



HAYS COUNTY HEALTH DEPARTMENT

Community Assessment for Public Health
Emergency Response

Table of Contents

Table of Contents	1
Introduction	3
Background	3
Emergency Preparedness Recommendations	3
What is a CASPER?	3
Purpose	4
Objectives	4
Methods	4
Organization	4
CASPER Methodology	5
Questionnaire and Field Materials	5
Communications and Promotion	6
Data Entry and Analysis	6
Results	6
Socioeconomic Factors	7
General Utilities	8
Carbon Monoxide Exposure	9
Animal Safety	9
Health Status and Disabilities	10
Emergency Preparedness	11
Medical Care and Prescriptions	13
Communication	13
Open-ended Questions	15
Discussion	16
Recommendations	16
Limitations	17
Conclusion	18
Acknowledgements	18

Sources	19
Appendix A Questionnaire	20
Appendix B Most Important Issue Responses	24
Appendix C Greatest Need Responses	25
Appendix D Cluster Map	26
Appendix E Training Presentation	27

Introduction

Background

Hays County is a hub of diversity in Central Texas, comprised of both suburban and rural areas. Situated between Austin and San Antonio, Hays is estimated to be home to just under 281,000 people as of July 2023⁷. Hays County encompasses the cities of San Marcos, Kyle, Buda and Dripping Springs, as well as rural communities such as Wimberly, Driftwood and Henly. Since 2014, Hays County has declared 8 disasters including severe weather, flooding and biological disasters (during the COVID-19 pandemic).

In the last 5 years, excluding COVID-19 related disasters, winter weather has been responsible for all declared disasters in Hays County³. Most notable in recent history was a historical freeze event in February of 2021. During this time, Texas was subjected to the coldest winter weather since 1989⁵. At the peak of the power outages, nearly 10 million people were without power in the state of Texas. This means millions were without heat and the electricity needed to cook food. Additionally, pipe bursts and boil water advisories impacted access to clean water⁵. The Great Texas Freeze highlighted the need for emergency preparedness.

Emergency Preparedness Recommendations

Recommended emergency supplies include, but are not limited to, a gallon of water per person for several days, non-perishable food, a flashlight, first aid kit, and food and water for any pets in the household⁶. Having emergency supplies on hand can help reduce reliance on already strained resources available to a community during and after an emergency and improve conditions for a household during the immediate aftermath of an emergency.

Additionally, household level plans that involve outlining actionable steps to take during an emergency can reduce the stress and improve the safety of a given household in the event of an emergency. These plans occur on the individual level to take into consideration the unique needs of each household. WarnCentralTexas.org is a resource available to Hays County residents and surrounding counties. It is a regional notification system used to distribute information during emergencies⁸.

What is a CASPER?

The Community Assessment for Public Health Emergency Response (CASPER) is a rapid needs assessment that collects information on the household level to inform public health officials and other stakeholders¹. This information can be used to identify information gaps,

help allocate resources, and assess needs in the community. A CASPER has the added benefits of being relatively cost effective and quick to implement. There are four phases of a CASPER:

1. Prepare for the CASPER
2. Conduct the CASPER in the field
3. Analyze CASPER data
4. Report CASPER data

Purpose

The purpose of this CASPER is to gain a better understanding of the general preparedness of Hays County community members for natural disasters and emergencies. Through this report, Hays County Health Department hopes to improve the response of partners in the event of an emergency and aid in developing recommendations for the community and stakeholders.

Objectives

During phase one of this CASPER, Hays County Health Department identified three objectives.

1. Identify key strengths and weaknesses of Hays County residents regarding emergency preparedness
2. Identify gaps for crucial resources for Hays County residents in the event of a natural disaster or emergency
3. Develop recommendations to improve the general preparedness of Hays County residents both on a household scale and in policy

Methods

Organization

The Hays County Health Department, with help from the emergency preparedness coordinator and epidemiologists, were responsible for developing the questionnaire, recruiting volunteers, and developing a plan for the CASPER based on Center for Disease Control and Prevention (CDC) recommendations. Additionally, the planning team utilized the incident command system (ICS) to organize communication and structure of the CASPER.

CASPER Methodology

CDC guidelines for conducting a CASPER call for a two-stage cluster sampling methodology. Using ArcGIS software, 30 clusters in Hays County were generated with the probability of being selected proportionate to the number of households in the area compared to the rest of the county². Within these 30 clusters, 7 households (including single family homes, apartments, mobile homes, and single rooms) were selected systematically, by dividing the number of households by 7 to calculate n . Then, at a random starting point, every n th household was selected to interview to complete the ideal 210 interviews recommended by the CDC. In practice, 43 interviews were completed. The map of all of the clusters can be found in Appendix D.

CASPER methodology prioritizes reducing bias through the utilization of systematic random sampling². Additionally, three good faith attempts at each household are required before moving on to ensure adequate opportunity to be represented is provided. Volunteers were trained to avoid convenience sampling and sequential sampling (unless there are less than 10 households in a cluster).

The CASPER took place over two days, February 19th and 20th, from 2PM-7PM and was comprised of around 35 volunteers, forming 8 teams. Each team included HCHD staff and community members. A training session was conducted on the morning of each day. The training emphasized the importance of random sampling, how to select houses in the field, and how to standardize interviews to increase the reliability of the data. The presentation given to volunteers can be found in Appendix E. Volunteers were comprised of public health officials in the state, students at Texas State University, and Hays County Health Department staff.

Questionnaire and Field Materials

The questionnaire was developed from a shell provided by the CDC on ArcGIS, and adjusted to fit the population of Hays County, with the assistance from the Department of State Health Services Public Health Region (DSHS PHR 7) 7 who conducted a CASPER in 2024. The questionnaire was comprised of around 55 questions and interviews lasted an average of 15 minutes. Survey teams were provided both tablets to conduct the survey and paper copies as a back-up in the event of technical problems in the field. Survey teams were provided copies of the questionnaire in both English and Spanish and a Spanish speaking volunteer was stationed at the operations center in the case of translation needs for any team in the field without a Spanish speaker. The questionnaire can be found in Appendix A.

Additionally, survey teams were equipped with portable Wi-Fi devices and information folders unique for each cluster. These folders included interview tips, paper maps, addresses within the cluster, tracking forms, and note sheets. In the field, volunteers wore blue vests identifying themselves as volunteers of the Hays County Health Department.

Communications and Promotion

Prior to conducting the CASPER, HCHD began notifying residents of the event in December 2024 and then more frequently as the date of the CASPER approached. Through the HCHD Facebook page, municipal Facebook pages, and other government agency social media, HCHD requested residents to be aware of volunteers conducting assessments that would be wearing blue vests. Additionally, a CASPER toolkit was posted and provided to cities in the county to share so residents could be informed on the purpose, methods, and outcomes to expect.

Requests for volunteers began going out in January of 2025. HCHD reached out to Texas State University, University of Texas, Department of State Health Services, and DSHS Public Health Region 7 for volunteers who would be able to participate in the CASPER.

Data Entry and Analysis

Data from the tracking forms were entered into an Excel database to calculate response rates. Survey data was collected through ArcGIS and downloaded into an Excel database to be cleaned and analyzed. Descriptive statistics were calculated for each question.

Results

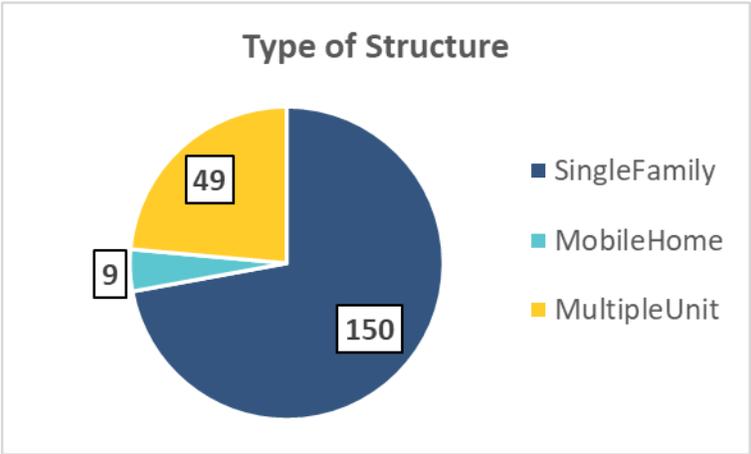
In the thirty clusters, the teams approached a total of 208 housing units, of which 173 were marked accessible. The survey teams contacted 109 households and ultimately completed a total of 43 interviews, and one incomplete survey. The target number for completed surveys was 210. Due to the completion rate being less than 80%, the results are not generalizable to the sampling frame population.

To determine the number of households where contact was attempted for the contact rate, the sum of the Answer section from the tracking form (Door Answered, Appears Vacant, and Nobody Home) was used. To determine the number of households where contact was made for the cooperation rate, the sum of the Interview section from the tracking form (Language barrier, Refused to participate, Come back later, Interview not finished, Interview complete) was used. The completion rate was calculated using the number of completed interviews from the tracking form divided by the number of interviews intended to be completed, 210.

Response Rates		Percent (%)
Contact Rate:	Proportion of households where contact was attempted and survey completed	20.7%
Cooperation Rate:	Willingness of community to participate	39.4%
Completion Rate:	Percent of target number of surveys completed	20.5%

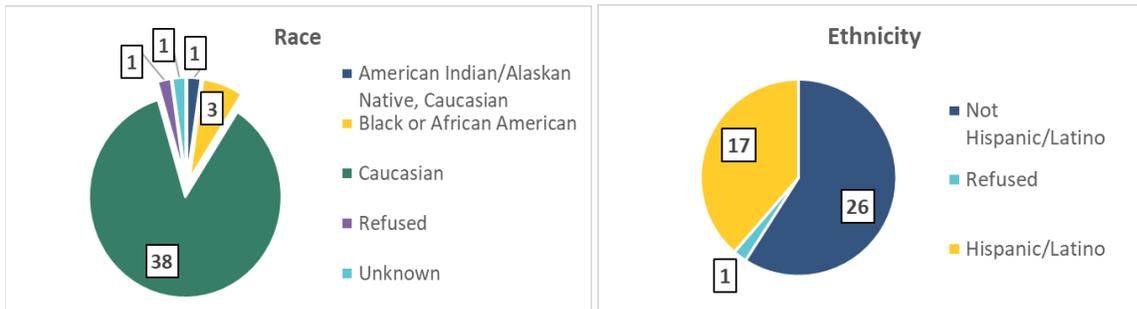
Socioeconomic Factors

Of the 208 households visited, 150, or 72.1%, were single-family structures, 49, or 23.6%, were multiple-unit structures, and 9, or 4.3%, were mobile home structure. The household age range was captured for 102 individuals. The most common age range were individuals 18-64 years old, accounting for 60.8% of the sample, and 21.6% were individuals more than 64 years old. Gender was captured for 105 individuals. The majority of household members, 57%, were identified as female, and 42.9% were identified as male.

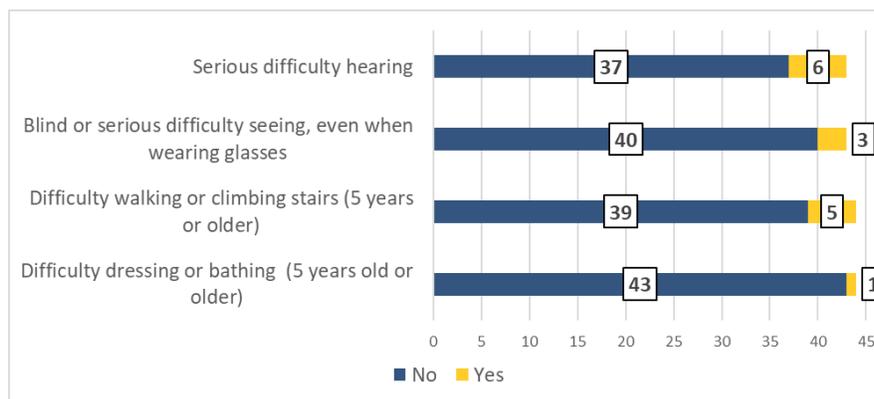


While reviewing the data, it was found that the total number of people living in the household, 106, is not equal to the sum of the reported number of individuals in each age category for 7 entries, accounting for a discrepancy of 4 people. Additionally, it was found that the gender variable for 2 entries was not consistent with the total number of people living in the household, accounting for a discrepancy of 2 people.

Of the 44 responses regarding race, 1 Refused, 1 was Unknown, 1 was American Indian/Alaskan Native and Caucasian, 3, or 6.8%, were Black or African American, and 38, or 86.4%, were Caucasian. Of the 44 responses regarding ethnicity, 1 Refused, 17, or 38.6%, stated they were Hispanic/Latino, and 26, or 59.1%, stated they were not Hispanic/Latino. A total of 4 respondents stated that there was an adult in the household who does not speak English.

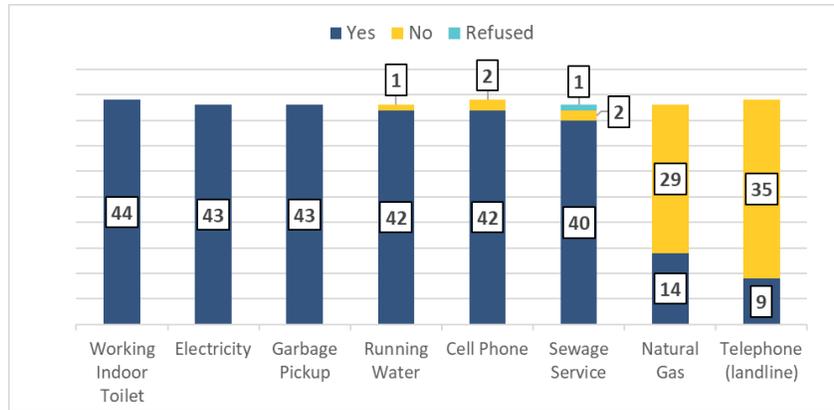


A total of 43 households responded to questions regarding difficulty hearing or seeing. Of which 6 respondents stated that a member of their household has serious difficulty hearing, and 3 stated that a member of their household is blind or has serious difficulty seeing, even when wearing glasses. Of the 44 total respondents, 5 stated that a member of their household (5 years or older) has difficulty walking or climbing stairs, and 1 stated that a member of their household (5 years or older) has difficulty dressing or bathing.



General Utilities

The households surveyed were asked if they had the following services/utilities: working indoor toilet, electricity, garbage pickup, cell phone, sewage service, natural gas, landline telephone. All 44 households that were surveyed stated they have a working indoor toilet. Additionally, 43 households responded Yes, they have Electricity and Garbage Pickup. Only 1 household stated they do not have Running Water and 2 households stated they do not have a Cell Phone or Sewage Service, and 1 Refused.



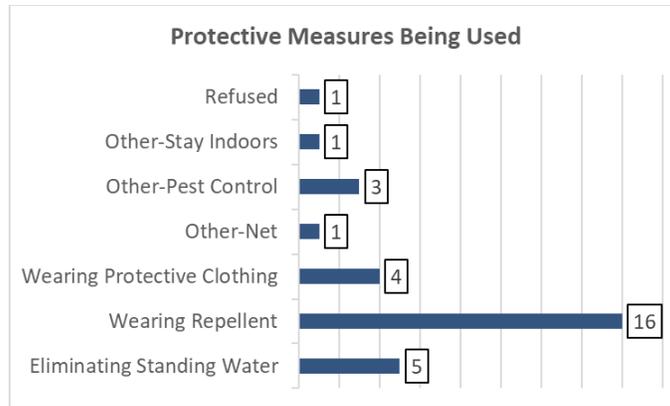
The majority of households surveyed stated that their current source of electricity was from a Power Company, 95.5%, and 2 households stated their current source of electricity was Unknown. When asked what their current source of heat was, the majority of households, 79.5%, stated Electricity, 7 households, or 15.9%, stated Propane/Gas, and 2 households Refused or said Unknown, 1 each.

Carbon Monoxide Exposure

The majority of households stated that they did not use a generator at their residence in the last 12 months. The 1 household that did use a generator said they used it outside, more than 25 feet away, and not near an open or broken window. Households were asked if in the last 5 years they had used a pressure washer with the actual engine in the house/garage, or if they had used a charcoal or gas grill/camp stove. Of the respondents, 17 households, or 38.6%, stated yes, they had used a Charcoal or Gas Grill/Camp Stove in the last 5 years. Most households, 70.5%, stated that they have a carbon monoxide detector, and 29.5% stated they do not.

Animal Safety

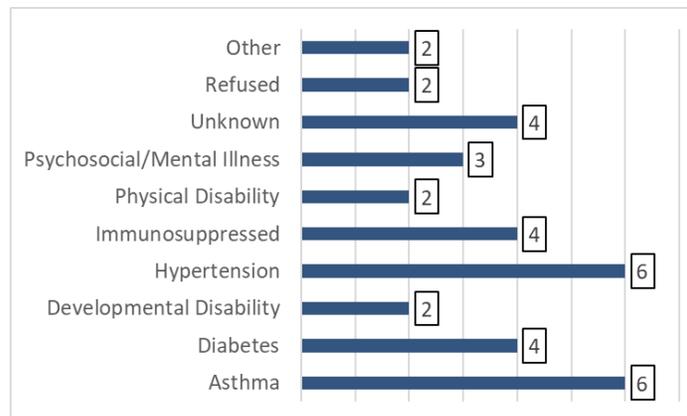
The households surveyed were asked if they had noticed an increase in mosquitoes around their home or neighborhood in the last 5 years. The majority, or 79.5%, stated No, they have not noticed an increase, and 20.5% stated Yes, they have noticed an increase. Respondents were asked if they or their household members were doing anything to protect themselves from mosquitoes. Respondents who stated Yes were asked what type of protective measures they are using. The most common protection measure being used by 16 households is Wearing Repellent, followed by Eliminating Standing Water, Wearing Protective Clothing, and Pest Control. Of the remaining respondents, 1 household stated they use a Net, 1 household stated they Stay Indoors, and 1 household Refused to specify.



Health Status and Disabilities

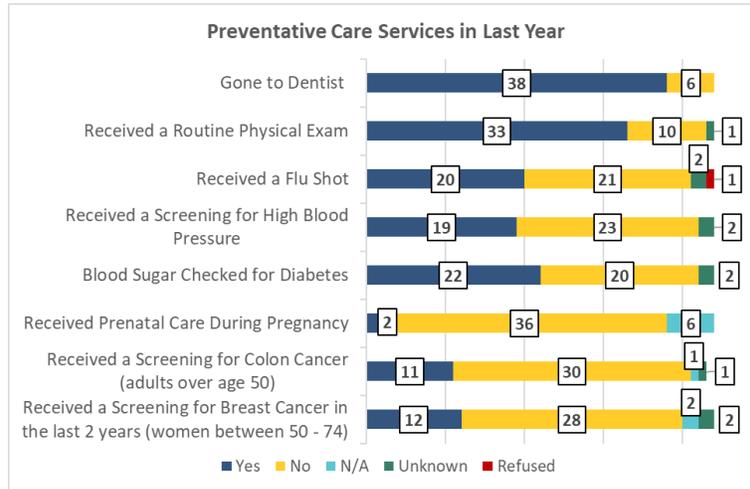
The surveyed households were asked if everyone in their household is up to date on their recommended vaccines. Of the 44 households that were asked, 38, or 86.4%, said Yes, 2 Refused, 1 household stated N/A, and 3 said No. Those who stated No were asked why, and given the choice of Religious Belief, Medical Exemption, Parental Refusal, Prefer Not to Say, and Other; all 3 chose Other. When asked to further specify, 1 stated Scam, 1 stated Dangerous, and 1 Did not specify.

Respondents were asked if they or a member of their household had been told by a healthcare professional that he/she has any of the following: Asthma, Diabetes, Developmental Disability, Immunosuppressed, Physical Disability, Psychosocial/Mental Illness. A total of 24 households provided a response. The most common responses were Asthma and Hypertension, followed by Diabetes and Immunosuppressed.



Respondents were asked if any household members had received any of the following preventative care services in the last year: Dentist, Routine Physical Exam, Flu Shot, Screening for High Blood Pressure, Checked for Diabetes, Prenatal Care during Pregnancy, Screening for Colon Cancer, and Screening for Breast Cancer in the last 2 years. The most

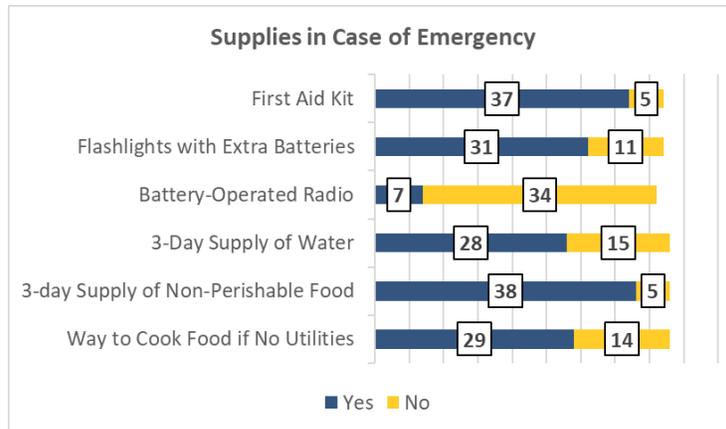
common preventative care services utilized by the households surveyed were going to the Dentist and receiving a Routine Physical Exam, 86.4% and 76.7%, respectively.



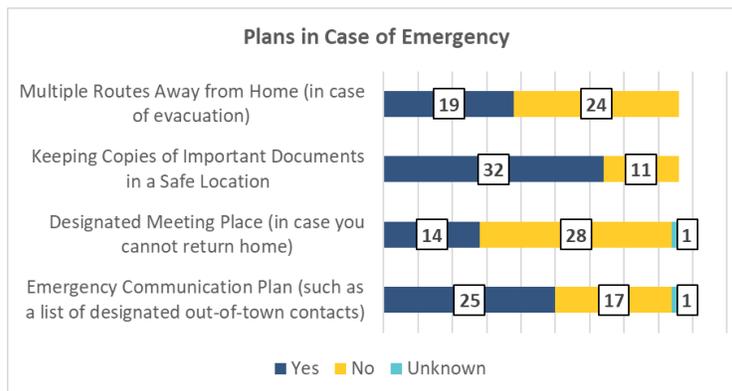
Emergency Preparedness

Households were asked if they currently had a 7-day supply of medication for each person who takes prescribed medication. The majority of households, 28 (65.1%), stated Yes, 7 households stated No, 5 households stated they have No Prescriptions, and 3 stated Unknown. All 43 households that responded stated they currently have access to Transportation. Of those, the majority or 83.7% stated they currently have access to Fuel, 6 households stated No, they do not currently have access to fuel, and 1 household stated N/A.

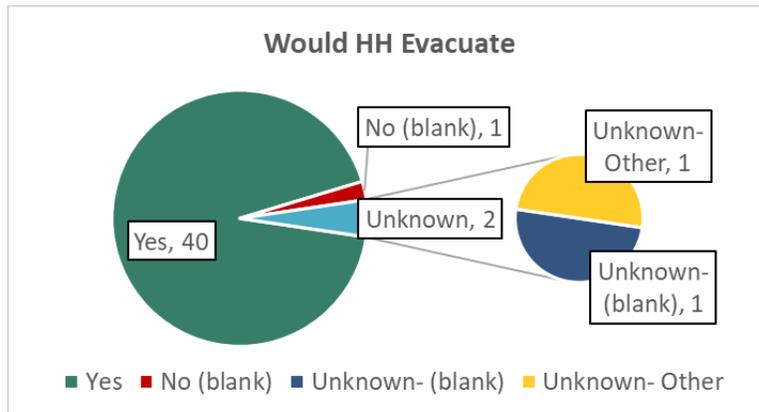
The surveyed households were asked if they had any of the following supplies in case of an emergency: First Aid Kit, Flashlight with Extra Batteries, Battery-Operated Radio, 3-Day Supply of Water and Non-Perishable Food, and Ways to Cook Food if No Utilities. Most households, approximately 88%, stated that they had a First-Aid Kit and a 3-Day Supply of Non-Perishable Food. Conversely, the majority of respondents stated that they do not have a Battery-Operated Radio, 82.9%.



Respondents were asked if they had discussed or planned any of the following in case of an emergency: Multiple Routes Away from Home, Keeping Copies of Important Documents in a Safe Location, Designated Meeting Place, Emergency Communication Plan. Most households stated that they had discussed/planned Keeping Copies of Important Documents in a Safe Location, as well as an Emergency Communication Plan (such as a list of designated out-of-town contacts). Conversely, the majority of households had not discussed/planned a Designated Meeting Place or Multiple Routes Away from Home.



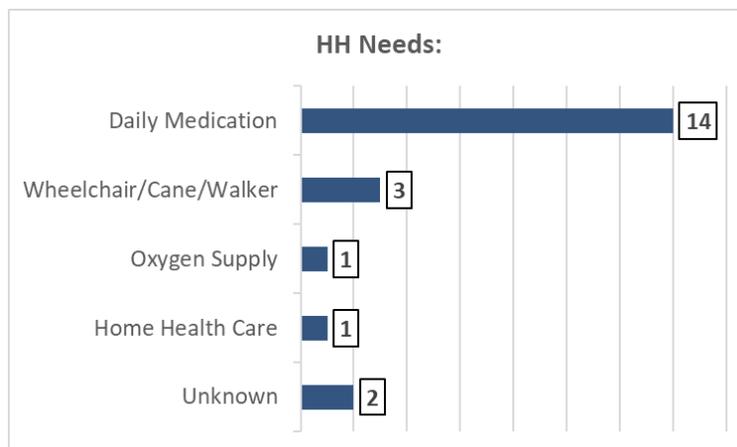
Respondents were asked if Public Authorities Announced a Mandatory Evacuation, if Their Household Would Evacuate, to which 40 respondents, or 93%, stated Yes. 1 respondent stated No, but did not provide a reason, (blank), and 2 respondents stated Unknown, of which 1 provided a reason of Other, and further explained that they “Would make the judgment themselves.”



Medical Care and Prescriptions

Respondents were asked if in the last 12 months anyone in their household required medical care and if they were able to get the care that they needed for everyone in the household. Over half the respondents stated Yes, someone in their home required medical care, and 42 respondents stated they were able to get the care they needed, 1 refused.

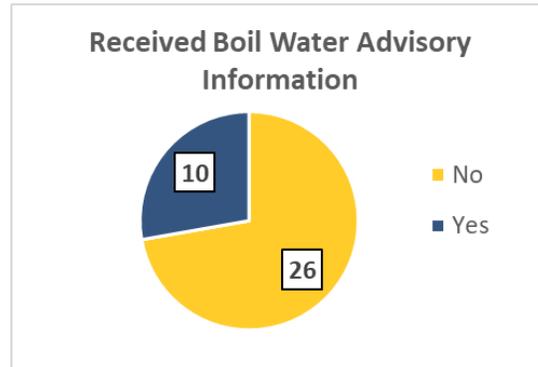
Respondents were asked if anyone in their households needed any of the following: Daily Medication, Wheelchair/Cane/Walker, Oxygen Supply, Home Health Care. A total of 16 households provided a response. The most common need for the households surveyed was Daily Medication.



Communication

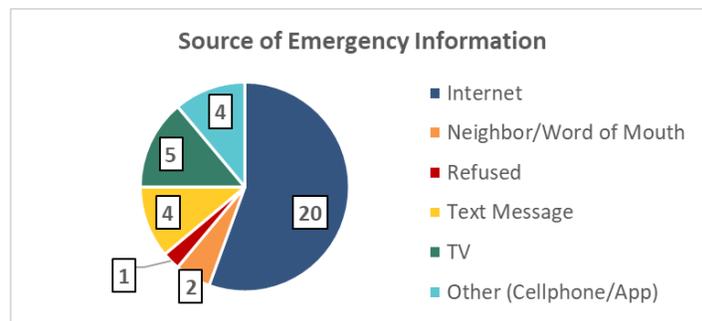
Respondents were asked if in the last 12 months, they or a member of their household Received Any Information about Boil Water Advisories in their area. A total of 36 households provided a response, of which the majority, or 72.2% stated No. Of these responses, 10 households responded Yes. The households that responded Yes were asked what the primary source of the information was, and 7 households provided a response

and 3 stated Text Message, 1 stated Email, 1 stated Mail, and 2 stated Internet, which they both further specified as Facebook, and 1 also specified Neighborhood Newsletter.



Respondents were asked if they or any members of their household Received Warnings about Floods. A total of 36 households provided a response. The majority of households, or 58.3%, stated No, 14 households stated Yes, and 1 household Refused.

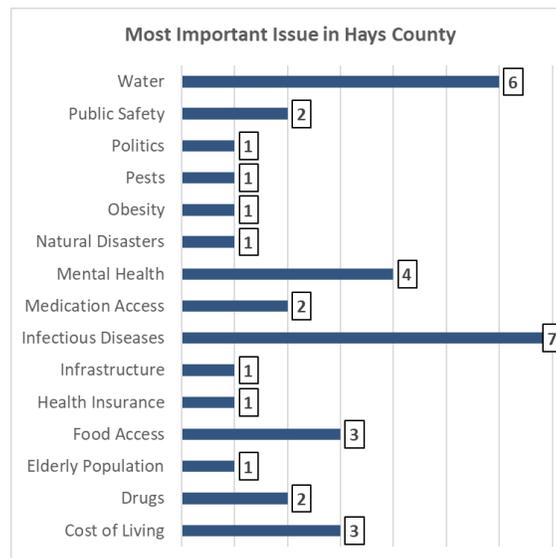
Respondents were asked Where they Would First Look for Reliable Information Regarding Natural Disasters or Emergencies. A total of 36 households provided a response. The majority of households, 55.6% stated Internet, 5 stated TV, 4 stated Text Message, 4 stated Other, 2 stated Neighbor/Word of Mouth, and 1 Refused. The 4 households that stated Other all further specified their Cellphone/App (Cellphone, Phone app, App, and Social Media). Households that stated Internet were asked to specify the webpage they would go to. Of these respondents, 18 households provided a response, with Google being the most common webpage.



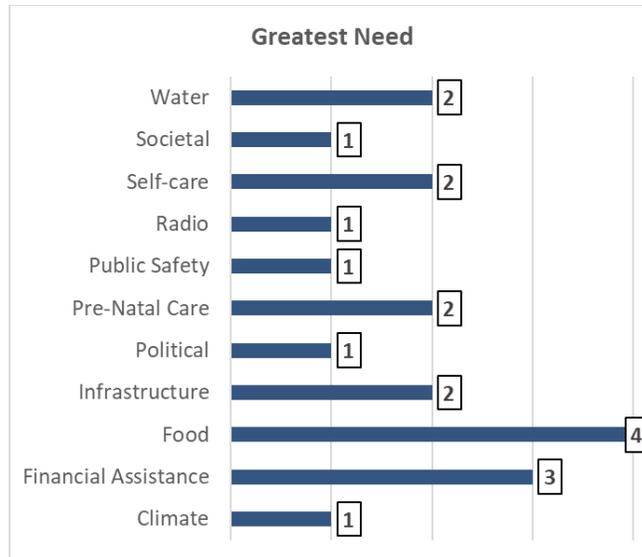
Respondents were asked if they were aware of "Warn Central Texas." The majority of households, 79.4%, stated No, 6 stated Yes, and 1 Refused. Households that stated Yes were asked if the information that they received was helpful, to which 4 stated Yes, and 2 did not provide a response (blank).

Open-ended Questions

Respondents were asked What their Household Thinks is the Most Important Health Issue in Hays County. A total of 31 households provided a response that was categorized into the following topics: Water, Public Safety, Politics, Pests, Obesity, Natural Disasters, Mental Health, Medication Access, Infectious Diseases, Infrastructure, Health Insurance, Food Access, Elderly Population, Drugs, Cost of Living. The most frequently addressed issues were Water and Infectious Disease. The complete list of detailed responses can be found in Appendix B.



Respondents were asked What their Greatest Need was at the Time of the Survey. Of the 40 households that provided a response, 22 households, or 55%, stated they had No Need. The remaining responses were categorized into the following topics: Water, Societal, Self-Care, Radio, Public Safety, Prenatal Care, Political, Infrastructure, Food, Financial Assistance, Climate. The most common needs were Food and Financial Assistance. The complete list of detailed responses can be found in Appendix C.



Discussion

Recommendations

This is the first CASPER conducted in Hays County since 2015, and the primary focus was on gauging community preparedness for an emergency or natural disaster. The survey focused on nine sections: Physical Location, Demographics, Carbon Monoxide Exposure, Animal Safety, Health Status and Disabilities, Emergency Preparedness, Medical Care, and Communication. The data from this CASPER can help Hays County and partners understand the current strengths and weaknesses of county residents.

The population demographics among the surveyed households reflect a significant amount of single-family homes, mostly consisting of adults aged 18-64. Adults older than 64 also represented a significant portion of respondents, which can present challenges during an emergency that requires evacuation or causes a disruption to daily medication or routine medical services. Adjusted messaging about emergency preparedness that includes recommendations for older populations, such as having a 7-day supply of daily medication on hand and bringing necessary medical equipment during an evacuation, may improve preparedness among more vulnerable older adults.

A significant number of respondents indicated someone in the household experiences chronic conditions such as asthma, hypertension, and diabetes. These conditions may prove challenging to individuals experiencing an emergency situation. This again emphasizes the importance of households maintaining a supply of necessary medications such as insulin and inhalers.

Additionally, 38.6% respondents were Hispanic/Latino which aligns closely with the U.S. Census Bureau's population estimates for July 2023 (most recent data), at 39.6%⁷. Of the respondents, 9.3% of households had an adult in the house that did not speak English. The U.S. Census Bureau estimates that up to 25% of households do not speak English at home. This indicates the need for public health messaging in multiple languages, specifically Spanish in Hays County. In conjunction with messaging being released in relevant languages, messaging should be culturally relevant and tailored to the specific audience⁹. These recommendations apply both to preparedness messaging, and messaging occurring during a disaster.

Most of the respondents had access to some resources in the event of an emergency, such as a first aid kit, flashlights with extra batteries, and a 3-day supply of food and water. However, the majority responded 'No' to having a battery-operated radio. Additionally, less respondents had discussed designated meeting places and an emergency communication plan in case of an emergency. These responses are an opportunity for public messaging about recommendations for emergency preparedness, including the supplies and plans that can most help a household in case of an emergency situation. Developing a specific list of recommendations and distributing that online and at community events can increase the resources available on a household level and decrease the strain on public resources during an emergency.

For effective messaging, there also needs to be lines of communication between the public and public health/emergency services. Most respondents had not heard of WarnCentralTexas.org, but did receive their information from the internet. This indicates the importance of public health entities having and expanding online presences, promoting warning systems, and connecting with the community to ensure emergency warnings are received. For example, social media accounts across different platforms may expand the reach of messaging. Encouraging registration for WarnCentralTexas.org could benefit community members in their awareness of ongoing events.

Limitations

There are several limitations to the Hays County CASPER. The CASPER occurred on February 19th and 20th, which were abnormally cold days with subfreezing temperatures which may have impacted the response rate. This may have also impacted the number of volunteers who participated, which also impacted the response rate. Increasing advertising to the community prior to the event may also improve cooperation in the future.

Additionally, Hays County Volunteers were not able to survey all the clusters. Recommendations moving forward include lengthening the amount of time set aside for

survey collection, recruiting more volunteers, and choosing different dates later in the year (in non-emergency circumstances) to improve the chance of mild weather conditions. Additionally, smaller teams would increase the number of clusters surveyed, improving the response rate. Smaller teams would be better facilitated by more iPads, more MiFis and more vehicles. Discrepancies in data collection also hindered analysis and could be improved by more training for surveyors.

Conclusion

The Hays County Health Department CASPER provided insight into emergency preparedness in Hays County and served as a learning opportunity for staff and volunteers about how to conduct a CASPER in the event of an emergency. Although the data is not generalizable, these results are beneficial to stakeholders in adjusting messaging surrounding emergency preparedness.

Acknowledgements

This report was completed in May 2025 and compiled by Madison McLarry (Epidemiologist with the Hays County Health Department) with the assistance of Hays County Epidemiologists Ian Harris and Gabriela Guel, Emergency Preparedness Coordinator Brayden Watson, Data Program Specialist Samantha Jones, Community Outreach Specialist Kate Esqueda, and Director Matthew Gonzales. Special thanks to the staff of the Hays County Health Department who volunteered during subfreezing temperatures. Additionally, thank you to Hays County CERT team, Texas State University, Hays County Office of Emergency Services, Department of State Health Services, and Public Health Region 7 for their volunteers, expertise, and assistance through the completion of this CASPER. This would not have been possible without the help of public health professionals and students from across the region.

Print: Matthew Gonzales, MHA

Local Health Director

Signature: 

Date: October 09, 2025

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Appendix A Questionnaire

Community Assessment for Public Health Emergency Response (CASPER) – Preparedness
 HH=Household DK=Don't Know Ref=Refused NA=Not Applicable

Identification and Physical Location			
A1. Date: ___/___/___	A2. Team Name:	A3. Interviewer Name:	
A4. Cluster ID:	A5. Housing Unit ID (Street Address #):	A6. Number of Housing Units in Cluster:	
A7. Type of Structure: <input type="checkbox"/> Single-Family <input type="checkbox"/> Multiple Unit <input type="checkbox"/> Mobile Home <input type="checkbox"/> Vacant Lot <input type="checkbox"/> Other:	A8. Accessibility: <input type="checkbox"/> House Accessible <input type="checkbox"/> House Not Accessible <input type="checkbox"/> Unsafe Environment <input type="checkbox"/> Other:	Address:	Survey Status Initial: <input type="checkbox"/> Refusal <input type="checkbox"/> Non-Respondent

Demographics and Functional Needs	
D1. Is this your primary residence? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	D2. How many people live in your household full-time? <input type="text"/>
D3a. How many people living in your household are less than 2 years old? <input type="text"/>	D3b. How many people living in your household are 2–17 years old? <input type="text"/>
D3c. How many people living in your household are 18–64 years old? <input type="text"/>	D3d. How many people living in your household are more than 64 years old? <input type="text"/>
D4a. How many people living in your household are male? <input type="text"/>	D4b. How many people living in your household are female? <input type="text"/>
D5. Is anyone in your household pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	D6. What is your race? (check all that apply): <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> Caucasian <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other
D7. Are you Hispanic or Latino? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	
D8. Is there an adult in your household who does not speak English? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	D11. Do you or does a member of your household have difficulty walking or climbing stairs? (5 years or older): <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
D9. Do you or does a member of your household have serious difficulty hearing? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	
D10. Are you or a member of your household blind or have serious difficulty seeing, even when wearing glasses? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	D13. How often in the past 12 months would your household say they were worried or stressed about having enough money to pay your rent/mortgage? Would you say you were worried or stressed – <input type="checkbox"/> Always <input type="checkbox"/> Usually <input type="checkbox"/> Sometimes <input type="checkbox"/> Rarely <input type="checkbox"/> Never <input type="checkbox"/> Refused
D12. Do you or does a member of your household have difficulty dressing or bathing? (5 years old or older): <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	
D14. How often in the past 12 months would your household say they were worried or stressed about having enough to buy nutritious meals? Would you say you were worried or stressed – <input type="checkbox"/> Always <input type="checkbox"/> Usually <input type="checkbox"/> Sometimes <input type="checkbox"/> Rarely <input type="checkbox"/> Never <input type="checkbox"/> Refused	D15. Do you own or rent this residence? <input type="checkbox"/> Own <input type="checkbox"/> Rent <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other
D16. Did your household evacuate your home any time during or before the 2015 flood? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused <input type="checkbox"/> Did Not Live Here	

General Utilities
U1. Do you currently have the following services in your home? (check all that apply):
U1a. Running Water: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused
U1b. Electricity: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused
U1c. Garbage Pick-up: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused
U1d. Natural Gas: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused
U1e. Sewage Service: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused

Community Assessment for Public Health Emergency Response (CASPER) – Preparedness
 HH=Household DK=Don't Know Ref=Refused NA=Not Applicable

U1f. Telephone (Landline): <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused	
U1g. Cell Phone: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused	
U2. What is your current source of electricity? <input type="checkbox"/> No Electricity <input type="checkbox"/> Generator <input type="checkbox"/> Power Company <input type="checkbox"/> Never Had <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other	U3. What is your current source of heat? <input type="checkbox"/> No Heat <input type="checkbox"/> Electricity <input type="checkbox"/> Propane/Gas <input type="checkbox"/> Wood <input type="checkbox"/> Coal/Charcoal <input type="checkbox"/> Never Had <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other
U4. Do you have a working indoor toilet? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused	

Carbon Monoxide Exposure	
E1. Have you used a generator in the last 12 months at this residence? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	E2. In the last 5 years have you used a charcoal or gas grill/camp stove? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
E3. In the last 5 years have you used a pressure washer with the actual engine in the house/garage? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	E4. Do you have a carbon monoxide detector? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused

Animal Safety	
F1. In the last 5 years have you noticed an increase in mosquitoes around your home or neighborhood? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	F2. Are you or your household members doing anything to protect yourselves from mosquitoes? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused

Health Status and Disabilities	
H1. Is everybody in your household up to date on their recommended vaccines? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Refused	H2. Have you or a member of your household ever been told by a healthcare professional that he/she has:
H1b. If no, why? <input type="checkbox"/> Religious Belief <input type="checkbox"/> Medical Exemption <input type="checkbox"/> Parental Refusal <input type="checkbox"/> Prefer Not to Say <input type="checkbox"/> Other	<input type="checkbox"/> Asthma <input type="checkbox"/> Diabetes <input type="checkbox"/> Developmental Disability <input type="checkbox"/> Hypertension <input type="checkbox"/> Immunosuppressed <input type="checkbox"/> Physical Disability <input type="checkbox"/> Psychosocial/Mental Illness <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other
Have any household members received the following preventive care services in the last year?	
H3. Gone to the dentist	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
H4. Screening for High Blood Pressure	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
H5. Blood sugar checked for diabetes	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
H6. A routine physical exam in the last year?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
H7. Received a flu shot	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
H8. Screening for colon cancer (adults over age 50 - colonoscopy, fecal occult blood test)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
H9. Screening for breast cancer in the last 2 years (women between 50 - 74 - mammogram every 2 yrs)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
H10. Received prenatal care during pregnancy	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A

Emergency Preparedness	
S1. What is your household's primary source of drinking water right now? <input type="checkbox"/> No Drinking Water <input type="checkbox"/> Well <input type="checkbox"/> Public/Municipal (tap) <input type="checkbox"/> Bottled <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other	
S2. Does your household currently have a 7-day supply of medication for each person who takes prescribed meds? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No Prescriptions <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other	
S3. Does your household currently have access to transportation? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Never Have <input type="checkbox"/> Refused	S4. Does your household have access to fuel? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Refused

Community Assessment for Public Health Emergency Response (CASPER) – Preparedness
 HH=Household DK=Don't Know Ref=Refused NA=Not Applicable

Does your household have the following supplies in case of an emergency?	
S5. A three-day supply of non-perishable food (e.g. canned fruits and vegetables, protein bars, nuts)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
S6. A three-day supply of water (1 gallon/person/day)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
S7. A battery-operated radio	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
S8. Flashlights with extra batteries	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
S9. A first-aid kit	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
S10. A way to cook food if there are no utilities (e.g. gas/charcoal grill)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
Has your household discussed and planned for any of the following in an emergency (Select all that apply)?	
S11. An emergency communication plan such as a list of designated out-of-town contacts?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
S12. A designated meeting place in case you cannot return home?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
S13. Keeping copies of important documents in a safe location?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
S14. Multiple routes away from home in case of evacuation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A
S15. If public authorities announced a mandatory evacuation from your home due to an emergency, would your household evacuate? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> N/A	
S15b. If NO, of the following choices, which reasons would prevent your household from evacuating? (Select all that apply):	
<input type="checkbox"/> Nowhere to go <input type="checkbox"/> Lack of Transportation <input type="checkbox"/> Concern about Leaving Property <input type="checkbox"/> Concern about Personal Safety	<input type="checkbox"/> Concern about Leaving Pets <input type="checkbox"/> Concern about Leaving Livestock <input type="checkbox"/> Concern about Traffic Jams
<input type="checkbox"/> Inconvenient or too Expensive <input type="checkbox"/> Can't Evacuate due to Health Problems <input type="checkbox"/> Lack of Trust in Public Health Officials	<input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other

Medical Care and Prescriptions	
M1. In the last 12 months, have you or has anybody in your household required medical care? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	M2. In the last 12 months, have you been able to get the care you need for everyone in your household? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
M3. Do you or does any member of your household need any of the following (select all that apply)? <input type="checkbox"/> Daily Medication (other than birth control or vitamins) <input type="checkbox"/> Dialysis <input type="checkbox"/> Home Health Care <input type="checkbox"/> Oxygen Supply <input type="checkbox"/> Wheelchair/Cane/Walker <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other Type of Special Care	

Communication	
C1. In the last 12 months, have you or members of your household received any information about boil water advisories in your area? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused	C2. Have you or members of your household received warnings about Floods [specific concern, i.e., carbon monoxide]? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused
C3. Where would you first look for reliable information regarding natural disasters or emergencies? <input type="checkbox"/> TV <input type="checkbox"/> Radio <input type="checkbox"/> Text Message <input type="checkbox"/> Neighbor/Word of Mouth <input type="checkbox"/> Internet <input type="checkbox"/> Flyer/Poster <input type="checkbox"/> Local Newspaper <input type="checkbox"/> Unknown <input type="checkbox"/> Refused <input type="checkbox"/> Other	C4. Are you aware of Warn Central TX to better prepare you and your family for a natural disaster or other significant event? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Refused

Community Assessment for Public Health Emergency Response (CASPER) – Preparedness

HH=Household DK=Don't Know Ref=Refused NA=Not Applicable

Other
What does your household think is the most important health issue in Hays County?
What is your greatest need at this time?

Conclusion	
Survey Status End:	Survey Status Summary:
<input type="checkbox"/> Complete	<input type="checkbox"/> Complete
<input type="checkbox"/> Incomplete	<input type="checkbox"/> Incomplete
	<input type="checkbox"/> Refusal
	<input type="checkbox"/> Non-Respondent

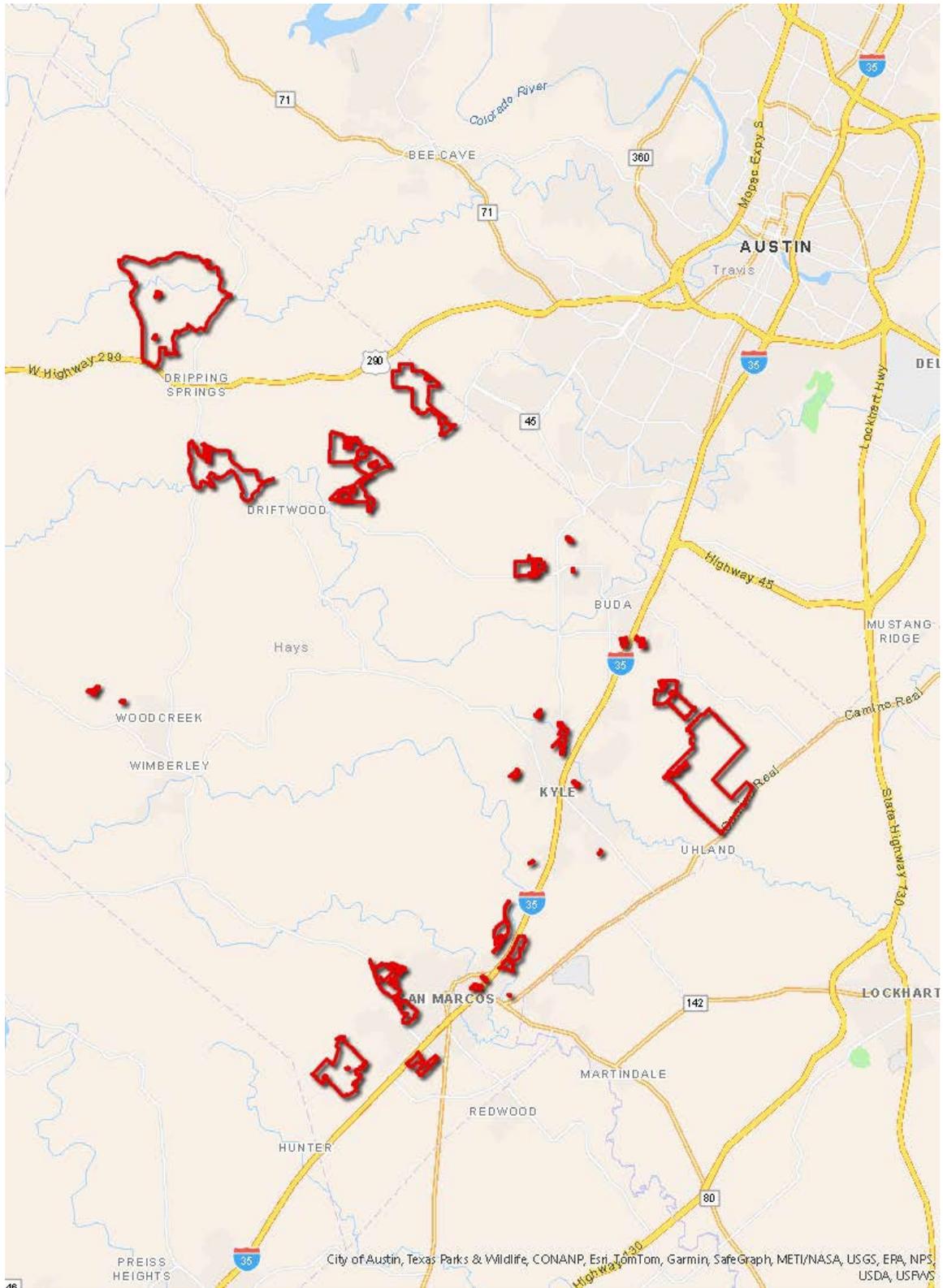
Appendix B Most Important Issue Responses

Most important issue in Hays County (detailed response)	Count
Cost of Living	2
Cost of living “too expensive”	1
Poverty	1
Drugs	1
Drugs in the area	1
Drugs/Mental Health/Infrastructure/Pests	1
Fentanyl, bullying, low water crossing, ants, scorpions.	1
Elderly Population	1
Anything to do with older aged persons	1
Food Access	2
Access to healthy food	1
Food insecurity students who could not eat at	1
Food Access/Cost of Living	1
Access to food and housing	1
Health Coverage	1
Lack of health coverage	1
Infectious Diseases	7
Bird flu	1
Flu	2
Flu and Covid	2
Infectious Diseases	1
STD/STIs	1
Medication Access	2
Dropped 24 hour pharmacy if need medication	1
Vaccines	1
Mental Health	3
Lack of mental health services	1
Mental health	2
Obesity	1
Obesity	1
Politics	1
“Trump Derrangement Syndrome. I was the only one with signs up for Trump.”	1
Public Safety	2
Public Safety	1
Traffic	1
Water	5
Supply of drinking water	1
Water	3
Water quality	1
Water/Natural Disasters	1
Drought/Water restrictions, Freeze	1

Appendix C Greatest Need Responses

Greatest Need (detailed response)	Count
Climate	1
To warm	1
Financial Assistance	2
money	1
The economy (expenses)	1
Food	2
Food and Financial Assistance	1
Sometimes food and sometimes rent	1
Food and Water	1
Food and water	1
Infrastructure	2
More sidewalks/accessibility	1
Not frozen pipes	1
None	22
Political	1
Different government	1
Pre-Natal Care	2
Prenatal	1
Pre-Natal Care	1
Public Safety	1
Road safety	1
Radio	1
Radio	1
Self-care	2
Be healthy	1
Relaxation	1
Societal	1
Lack of population - rather not have more people drawn to this area	1
Water	1
Water	1

Appendix D Cluster Map



Appendix E Training Presentation



Community Assessment for Public Health Emergency Response (CASPER)

CASPER Community Assessment for Public Health Emergency Response Toolkit

Third Edition 3.1



Center for Disease Control and Prevention
National Center for Environmental Health

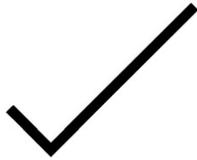


HAYS COUNTY
HCHD
HEALTH DEPARTMENT

Today's Agenda

-  What is a CASPER?
-  Purpose and Goals of CASPER
-  Methodology Overview
-  Selecting Households
-  Packet Review
-  Forms
 - Questionnaire
 - Tracking Sheet

What is a Community Assessment for Public Health Emergency Response (CASPER)?



- A CASPER is a type of household survey developed by the CDC which is used to quickly gather information about a community.
- A CASPER can be beneficial in a time of disaster to collect information about the needs of a community.
- Additionally, it can be used in situations unrelated to a disaster. For example, public health departments have used CASPER to identify household-level information about community health status

Goals and Objectives

Our Goal in conducting this CASPER is to:

Gain a better understanding of the general preparedness of Hays County community members for natural disasters and emergencies.

Objectives:

1. Identify key strengths and weaknesses of Hays County residents regarding emergency preparedness
2. Identify gaps for crucial resources for Hays County residents in the event of a natural disaster or emergency
3. Develop recommendations to improve the general preparedness of Hays County residents both on a household scale and in policy

CASPER Methodology Overview



Two-stage probability sampling

30 clusters
7 households per cluster



Household interview



Data weighting to obtain population estimates



Report generated and shared with key stakeholders and decision-makers

Selecting Households

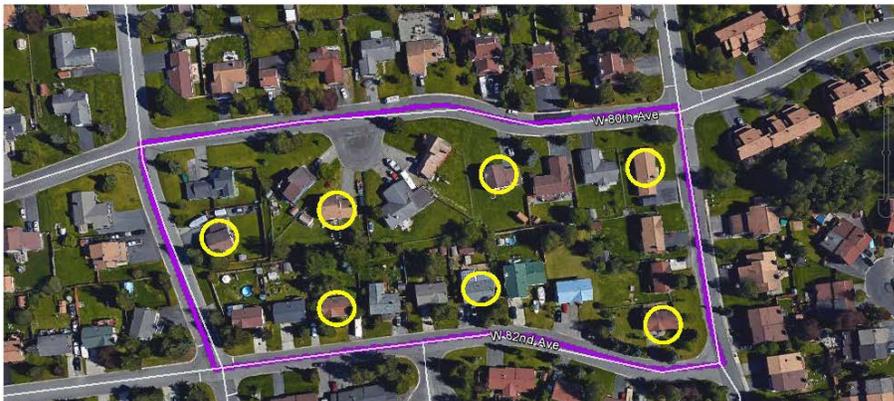
- Randomly choose a starting point (e.g., intersection) prior to heading into the field
- Select the nearest house, then every x house after (x has already be calculated for each cluster and is in your folder)
 - Based on the approximate number of households found on the map
 - If 23 households, $23/7=3$... select every 3rd household to get 7 surveys
 - Apartment complexes: each unit is a separate household
- The main goal is to be sure interviews are spread out across the cluster

Example: Selecting Households to Interview

- 24 chocolates in the box
- You want to randomly eat 7
- $24/7 = 3.3$
- $N = 3$



Example: Selecting Households to Interview



Tips: Selecting Households to Interview

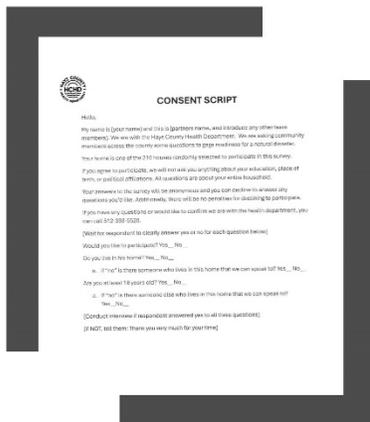
- **Apartment complexes**
 - High rises: randomly select 7 floors then get an interview on each floor
 - Mixed clusters: attempt houses first then move to apartment complex
- **Introduce yourself to front desk/leasing office (we have notified many of the apartments selected)**
- **Always call headquarters if there are any questions**



Things to Avoid

- **Avoid bias in sampling & poor record keeping**
 - **Make sure to choose houses randomly**
 - **Don't go to houses just because they are convenient**
 - **Record every household selected, even they do not respond**
- **DO NOT replace households until 3 good faith attempts have been made**

***These Mistakes Can Impact
the Results of the Survey***



Introduction to CASPER Packet

- **In your CASPER Packet you should find**
 - Maps of your cluster(s)
 - The map number(s) should correspond with the number(s) written on the outside of your folder
 - 1 consent form in a plastic cover
 - Numerous additional consent forms
 - At least 7 questionnaires per cluster
 - At least 2 tracking forms per cluster



Tracking Form

- Used for tracking every household sampled
- Each cluster is collected on a separate form
- Document events at every household you attempt to survey, even if they do not answer
- Impacts data analysis and data weighing

Tracking Form

Make sure to track EVERY household you visit!

Community Assessment for Public Health Emergency Response (CASPER): Tracking Form

City: _____ Cluster # (i.e., 1-30): 13 # of Houses in the Cluster: 53 Team: dinosaur Date of Interview: 5/2/17

Instructions: Use one tracking form per cluster. Check where appropriate, but try to choose only one best option for each of the five categories. Go as far down the list as possible for each site you visit. Use neighbors to find information if no resident is available.

Sampled Households	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1
1) ACCESS																			
House is Accessible	X		X	X	X	X	X	X	X	X	X								
House is Inaccessible		X																	
2) TYPE OF DWELLING																			
No housing structure																			
Mobile Home																			
Single Family Home	X		X	X	X		X	X	X	X									
Apartment or Condo																			
Other																			
3) ANSWER																			
Door was answered	X		X	X			X	X	X	X									
Appears home, but no answer																			
Appears vacant																			
Nobody home																			
1 st visit	X				X	X	X		X	X									
2 nd visit																			
3 rd visit							X												
4) INTERVIEW																			
Language Barrier																			
Refused to Participate					X			X											
Interview begun, not finished																			
"Come back later"	X		X																
Interview Completed	X		X				X		X	X									
Survey # (6a, 1-7) from Completed Questionnaire:	6		1	4			3		7	2	5								

Tracking Form

Write information to identify households to return to or any notes that you may need to take (e.g., why the household is inaccessible) on the back of the form

- Community Assessment for Public Health Emergency Response (CASPER): Notes**
- Instructions:** Use this page to keep notes on which houses may need return visits
- Sampled Households
1. 2-story with green roof and rock garden — Spanish, come back after 5:30pm
 2. 3 big scary dogs w/no trespassing sign
 - 3.
 4. CALL TONIGHT 9:00pm - 123.555.4356
 5. Red door, large gnome on the porch
 6. McMansion on the corner
 7. Dark brown with white awning
 - 8.
 9. Unique house w/columns in front & Christmas decorations still up
 - 10.
 11. 2 flag in window (go hawks!) bamboo garden on side
 - 12.
 - 13.
 - 14.

Standardization Procedures

Tips for standardization

- Ask the question in the *same order* with the *exact wording*
- Don't prefill questions or assume answers
- Read the entire question
- Record answers verbatim
- Changing wording = asking different questions
- If respondents have difficulty...pause!

Why Standardize Procedures

- Increases reliability of data
- Avoids bias/error

Why Standardization is Difficult

- Situation is artificial
- Using a script can be awkward making it tempting to change content

Standardization increases reliability of data

Ending the CASPER Interview

- Thank for participation!
- Give another chance for participants to ask any questions
- Re-check the questionnaire and tracking form once you leave the household

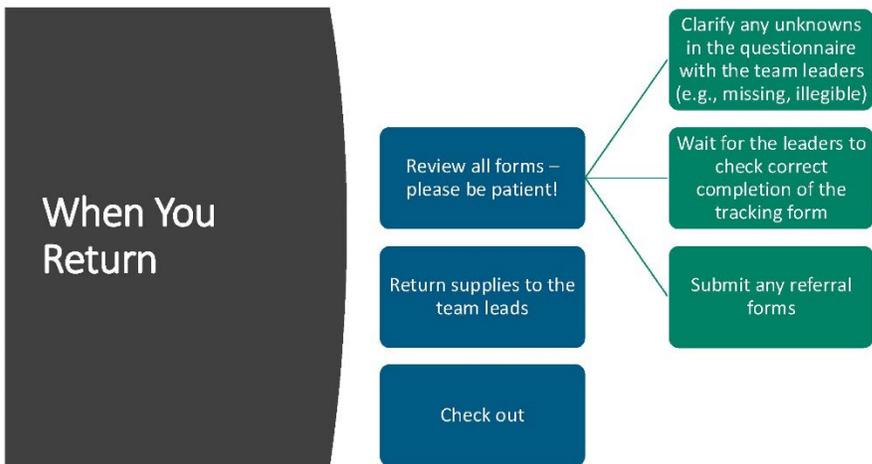


Safety First!

No trespassing vs no solicitation

Personal safety

- Do not enter households for any reason
- Do not survey homes with purple fence markers (indicates homeowner will "shoot on sight")
- Know your limitations
- Drink plenty of water
- If you find yourself in an uncomfortable or unsafe situation with a respondent use the phrase "Brayden is calling, we need to head back to the EOC."
- Drivers should not be distracted with maps while in motion



Now what?

- Once broken up into teams
 - Log into ArcGIS Field Maps and ArcGIS Survey 123
 - Open Survey123 and click Download Surveys at the bottom of the screen. Download "Community Health Assessment Survey" This is where responses will be collected
 - Open ArcGIS Field Maps and open "Community Health Assessment Survey Home Addresses"
 - Each dot represents an address, and the address is displayed by clicking on the dot. You can use this map to select
 - Receive cluster assignment and corresponding folders
 - Designate driver and navigator
 - Find first address (located on table in folder)