have insurance, but worried about potential cost	10 (6)	1429 (554,2304)	6 (2,10)	1 (3)
Don't have insurance	5 (3)	714 (108,1321)	3 (1,6)	1 (3)
Too busy	19 (12)	2715 (1565,3865)	12 (7,16)	3 (10)
Other ⁴	10 (6)	1453 (671,2234)	6 (3,10)	2 (7)

Notes:

¹ Category includes all subtypes listed below

² 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: neighbors, County Department of Education, workplace, Red Cross, family members, homeopathics, internet, mental health hotline

⁴ Other reasons specified: members of household are therapists, didn't want to take time from those who needed it more, didn't know if there would be a cost, too much effort, family support was sufficient, too soon to determine whether there is a long term impact

Table 8. Time taken off work, CASPER, Napa County, California.

	Napa			American Canyon
	<u>Unweighted</u> n (%)	<u>Weighted</u> n (95% CI) % (95% CI)		<u>Unweighted</u> n (%)
	(n=201)	(n=30,005)		(n=40)
Took time off work	62 (31)	9902 (6856,12947)	33 (23,43)	10 (25)
To clean up	51 (82)	8282 (5844,10720)	84 (73,95)	5 (50)
To assess the damage	42 (68)	6996 (4613,9379)	71 (56,85)	4 (40)
To make repairs	28 (45)	4939 (2458,7420)	50 (32,68)	2 (20)
Needed to replace a damaged item	24 (39)	4367 (2182,6553)	44 (27,62)	1 (10)
Kids out of school	18 (29)	2653 (1566,3740)	27 (15,39)	4 (40)
Feeling Anxious, scared, distracted	27 (44)	3939 (2706,5171)	40 (29,51)	7 (70)
Ill or injured	3 (5)	429 (0,918)	4 (0,9)	0 (0)
Workplace was closed	21 (34)	3905 (1660,6151)	39 (22,57)	3 (30)
Other ¹	4 (6)	629 (0,1378)	6 (0,14)	3 (30)

Notes:

¹ Other reasons specified: no work available, to care for grandparent, family wanted to be together, to look for dog

Table 9. Communication during an emergency, CASPER, Napa County, California.

	Napa			American Canyon
	<u>Unweighted</u> n (%)	<u>Weighted</u> n (95% CI)	<u>Weighted</u> % (95% CI)	<u>Unweighted</u> n (%)
Preferred method for receiving information¹	(n=201)	(n=30,005)		(n=40)
Television	31 (15)	4486 (2883,6090)	15 (10,20)	23 (58)
AM/FM Radio	44 (22)	6425 (4435,8414)	21 (15,28)	4 (10)
Text message	48 (24)	7854 (5271,10436)	26 (18,35)	8 (20)
Nixle message	8 (4)	1143 (209,2077)	4 (1,7)	0 (0)
Cell Phone call	41 (20)	5882 (3721,8043)	20 (12,27)	5 (13)
Social Media	5 (2)	714 (0,1452)	2 (0,5)	2 (5)
Landline	10 (5)	1429 (458,2400)	5 (2,8)	1 (3)
Internet	12 (6)	1762 (635,2889)	6 (2,10)	0 (0)
Word of mouth	7 (3)	1000 (91,1910)	3 (0,6)	0 (0)
Ham radio	1 (0)	167 (0,508)	1 (0,2)	0 (0)
Reverse 911	4 (2)	572 (18,1125)	2 (0,4)	1 (3)
Other ³	4 (2)	572 (18,1125)	2 (0,4)	0 (0)
Don't know	2 (1)	286 (0,692)	1 (0,2)	0 (0)
Missing	0 (0)	0 (0,0)	0 (0,0)	1 (3)
Households with at least one communication barrier	71 (35)	10421 (7721,13120)	35 (26,44)	10 (25)
Hearing problems	24 (12)	3510 (2208,4813)	12 (7,16)	1 (3)
Vision problems	24 (12)	3543 (1934,5153)	12 (7,18)	1 (3)
Difficulty understanding written material	10 (5)	1429 (458,2400)	5 (2,8)	1 (3)
Difficulty understanding English	34 (17)	4972 (2531,7414)	17 (9,25)	4 (10)
Developmental Disability	4 (2)	572 (0,1266)	2 (0,4)	3 (8)
Physical Disability	13 (6)	1938 (819,3058)	7 (3,10)	2 (5)
Other ²	8 (4)	1167 (319,2015)	4 (1,7)	0 (0)

Notes:

¹Frequencies sum to greater than 201 (Napa) or 40 (AC) as some households gave multiple answers

²Other barriers specified: cannot speak, heart angina, post-traumatic stress disorder, age, cannot speak English well, dementia, mental disability

³Other methods specified: Outdoor warning system, Sheriff's message

Table 10. Awareness of NapaLAC, CASPER, Napa County, California.

	Napa			American Canyon
	<u>Unweighted</u> n (%)	<u>Weighted</u> n (95% CI)	<u>Weighted</u> % (95% CI)	<u>Unweighted</u> n (%)
Households that know of NapaLAC	(n=201)	(n=30,005)		(n=40)
From where these household learned of NapaLAC^{1,2}	(n=83)	(n=12,969)		(n=13)
City of Napa website	4 (5)	572 (19,1124)	4 (0,9)	2 (15)
County of Napa website	7 (8)	1000 (0,2002)	8 (0,15)	3 (23)
Other website	9 (11)	1286 (436,2136)	10 (3,17)	2 (15)
Radio	11 (13)	1572 (692,2451)	12 (6,19)	3 (23)
Word of mouth	26 (31)	3853 (2383,5323)	30 (19,41)	4 (31)
Community agencies	9 (11)	1367 (469,2265)	11 (4,18)	1 (8)
From driving by the facility	7 (8)	1000 (0,2087)	8 (0,16)	0 (0)
Newspaper	31 (37)	4486 (2778,6195)	35 (21,48)	2 (15)
TV/TV news	8 (10)	1200 (333,2068)	9 (2,16)	3 (23)
Facebook	5 (6)	714 (109,1319)	6 (1,10)	1 (8)
Employer	4 (5)	1429 (0,3549)	11 (0,27)	1 (8)
Other ³	7 (8)	1000 (196,1804)	8 (1,14)	1 (8)

Notes:

¹ Frequencies do not sum to 83 (Napa) or 13 (American Canyon), as households could select more than 1 response

² Proportions are conditional on household having heard of NapaLAC

³ Other sources specified: Red Cross, Church, Sheriff's Office, flier, through the school, Nixel

Table 11. Pet ownership and pet evacuation, CASPER, Napa County, California.

	Napa			American Canyon
	<u>Unweighted</u> n (%)	<u>Weighted</u> n (95% CI)	<u>Weighted</u> % (95% CI)	<u>Unweighted</u> n (%)
Have pets or animals	(n=201) 116 (58)	(n=30,005) 17584 (14995,20173)	59 (50,67)	(n=40) 24 (60)
What household would do with animals in case of evacuation^{1,2}	(n=116)	(n=17,584)		(n=24)
Take them	107 (92)	15384 (12803,17964)	87 (76,99)	17 (71)
Find a safe place for them	13 (11)	1915 (289,3540)	11 (2,20)	11 (46)
Leave behind with food and water	8 (7)	2000 (0,4090)	11 (0,23)	2 (8)
Would not evacuate because of animals	4 (3)	572 (0,1267)	3 (0,7)	3 (13)
Would not evacuate for other reasons	0 (0)	0 (0,0)	0 (0,0)	1 (4)

Notes:

¹ Frequencies do not sum to 116 (Napa) or 24 (American Canyon), as some households selected more than 1 response

² Proportions are conditional on household having pets or animals

Table 12. Emergency supplies for an emergency or disaster, CASPER, Napa County, California.

	Napa			American Canyon
	Unweighted n (%)	Weighted n (95% CI)	% (95% CI)	Unweighted n (%)
Days of supplies in home, excluding emergency kit	(n=201)	(n=30,005)		(n=40)
0 days	3 (1)	429 (0,917)	1 (0,3)	0 (0)
1 to 3 days	73 (36)	10568 (8328,12809)	35 (28,43)	10 (25)
4 to 6 days	51 (25)	7392 (5286,9497)	25 (18,32)	13 (33)
7 to 9 days	32 (16)	5510 (3252,7769)	18 (11,26)	8 (20)
10 days or more	40 (20)	5820 (4217,7423)	19 (14,25)	8 (20)
Don't know	1 (0)	143 (0,435)	0 (0,1)	0 (0)
Missing	1 (0)	143 (0,435)	0 (0,1)	1 (3)
Had an emergency kit prior to the earthquake				
Yes	77 (38)	11154 (8388,13920)	37 (28,46)	17 (43)
Supplies set aside for emergency kit¹				
3-day supply for non-perishable food	52 (68)	7582 (5457,9708)	68 (58,78)	9 (53)
3-day supply of water	55 (71)	7987 (5969,10005)	72 (62,81)	12 (71)
Battery-operated radio	54 (70)	7868 (5965,9771)	71 (62,79)	10 (59)
First-aid kit	73 (95)	10583 (8069,13097)	95 (89,100)	17 (100)
3-day supply of prescription medication	45 (58)	6525 (4294,8755)	58 (46,71)	10 (59)
Special medical equipment or supplies	42 (55)	6049 (4039,8058)	54 (45,63)	8 (47)
Flashlights with extra batteries	72 (94)	10440 (8064,12816)	94 (88,99)	13 (76)
Dust masks	31 (40)	4558 (2878,6238)	41 (27,55)	6 (35)
Copies of important documents	31 (40)	4558 (2988,6128)	41 (29,53)	8 (47)
Other ²	24 (31)	3534 (2015,5053)	32 (21,43)	4 (24)
No	124 (62)	18851 (16085,21617)	63 (54,72)	22 (55)
Reasons for not having emergency kit³				
Didn't know what to have	34 (27)	4972 (3058,6886)	26 (17,36)	9 (41)
Didn't have time	31 (25)	4486 (2998,5975)	24 (17,31)	8 (36)
Didn't want to think about it	42 (34)	6049 (4273,7825)	32 (22,42)	5 (23)
Costs too much	10 (8)	1429 (458,2400)	8 (3,12)	4 (18)
Didn't think it was necessary	67 (54)	9768 (6734,12802)	52 (39,64)	12 (55)
Other ⁴	34 (27)	5796 (3643,7949)	31 (20,42)	3 (14)

Notes:

¹ Among households with emergency kit

² Other supplies specified: air mattress, clothing, flares, blankets, candles, cat food, lanterns, extra fuel, firearms, generator, scissors, toilet paper, cash, water purifying tabs, books, extra oxygen tank, tent, tools, Benadryl, Epi-pen, handywipes, shoes, whistle, needle and thread, tape

³ Among households without an emergency kit

⁴ Other reasons specified: feeling like it won't happen to me, first kit expired, procrastination, didn't expect an earthquake to happen, lack of awareness, negligence, never crossed my mind, not sure where to put it, not enough space in home

Appendix I. Questionnaire used for CASPER household interviews in Napa and American Canyon, California.

To be completed by interview team BEFORE the interview	
Q1. Date (MM/DD/YY):	Q3. Cluster number:
Q2. Time: <input type="checkbox"/> am <input type="checkbox"/> pm	Q4. Survey number:
Q5. Team Member Initials:	
Q6. Is this home a: <input type="checkbox"/> Mobile home <input type="checkbox"/> Single family home (detached) <input type="checkbox"/> Duplex <input type="checkbox"/> Multi-unit complex (e.g., apartments) <input type="checkbox"/> 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 _____ <input type="checkbox"/> DK <input type="checkbox"/> R	
Q9. What is the MAIN language spoken in your household? <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Tagalog <input type="checkbox"/> Other, specify _____ <input type="checkbox"/> DK <input type="checkbox"/> R	
Q10. Does your household own or rent your place of residence? <input type="checkbox"/> Own <input type="checkbox"/> Rent <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> DK <input type="checkbox"/> R	
Q11. Does your household have earthquake insurance? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	
Q12. In what decade was your home built? [if needed, say "for example, 1920's"] (write decade) _____ <input type="checkbox"/> DK <input type="checkbox"/> 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? <input type="checkbox"/> less than \$30,000 <input type="checkbox"/> \$30,000 up to \$70,000 <input type="checkbox"/> \$70,000 up to \$100,000 <input type="checkbox"/> \$100,000 or greater <input type="checkbox"/> DK <input type="checkbox"/> 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. Due to the earthquake, was your residence damaged enough to need repairs? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	
Q15. Did you or members of your household observe any of the following types of damage to your home?	
Fire damage	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Collapse of walls or building shift from foundation	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Damage to chimney	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Damage to roof	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Cracks to exterior walls	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Windows cracked or broken	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Damage to interior walls or ceilings	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Bookshelves falling over	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Damage to detached garage	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R

Q16. Did you or members of your household have any of the following personal property or belongings damaged during the earthquake?				
Vehicle(s)	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Electronics (TV, computers, stereo)	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Major pieces of furniture	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Heirlooms and items of sentimental value	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Household goods [if needed, say "such as dishes, glassware, pictures"]	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> 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?				
	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> 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?				
	<input type="checkbox"/> Not applicable	<input type="checkbox"/> Not difficult	<input type="checkbox"/> A little difficult	<input type="checkbox"/> Very difficult
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"]				
	<input type="checkbox"/> Y	<input type="checkbox"/> N (go to Q27)	<input type="checkbox"/> DK	<input type="checkbox"/> R
Q20. Was anyone in your household injured specifically during cleanup within two weeks of the earthquake?				
	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> 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	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Broken bone or fracture or dislocation	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Head injury	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Strain or sprain	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Burn injury	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Other, specify: _____	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Q23. What caused the injuries?				
Burn	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Electric shock	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Fall, slip, or trip	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Use of machinery, tools, or equipment	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Being hit by an object	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Motor vehicle crash	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Violence or assault	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Other, specify: _____	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Q24. Did everyone who was injured in your household seek medical care for their injuries?				
	<input type="checkbox"/> Yes, all	<input type="checkbox"/> Some	<input type="checkbox"/> None (go to Q26)	<input type="checkbox"/> DK <input type="checkbox"/> R
Q25. How were injured household members medically treated?				
By emergency medical personnel at the scene of the injury	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Treated and released at a hospital, ER, or clinic	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Admitted to a hospital overnight	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R

(Skip if Q24 is "Yes, all")

Q26. If you or a member of your household had an injury but did not seek medical care, what were the reasons?

Transportation difficulties	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Have insurance, but worried about potential cost of care	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Do not have insurance	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Injury not serious enough	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Too busy	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Other, specify _____	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> 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)	(Only ask of "Y" conditions from Q27) Q28. If yes, have any of these conditions gotten worse since the earthquake?	(Only ask of "Y" conditions from Q28) Q29. If any condition has gotten worse, have you sought additional medical attention outside of your normal care since the earthquake?
Hypertension	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Congestive heart failure	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Diabetes	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Compromised immune system, such as lupus, cancer, or HIV)	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Seizures	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Stroke	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Asthma	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Emphysema or COPD (Chronic Obstructive Pulmonary Disease)	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Developmental disability	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Physical disability	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Depression or other emotional or mental health condition	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R
Other chronic conditions, specify _____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> R	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> DK <input type="checkbox"/> 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)	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Dialysis	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Oxygen	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Other, specify _____	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R

Q32. What were the reasons medications, supplies, or services could not be accessed?				
Could not get to pharmacy, or pharmacy was closed	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Could not get to clinic, or clinic was closed	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Loss, destruction, or contamination of medication(s)	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Left at home and did not bring	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Other: _____	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> 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? (If all "N," go to Q36)				
Feeling anxiety, fear, or distraction?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Showing extreme panic?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Expressing thought or intent to harm self or others?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Seeing or hearing a <u>direct threat</u> to the life of yourself or a family member?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Suffering significant disaster-related illness or physical injury to self or family member?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Seeing a serious injury of a non-family member?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Experiencing the death of a pet?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Being trapped or delayed in evacuating?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Having a home not livable due to disaster?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Having a child separated from all caretakers?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Being separated from a family member and being unaware of their location or status during the event?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
(Skip if Q33 all "N")				
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	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Pre-existing support group	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Community Health Clinic Ole	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Primary Care Provider or a clinic	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Emergency Room	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Social worker or case manager	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Private mental health provider [if needed, say "such as psychologist or counselor"]	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Napa County Mental Health	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
North Bay Suicide Prevention Hotline for Napa County	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Napa County Mental Health Crisis Services	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Other, specify: _____ City: _____	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R

(Skip if Q33 all "N")

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

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

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

Q37. What were the reasons?

- | | | | | | | | | | | | | | | | | | |
|----------------------------------|--------------------------|---|--------------------------|---|--------------------------|----|--------------------------|---|---|--------------------------|---|--------------------------|---|--------------------------|----|--------------------------|---|
| To clean up | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R | Feeling Anxious, scared, distracted | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R |
| To assess the damage | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R | Ill or injured | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R |
| To make repairs | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R | Could not work because workplace was closed | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R |
| Needed to replace a damaged item | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R | Other, specify: _____ | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R |
| Kids out of school | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | 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. [hand printed prompt to the responder]

- TV AM/FM Radio Text message Nixel message Cell phone call Social media Landline telephone Internet
 Word of mouth Ham radio Reverse 911 Other: _____ DK Refused

Q39. Have you heard of the Napa County Local Assistance Center (NapaLAC)? Y N (go to Q41) DK R

Q40. How did you hear about it? (check all that apply)

- | | | | | | | | | | | | | | | | | | |
|------------------------|--------------------------|---|--------------------------|---|--------------------------|----|--------------------------|---|--------------------|--------------------------|---|--------------------------|---|--------------------------|----|--------------------------|---|
| City of Napa website | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R | Local radio | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R |
| County of Napa website | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R | Word of mouth | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R |
| Other website | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R | Community agencies | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R |
| | | | | | | | | | Other: _____ | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | <input type="checkbox"/> | DK | <input type="checkbox"/> | R |

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

- | | |
|--|---|
| <input type="checkbox"/> Impaired hearing | <input type="checkbox"/> Developmental disability |
| <input type="checkbox"/> Impaired vision | <input type="checkbox"/> Physical disability |
| <input type="checkbox"/> Difficulty understanding written material | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Difficulty understanding the English language | |

Q42. Do you have any pets or large animals? <input type="checkbox"/> Y <input type="checkbox"/> N (go to Q44) <input type="checkbox"/> DK <input type="checkbox"/> R				
Q43. If your household were asked to evacuate, what would you do with your pets or animals? (check all that apply)				
<input type="checkbox"/> Take them with you <input type="checkbox"/> Find a safe place for them <input type="checkbox"/> Leave them behind with food and water <input type="checkbox"/> Would not evacuate because of pets or animals				
<input type="checkbox"/> Would not evacuate for reasons other than pets or large animals (Specify: _____) <input type="checkbox"/> NA <input type="checkbox"/> DK <input type="checkbox"/> R				
Q44. Prior to the earthquake, did your household have an emergency supply kit? <input type="checkbox"/> Y <input type="checkbox"/> N (go to Q46) <input type="checkbox"/> DK <input type="checkbox"/> R				
Q45. Which of the following supplies were in your emergency supply kit?				
3-day supply of non-perishable food	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
3-day supply of water (1 gallon/person/day)	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Battery-operated radio	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
First-aid kit	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
3-day supply of prescription medication for each person who needs it	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Medical <u>equipment, supplies</u> , or prescription eyeglasses	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Flashlights with extra batteries	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Dust masks	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Copies of important documents	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Other, specify _____	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
(Skip if Q44 is "Y")				
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	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
You didn't have the time to put one together	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
You didn't want to think about it	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
It costs too much to put one together	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
You didn't think it was necessary to have an emergency supply kit	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Other, specify _____	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> DK	<input type="checkbox"/> R
Q47. Think about the supplies in your home, other than those in an emergency supply kit, at the time of the earthquake. For how many days would your household have been able to stay in your home without anyone shopping for additional supplies?				
<input type="checkbox"/> 1 to 3 days	<input type="checkbox"/> 4 to 6 days	<input type="checkbox"/> 7 to 9 days	<input type="checkbox"/> 10 days or more	<input type="checkbox"/> DK <input type="checkbox"/> 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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