

Kauai CASPER 2018 Preliminary Report

Introduction

A community assessment for public health emergency response (CASPER) was conducted on Kauai in July 2018 by the Department of Health's Kauai District Health Office. CASPER is a validated two-stage cluster sampling methodology developed by the Centers for Disease Control and Prevention (CDC) to rapidly obtain information about the health and resource needs of a community that is generalizable to the entire sampling frame (provides population-based estimates). The goal of this assessment was to determine resident preparedness, evacuation plans, health-related needs for natural disasters, and impact from the April 2018 flood.

Methods

The sampling frame for this assessment was the County of Kauai. 2010 Census block data was used to select 30 clusters via random number generation. The survey included questions that addressed basic household information, health status, emergency supplies, evacuation plans, mosquito activity, and communication preferences. The survey was adjusted to include an assessment of impact from the April 2018 flood. Survey teams were comprised of Department of Health staff with support from the Kauai Emergency Management Agency, American Red Cross, and Kauai Medical Reserve Corps. Between July 20-23, a total of twenty-two survey teams were deployed to conduct door-to-door surveys in the thirty randomly selected clusters. Within each cluster, seven households were systematically selected for participation with an ultimate target of 210 completed surveys (30 clusters x 7 surveys per cluster). Survey participants were given drawstring backpacks, first aid kits, waterproof bags for storage of important documents as well as educational materials on: emergency preparedness, tsunamis, hurricanes, flood insurance, hurricane insurance, ballistic missile guidance, mental health resources, rat lungworm disease, leptospirosis, and mosquito-borne diseases.

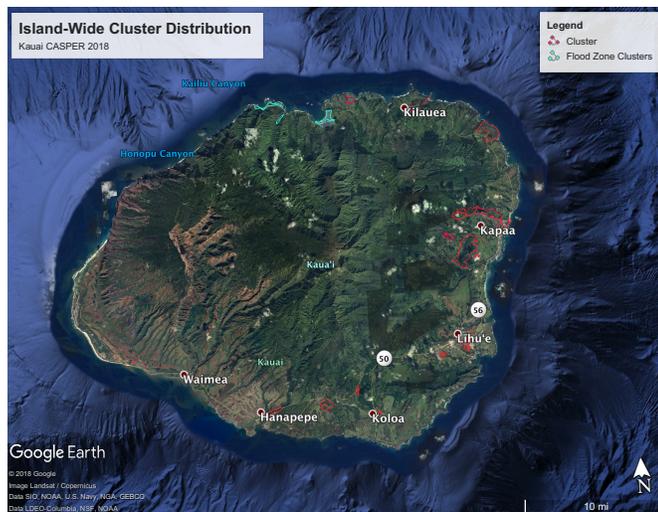


Figure 1: Island-wide Cluster Distribution
The 30 selected clusters are outlined in red. Due to the fact that no clusters were selected in the area most impacted by the 2018 flood, an additional three clusters were selected via random number generation between Hanalei and Haena and are outlined in teal. Data from these additional clusters was assessed separately and is not included in this preliminary report.

Results

Survey data was entered and analyzed using Epi Info 7 software. The survey teams attempted to contact 398 households, spoke with a resident at 290 households, and ultimately completed a total of 190 interviews, which produced the following response rates:

- Completion Rate: 90.5% (represents how close we came to collecting the target 210 interviews)
- Cooperation Rate: 63.1% (represents the willingness of the community to participate)
- Contact Rate: 46.0% (represents the proportion of households where contact was attempted and an interview completed)

During analysis, each survey was assigned a weight to account for the likelihood of a household to have been selected for participation. Every percentage included in this report is weighted to ensure representativeness of the entire island. Survey results are grouped by subject matter and summarized in data tables on the following pages.

Basic Household Information and Health Status:

	Yes	No	Don't Know
Is anyone in your household pregnant?	2.11%	97.89%	0.00%
Are there any adults in your household who do not speak English?	0.96%	98.56%	0.48%
Does anyone in your household have serious difficulty hearing?	11.47%	87.69%	0.84%
Does anyone in your household have serious difficulty seeing, even when wearing glasses?	7.97%	90.99%	1.04%
In the past 5 years, have you or anybody in your household taken training in first aid, CPR, or community emergency response team (CERT)?	49.27%	50.25%	0.48%

Have you or a member of your household ever been told by a healthcare professional that he/she has:	Yes	No	Don't Know
Asthma/COPD/Emphysema	23.27%	75.50%	1.23%
Diabetes	23.21%	76.79%	1.04%
Developmental Disability	3.55%	94.74%	1.71%
Hypertension/Heart Disease	30.30%	68.66%	1.04%
Immunosuppression	2.49%	94.95%	2.56%
Physical Disability	10.59%	88.85%	0.56%
Psychosocial/Mental Illness	5.55%	93.90%	0.56%
Seizure Disorder/Epilepsy	4.22%	95.22%	0.56%

47% of households surveyed had a member with *at least one* of the above health conditions

Do you or does any member of your household need:	Yes	No	Don't Know
Medication that requires refrigeration	8.38%	89.91%	1.71%
Dialysis	0.00%	99.44%	0.56%
Home health care	3.55%	95.89%	0.56%
Oxygen Supply	2.59%	96.85%	0.56%
Wheelchair/cane/walker	8.41%	91.04%	0.56%
Other type of special care	0.48%	98.96%	0.56%

16% of households surveyed had a member with *at least one* of the health needs listed above

Emergency Supplies and Evacuation Plans:

Does your household have any of the following emergency plans?	Yes	No	Don't Know
An emergency communication plan such as a list of numbers and out-of-town contact	59.5%	39.4%	0.96%
Designated meeting place immediately outside your home or close by in your neighborhood	50.85%	48.19%	0.96%
Designated meeting place outside your neighborhood in case you cannot return home	42.93%	52.64%	4.41%
Copies of important documents in a safe location (e.g. waterproof container)	68.66%	29.90%	1.44%

19.5% of households surveyed had *all* of these emergency plans

Does your household have the following emergency supplies?	Yes	No	Don't Know	N/A
An emergency supply kit	79.26%	20.26%	0.48%	
A first aid kit	85.92%	13.52%	0.56%	
An emergency generator	29.29%	66.92%	3.80%	
Smoke detectors	87.07%	11.89%	1.04%	
A fire extinguisher	70.38%	28.53%	1.08%	
Enough drinking water for the next 3 days (1gal./person/day)	73.97%	25.07%	0.96%	
Enough drinking water for 7 days	41.51%	57.04%	1.45%	

Enough drinking water for 14 days	20.22%	76.65%	3.13%	
Enough non-perishable food for the next 3 days	91.56%	8.44%	0.00%	
Enough non-perishable food for 7 days	72.39%	24.74%	2.88%	
Enough non-perishable food for 14 days	40.95%	54.75%	4.30%	
A 7-day supply of medication for each person who needs it* (*64% of households surveyed had a household member who takes daily medication)	64.32%	22.68%	0.96%	12.03%
A 14-day supply of medication	58.37%	27.61%	1.93%	12.09%

If your household were told to evacuate due to a hurricane or other emergency, where would you go?	
Friends/family/2 nd home outside your area	48.78%
Hotel or motel	3.82%
American Red Cross, church, or community shelter	27.18%
Would not evacuate	14.08%
Other	3.74%
DK	1.92%
Refused	0.48%

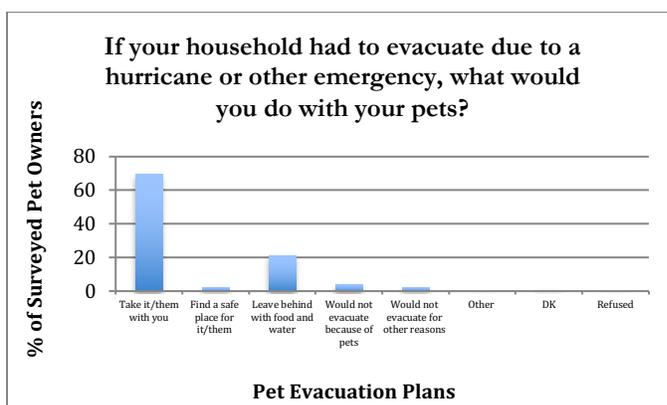
What is the main barrier that might prevent your household from evacuating if asked to do so?	
Concern about leaving property	15.44%
Lack of transportation	5.08%
Uncertainty about where we would go	10.51%
Health or mobility issues	3.93%
Concern about leaving livestock or pets	9.68%
DK	3.07%

How important do you think it is to have emergency supplies on hand for disaster preparation	
Very important	83.44%
Somewhat important	15.60%
Not important	0.00%
DK	0.96%
Refused	0.00%

What is the main thing keeping your household from putting together an emergency kit?	
Financial barriers	10.83%
Storage space	14.35%
Lack of knowledge regarding what we need	5.94%
Lack of time to put emergency supplies together	17.05%
Nothing	43.94%
DK	6.57%

Pets:

	Yes	No
Do you have a pet(s)?	55.06%	44.94%
If yes, do you have supplies for your pet(s) in your emergency kit?	69.21%	30.79%



Communication Preferences:

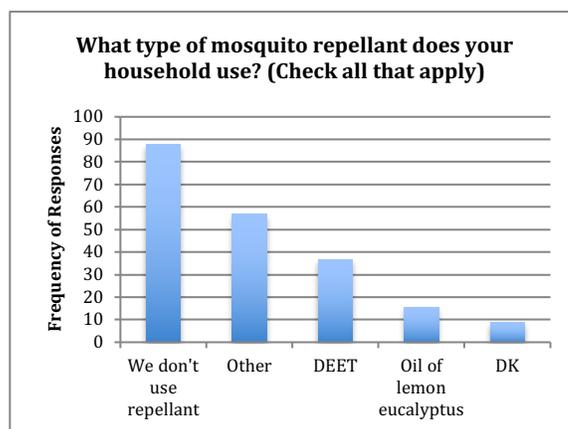
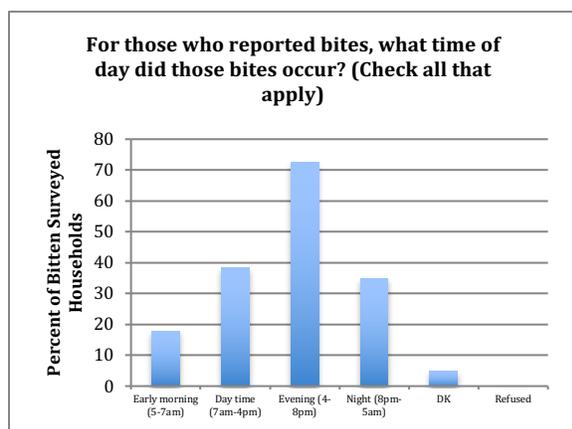
What is your main source of information regarding disaster or emergency events? (Choose one)	
TV	28.79%
Automated call or message	29.48%
Internet	7.86%
Social Media (Facebook, Twitter, etc.)	11.29%
Mobile App	6.94%
Other	14.67%
DK	0.48%

What is your main source of health-related information? (Choose one)	
Doctor/Nurse/Clinic	72.48%
Internet	12.57%
Friends and family	6.86%
Hospital	0.96%
Health Department	1.92%
Church or other community groups	0.48%
Other	3.74%
DK	1.01%

	Yes	No	DK
Hawaii Emergency Management Agency (formerly known as Hawaii Civil Defense) recently increased the recommended amount of emergency supplies for all Hawaii residents from 7 days to 14 days' worth. Have you heard about this change?	33.58%	64.79%	1.63%
Have you or anyone in your household signed up to receive weather and other disaster-related alerts?	61.72%	35.88%	2.40%
Have you used the Kauai Emergency Management Agency's website where you can access materials to better prepare your family for emergencies?	30.97%	67.11%	1.92%

Mosquito Activity:

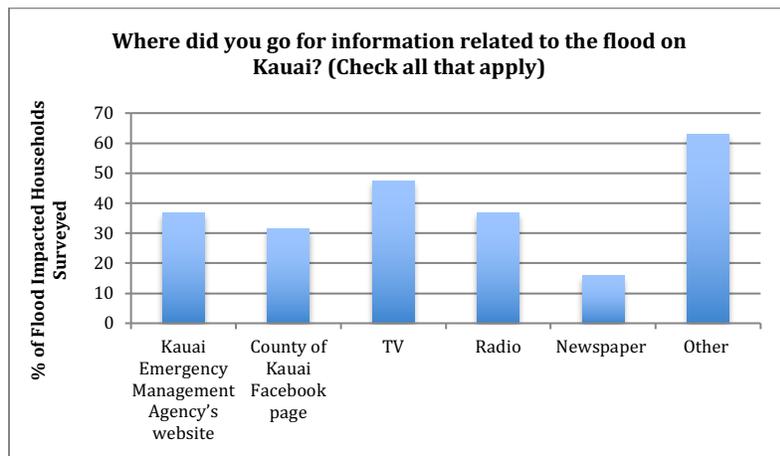
62.09% of surveyed households indicated that a member had been bitten in or around their property in the past thirty days.



In the past 30 days, have any of the following actions been done to prevent mosquito breeding around your home?	Yes	No	Don't Know	N/A
Cleaned roof gutters	22.84%	62.73%	4.60%	9.35%
Dumped or covered outdoor containers holding water	74.56%	24.44%	1.15%	
Kept screens on windows and doors in good repair (no holes)	85.40%	14.12%	0.48%	
Sprayed or fumigated for mosquitoes around the home	23.99%	72.56%	3.45%	
Applied chemical, larvicide, or mosquito dunks directly to water	7.65%	89.09%	2.78%	

Impact from the April 2018 Flood:

	Yes	No	DK	N/A
Have you or anyone in your household experienced emotional distress related to the April flood on Kauai or the ongoing volcanic eruption on the Big Island?	9.04%	90.96%	0.00%	
If yes, do you know where to seek help if you want it?*(<i>A mental health resource list was provided to all participants</i>)	67.41%	27.80%	4.79%	
Was your household affected by the historic flood in April?	10.42%	88.91%	0.67%	
If yes, did you report your damage to the County of Kauai, FEMA, or American Red Cross?*(<i>Many residents who did not report their damages to any of these agencies indicated that it was minimal or not worth reporting</i>)	10.53%	63.16%	5.26%	15.79%
If affected, do you have any unmet needs related to the flood?*(<i>For those with unmet needs who were willing to share their contact information, a referral was made to the appropriate agency</i>)	31.58%	68.42%	0.00%	



**Common responses for those who checked other, included: word of mouth, other internet sites and none (did not seek information)*

Conclusion

The 2018 Kauai CASPER collected important information about the island's residents, their health status, and their preparedness levels that will help to inform state and county emergency response plans as well as enable the Department of Health to best meet the community's health needs after a disaster. Further, the 2018 Kauai CASPER enabled us to collect important information regarding impacts from the April 2018 flood and the ongoing needs of affected families. Referrals were passed on to the appropriate agency for follow-up. Mobilizing survey teams requires extensive planning, resources, and training. Through this effort, over fifty DOH staff, partners, and vetted community volunteers have been trained on the CASPER methodology and door-to-door assessments. The Kauai District Health office is excited to have developed this rapid needs assessment capability on island and, if resources allow, will conduct annual CASPERs to evaluate the impact of emergency preparedness education on the readiness of our community for hurricanes and other disasters.