The Health and Wellness Landscape in Southeast Texas: An Assessment of Jefferson, Hardin, Orange, and Liberty Counties

Final Report
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TREATY OAK STRATEGIES

EPISCOPAL HEALTH FOUNDATION

COLLEGE OF ARTS AND SCIENCES
LAMAR UNIVERSITY
Social Work

The Health and Wellness Landscape in Southeast Texas: An Assessment of Jefferson, Hardin, Orange, and Liberty Counties

Final Report

Ginger Gummelt, PhD, LCSW-S
Lamar University

Lori Wright, LCSW-S
Lamar University

Laurie Vanhoose
Treaty Oak Strategies

Sarah Mills
Treaty Oak Strategies

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INTRODUCTION

The final report on the Health and Wellness Landscape in Jefferson, Hardin, Orange, & Liberty Counties signals the conclusion of a collaborative research effort investigating the unique needs of these vulnerable communities. The purpose of this project was to better understand the non-medical issues which impact access to healthcare in these areas. Specifically, it was important to both Texas Children's Health Plan (TCHP) and The Episcopal Health Foundation (EHF) to gather data surrounding the current food insecurities and other non-medical needs of community residents (e.g. transportation, housing, employment, etc.), the existing resources that are available in the community, and if Community Based Organizations (CBOs) consistently have enough resources to serve their communities. Additionally, TCHP and EHF wanted to better understand if and how individuals in need of non-medical services are identified, screened, and the existing referral patterns of both CBOs and health care providers.

During the summer of 2022, Texas Children's Health Plan noted that there was limited information to the needs and issues of several counties within southeast Texas (east of Harris County) and consulted with the Episcopal Health Foundation to develop ways to better understand the needs of these communities. EHF then reached out to Treaty Oak Strategies and Lamar University Social Work Program for further consultation. The aim of this project was to conduct a needs assessment survey of residents, Community-Based Organizations (CBOs), and health care providers in the Jefferson, Hardin, Orange, and Liberty counties to assess non-medical drivers of health (NMDoH) in these areas. Situated in the heart of the Golden Triangle in Southeast Texas, Lamar University works closely with the communities of Jefferson. Hardin. Orange, and Liberty counties. Lamar University has created strong relationships with Primary Health, Behavioral Health and Integrated Health Centers in the area and has been a primary provider of mental health professionals, allied health professionals, and social work advocates in the area. Designated by the Health Resources Service Administration (HRSA) as medically underserved areas, the Jefferson, Hardin, Orange, and Liberty counties serve a highly diverse and often under-resourced population. Through the placement of students, engagement with the community, and connection of alumni across the area, Lamar University has maintained outstanding relationships with both community-based organizations and the residents of the greater Golden Triangle.

Collectively known as the Golden Triangle, Jefferson, Hardin, and Orange counties are traditionally recognized as vulnerable communities within southeast Texas. Added to this, Liberty County neighbors Hardin County with similar demographics and challenges. Beyond the limits of Harris County, home to the metropolis of Houston, these counties are generally more rural areas which border the Gulf Coast and reach to the edges of Louisiana (Figure 1). The vulnerability due to lack of resources in these smaller counties is exacerbated by additional risk

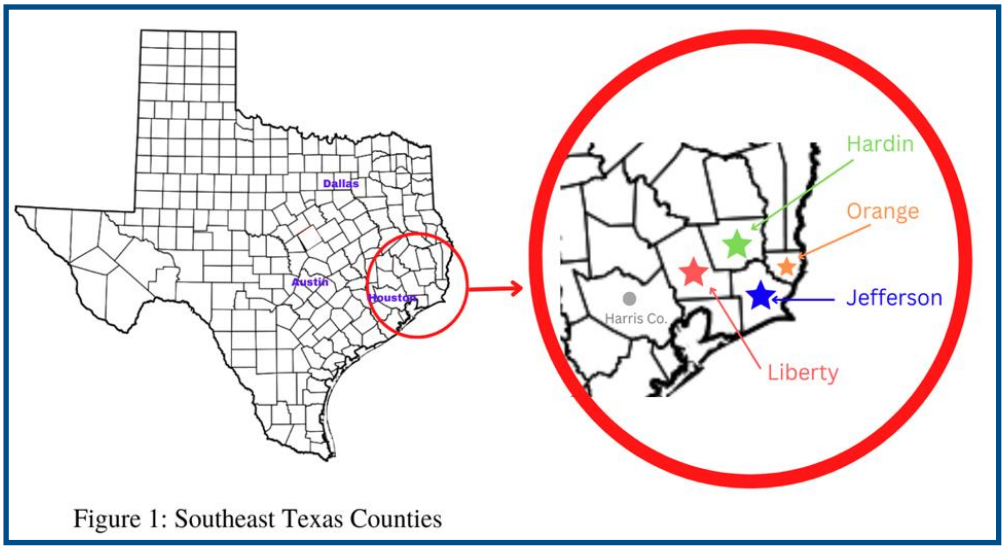


Figure 1: Southeast Texas Counties

factors including high poverty rates, low-income levels, limited education (beyond secondary), and aging populations (U.S. Census Bureau, 2023). Table 1 summarizes the vulnerability risks for Jefferson, Hardin, Orange, and Liberty counties with a comparison to the nearby Harris County. Furthermore, Jefferson, Hardin, Orange, and Liberty counties are highly susceptible to the severe devastation of natural disasters, particularly hurricanes and flooding, which further complicate the community risks. For example, extensive damage caused by Hurricane Harvey in 2017 resulted in the loss of many larger grocery stores across these communities. Stores were then abandoned and/or closed, leaving many neighborhoods without access to a regular grocery supply; thus creating or exacerbating a local food desert. This was repeated in 2019 when Tropical Storm Imelda caused similar damage and flooding to local homes and businesses in these counties.

This project was funded by Episcopal Health Foundation and Texas Children's Health Plan.

Table 1: Vulnerability Risks for Jefferson, Orange, Hardin, and Liberty Counties with comparison to State of Texas – April 2020 data

	Jefferson County	Orange County	Hardin County	Liberty County	Texas Averages
Population Estimate	256,526	84,808	56,231	91,628	29,145,505
Persons in Poverty	49,253 **(19.2%)**	10,601 **(12.5%)**	5,454 **(9.7%)**	14,294 **(15.6%)**	4,138,662 **(14.2%)**
Persons 65 and over	38,479 **(15.0%)**	13,569 **(16.0%)**	9,728 **(17.3%)**	11,270 **(12.3%)**	3,905,498 **(13.1%)**
Post-secondary education (persons 25 years or older)	48,996 **(19.1%)**	14,248 **(16.8%)**	10,515 **(18.7%)**	9,071 **(9.9%)**	9,180,834 **(31.5%)**
Persons with a disability (under age 65)	26,166 **(10.2%)**	9,838 **(11.6%)**	6,804 **(12.1%)**	10,262 **(11.2%)**	2,331,640 **(8.0%)**
Persons without health insurance	59,771 **(23.3%)**	13,909 **(16.4%)**	9,728 **(17.3%)**	21,258 **(23.2%)**	5,945,683 **(20.4%)**
Race/Ethnicity					
White alone	145,194 **(56.6%)**	73,868 **(87.1%)**	51,170 **(91.0%)**	79,350 **(86.6%)**	22,704,348 **(77.9%)**
Black or African American alone	88,245 **(34.4%)**	7,802 **(9.2%)**	3,205 **(5.7%)**	8,521 **(9.3%)**	3,847,207 **(13.2%)**
American Indian / Alaskan Native alone	2,822 **(1.1%)**	678 **(0.8%)**	394 **(0.7%)**	1,374 **(1.5%)**	320,601 **(1.1%)**
Asian alone	10,261 **(4.0%)**	1,018 **(1.2%)**	506 **(0.9%)**	733 **(0.8%)**	1,603,003 **(5.5%)**
Two or more races	4,6170 **(1.8%)**	1,442 **(1.7%)**	900 **(1.6%)**	1,558 **(1.7%)**	641,201 **(2.2%)**
Hispanic or Latino	59,258 **(23.1%)**	7,887 **(9.3%)**	3,711 **(6.6%)**	31,428 **(34.3%)**	11,716,493 **(40.2%)**

U.S. Census Bureau: https://www.census.gov/quickfacts/fact/table/US/PST045221

Much like other states in the U.S., the state of Texas is faced with challenges for meeting the healthcare needs of the residents. Texas is suffering to the point of a public health emergency. Of the 254 counties in Texas, 224 (88%) are designated Health Care Professional Shortage areas (HPSAs). According to the Health Resources & Services Administration (HRSA), Jefferson, Orange, Liberty, and Hardin counties all qualify as Primary Care Health Professional Shortage areas for both primary care and mental health services. Jefferson county and Orange county are also designated as medically underserved populations (HPSA Find, n.d.).

The landscape of overall health for Jefferson, Hardin, Orange, and Liberty counties is both concerning and markedly below the state averages. According to statistics provided by the County Health Rankings and Roadmaps (2022), Jefferson, Orange, and Liberty counties all fall within the lowest quartile for health outcomes within the state of Texas. Furthermore, premature deaths for persons under 75 years of age are well above the state average for all four counties. An overview of health and healthcare availability is summarized in Table 2.

Table 2: Summary of Health and Health Outcomes

	Jefferson County	**Orange County**	**Hardin County**	**Liberty County**	**Texas Averages**
Health Outcomes	0% - 25% lowest	0% - 25% lowest	25% - 50% middle	0% - 25% lowest	
Health Factors	0% - 25% lowest	0% - 25% lowest	50% - 75% Higher middle	0% - 25% lowest	
Premature deaths	9,900	10,500	10,100	10,200	7,000
Poor or fair health	24%	21%	21%	27%	21%
Low birth weight	10%	9%	9%	9%	8%
Adult smoking	19%	21%	21%	22%	15%
Adult Obesity	41%	40%	36%	37%	34%
Physical Inactivity	34%	30%	30%	37%	27%
Teen Births (per 1000)	38	41	33	42	29
Uninsured	22%	17%	16%	23%	21%
Primary Care Physicians	1,880:1	5560:1	4800:1	4410:1	1630:1
Mental Health Providers	870:1	3600:1	2240:1	4360:1	760:1
Unemployment	11.9%	10.5%	9.0%	10.6%	7.6%
Children in Poverty	26%	21%	13%	20%	19%
Violent Crime	707	324	157	410	420
Air pollution – particle matter	10.2	10.4	10.4	10.3	9.0

County Health Rankings & Roadmaps. (2022). https://www.countyhealthrankings.org/

Non-medical drivers of health (NMDoH), often referred to as social determinants of health, are factors and conditions beyond healthcare and well-being that influence health outcomes (Turner et al, 2020). These factors, forces, and circumstances shape the conditions of daily living and create the framework in which health is maintained. Examples include social policies, social norms, access to resources, economic systems, and governmental policies. For the individual,

these NMDoH influence the risk of illness and ability to access healthcare. These include factors such as housing, employment status, transportation, local resources, and working conditions (Cogburn, 2019; Sharma et al., 2018).

Over the past several decades, research indicates that the general health of the U.S. population has improved notably. Life expectancy has improved, and mortality (based on age-adjusted rates) has decreased (National Center for Health Statistics, 2012). Subsequently, researchers have noted marked variations in the general health based on geographic areas and social groups, often leading to broader health disparities. While social conditions and groups may not directly influence health, they often generate increased health risk factors such as smoking, unhealthy diet, lack of physical activity, and alcohol or drug use (Arcaya & Arcaya, 2015; Miller & Vasan, 2021). Social determinants, the larger conditions, influence health often through resources such as available care, knowledge and education, and quality of care (Sing et al., 2017).

Non-medical and/or social determinants have dense and complex effects on overall health. Research over the past two decades suggests that medical care accounts for 10-20% of the contributing variables to healthy outcomes, leaving the remaining 80-90% to non-medical drivers (Braveman et al., 2010; Magnan, 2017; McGinnis et al., 2002; Schroeder, 2007). While non-medical determinants of health affect the population as a whole, the research is clear that vulnerable populations are at an increased risk. For example, residents in rural communities and/or poorer neighborhoods are less likely to have access (transportation, availability, etc.) to nutritious foods. This may result in a number of health-related issues including obesity, diabetes, or anemia (Perez et al., 2018). Another example may include poor air quality, often found in lower income/lower priced neighborhoods, may exacerbate breathing issues such as asthma or COPD. Furthermore, lack of insurance often prevents families from seeking preventative healthcare. Such examples only begin to address the complex issues related to healthcare beyond medical treatment.

It is clear in the literature that improving health outcomes in the U.S. will require intentional collaboration and consideration of the non-medical drivers of health (Braveman & Gottlieb, 2014; Linde-Feucht & Coulouris, 2012; Nutbeam & Lloyd, 2021). A better understanding of the various factors which influence health at all levels can help practitioners, providers, payors, and policy makers better meet the needs of the growing population. It can also help healthcare providers and payors develop and implement routine procedures which assess and respond to social needs (Gold et al., 2017; Gottlieb et al., 2013).

METHODOLOGY

To conduct the comprehensive needs assessment, researchers decided to survey residents living in Jefferson, Hardin, Orange, and Liberty counties. Researchers also found it important to survey CBOs and health care providers to better understand how they identify the needs of individuals and connect them to resources, and their current capacity to serve the community. Specifically, this project sought to answer the following research questions:

1. What are the specific needs of the community (members, CBOs, and providers) related to the non-medical drivers of health and food insecurities?
2. Where are the gaps in services for each county as identified by the community?

It was determined that the researchers would gather information utilizing electronic surveys developed specifically for each of the three groups.

Survey Questions

To develop the survey questions, research was conducted on ways to measure food insecurity and what other non-medical drivers may exist in each of the 4 communities for individuals, CBOs, and health care providers. Researchers reviewed existing screening tools and needs assessments to assist in the development of the surveys for this report, including:

- The Food and Agriculture Organization of the United Nations Voices of Hunger Food Insecurity Experiences Scale (FIES) which is an experience-based measure of household or individual food security.
- *Protocol for Responding to and Assessing Patient Assets, Risks, and Experience* (PREPARE) which is a national standardized patient risk assessment protocol designed to engage patients in assessing and addressing social determinants/non-medical drivers of health.
- The United States Department of Agriculture (USDA) Economic Research Service website which links to various surveys and modules including:
    - U.S. Household Food Security Survey Module
    - U.S. Adult Food Security Survey Module
    - Self-Administered Food Security Survey Module for Youth Ages 12 and Older
    - CPS Food Security Supplements
- The Kaiser Permanente *Your Current Life Situation Survey* which was developed to capture a range of social and economic needs, including living situation, housing, food, utilities, childcare, debts, medical needs, transportation, stress, and social isolation.

- *The Health-Related Social Needs (HRSN) Screening Tool* developed by the Centers for Medicare & Medicaid Services Center for Medicare and Medicaid Innovation for use in the Accountable Health Community Model to test the impact of systematically finding and addressing the health-related social needs of Medicare and Medicaid beneficiaries.

Resident Survey Questions

The main goal of the resident survey was to identify the prevalence of food insecurities and other non-medical needs in the community and determine if individuals are accessing existing community resources. The Food and Agriculture Organization of the United Nations Voices of Hunger provided the initial list of questions for the resident survey. Eight key questions make up the Food Insecurity Experiences Scale (FIES) and it is recommended to ask the questions from the perspective of the last twelve months. The primary questions are:

1. You were worried you would not have enough food to eat
2. You were unable to eat healthy and nutritious food
3. You ate only a few kinds of foods
4. You had to skip a meal
5. You ate less than you thought you should
6. Your household ran out of food
7. You were hungry but did not eat
8. You went without eating for a whole day

Supplemental questions were added to the primary questions to gather more details about the respondent's possible limited access to food within the last twelve months, to help identify the root cause and obtain other important information including:

- If the individual has health insurance and the type of coverage (employer sponsored, Medicare, Medicaid)?
- The financial and non-financial issues that contribute to food insecurities.
- The places in the community that individuals seek assistance for food and other non-medical needs.

CBO Survey Questions

The main goal of the CBO survey was to determine the type of services they provide and to identify if they consistently throughout the year have the resources and infrastructure necessary to address the needs of their community. Researchers incorporated questions to obtain this information and questions were also built into the survey to obtain specific information about the CBO including:

- The number of people the CBO can serve in a year.
- Where the CBO provides services.
- Whether or not the CBO had specific eligibility criteria that must be met for an individual to access services.
- The types of programs the CBO offers to address food insecurities.
- If, how and the frequency of which a CBO screens individuals for food insecurities and other non-medical needs.
- The main barriers impacting community residents' ability to obtain food.

Health Care Provider Survey Questions

The main goal of the provider survey was to determine if the providers screen patients for non-medical services, if they provide clients with referrals, and if they track referrals. Questions were included in the survey to gather the following information:

- The population the provider serves.
- If the provider screens patients, the types of screening tools used, and the frequency patients are screened.
- Whether or not the provider tracks referrals, and how they track.
- Challenges for conducting screenings and tracking.
- The various non-medical needs for which providers are screening.
- The available referrals and resources available for clients in the county and what additional resources are needed.

Survey Collection

The surveys were collected electronically using SurveyMonkey™ for all three groups. The resident surveys were completed by student volunteers from the department of Social Work at Lamar University. The volunteers were provided iPads and sent to public locations (e.g., the public library and meeting spaces) in each of the four counties and randomly asked adult (18+) individuals if they would be interested in participating in the survey. Individuals were selected at random and were not selected based on their race, ethnicity, gender, or if they were currently receiving services in the community.

To survey CBOs, a list was created for each community by accessing several sources including local resource lists provided by several agencies, *211 Texas* information, and word of mouth. A solicitation email was sent explaining the purpose of the survey and a link to the survey. If a response was not received within a week, a follow-up email was sent. Phone calls were made to

agencies which had not responded or had returned emails after the second email was sent and a final reminder email was sent two weeks later for all non-responding CBOs.

To survey providers in each of the counties, researchers had to determine which providers would be engaged in identifying and referring clients for food insecurities and other non-medical needs. After the provider types were identified, outreach was conducted to the provider associations representing Federal Qualified Health Centers (FQHCs), local hospice and home health agencies, local mental health authorities (LMHAs), family planning clinics, and other providers such as MDs, nurses, and hospitals. An email was sent to each identified contact explaining the purpose of the survey and a link to the survey. Additional reminders were sent over a two-month period to remind providers about the survey.

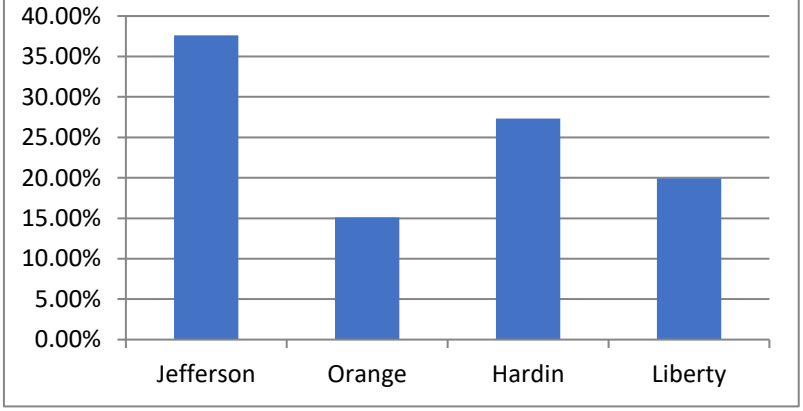
Approval from the Lamar University Institutional Review Board (IRB) was obtained to ensure the protection of the rights, welfare, and well-being of human subjects. This has adhered to all guidelines set forth by the IRB-FY23-10.

RESULTS

Community Members/Residents

A total of 322 surveys were collected from community members in the Jefferson, Hardin, Orange, and Liberty counties. Of those surveyed, 69% reported having health insurance compared to 31% who reported no health insurance. After careful review of the data, it was noted that there were marked differences in the responses by those reporting having health insurance and those not having health insurance. Data was then reviewed in three sections: the overall landscape, those identified as having health insurance, and those without health insurance.

Graph 1: Resident Responses by County



Overall Responses

Food Insecurities: Over 60% of the respondents noted that within the last 12 months, the food they had purchased did not last as long as needed and nearly 40% indicated that they worried that food would run out before they could buy more. Survey participants also indicated some concerns about being able to afford healthy food with 45% noting they were able to "sometimes". In regard to preparing nutritious meals, 43% indicated that they can cook, but nutritious foods are too expensive and 25% noted that they are too busy to prepare healthy meals. When asked about barriers to getting food, beyond financial reasons, nearly 45% also reported transportation issues. Nearly 30% indicated that there is not a place near their home to buy food, and 27% noted that work or childcare keeps them from purchasing food. Other reasons listed by the participants include availability (shelves not stocked or limited selection), time, and health or disability issues.

When asked specifically about food insecurities, 71% of the respondents indicated that, in the past 12 months, they have worried about food running out before they had money to buy more (44% responding "sometimes true" and 27% responding "often true"). Nearly 33% reported either cutting the size of their meals or skipping meals within the past year and 34% indicated that they had eaten less than they felt they should because there was not enough money to buy food and that they were hungry but did not eat because there was not enough money for food.

Barriers to Obtaining Food: When asked about barriers to getting food, beyond financial reasons, nearly 45% also reported transportation issues. Nearly 30% indicated that there is not a place near their home to buy food, and 27% noted that work or childcare keeps them from purchasing food. Other reasons listed by the participants include availability (shelves not stocked or limited selection), time, and health or disability issues.

Access to Community Resources: Community members report seeking food assistance from churches (37%), community organizations (35%), and local food banks (32%) more than any other programs. Table 3 summarizes the specific agencies and programs in each county which were most often reported by the survey participants. While many residents reported seeking help from local churches, the responses were too varied and vague to determine any specific churches that were accessed regularly. It was noted, however, that the many of the agencies listed were either housed within the outreach services of a church or were clearly faith-based agencies.

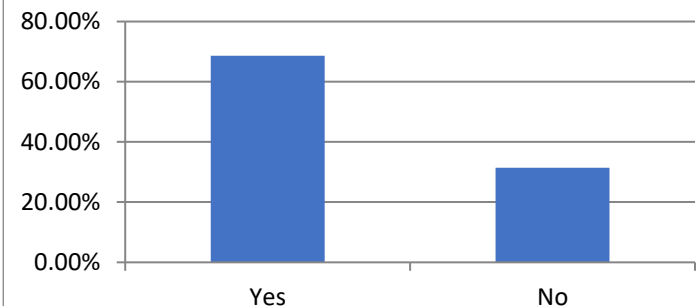
Table 3: Resources and Agencies Most Accessed as Reported by Residents

	Food Bank	Other Agencies
Jefferson County	• The Southeast Texas Food Bank • Market to Hope (a food pantry program of Catholic Charities) • Some Other Place (local soup kitchen)	• Some Other Place (local soup kitchen) • Nutrition Services for Seniors (Meals on Wheels) • Local Drug Treatment Center
Orange County	• The Southeast Texas Food Bank	• Anchor of Hope • Orange Christian Services
Hardin County	• The Southeast Texas Food Bank • *Family members*	• Sharing & Caring – Church of Christ outreach • Christian Care Center
Liberty County	• Trinity River Food Bank • The Southeast Texas Food Bank	• Liberty Church of Christ • Local Drug Treatment Centers

Insured Responses

Food Insecurities: Over 51% of the participants noted that the food they had purchased did not last as long as they needed and 23% indicated that they have worried that food would run out before they could buy more. Those with insurance indicated some concerns about being able to afford healthy food with 47% noting they were able to "sometimes" and 25% stating "often". In reference to preparing nutritious meals, 44% identified that they can cook, but nutritious foods are too expensive and 30% indicated that they are too busy to prepare healthy meals.

Graph 2: Residents with Health Insurance



When asked about food insecurities, 58% of the respondents indicated that, in the past 12 months, they have worried about food running out before they had money to buy more (48% responding "sometimes true" and 10% responding "often true"). The majority of insured

respondents (51%) reported that they have not cut the size of their meals or skipped meals within the last 12 months.

Barriers to Obtaining Food: Participants with insurance reported fewer barriers to getting food with the largest barriers included under the "other" section. Barriers identified in the "other" section included limited time to prepare meals and unable to cook.

Access to Community Resources: Participants with health insurance indicated that they use SNAP benefits (21%) for help with food. Nearly 22% indicated that they seek help from "other" resources which were mostly senior services such as Meals on Wheels and local senior centers.

Uninsured Responses

The group identified without insurance revealed marked differences in many categories from those listed as insured.

Food Insecurities: Nearly 78% of the respondents noted that within the past 12 months, the food they had purchased did not last as long as needed and nearly 70% indicated worrying that their food would run out before they could buy more. More than 67% indicated that within the past 12 months they had been hungry but did not eat and nearly 50% stated that they were hungry but did not eat. Responses about affording healthy food revealed that 50% of those without insurance did not feel the food they were able to afford was healthy and 36% indicated this only "sometimes". With regard to preparing nutritious meals, 36% indicated that they can cook, but healthy meals are too expensive.

When asked about food insecurities, 91% indicated that within the past 12 months they have worried that food would run out before they had money to purchase more (61% responding "often true" and 30% responding "sometimes true"). Of those listed as uninsured, 63% reported limiting the size of their meals or skipping meals and 75% reported eating less than they felt they should because there was not enough money to purchase food. 78% indicated that within the last 12 months they had been hungry but did not eat because there was not enough money to purchase food.

Barriers to Obtaining Food: Nearly 70% of this group identified that transportation prevented them from getting food and 43% indicated that there was not a place to buy food near their home. Under the "other" response in this category, respondents indicated that money made it difficult to get food.

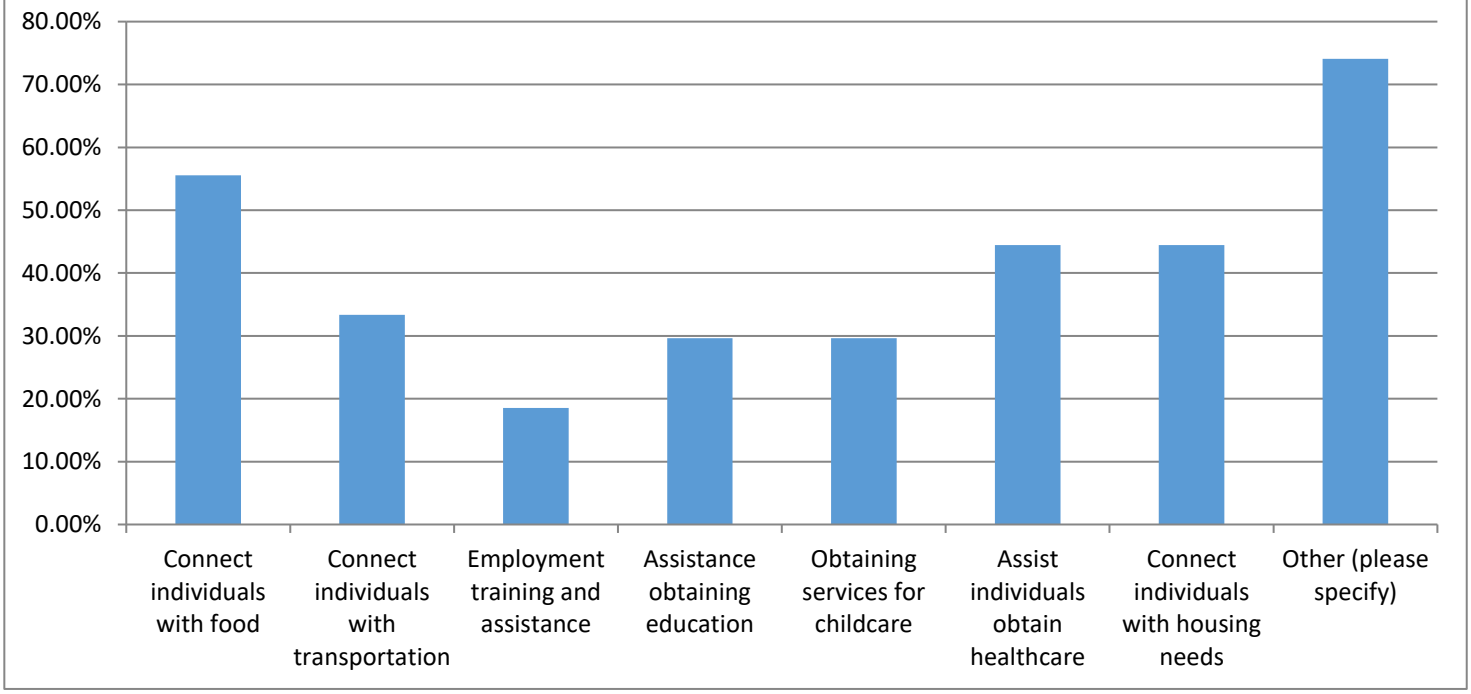
Access to Community Resources: Uninsured respondents reported seeking food assistance from churches in the community (55%), community organizations (54%), and local food banks (47%).

Community Based Organizations

Surveys were emailed to 181 CBOs located within the identified counties. While CBOs were identified and contacted in all four counties, many serve beyond their own county – into the larger region. Of the 181 contacted, 42 responded to the survey (23% response rate). Responses from each county were fairly representative of the size of that county in relation to the other counties. CBO respondents indicated that they serve anywhere between an estimated 24 and 25,000 clients per year, depending on the type of services provided. The smallest providers noted were highly specialized services (i.e. Drug Court and the local Human Trafficking agency), while the majority of the agencies serve much larger populations (average = 4000 clients per year).

Services Provided: According to the respondents, the most prevalent services provided include connecting individuals with food, assisting individuals to obtain healthcare, connecting with housing needs, child advocacy, and mental health related care. The majority of the CBOs provide services onsite with specific criteria that must be met for service eligibility. Over 55% of the CBOs can serve individuals on an emergency basis and approximately 21% have the capacity to service more clients at the time of the survey.

Graph 3: Services Provided by Agency (select all that apply)



Food Insecurities: Nearly 41% of the respondents reported having specific programs to address food insecurities, and the majority of these stated they do so in collaboration with the Southeast Texas Food Bank. The majority of those that screen for food insecurities use an agency specific assessment and note that there is a consistent need for food throughout the year. The most commonly reported barrier to obtaining food within the community is noted to be income. The majority of CBOs report that the demand for help with food is consistent throughout the year. The most significant barrier for clients to obtain food within the CBO community is income (76%), with transportation being next (64%) and followed by lack of organizations that provide food (45%). There were also individuals (24%) that identified stigma around food insecurity as being a barrier to obtaining food.

Screening and Tracking Referrals: Screenings for non-medical drivers of health yielded similar results with 40% of the CBO screening for NMDoH. While most agencies use an agency-specific screening (70%), 20% utilize the Unite Us platform for screening and tracking NMDoH. Of those agencies which screen for NMDoH, only 20% reported tracking or sharing information with other entities and again, this is generally an agency specific tool.

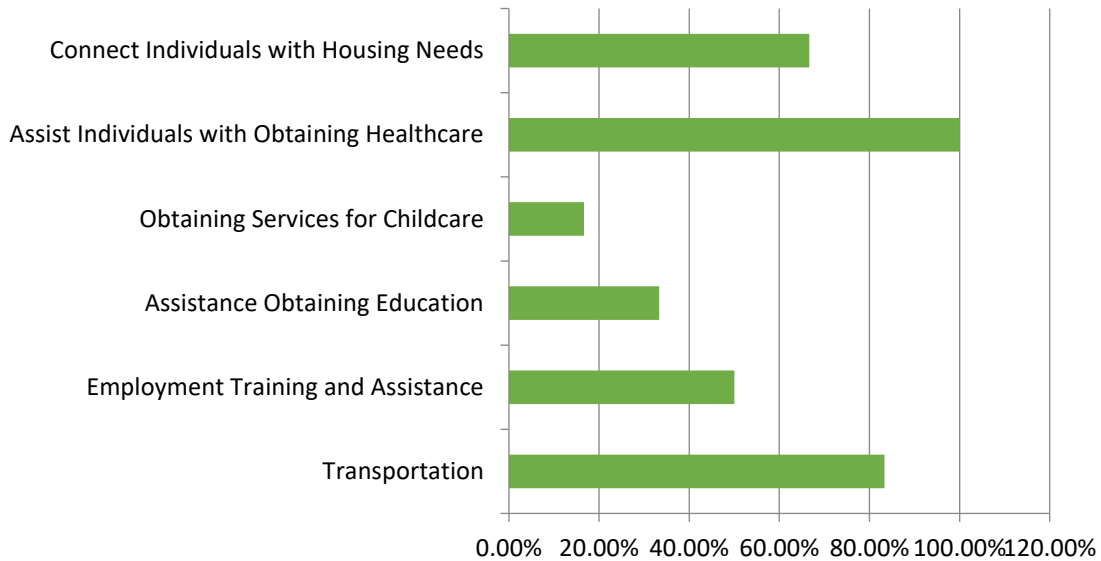
Health Care Providers

The provider results were limited as the researchers only received seven responses. Researchers identified several barriers to surveying providers which are outlined in the Limitations section of this report. The respondents include two Local Mental Health Authority's (LMHA), one Federally Qualified Health Center (FQHC), a nursing facility, two nurse practitioners, and a family physician. Five of the providers serve Jefferson County and two of those providers also serve individuals in Hardin and Orange counties. Two of the providers serve individuals only in Liberty County. None of the provider respondents serve all four counties. Over 80% of the respondents serve individuals receiving Medicaid benefits.

Screening for NMDoH: Only one provider (the FQHC) reported that they regularly screen for food insecurity, and one of the LMHAs and family physician indicated they sometimes screen for food insecurities when they identify a client that may be in need. Six of the providers indicated they screen for other non-medical needs ranging from transportation to housing, responses summarized in Graph 4. Based on the providers' response it appears they informally screen their clients and do not use a standardized screening tool. When asked about challenges to conducting a screening one provider indicated time as the main barrier; one provider reported lack of referral; one provider indicated other and identified it would not be productive; and two of the providers indicated reimbursement, time, and lack of referral network as all being major barriers.

Referrals and Follow-Up Activities: The majority of providers reported referring patients that indicate the need for food to a food bank or a food pantry. One provider reported they make referrals to SNAP, WIC and meals on wheels. Three of the providers reported they conduct follow-up activities to identify if a patient accessed services based on a referral. The four providers that do not follow-up with their clients indicated time and lack of reimbursement as being the main reasons. Two of the providers that do conduct follow-up activities estimated that 25-50% of their clients accessed services with the third provider reporting 0-10% of their clients received services based on the referral.

Graph 4: Non-medical needs Screened (select all that apply)



Food Insecurities: Providers were asked to estimate the percentage of clients that have reported some type of food insecurities in the past year. Four of the providers reported 0-10% of their patients; two providers indicated 10-25%; and one provider reported 50-75%.

The final question was an open-ended question and asked providers to indicate what resources are needed to reduce food insecurities in their community. Four providers answered the question and responded as follows: 1) college students need more assistance; 2) the government needs to be more responsive to the needs of the people; 3) more engagement between food sources and health centers is needed and patient information needs to be shared; and 4) more food banks and transportation are needed in the region.

Comparative Data

Surveys indicate that the majority of CBOs and providers do not utilize a specific or universal tool to screen for food insecurity. However, the data from several information and referral resources indicates that a large number of residents in Jefferson, Orange, Hardin, and Liberty counties have reached out for assistance with food needs as well as other NMDoH. In addition to conducting surveys, researchers were able to gather comparative data from *211 Area Information Center of Southeast Texas,* Findhelp, and Unite Us. *211 Texas* is a statewide free telephone number providing residents with information about local community services. Findhelp and Unite Us are community services referral platforms and resource databases used by health plans, CBOs, providers and other entities to search for and help connect individuals to resources. Researchers would like to thank *211 Area Information Center of Southeast Texas,* Findhelp, and Unite Us for their assistance with this study. Researchers would like to thank *211 Area Information Center of Southeast Texas,* Findhelp, and Unite US for their assistance with this study.

211 Texas

211 Texas is a 24-hour statewide service that provides free information and referrals to community and social services including food pantries, emergency shelter, rent assistance, utility bill assistance, childcare, senior services and more (2-1-1 north Texas). Data provided from 211 Texas indicates that individuals from Jefferson, Orange, Hardin, and Liberty counties made 13,624 total requests for assistance between August 2021-November 2022. Data fields included: date and start time of call, age, gender, county, city, zip code, preferred language, need name, met or reason unmet, call type, military status, military branch (veteran or active), and disaster or event call.

There were a total of 13,624 total requests during the specified time period. Of those, 8,942 were for information and/or assistance with specific types of NMDoH (food, housing/shelter, transportation, utilities, health insurance, and phone bills). The highest number of calls in each category are from Jefferson County, which has the highest population of the four counties.

The data indicates that the greatest number of requests by type were for assistance with utility bills (3,902), followed by requests related to housing/shelter (3,269), food needs (996), and transportation (medical and non-medical (587). These figures are consistent in both total number of requests as well as requests by county (see Table 4).

Table 4: Non-Medical Drivers of Health - 211 Assistance Calls by Texas County (Jefferson, Orange, Hardin, and Liberty Counties) – August 2021-November 2022 data

Type of Assistance Requested	Jefferson County	Orange County	Hardin County	Liberty County	Number of Calls
Food needs	728 **(11.1%)**	181 **(10.6%)**	83 **(12.7%)**	4 **(7.8%)**	996
Housing/Shelter needs	2337 **(35.8%)**	690 **(40.5%)**	223 **(34.2%)**	19 **(37.3%)**	3,269
Transportation needs	442 **(6.8%)**	86 **(5.0%)**	56 **(8.6%)**	3 **(5.9%)**	587
Utility needs	2,915 **(44.6%)**	700 **(41.1.%)**	266 **(40.8%)**	21 **(41.2%)**	3,902
Insurance	44 **(0.7%)**	27 **(1.6%)**	11 **(1.7%)**	4 **(7.8%)**	86
Telephone needs	69 **(1.0%)**	20 **(1.2%)**	13 **(2.0%)**	0 **(0%)**	102
Total Number of Calls	**6,535**	**1,704**	**652**	**51**	9,400

Source: Data provided by 211 Texas, Jefferson County

Findhelp

Findhelp (formerly known as Aunt Bertha) is a free to use search engine available to help locate social service agencies within a specific region. It is available to the public to find assistance with a variety of needs using the zip code to locate resources. While Findhelp is not readily used as a provider resource within the four counties surveyed, the search engine has collected search data when someone uses the site to find services in the area. Findhelp volunteered to conduct a data pull from their databases to assist with the development of this report for the timeframe of August 1, 2021, through November 30, 2022. Data fields included: the search term; high level category (housing, food, etc.); date stamp; zip Code; and county. During the identified timeframe there were 4,914 unique searches for resources in Jefferson County using Findhelp; 1,354 unique searches in Orange County; 571 unique searches in Hardin County; and 1,744 unique searches in Liberty County. The data shows there are both health care and non-medical needs in all four counties.

The data indicates that the greatest number of requests by type were for assistance with health care needs (1,325) (dental care, mental and behavioral health, medical supplies, long-term services and supports, preventive care, etc.), followed by requests related to housing/shelter/mortgage assistance (1,245), food needs (945), and transportation (medical and non-medical (737). Table 5 summarizes the data gathered from Findhelp.

Table 5: Findhelp Searches between August 2021 and November 2022

Type of Search	Jefferson County	Orange County	Hardin County	Liberty County
Health care needs	796 **(16.2%)**	164 **(4.7%)**	104 **(18.2%)**	261 **(15.0%)**
Housing needs	708 **(14.4%)**	245 **(18.1%)**	76 **(13.3%)**	216 **(12.4%)**
Food needs	442 **(9.9%)**	239 **(17.7%)**	83 **(14.5%)**	181 **(10.4%)**
Transportation needs	446 **(9.1%)**	109 **(8.1%)**	47 **(8.2%)**	135 **(7.7%)**
Utility needs	314 **(6.4%)**	103 **(7.6%)**	42 **(7.4%)**	132 **(7.6%)**
Not categorized	582 **(11.8%)**	160 **(11.8%)**	77 **(13.5%)**	271 **(15.5%)**
Total Number of Searches	4914	1354	571	1744

Other predominant searches of note in the four counties include employment, education, financial assistance, childcare, and clothing needs. The large number of searches related directly to health care needs further demonstrates that individuals in Jefferson, Orange, Liberty, and Hardin counties are faced with provider shortages for both primary care and behavioral health services and there is a large uninsured or underinsured population.

Another interesting finding was that many of the transportation searches related to the need for transportation were for health care. While we cannot identify if these searches were conducted by individuals insured through Medicaid, it could be beneficial for Medicaid health plans to ensure members know about non-emergency transportation benefits.

Unite Us

Unite Us also volunteered to assist with this report by providing data to the researchers. Unite Us provides an end-to-end technology solution to providers, health plans, governments, local communities, and CBOs that allow entities to predict social care needs, connect individuals to services, and leverage outcome data and analytics to drive community investment. Unite Us uses data to assign individuals and regions a social needs system (SNS) score. A SNS ranges from 0 (low) to 100 (high) and is driven by 12 SNS factors (food, transportation, health literacy, housing quality, etc.) spanning 3 SNS domains (social, environmental, and economic vulnerability).

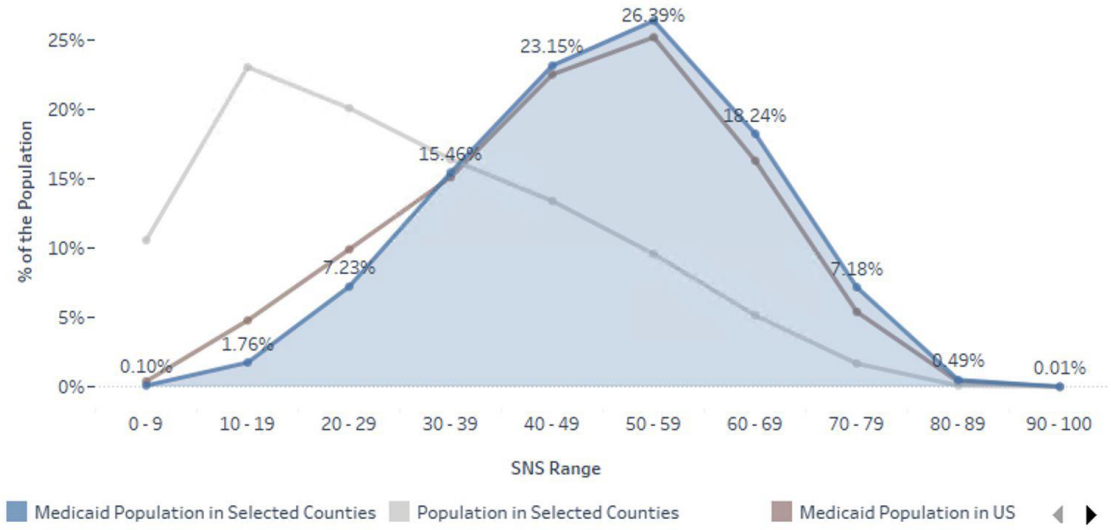
Based on information shared with the researchers from Unite Us' predictive data, out of the 263.6K adults in Jefferson, Orange, Hardin, and Liberty counties, 64.1K represent the socially

underserved population (i.e. SNS 37+) which equates to 37% higher maternal complications, 59% higher total cost of care, 100% higher emergency department visits, 90% higher rate of employment concerns, and 2.4 times higher rate of individuals being uninsured in these communities.

Predictive data from Unite Us demonstrates that the non-Medicaid population for the selected Texas counties is quite different from the Medicaid population with the average Medicaid SNS score being 1.62 times higher than the average SNS score for the general population. The Medicaid population SNS score in the selected counties is also higher than the national Medicaid population trend by 1.05 times more.

Unite Us also provided the researchers with data regarding the top three needs identified by the Medicaid population in the four counties, which aligns with the top needs identified for the Medicaid population nationally and includes financial insecurities, food insecurities, and housing quality.

Graph 5: Social Needs Score Trends - *provided by Unite Us*



Unite US. (December 2022). *Social Connector Community Opportunity Assessment* [Power Point Slides].

CONCLUSIONS AND RECOMMENDATIONS

The data revealed stark differences in the overall food insecurities of community members who are insured versus those who are not insured (91% of the uninsured population indicated that within the past 12 months they have worried that food would run out before they had money to purchase more). Responses by community members also indicated that there are many available resources, yet there was little consistency in the specific agencies or churches that are being accessed throughout the four counties. It was noted that the respondents without insurance were more likely to access local food banks, churches, or community organizations to address food insecurities. On the other hand, respondents with insurance indicated using SNAP, WIC, and School Lunch Programs more frequently than those without insurance.

Responses from CBOs reveal that less than half have programs specific to food insecurities and food insecurity needs are addressed only by a few targeted agencies (food banks, local shelters and meals providers) which is consistent with where community members indicated they seek help for food insecurities and where providers refer patients.

Recommendations:

1. Given the that the uninsured population in these communities indicated that they tend to seek resources from community entities (churches, food banks) more than the insured respondents, who indicated they tend to seek resources more from governmental programs, the uninsured population could benefit from targeted education about government programs and how to access these programs. Additionally, to help ensure greater access for all individuals with food insecurities, the community could benefit from more food resources directly provided to CBOs.
2. The community could benefit from additional resources and programs that address food insecurities within more and different types of CBOs.
3. Community members, CBOs, and providers could benefit from referral platforms and databases or comprehensive lists of programs and resources of where to refer individuals in need of non-medical services. The challenge to this task is the ever-changing list of programs and providers and housing this list in an accessible and up-to-date format. This is particularly enhanced in the Golden Triangle due to the susceptibility to natural disasters. Agencies and programs frequently establish themselves or expand to the Golden Triangle following a disaster, only to retreat once the crisis has stabilized.

The uninsured population identified at a high rate (nearly 71%) that the lack of access to transportation prevented them from obtaining food. The comparative data also showed

transportation, including the need for transportation to access health care, as being a major non-medical driver of health in these communities.

Recommendations:

1. Investment in additional transportation resources could be valuable to these communities.
2. Medicaid and Medicare health plan investment in value-based transportation services to food banks and other CBOs for Medicaid and Medicare clients could result in greater access to non-medical interventions and improved health outcomes.
3. Given the high number of individuals seeking transportation for health care, it is important that Medicaid health plans educate their members about non-emergency medical transportation program which provides transportation to medical services.

Overall, the results indicate that there is no consistency among CBOs or providers with screening for NMDoH or providing and tracking referrals. Furthermore, results show that there is no standardized screening or referral tool being used within the four counties. One of the LMHAs stated in their response that completing the survey made them evaluate the need to start screening all their clients and that they plan to start screening as a best practice moving forward.

Recommendations:

1. The results of the survey indicate a need to educate providers and CBOs on the usefulness of screening for non-medical drivers of health and food insecurity.
2. The use of universal screening tools or screening tools with common elements could help consistently identify and refer individuals in need of NMDoH interventions and allow the exchange of data between entities.
3. Since the providers indicated lack of time and reimbursement as being the main reasons they do not screen or refer clients for non-medical services, incentives for providers to screen, refer, and follow-up with patients could result in improved outcomes in the community.
4. Per the recommendation above, incentives for providers to invest in referral platforms or a comprehensive list of community resources could help encourage providers to refer clients to resources and interventions to address non-medical drivers of health.

Limitations

A clear limitation of this study relates to the content and structure of the survey. Since this was a needs assessment specific to the identified geographic area, a standardized survey would not target the specific information needed. Participant demographic data was not collected which

limited the information and comparison availability. It is unclear if the participants adequately reflect the demographics of each county. Furthermore, the counties included in this research are large enough to contain multiple zip codes. Each of the areas within these counties may have more determining factors related to health (i.e. food deserts, or frequent flooding), but, again, this information was not collected and could not be evaluated.

While the survey questions were comprehensive in nature, it was noted that the primary NMDoH reviewed related to food insecurities. Adding a few broader questions which addressed a wider breadth of issues may provide more detailed information. It was also noted, as commented by several survey participants, that at least one of the questions qualified as a double-barreled question – asking two different things within one question. Using a standardized questionnaire could have eliminated such issues, however, no such questionnaire was available for the purpose of this research.

Affordable housing qualifies as a health determinant, however, the survey used for this research did not address housing or homelessness. It was noted by multiple survey collectors that participants mentioned including responses sensitive to the homeless and/or transient population. For example, participants were asked about issues, other than financial, that make it difficult to get food, the responses did not include issues related to a place to prepare meals.

Other limitations and lessons learned were around the difficulty of surveying providers. Providers responded at a very low rate and this could be for multiple reasons. One is that there are health care workforce shortages across Texas and the nation. Providers in rural areas especially cannot staff the number of employees required to serve those in need. Thereby asking a provider to voluntarily respond to a survey without any type of incentive is not likely to occur. Additionally, providers were surveyed during a time in which rates of COVID, RSV and flu were increasing, resulting in providers being extremely busy tending to patient needs. Finally, provider trade associations were used to identify providers to survey. Several of the associations are unable to identify member providers by county making it difficult to target outreach to specific areas of the state.

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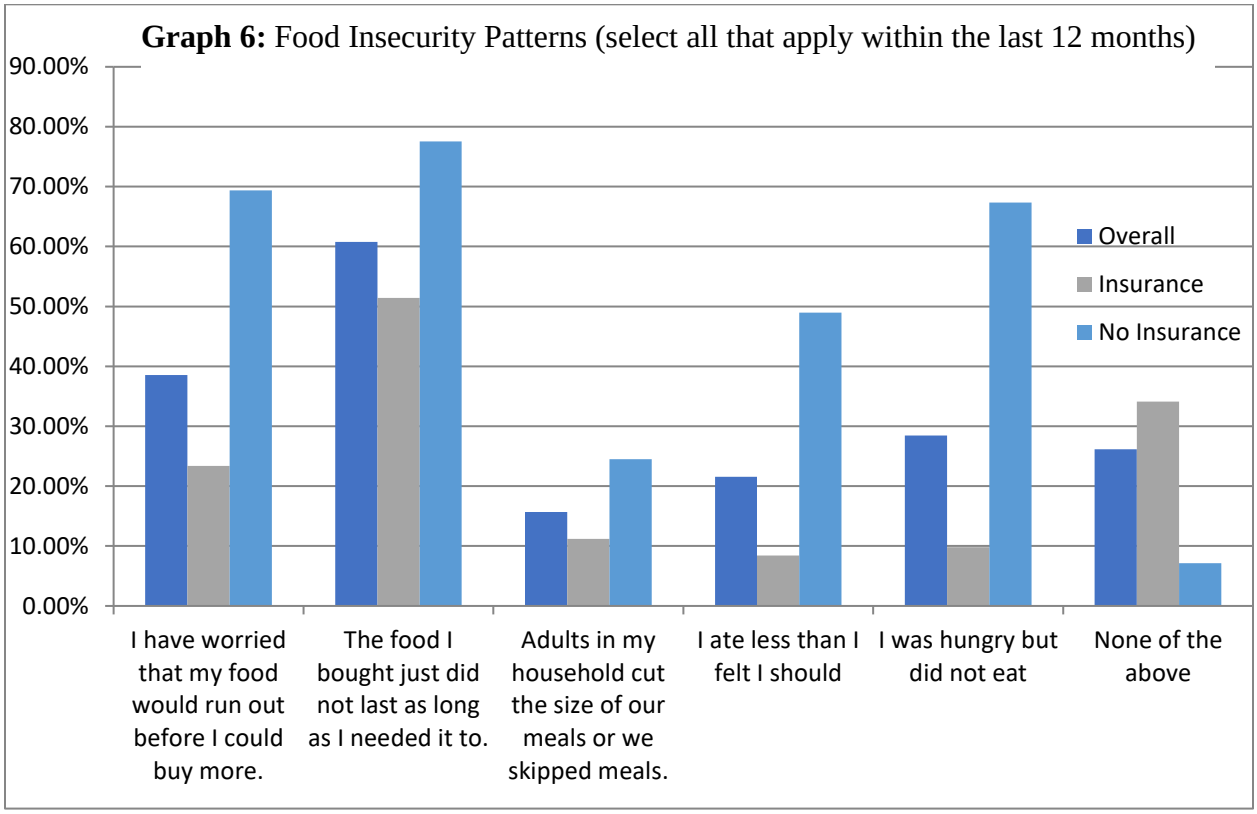
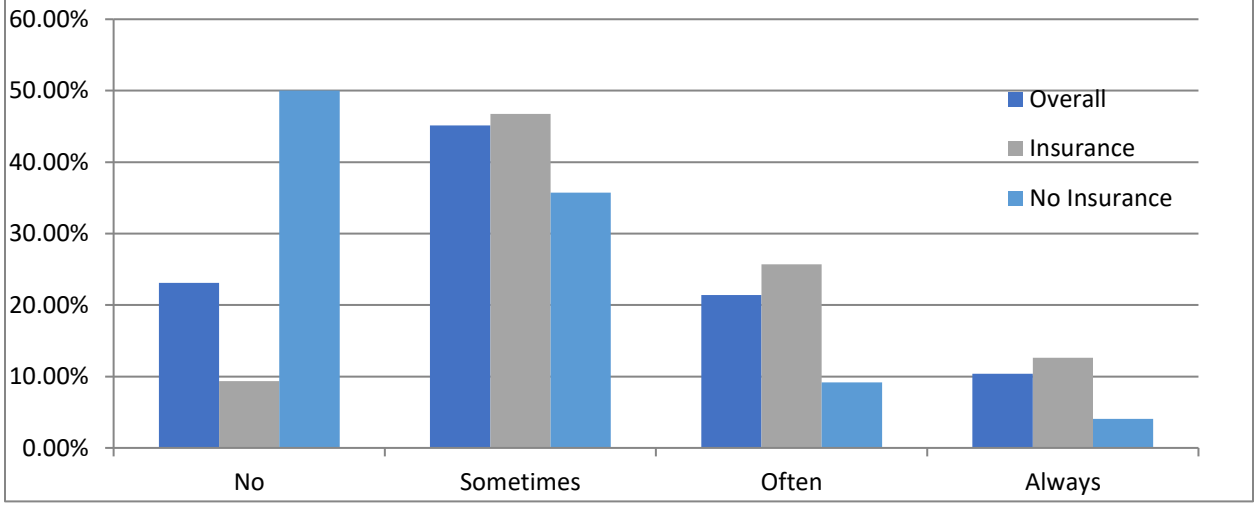
APPENDIX - CHARTED SUMMARY OF RESPONSES

Community Member Responses

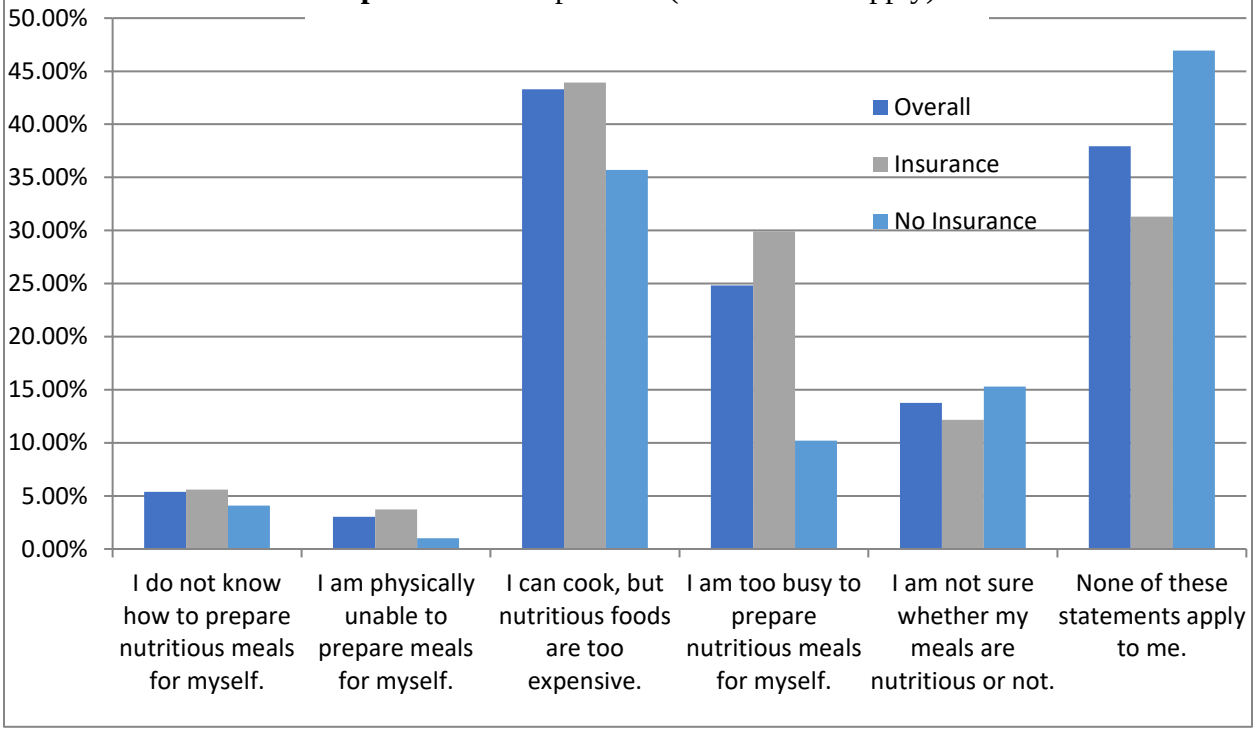
Graph 6: Food Insecurity Patterns (select all that apply within the last 12 months)



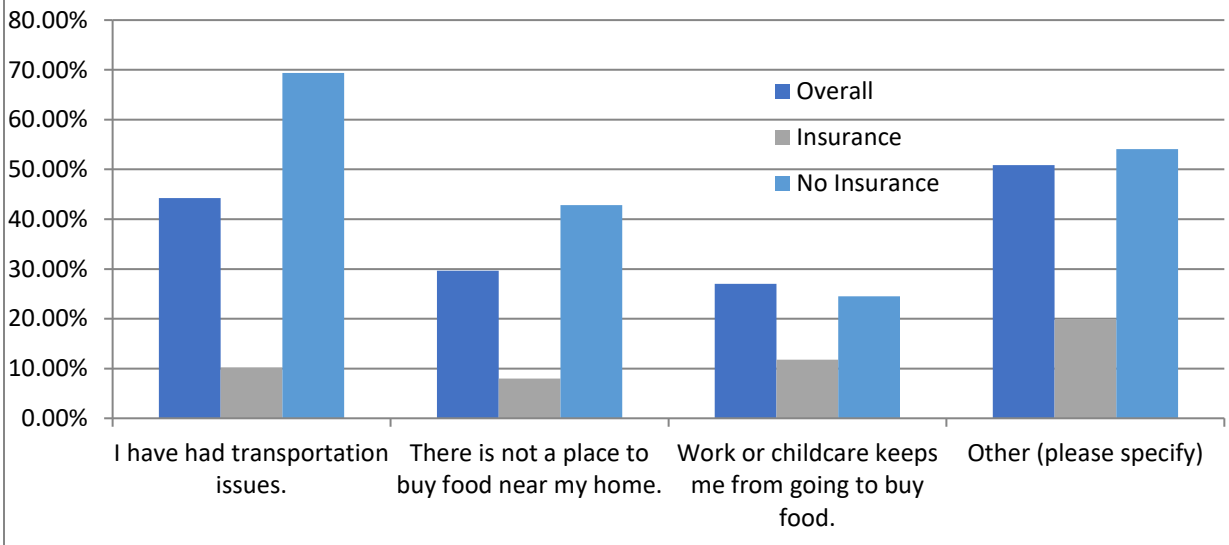
Graph 7: Healthy Foods (within the past 12 months have you felt the food you were able to afford to buy was healthy?)



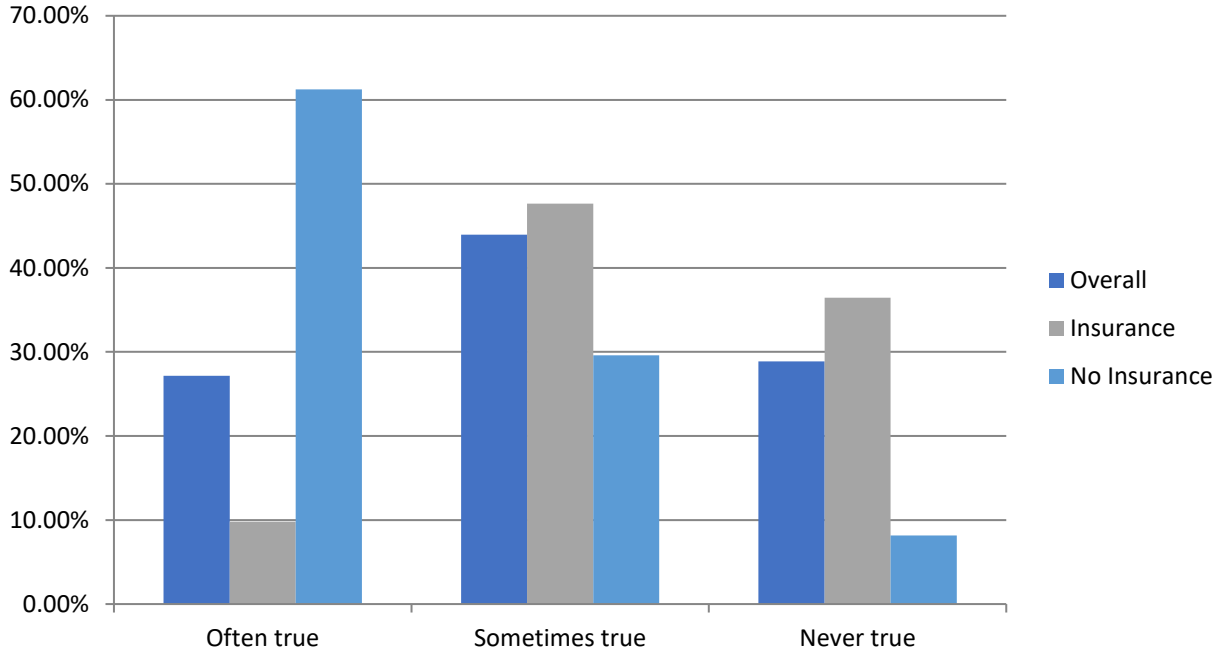
Graph 8: Food Preparation (select all that apply)



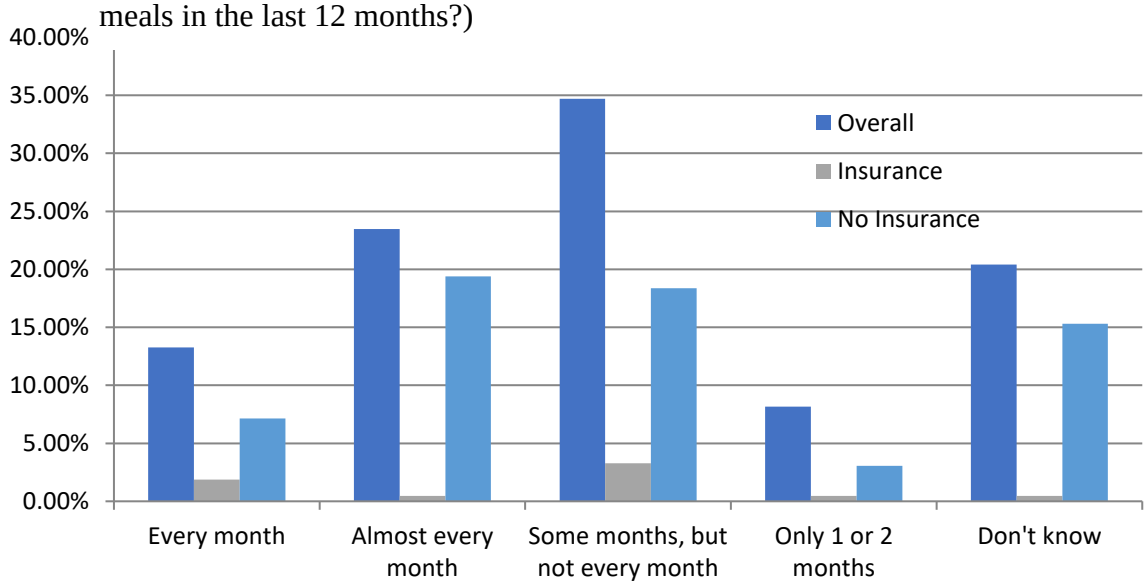
Graph 9: Barriers to obtaining food (other than financial reasons, are there issues that make it difficult to get food?)



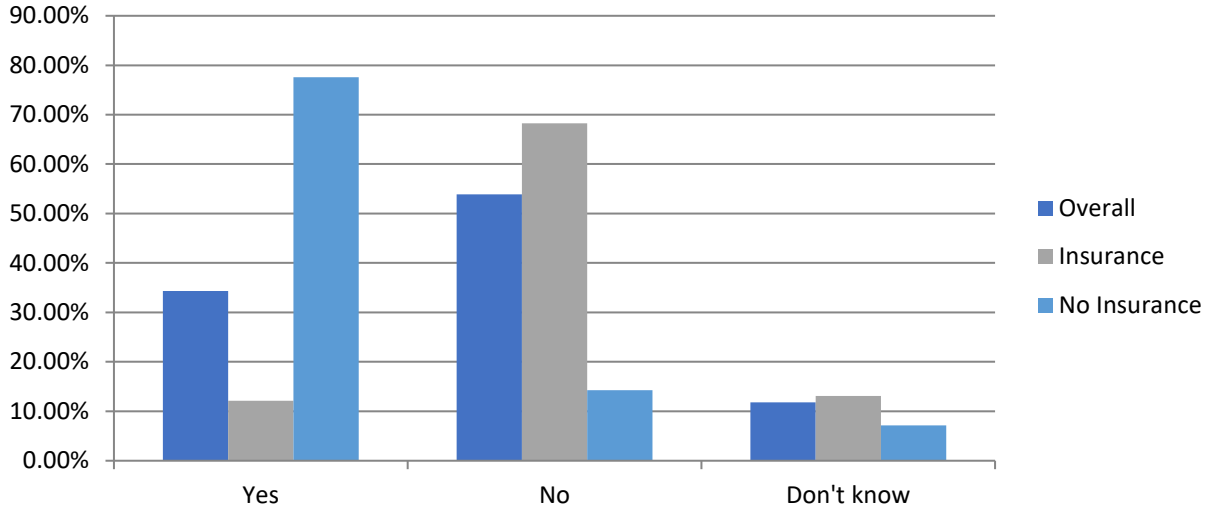
Graph 10: Food Insecurity (within the past 12 months, have you worried that your food would run out before you got money to buy more?)



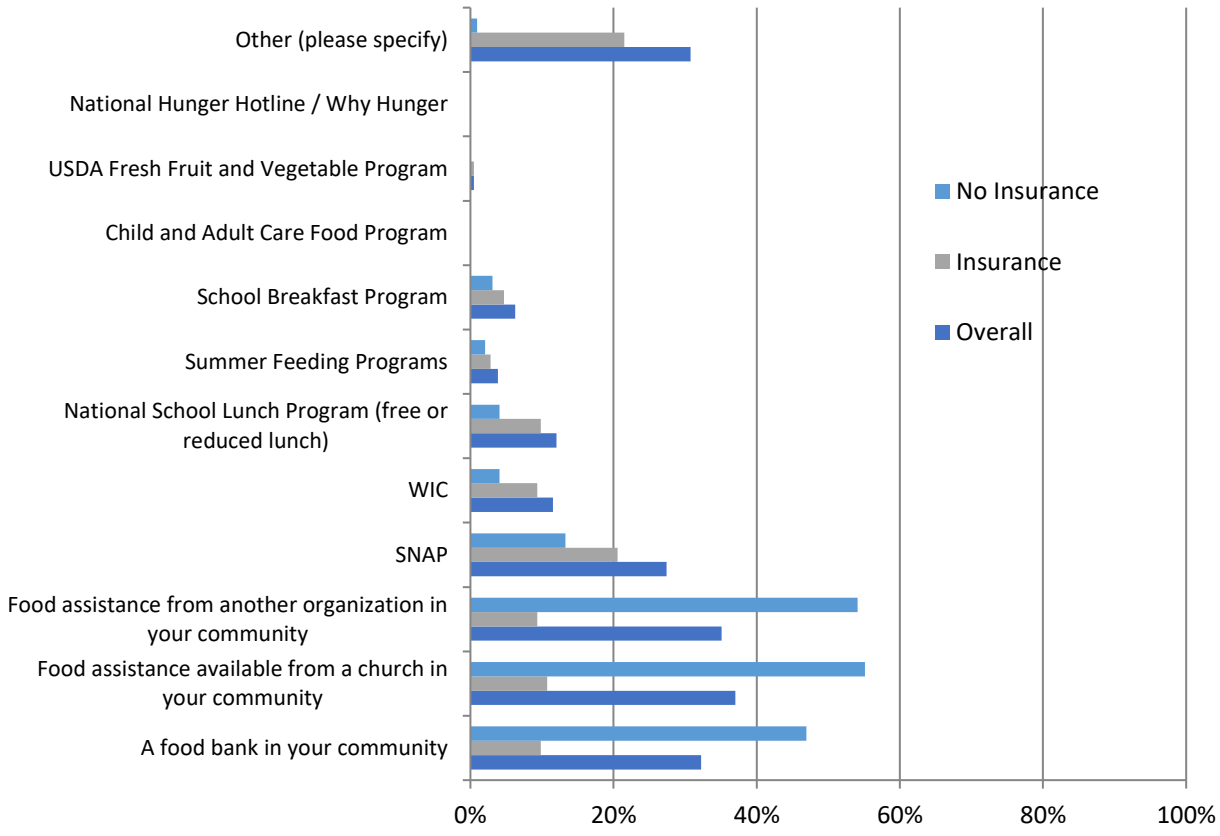
Graph 11: Skipping Meals (how often did you cut the size of your meals or skip meals in the last 12 months?)



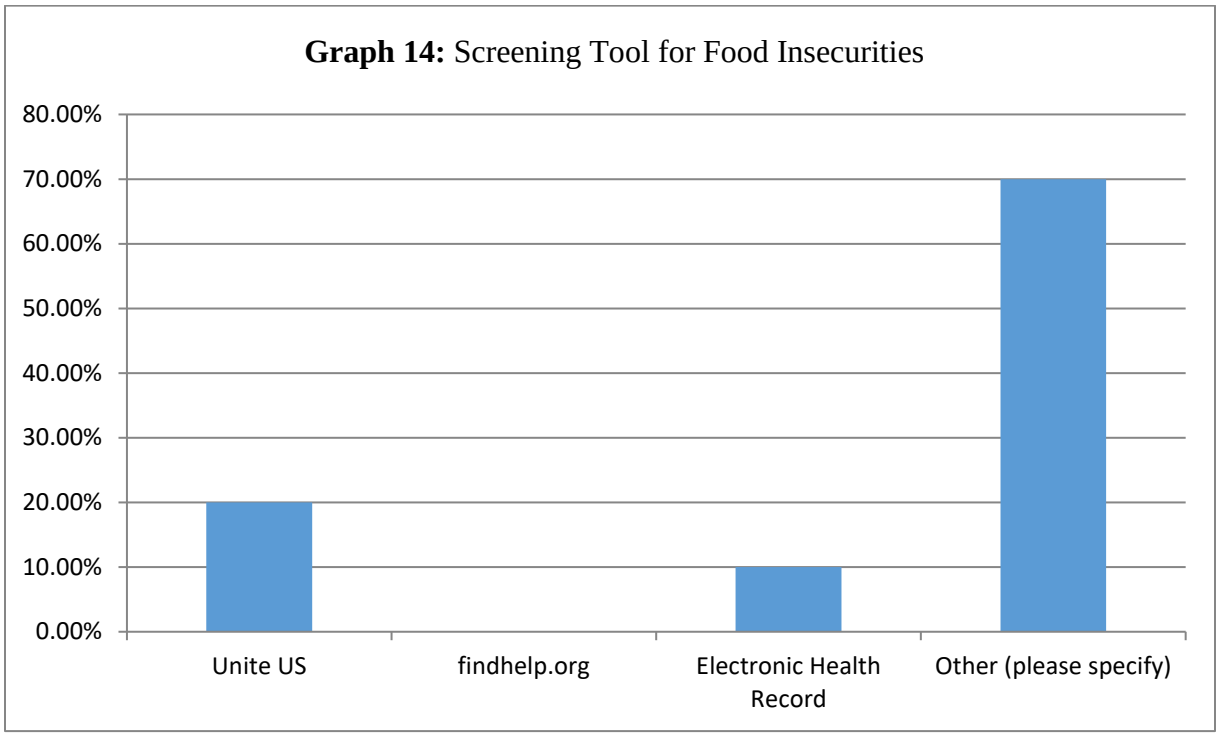
Graph 12: Hunger (in the last 12 months were you every hungry but did not eat because there was not enough money to buy food?)



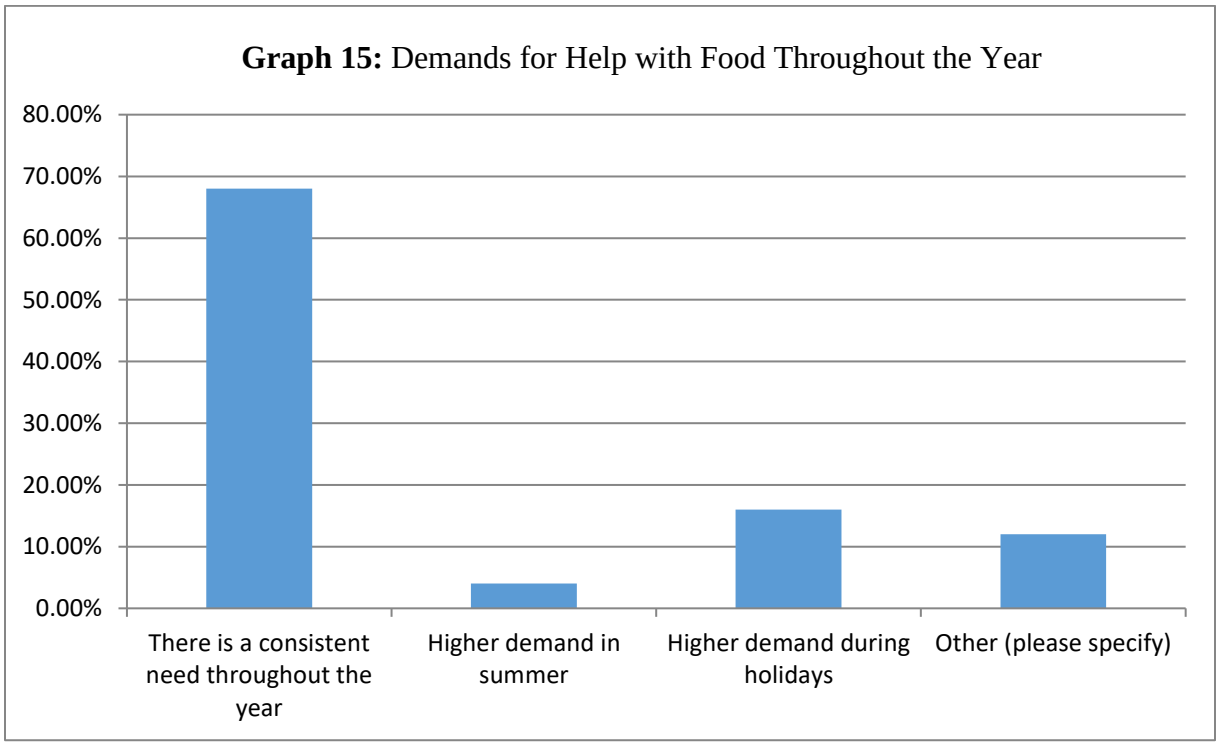
Graph 13: Resources Accessed (select all that apply)



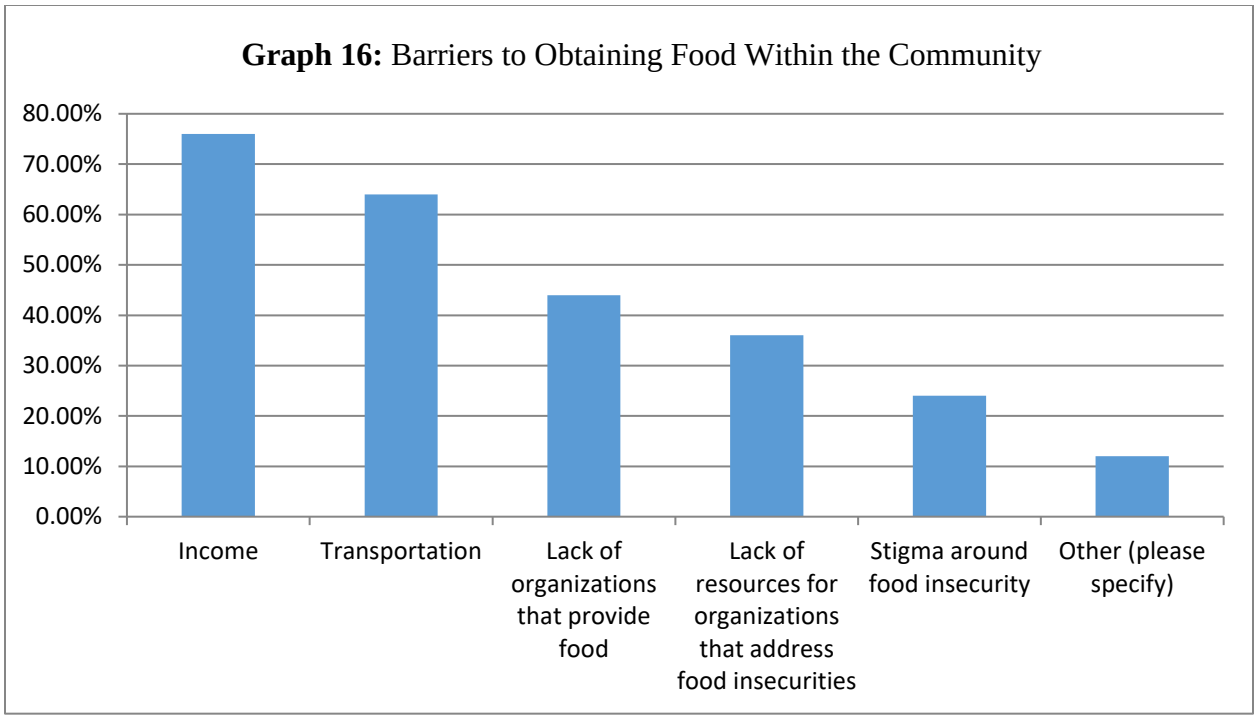
Community Based Organization Responses



Graph 14: Screening Tool for Food Insecurities

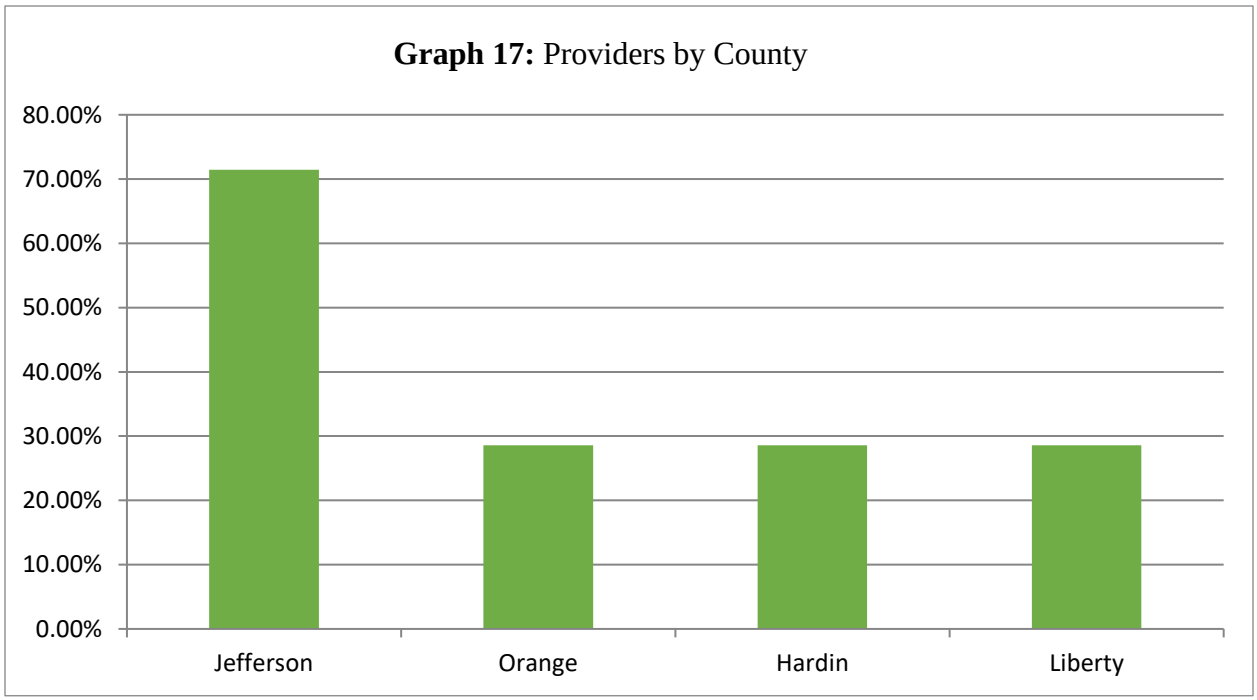


Graph 15: Demands for Help with Food Throughout the Year



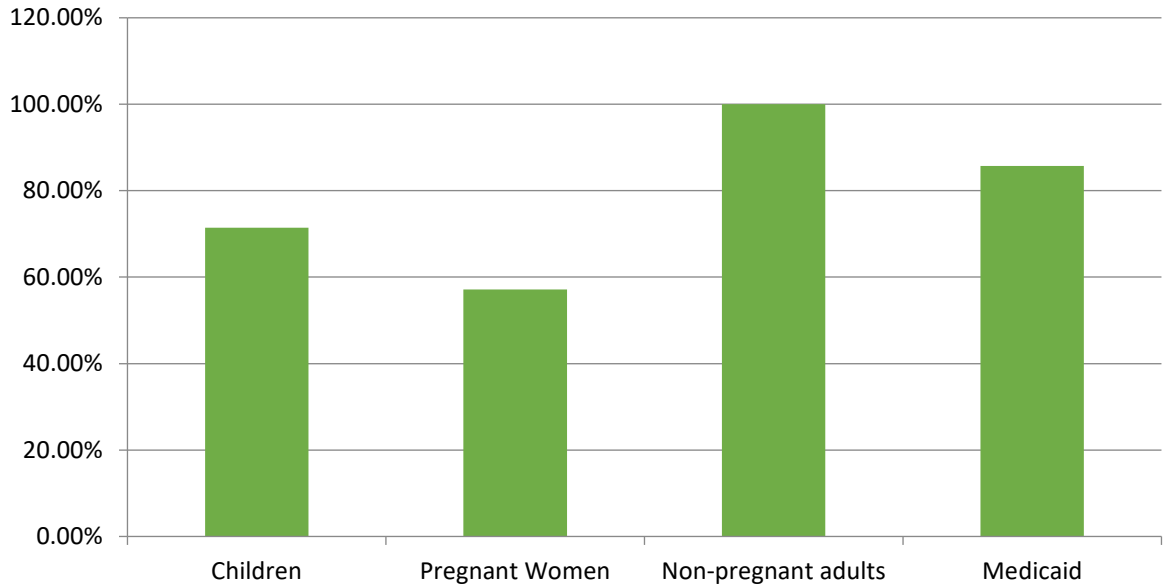
Graph 16: Barriers to Obtaining Food Within the Community

Health Care Provider Responses

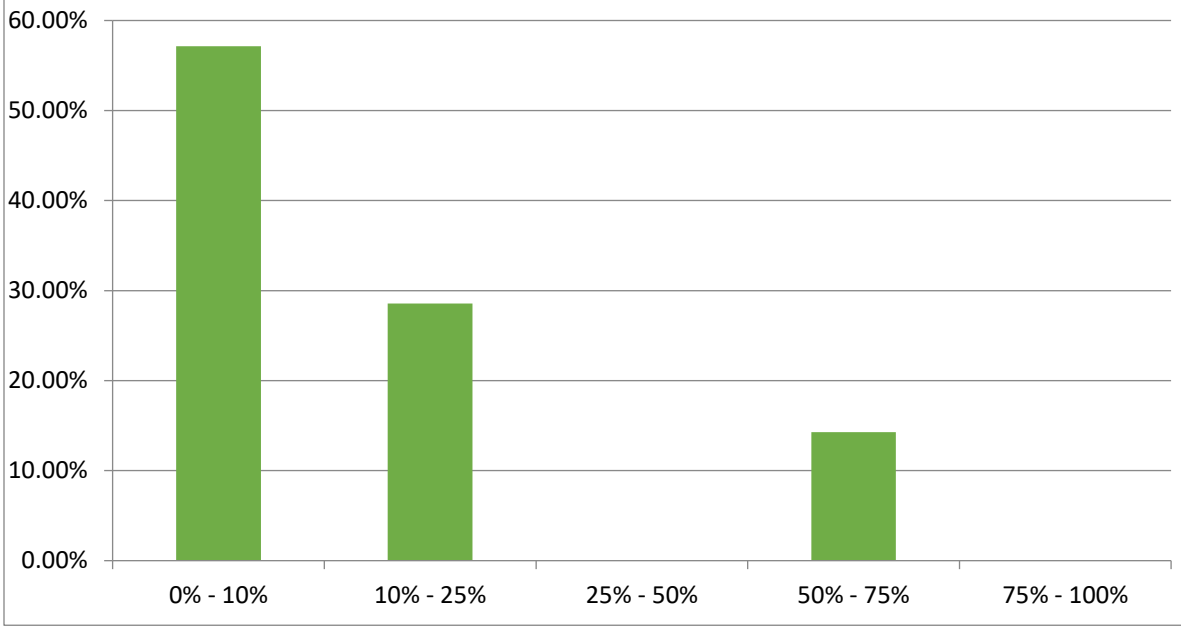


Graph 17: Providers by County

Graph 18: Population Served (select all that apply)



Graph 20: Estimated Percentage of Clients Who Have Reported Food Insecurities Within the Last Year



Graph 21: Estimated Percentage of Clients Who Receive Services Based on a Provider Referral