VHC Medical Brigade

VHC Medical Brigade 2023 Rural Needs Assessment

A Multi-sector Needs Assessment of Rural Areas in Comayagua and La Paz

VHC Medical Brigade 2023 Rural Needs Assessment

Table of Contents

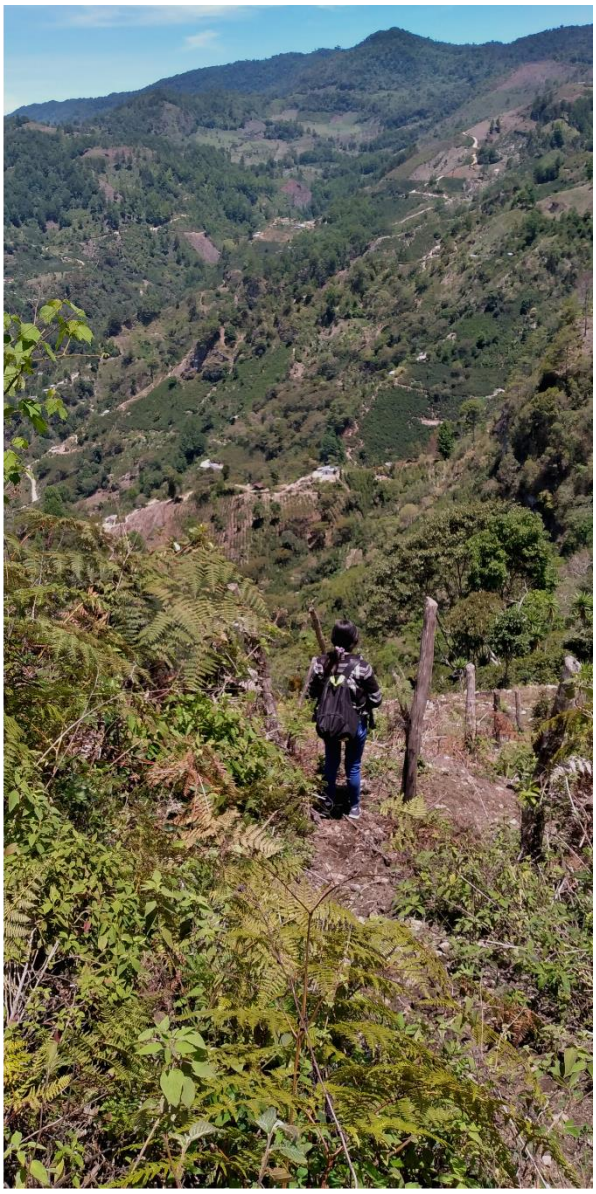
1. Executive Summary 3
2. Recommendations 5
3. Methodology 8
4. Demographics 10
   - 4.1 - Geography 10
   - 4.2 - Household Size 10
   - 4.3 - Head of HH 11
   - 4.4- Ages of Target Population 12
   - 4.5 - Age of Pregnancy 12
5. Livelihoods & Agriculture 13
   - 5.1- Employment 13
   - 5.2 -Agriculture 14
   - 5.3 - Non-Agricultural Income 15
   - 5.4- Seasonal Agricultural (Coffee) Income 15
   - 5.5-Poverty & Vulnerability Ranking 17
6. Education 18
   - 6.1- Household Education Levels 18
   - 6.2- School Attendance 19
   - 6.3- Migration 20
7. Homes & Hygiene 20
   - 7.1- Homes 21
   - 7.2- Home Water Source 21
   - 7.3- Latrines 22
8. Health 23
   - 8.1- Incidence of Illness 23
   - 8.2- Chronic Illnesses & Disability 24
   - 8.3- Causes of Mortality: 25
   - 8.4- Access to Care 26
   - 8.5- Quality of Care 27
   - 8.6- Nutrition 28
9. Perceptions of Community Needs 28
   - 9.1- Violence and Domestic Abuse 29
   - 9.2- Mental Health 29
   - 9.3- Other Community Priorities 30
10. Conclusions 32
11. Question Set from Survey 33
12. About the VHC Medical Brigade 34

Acronyms

1. **HH** Household
2. **HoH** Head of Household
3. **KII** Key Informant Interviews
4. **KI** Key Informant
5. **NGO** Non-Government Organization
6. **VHCMB** Virginia Hospital Center Medical Brigade
7. **HNL** The Honduran Lempira
8. **USD** United States Dollar

1. Executive Summary

This study of rural communities in Comayagua and La Paz, Honduras is a multi-sector needs analysis and a baseline for assessing our program guidance. This is a quantitative needs assessment with 555 samples at a household level, and a sample rate of 100%. There are 10 communities (clusters) with 2,406 total people assessed. The data was collected in June 2023 and published in August 2023.



The survey found rural households with 4.3 people; 23% of household (HHs) are single female led HHs, while 14% are single male led HHs. The population is slightly younger than the national average with an average age of 24. There are fewer elders than the national average and the life expectancy (~49) is also lower than the national average. Nearly all households identify as partially or fully indigenous ethnicity.

The survey found widespread poverty in the assessed communities. The primary livelihood in these areas is subsistence farming. Most of the households surveyed (96.1%) report agriculture or support to agriculture (mostly coffee) as the primary livelihood. There is little income outside of coffee, with monthly casual labor earning an average of USD$57 and median of USD$20, indicating a high reliance on coffee income, which we were not able to quantify. Likewise, we found a relatively low standard of living, with lower incomes in the communities furthest up the mountains.

Education levels in the area are particularly low. All communities have primary schools, but the area has only recently received its first secondary school. One quarter of HHs have one or more school

aged children out of school, with the poverty being cited as the top reason for non-attendance. There was a slightly better attendance rate at schools with school feeding programs and at smaller schools. 35% of heads of household have completed 0-5 years of schooling, while only 2% have completed high school. The low levels of education are a prevailing constraint to individual and communal development, visible in the lack of professional workers, low financial literacy, and low valuation of education my many parents.

The assessment asked several questions about the homes or infrastructure of respondents, and the answers reflected a significantly lower standard of living than in urban areas. 53.2% reported that they have electricity from the grid, while 86.7% of all surveyed houses are connected to the improved water system. 63.1% reported that their house does have a latrine, while 33.9% do not. While not quantified, the roads in this area are highly unmarked, further indicating a significant need for improved infrastructure.

We asked about health care access and quality. We asked specifically about respondent's experiences with VHC Medical Brigade rural clinics and the community health workers who support them. 85.6% reported that when they have visited the clinic, they received the needed medical attention to resolve their health concern, while 14.4% said they did not, indicating relatively high perceived quality of care. When asked about access to care, 84.68% say the community health worker (rural health clinic staff) is available when needed, while 15.32% say they were not available when needed. Just over half (53%) say the nearest clinic they are likely to attend is less than an hour away, while 47% are over an hour from the nearest clinic. HHs seemed to value both the close access to smaller rural clinics, and the wider services & medicines provided by larger (government) clinics farther away.

We also asked about health and disease incidence. When asked if their children under five have been sick in the last 3 weeks, 44.7% reported no sickness during that time. Meanwhile 33.2% had experienced flu and cough, 12.2% reported fever only, and 8.6% reported diarrhea alone or pneumonia with 1.4%. This relatively low incidence of diarrhea suggests that the improved water sources are likely mitigating much of the waterborne illness. Only 20% reported chronic illness or disability, which we believe is underreporting due to poor understanding and undiagnosed chronic illnesses.

We also asked about incidence and causes of death. reported that the leading cause to be is morbidity (58.6%), followed by homicide (13.8%), accidental causes (13.8%), old age (8.6%), suicide (1.7%)

and unknown causes (3.4%). The average age of the deceased member of the household was 49 years old while the median was 55 years. The average age at death was 49, 21 years younger than the national average of 71[1]. We believe this is due to poor health and high violence.

Finally, we inquired about other perceived needs in the community. Most responses expressed a relatively high need for all areas of development. Nutrition and food were the top priority, followed by Education and Support for Children, then Health Care, then Water & Sanitation and then Livelihoods.

Overall, this assessment finds widespread poverty, and a widespread need for additional services. These include health, nutrition, education, livelihoods, and general community development. Two of the most immediate and feasible programmatic recommendations are:

- Improved rural health programming, especially in raising the level of services in rural clinics to address the remaining health needs, ideally including a visiting doctor.
- Educational support, with parental education about the importance of school attendance, and expansion of the secondary school offerings, and the improvement quality of primary schools.

2. Recommendations

The report identifies two types of recommendations: further research, and programmatic approaches. First, this report is a needs analysis to help us understand the communities we serve. There are some areas where our data was limited or inconclusive, so this report recommends some opportunities for additional, deeper research on concerns identified in this report. Second, this report guides our program effectiveness by providing a series of programmatic recommendations to help improve health and development outcomes.

These recommendations are based exclusively on the needs assessed, and do not consider practical limitations like available funding and the capacities of the VHC Medical Brigade. Below are the recommendations, organized in order of the report findings:

1. Demographics

[1] https://www.statista.com/statistics/970739/life-expectancy-at-birth-in-honduras-by-gender/

a. Additional Research Opportunities: Similar assessments of other communities not supported by the VHC Medical Brigade could be assessed in the future to provide a latitudinal control group.
b. Programming Recommendations: There is a need for programming to address youth pregnancy, family planning, general women's health programming, and parental education for women's protection against underage marriage / cohabitation. Households with single heads of household with children tend to be highly vulnerable, so future programming could target these families with additional assistance.

2. Livelihoods & Agriculture
    a. Additional Research Opportunities: Income levels were difficult to ascertain, in part because families often don't calculate their annual incomes. Our assessment team feels that additional research around economics in the area would be useful. This could include employment prospects for women (especially single heads of HH), informal payment practices, youth labor participation in agriculture, savings & financial literacy, and other topics. Also, some research into the viability of home garden crops in the mountain microclimates could help families better supplement their nutrition.
    b. Programming Recommendations: There has been very little formal education around agriculture, so training in coffee agriculture and value chains could have a high impact. Likewise home gardening assistance may improve nutrition. Also future programing should consider targeting at a HH level by simple poverty score where selecting beneficiaries
3. Education
    a. Additional Research Opportunities: Many children are not attending school, with varying reasons given. A simple round of interviews could ask parents and children more about why they don't attend school, and what could be done to increase the chances of attendance. Also, the assessment did not assess quality of education provided, but did find variation between communities in school attendance. Qualitative or quantitative research into school quality could identify areas for improvement.

b. Programming Recommendations: About one in four school aged children does not attend school. We recommend creating a community owned outreach program in coordination with each school. We have already identified currently out of school children, and home visits or community mobilization could encourage parents to value education for their children. Additional incentives such as school kits, rubber rain boots, and school hardware improvements may also increase attendance. Finally, in schools with the lowest attendance, investments in facilities or staff capacity may improve outcomes.

4. Homes & Hygiene
    a. Additional Research Opportunities: Interviews with HHs not connected to the system could help better understand challenges in communities with lower water system connectivity.
    b. Programming Recommendations: We recommend that additional hygiene education for HoHs, which can be targeted to the communities with the least latrines. Municipal government or NGO programming could include construction assistance or incentives to increase the construction and proper use of latrines.
5. Health & Nutrition
    a. Additional Research Opportunities: We recommend a separate health assessment to better assess levels of sickness using methodology less limited by self-reporting of patients who have a low comprehension of the medical conditions we are asking about. We also recommend additional interviews with those who travel to farther clinics to identify their reasons for choosing the larger clinic.
    a. Programming Recommendations: Where possible, the rural health team should consider whether it is feasible to add some additional services that currently attract people to attend clinics farther away. Some options include additional medicines, longer hours at clinics, more community health worker training, and periodic experienced nurse or doctor visits. Specific areas of added training for community health workers include increased women's health support, diabetes screening, and hypertension screening.

6. Perceptions about Community Needs
    a. Additional Research Opportunities: Additional research about mental health, disability, violence, and gender-based violence would be beneficial, but require a more sensitive qualitative assessment approach. Also, future research would need to overcome low awareness in any self-reported assessment (i.e. respondents need to understand what it is, be diagnosed, and be willing to share openly about the need).
    b. Programming Recommendations: There is a verified high prevalence of violence, and these communities could benefit from carefully implemented domestic violence prevention programming. Also, many respondents suggested that a health unit with a doctor is a high priority and fits well with the assessed needs. Likewise, incentives or assistance in the construction of latrines would improve health outcomes. Finally, there is a widespread need for improved livelihood opportunities, as income is an essential input in any HH or community's development.

3. Methodology

This is a quantitative needs assessment with 555 samples at a household level, and a sample rate of 100%. There are 10 communities (clusters) assessed with 2406 total people. The data was collected in June 2023 and published in August 2023.

This is a multi-sector quantitative needs analysis of beneficiary communities. This serves to identify the general level of poverty in the area, to identify community priorities, to capture the GIS location of the homes served, and serve as a baseline for future impact assessments. The survey questionnaire collected information of the households on the following socio-demographic, livelihood, dwelling, education, income, employment status, health, migration, and other characteristics.

For this assessment, a 100% sample rate was assessed, with a total of 555 households in 12 clusters. This was carried out in 12 communities in La Paz and Comayagua, Honduras. This includes Buenas Noches, El Pacayal, San José del injerto, Planes de la Nueva Esperanza, Veracruz, Playitas, San Antonio de la Libertad, El Pichingo, Los Lirios, Llanos del Tablón y San Antonio de Cañas. These locations were chosen because they are beneficiary locations for our programming, and are the only communities fully covered by both our health and water projects simultaneously. The 100% coverage was selected to enable future HH level program targeting and interventions, such as

targeting out of school for return to school. This also removed some generalization challenges and the need to calculate confidence intervals.

Local leaders, in collaboration with community health workers, helped map the existence of all homes in the target communities. A total of 18 assessors were trained in a one-day training session, and then sent out Teams of 3-4 assessors with at least one male, one female, and one community volunteer in each group. The questionnaire had 34 open and closed questions that were applied using Epicollect 5 tool. A test validation of the questionnaire was carried out with a pilot test in a relevant study area.

All respondents were provided with a disclosure statement and given the choice to participate or decline the survey. Given the NGO's longstanding presence in the area and the participation of local community members in assessment teams, no households opted to decline the survey at large, although some respondents did decline some individual questions.

The survey included the questions aligned with the Simple Poverty Scorecard poverty assessment tool to enable latitudinal comparisons to other Honduran contexts[2]. This tool was originally developed by micro-finance institution Grameen Foundation. The Ford Foundation supported Mark Schreiner to contextualize the tool for Honduras and use 2007 Multi-Purpose Continuous Household Survey and statistics from the Government of Honduras' Instituto Nacional de Estadística. While the poverty thresholds are now outdated, the tool remains a strong latitudinal comparison tool.

The collected data was processed and analyzed through the spreadsheet's "R" software. Analysis of findings was performed with advisory technical experts in the United States, as well as the VHCMB Programs Team in Honduras.

The Assessment Team leader is Ivett Andrea Ramirez Palacios, with M. Aaron Moore serving as Lead Assessment Technical Advisor. The authors are thankful to the incredible team of volunteers and supporting partners and staff of gave time, passion, and energy to make this assessment possible.

[2] https://www.simplepovertyscorecard.com/HND_2007_ENG.pdf

4. Demographics

4.1 - Geography

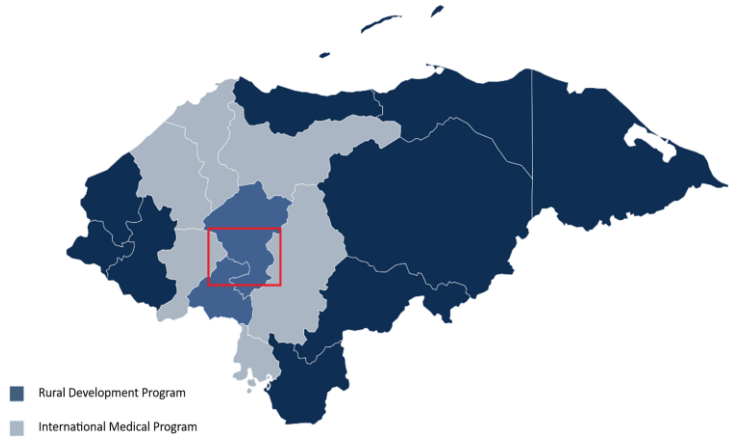


Image 1. Locations of VHCMB programs

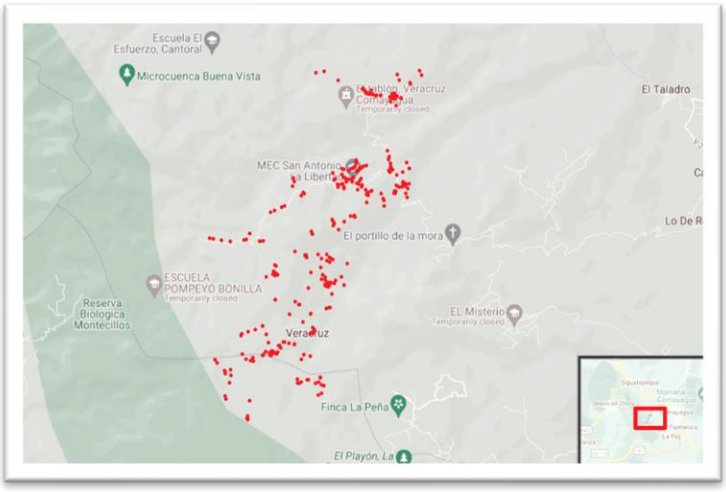


Image 2. Locations of Responding Households

555 households across 12 communities in La Paz and Comayagua, Honduras were surveyed. These communities are 2-3 hours by car from the nearest major cities (La Paz and Comayagua). No official addresses exist for most homes, so where possible, GIS coordinates were captured at the site of the interview, although the mountainous terrain made GPS signal capture inaccurate or impossible in some locations. Below is a map of 320 accurately tagged HH locations, with some HHs close enough together to be indistinguishable.

The surveyed areas are also indigenous communities, with nearly all families having lived in the areas since before Honduran independence. KIIs informed us that all or nearly all members of the assessed communities are partially or fully indigenous, but this was not a survey question. This information was validated with several community members.

4.2 - Household Size

The average number of people per household in the communities is 4.3, with a median of 4 and a standard deviation of 1.9, indicating significant variance in household size. We observed a significant

reduction in average size of households since our work began in this area in 2006, although our previous assessments were not of sufficient size to validate the specific change.

4.3 - Head of HH

The average age of the male and the female of the household is 38 and 35 years old respectively. Key informant interviews shared that men tend to have female partners more than 3 years younger, but this assessment does not differentiate between multi-generational heads of households (i.e., parents and not partners) so the exact difference is not known.

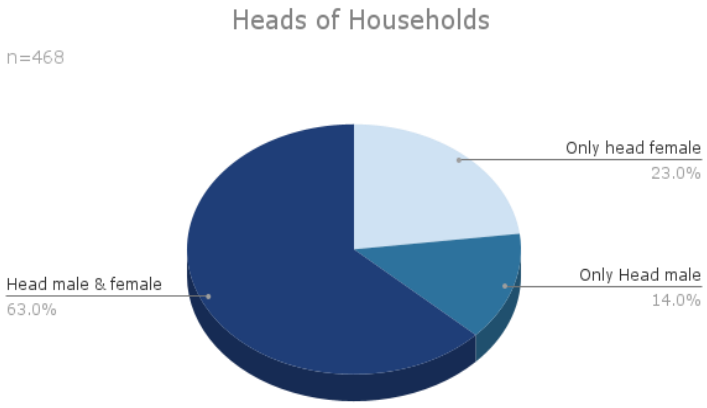


Figure 1. Heads of the Households.

Among family households, the majority with 63% are headed by a male and female couple while over a third (37%) have only one HoH (14% male only HOH, and 23% female only).

It may be that the family has experienced some type of marital dissolution by separation or divorce, as well as widowhood. The assessment did not inquire about same sex couples, as in this area, same sex couples would be unlikely to self-identify and might be placed at risk by a positive response. We recommend additional research about HH level targeting to support woman headed households with additional services.

We tested for correlations between poverty and single headed households and found a very small correlation of .15. The male only headed households had the lowest poverty, while dual-heads of HH had a slightly lower poverty, and women headed households had the highest poverty level - although the correlations remain very insignificant. We also tested for correlations with single headed HHs and migration status and found no significant correlation.

4.4- Ages of Target Population

The communities are, on average, younger than Honduras overall with an average age of around 24 years, and around 75% of the population under 45 years of age (see graphic). The surveyed communities show that 37.4% of the target population are 0-14 years of age, which is significantly lower than the 27.9% national average[3]. The portion of over 65+, 2.7%, is also significantly lower than the national average of 4.3%.[4] We observe a large number of young persons who are not served by educational or livelihood opportunities, which will be further addressed in the later section on education.

Image 3. Members of a Surveyed Household.

4.5 - Age of Pregnancy

We were not able to calculate exact ages of the first pregnancy from the data collected, but we did perform key informant interviews (KIIs) to compare to the data. Interviewees shared that the most remote areas tend to have the youngest average pregnancy (14-15 years when first becoming pregnant) while the communities closer to the city areas average closer to 18 years of age. (This can be compared to the national average of 17[5]).

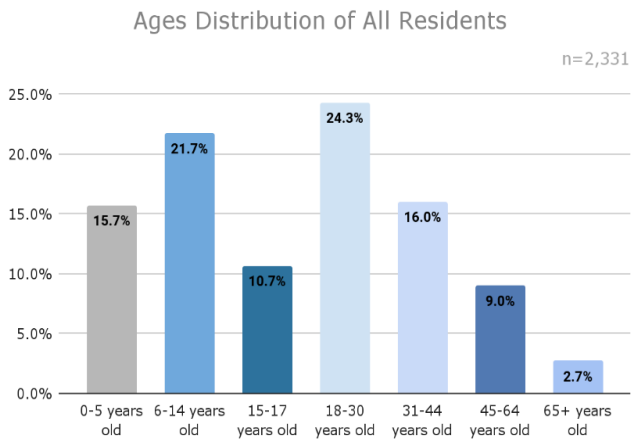


Figure 2. Ages Distribution of All Residents.

[3] https://www.cia.gov/the-world-factbook/countries/honduras/#people-and-society

[4] https://tradingeconomics.com/honduras/population-ages-65-and-above-percent-of-total-wb-data.html

[5]https://www.itmedicalteam.pl/articles/caracterizacioacuten-sociodemograacutefica-cliacutenica-de-adolescentes-embarazadas-103374.html

KIIs also indicated a strong tendency for couples to have an older male than female as HoH. Additional data collection on both pregnancy ages and male-female partner age differences is recommended if possible. We recommend considering future programming to address youth pregnancy, family planning, general women's health programming, and parental education for women's protection against underage marriage / cohabitation.

5. Livelihoods & Agriculture

5.1- Employment.

The primary livelihood in these areas is subsistence farming. Most of the households surveyed (96.1%) report agriculture or support to agriculture as the primary livelihood. This is almost exclusively small-scale coffee production. The minority with 3.9% work as a businessperson, construction worker, or carpenters or as agricultural engineers.

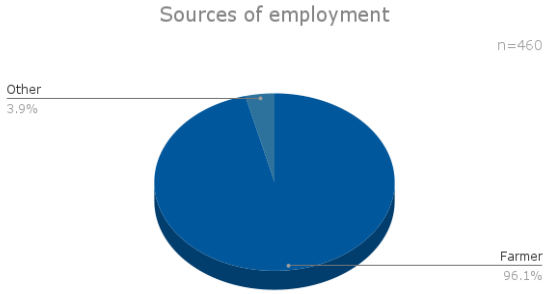


Figure 3. Sources of Employment.

The survey asked the primary income of the male to align with other data sources. Around 12% say that there is no male primary breadwinner, because those households have no husband or head male which means that the head female is a primary breadwinner.

Our assessment team feels that additional research around economics in the area would be useful. This could include employment prospects for women (especially single heads of HH), informal payment practices, youth labor participation in agriculture, savings & financial literacy, and other topics.

Image 4. A local farmer.

5.2 -Agriculture

Most families grow coffee or help others work coffee harvesting as a livelihood. However, some households also have gardens, not including a coffee plot: 79.5% of families grow some crops, while 20.5% have no garden at all. 75.9% of all HHs (or 95.5% of those households with gardens) grow just for household consumption. A small minority of the households with 2.9% grow for both food and sale, or 1.6% just for sale. This means that HHs gardens are mostly used for home consumption.

We also inquired about what crops the HHs would like to grow in the future if they have the opportunity. Many of the households surveyed (43.1%), report that they are willing to grow vegetables in their home gardens like carrots, cabbage, potatoes, tomatoes, and cucumbers. Some of them want to grow grains (34%) like beans, corn, rice and coffee and others want to grow fruits (22.9%) like growing bananas, mango, avocado, watermelon or papaya. We did not inquire about feasibility to grow these in their individual home terrains.

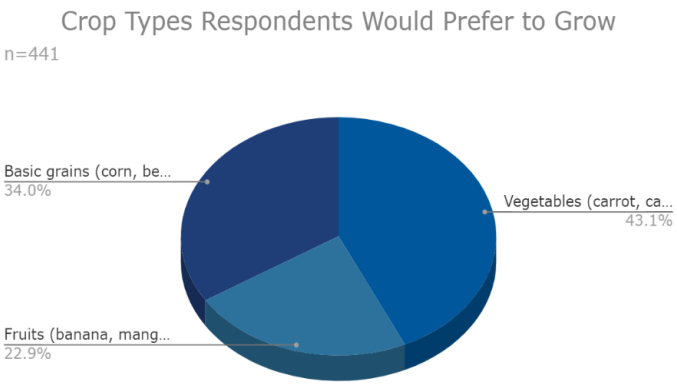


Figure 4. Crop Types Respondents Would Prefer to Grow.

The households interviewed were asked about the training they have received of agriculture. In general, 82.3% of households have not received any training. Only 17.7% received the training.

The research indicates that knowledge acquired in agriculture has been through generational teaching, and more formal training could yield significant impact. There is also significant interest in non-coffee gardening, but there is very little technical skill for gardening outside of coffee. Respondents don't seem to know what plans could be viable in their homes. Technical experts can further explore this question but would need to tailor responses to each community as the altitude makes micro-climate diversity, and viable plants likely vary by location. We find that additional agricultural training programming would likely improve the general incomes in the area.

5.3 - Non-Agricultural Income

We were not able to quantify the total annual income by HH by survey but did collect some information about incomes. Quantitative assessment of incomes was challenging for two reasons. First, most respondents are uncertain of annual incomes because coffee incomes are seasonal and unpredictable. Second, low financial literacy means that few HHs carefully track their annual income.

The primary income of coffee harvesting is seasonal, with harvesting concentrated from December to March or April most years. Coffee prices and harvest income are not a survey question, but the topic was researched through key informant interviews.

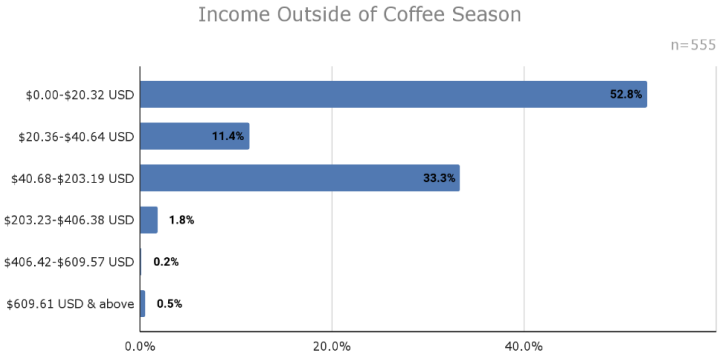


Figure 5. Income Outside of Coffee Season.

Most households´ main annual income comes from coffee, but the coffee harvesting is concentrated in the December-March season. Outside of this season, 46.8% report that their jobs are informal (daily labor depending on availability), and only 10.6% report earning a consistent salary. For daily labor outside of the coffee harvesting season, the average monthly income of households in the communities is HNL 1,395 (USD $57) while the median is HNL 500 (USD $20.24). Our KIIs validated this income level. The Anker Living Wage Reference Value 2020 for rural Honduras is HNL 6,852 per month (USD $277)[6] This population's monthly average income without coffee is roughly a quarter of the national average income for rural Hondurans, which makes coffee a critical part of the local economy.

5.4- Seasonal Agricultural (Coffee) Income

A minority of HHs own a small coffee plot of around 1-4 imp. acres, while most people are hired to work in the neighboring plots. A coffee harvester who does not own a coffee plot works daily labor harvesting coffee for others. They earn at least HNL 150 (USD $6.10) per day, or $153 per 25-work

[6] https://www.globallivingwage.org/wp-content/uploads/2020/11/Rural-Honduras-LW-Reference-Value-FINAL.pdf

day month. Owners of small coffee, farming landowners earn more than harvesters. Those who own small plots can earn as much as HNL 3000 (USD $122) per week also sell the coffee they harvest.

In summary, incomes are seasonal but remain far lower than the national average. Meanwhile the Honduran essential basic food basket consists of 30 food items that stands at an average of HNL 6,400 (USD$260) per month[7]. Our assessment finds that the majority of the community does not earn enough to supply the needs of food for the families, which is a high risk of malnutrition.

While it is not a survey question, many community members and our program team have noted that climate change and seasonal patterns have drastic effects on the assessed communities. This includes some deforestation of watershed areas, and El Niño weather pattern (which is occurring at the time of this assessment), leading to reduced rain and groundwater supplying mountain spring water sources. Some coffee farmers expressed that due to the current drought, the coffee harvest of 2023 may be reduced or even a near complete failure. Any negative impact on coffee plants would have substantial negative impacts on livelihoods in the surveyed areas.

Image 5. Panoramic view of coffee plantations.

[7] https://tnh.gob.hn/nacional/proteccion-al-consumidor-precio-de-la-canasta-basica-alimentaria-fue-de-l6400-en-julio/

5.5-Poverty & Vulnerability Ranking

The Simple Poverty Scorecard is ten question scored survey tool designed to be a low-cost poverty assessment tool which will enable latitudinal comparisons to other Honduran contexts[8]. This tool was originally developed by micro-finance institution Grameen Foundation, while the Ford Foundation supported Mark Schreiner to contextualize the tool for Honduras use in 2007, using Multi-Purpose Continuous Household Survey and statistics from the Government of Honduras' Instituto Nacional de Estadística. The scorecard assigns points by each response, and assigns a total score between 0-100, with zero being the most impoverished.

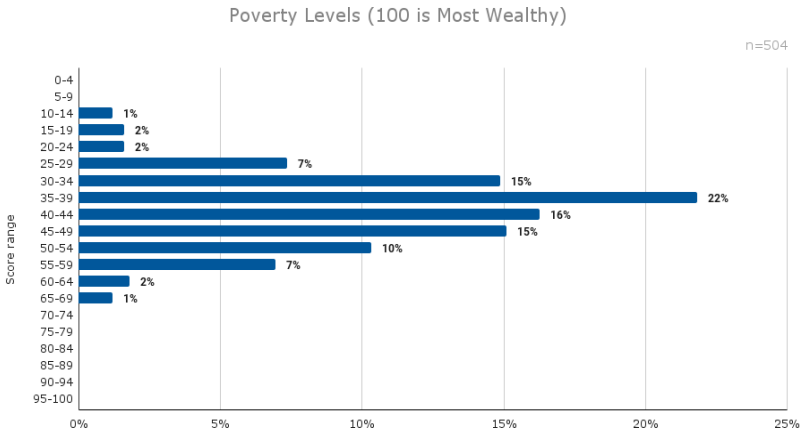


Figure 6. Poverty Level.

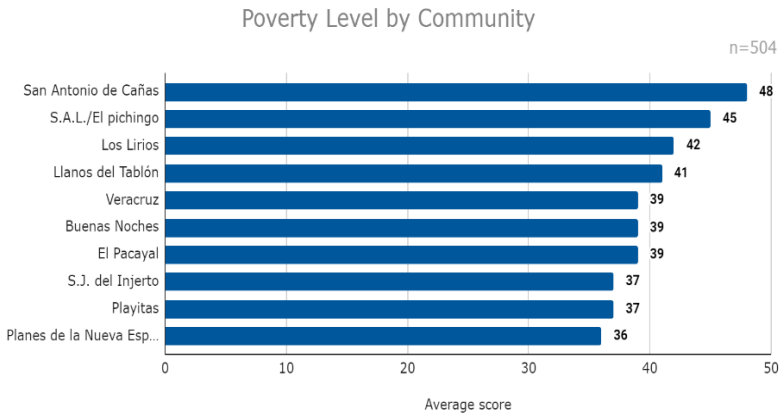


Figure 7. Poverty Level by Community.

The scoring aspires to measure the HH level poverty in these areas against national averages in rural areas. However, the most recent large-scale calculation of the poverty level was in 2007. Since then, standards have changed significantly across the country, so a direct comparison would be inaccurate. VHCMB will continue our efforts to obtain a

[8] https://www.simplepovertyscorecard.com/HND_2007_ENG.pdf

viable baseline to help compare the level of need by area, but in the meantime this tool still allows effective in-area targeting at the community or HH level.

According to the results, the average score per community is 40.6 while the median score is 40. The total population distribution falls in a bell curve with a standard deviation of the population is 10.5. However, the wealth by community varies significantly. The community closest to the major urban areas is San Antonio de Cañas, which has an average poverty score approximately 8 points above the average, which is in line with the perception that the most rural communities suffer the lowest standard of living.

6. Education

6.1- Household Education Levels

The communities assessed have a relatively low education level across the whole population. Respondents were asked about the highest level of education of the heads of household but were not asked about their individual literacy. Around 70% of respondents reported completing primary school (through 6th grade), while around 26% completed less than 6 years of school or have no education at all. Less than 2% of the heads of household have completed high school.

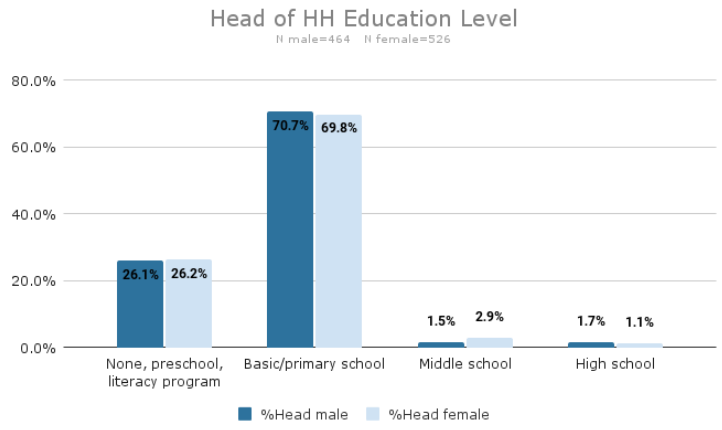


Figure 8. Head of HHs Education Level.

The sharp drop-off after 6th grade is likely driven by three primary factors. First, no secondary schools exist in these areas, so secondary education requires expensive transportation or boarding school. Second, the Honduran government provides a small subsidy to mothers whose children complete the 6th grade, incentivizing completion but not continuation past the 6th grade. Also, the low-income levels and subsistence agricultural livelihoods require youth to support families by

working at young ages. Finally, the parent's relatively low education level may cause parents to have lower appreciation for the potential benefits of education, causing generational poverty.

6.2- School Attendance

Of families with children, three quarters of the HHs (a total of 238) send all of their children to school, while (8.2%) report that some of the children go to school, and 16.7% report that none of the children attend school.

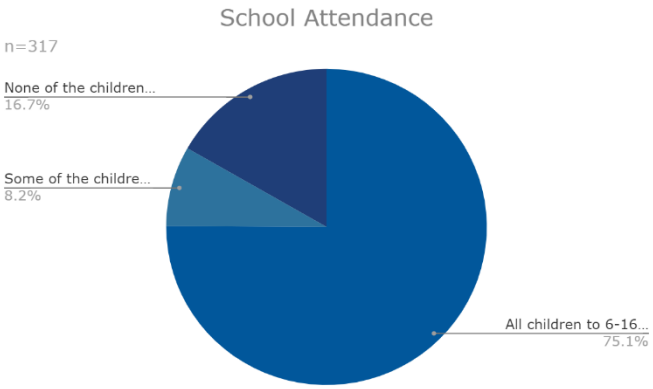


Figure 9. School Attendance.

HHs were asked the primary reason their children do not go to school. (62.8%) Reported that the reason is due to lack of resources, while 29.5% reported that children do not like going to school, and only (7.7.%) reported that children are away because there is no high school in the community. The survey did not assess student special needs, which may also be a driver in non-attendance.

VHCMB currently provides a cooked school lunch in 5 of the 12 surveyed schools. These schools were previously selected due to their highest level of need. We observed a very small correlation between the school feeding and the attendance in schools. When poverty (which has a negative correlation to attendance) is accounted for, there is a .28 correlation between school feeding and attendance, suggesting that school meals have a moderate positive impact on attendance.

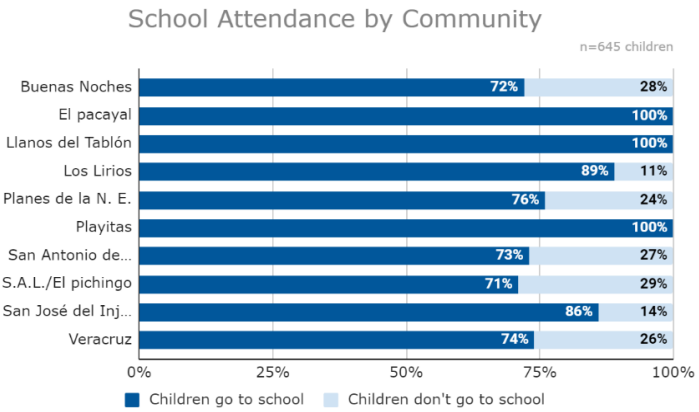


Figure 10. School Attendance by Community.

We also notice a strong correlation between the attendance and the size of the community, indicating that shorter distance from home to school, and the smaller number of students in a school are likely drivers of attendance.

Overall, it appears that about one in four school aged children does not attend school. We recommend creating a

community owned outreach program in coordination with each school. The assessment responses can identify currently out of school children and encourage parents to value education. Additional incentives such as school kits, rubber rain boots, and school hardware improvements can be tested.

6.3- Migration

There is significant new emigration from Honduras, primarily to the United States. The survey asked respondents whether they had members of the household who have left the country. Of the 555 HHs surveyed, 16.9% (94 HHs) state that they do have at least one member of the household outside the country, while (83.1%) report that there are no members abroad.

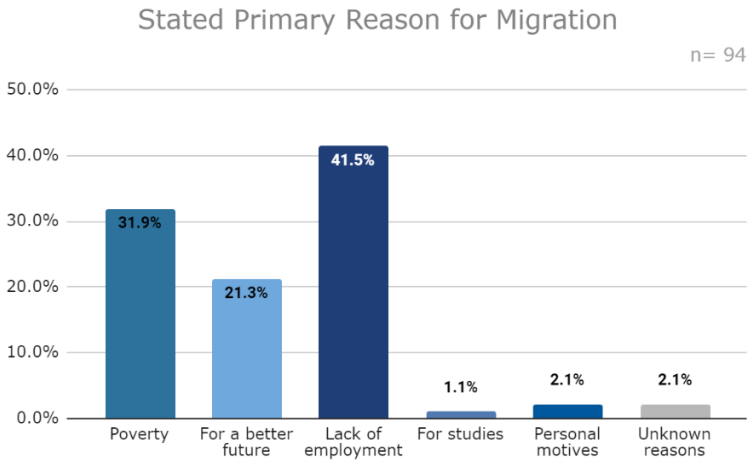


Figure 11. Stated Primary Reason for Migration.

When affirmative responders were asked about the motivation for migration, almost three fourths cited poverty or lack of employment opportunities, while 20.3% stated they were seeking a better future, and 3.3% had other reasons. Violence or threat of violence was not cited as a major cause of migration.

We tested for a correlation between migration and poverty and found a very small correlation of .17, where migrating families have slightly less poverty.

7. Homes & Hygiene

The assessment asked several questions about the homes or infrastructure of respondents. These helped establish a standardized poverty ranking score and helped us understand the communities we serve.

7.1- Homes

All HHs were asked about their access to electricity. 53.2% reported that they have electricity from the public network, while 6.1% that the principal resource of electricity is with solar panels (power level not asked), and 40.7% who have no electricity. Only 16.2% of HHs have a working refrigerator, while 27.9% have a TV. 63.5% of HHs have a dirt floor, while 46.5% of homes use clay, cement, wood floor, tile or other materials.

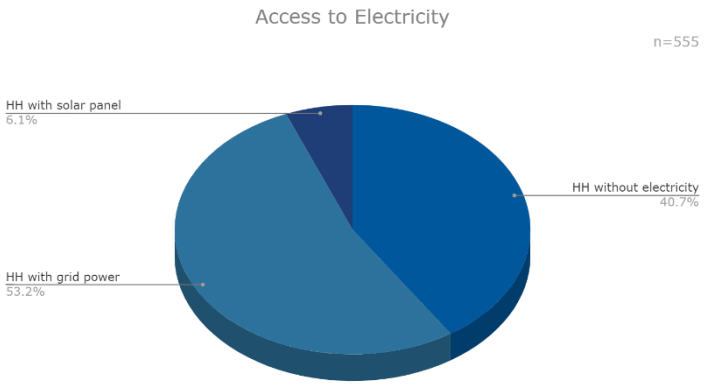


Figure 12. Access to Electricity.

7.2- Home Water Source

VHCMB has built clean drinking water systems across most of the 12 communities surveyed. However, the systems are owned and run by the community Water Boards. 86.7% of all surveyed houses are connected to the improved water system, while 13.3% use other sources. Many of the non-connected homes are newly constructed, while is difficult to connect the gravity fed water network because they sit topographically higher than the sources. Yet a few remaining still have not paid the community fee for the connection. Each HH will only be connected to the system if they pay for their in-home connection to the network, and they have agreed to pay the annual per-home water fee (around $16/year) to fund the community's water repair budget. This non-connected rate varies by community: Planes de la Nueva Esperanza has 34% not connected while in Veracruz, connections have reached 99%.

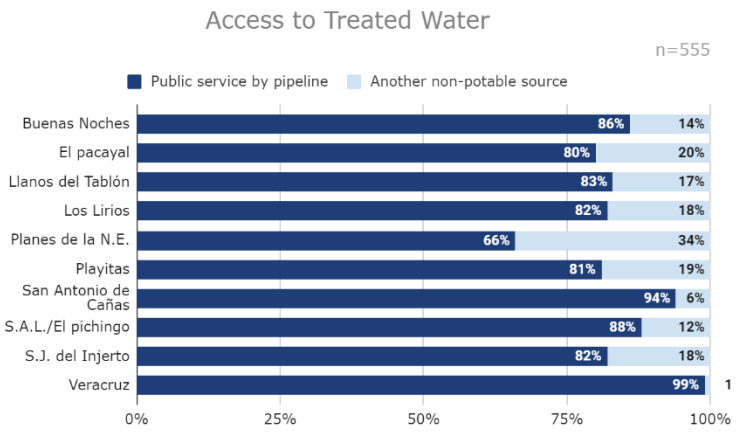


Figure 13. Access to treated Water.

Those not connected collect water from untreated wells (27%), other untreated water sources (71.6%), or bottled or purified water (1.3%). When the Brigade began work in this area, there were no treated water sources available in these communities. As a side note, water availability is at risk from climate change, drought, and deforestation. Some communities have faced occasional insufficient flow to meet community water demand during the driest seasons.

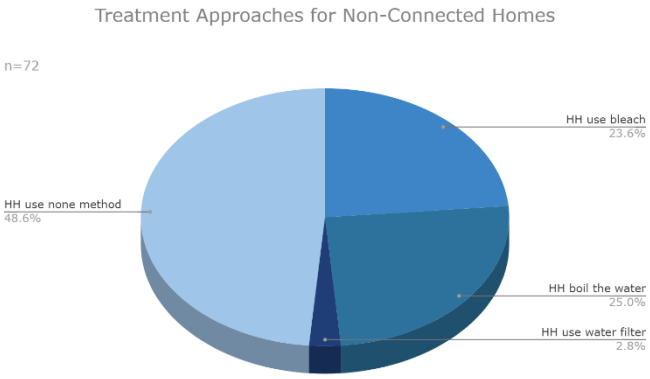


Figure 14. Treatment Approaches for Non-Connected Homes.

Of the households consuming untreated water, 25% boil the water, 23.6% use bleach and only 2.8% use a water filter. Finally, 48.6% drink water without any treatment. This means that the Households that have non-potable water sources and do not treat water for drinking are exposed to acquiring some food or waterborne diseases. This indicates the opportunity for additional home water treatment education.

7.3- Latrines

The interviewed households were asked about whether or not they have a latrine. 63.1% reported that their house does have a latrine, while 33.9% do not. Most latrines in this area are open pit or similar, as there is no central sewage.

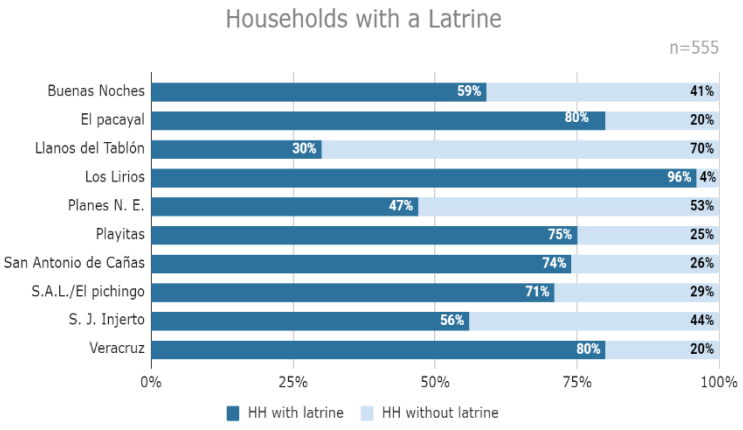


Figure 15. Households with a Latrine.

The survey did not assess alternative toilet practices for those without latrines. School based hygiene training is already implemented in these areas, but we recommend that additional hygiene education for parents is needed and can be targeted to the communities with the least latrines. Municipal

government or NGO programming could include construction assistance or incentives to increase the construction and proper use of latrines.

8. Health

8.1- Incidence of Illness

HHs were asked three questions about disease incidence: Overall sickness in the last 3 months, children under five sick in the last three weeks, and overall chronic illness.

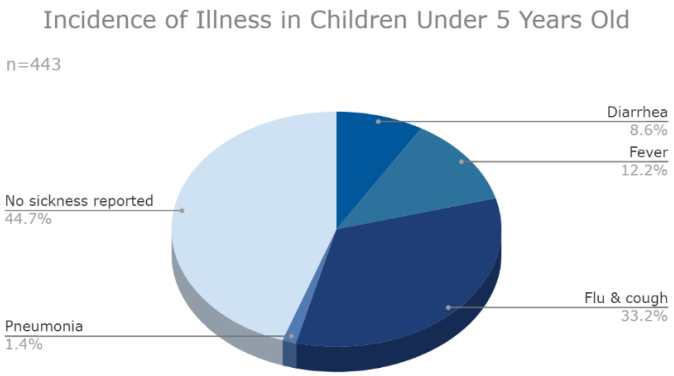


Figure 16. Incidence of Illness in Children Under 5 Years

The interviewed households were asked if in the last 3 months any member of the family became ill. The majority did not report illness with 55.1% while 44.9% reported that there was a household member who became ill during that time.

When asked about children under five getting sick in the last 3 weeks, 44.7% reported no sickness during that time. Meanwhile 33.2% had experienced flu and cough, 12.2% reported fever only, and 8.6% reported diarrhea alone or pneumonia with 1.4%. This relatively low incidence of diarrhea suggests that the improved water sources are likely mitigating much of the waterborne illness.

8.2- Chronic Illnesses & Disability

The interviewed households were asked about whether there is a member who has a serious or chronic illness. The majority (80%) reported that no one has a chronic disease, while 10.5% reported a member with other chronic disease or disability. Our key informant interviews indicated that high blood pressure is highly prevalent and largely untreated.

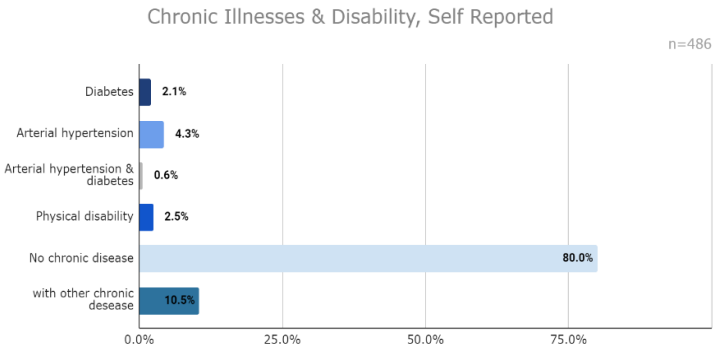


Figure 17. Chronic Illnesses & Disability, Self-Reported.

Image 6. A gentleman trying on eyeglasses.

Our brief anecdotal validation suggests that actual rates are likely higher - especially disabilities and hypertension, as these rates appear lower than national statistics (i.e., 10% of Hondurans have a disability[9]). It is unclear whether the respondents were familiar with chronic illnesses, what portion of cases are diagnosed, or how disability is understood among respondents. We recommend a separate health assessment to better assess levels of sickness, using a methodology less limited by self-reporting of patients who have a low comprehension of the medical conditions we are asking about.

[9] https://www.camo.org/services/services-disabilities/

8.3- Causes of Mortality:

Each HH was asked whether a member of their family has passed away in the last 12 months. 10.5% reported having lost at least one family member in the last year.

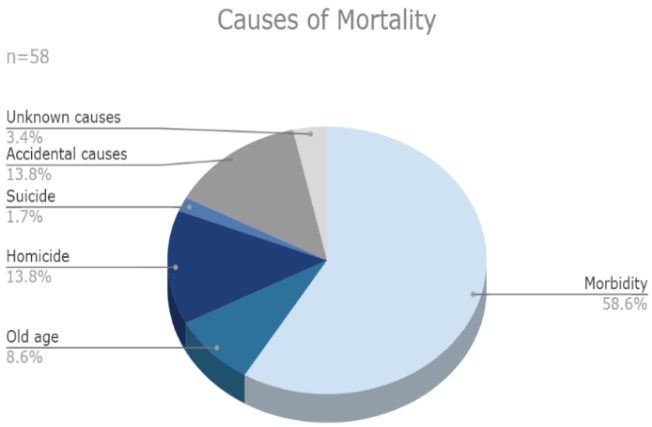


Figure 18. Causes of Mortality.

They reported that the leading cause to be is morbidity (58.6%), followed by homicide (13.8%), accidental causes (13.8%), old age (8.6%), suicide (1.7%) and unknown causes (3.4%). The average age of the deceased member of the household was 49 years old while the median was 55 years old and standard deviation of 29. We also find that our average age at death was 49, 21 years younger than the national average of 71[10].

Our death rate findings are higher than the national average (2410 vs 450 / 100,000 annually[11]). We believe that this is due to this area's verifiably younger average age at death, but also include some overreporting. Overreporting may be due to respondents inaccurately remembering deaths from recent years as having occurred in the last 12 months. Overall, we believe our breakdown of causes of death to be roughly accurate. Because we only asked about the leading cause of death, it is possible that sickness and old age could be multi-factor comorbidities. High levels of death due to sickness, and the relatively low average age at death indicate a need for additional health programming. (KIIs indicate that high blood pressure is highly prevalent and largely untreated).

We also note that there was significant violence in the assessed area in 2021-2022, and we are able to verify the homicide rate does match the response rate. This also reflects the high national rates of gender-based violence. The 2023 UN Humanitarian Needs Overview for Honduras[12] found that most 68 per cent of women between 15 and 49 have suffered physical and/or sexual violence by their

[10] https://www.statista.com/statistics/970739/life-expectancy-at-birth-in-honduras-by-gender/

[11] https://www.macrotrends.net/countries/HND/honduras/death-rate

[12] https://reliefweb.int/report/honduras/honduras-humanitarian-needs-overview-2023-september-2022?gclid=CjwKCAjwzo2mBhAUEiwAf7wjkrq4LdIM_1NkLLaEYJ8HFsuXnqpeoFn7diJpbRN76v7CLwZGO01ZLhoC2iIQAvD_BwE

partner in the last 12 months. The assessment team recommends continuing health programming and exploring violence prevention programming or partnerships to address violence prevention.

8.4- Access to Care

We asked several questions about HH access to health care, starting with the distance to the nearest clinic. 32.6% say the nearest preferred clinic is less than 30 minutes away, while 20.2% say the nearest preferred clinic is 30-60 minutes away and 47.2% say the nearest preferred clinic over an hour away.

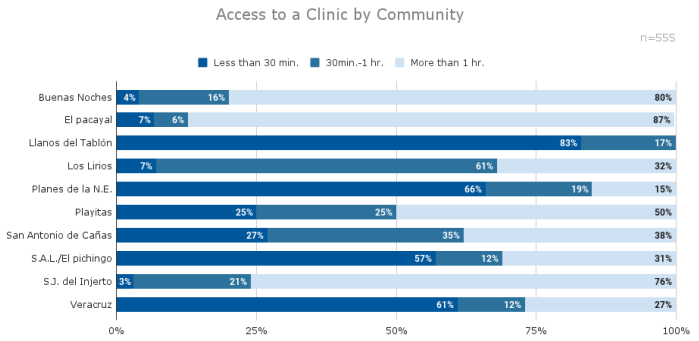


Figure 19. Access to a Clinic by Community.

The time to reach clinics is still over an hour on average for most HHs, meaning that health care coverage is still low, but as expected in rural mountain villages. Among the existing rural clinics managed by VHCMB, 5 communities are closest to the Planes clinic, two by Veracruz, and three are closest to San Antonio.

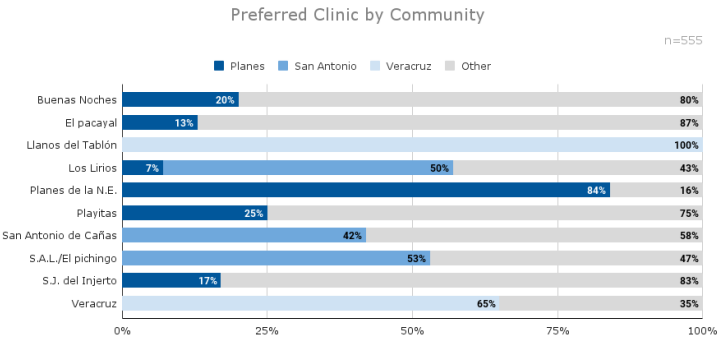


Figure 20. Preferred Clinic by Community.

When asked about the closest clinic they are likely to attend, just under half cited one of the VHC Rural Clinics, while 55% cited another clinic. This shows that many HHs consider larger clinics to be a first resort. We recommend additional interviews with those who travel to farther clinics t identify their reasons for choosing the larger clinic. Where possible, the rural health team should consider whether it is feasible to add some additional services that currently attract people to attend clinics farther away.

8.5- Quality of Care

We also asked if respondents feel that a community health worker is available when they need care. (CHW availability is not the same as the clinic open hours, as sometimes the CHW can be reached at their home, or a CHW can visit the home of severely sick patients, or a CHW who is at the clinic may be busy with another patient). 84.7% say the community health worker is available when needed, while 15.3% say they were not available when needed.

Image 7. A VHCMB Rural Clinic, Church, and School in Planes Community

Finally, we asked those who have visited a clinic at least once if they felt they received the care they needed. 85.6% reported to have received the needed medical attention to resolve their health concern, while 14.4% said they did not receive the care needed.

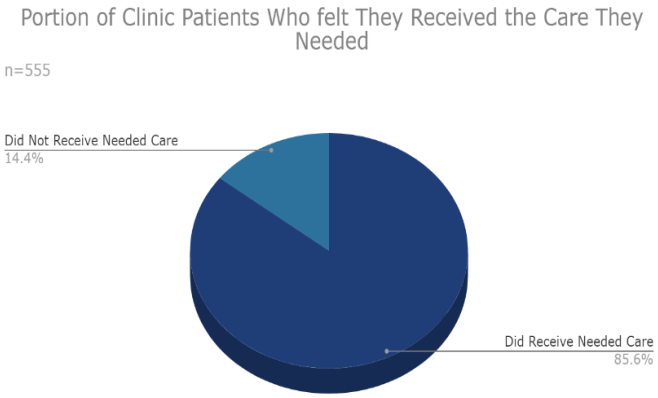


Figure 21. Portion of Clinic Patients Who felt They Received the Care They Needed.

KIIs inform us that a common reason people do not feel their needs are met is the limited range of medicines available in the rural clinics for chronic conditions like diabetes and high blood pressure. The extremely low-income families served by these rural clinics often struggle to find any source for expensive, chronic medicines. Likewise, vaccinations are provided by the Government across all of Honduras, and government provided vaccinations in the VHCMB rural clinics were halted during the pandemic and are about to resume at the time of this writing. This may shift some use back to closer clinics.

8.6- Nutrition

We asked HHs if, due to limited resources, their children have gone without food at least one night in the last three months. 86.7% reported that children have not lacked food in the last 3 months, 9.1% lack occasionally, and 4.2% have frequently lacked food. We believe that there was some response bias - specifically embarrassment to admit poverty and inability to feed their children.

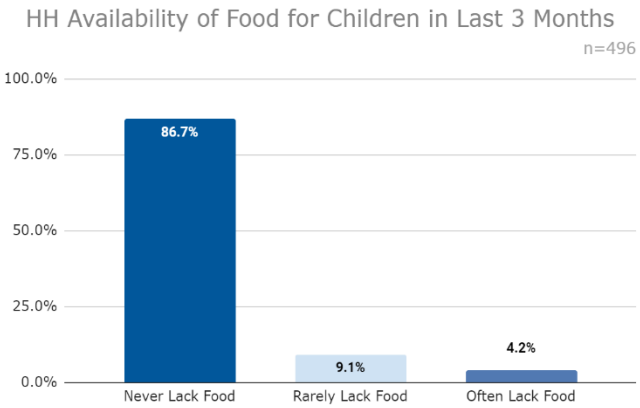


Figure 22. HH Availability of Food for Children in Last 3 Months.

Image 8. Children helping to prepare the meal.

We suspect this because KII responses and our malnutrition (height-weight-age measurements) indicate that the lack of food is more prevalent than these responses indicate. We recommend future research about nutritional consumption habits.

9. Perceptions of Community Needs

We asked several questions about the respondent's perception of the needs of the community. These were phrased as a community need to mitigate risks created by self-identifying as a HH under violence or a person with mental health. However, we found that the responses show less concern

about violence, domestic abuse, and mental health than we anticipated. There could be several reasons for this:

1. There could be a low awareness or understanding of the mentioned problem, leading to low prioritization.
2. There could be a hesitancy to mention sensitive community or household issues for fear of stigma or retaliation.
3. There could indeed be a lack of need for these services, although the assessment team considers that unlikely.

9.1- Violence and Domestic Abuse

Similar nationwide reports, like the 2023 UN Humanitarian Needs Overview for Honduras[13], finds that both mental health and violence are leading challenges in Honduras and although they are often poorly understood or not discussed in public. The assessed area experienced 8 murders in the last 12 months, yet more than half of respondents stated that violence and domestic abuse are not a problem in their community.

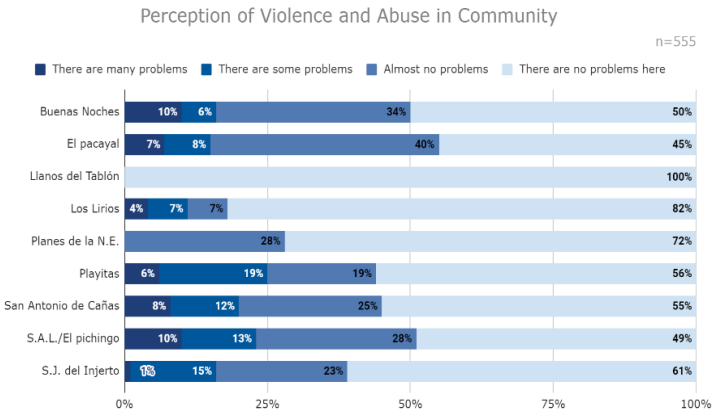


Figure 23. Perception of Violence and Abuse in Community.

9.2- Mental Health

We believe that mental health holds significant stigma and is not well understood, so a more accurate assessment in the future should not rely on self-reporting.

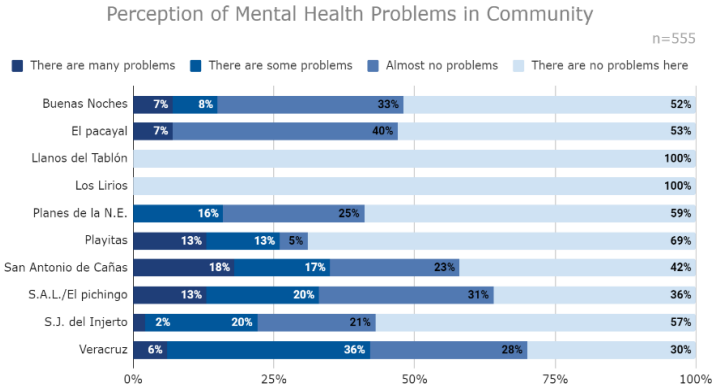


Figure 24. Perception of Mental Health Problems in Community.

[13] https://reliefweb.int/report/honduras/honduras-humanitarian-needs-overview-2023-september-2022?gclid=CjwKCAjwzo2mBhAUEiwAf7wjkrq4LdIM_1NkLLaEYJ8HFsuXnqpeoFn7diJpbRN76v7CLwZGO01ZLhoC2iIQAvD_BwE

When asked to prioritize basic needs in their communities, we found an even prioritization across each theme. This may indicate similar prioritization across needs or could indicate weakness in the question format. The majority of households surveyed reported that the most important issue is nutrition and food with an average score of 4. While education / support for children with a score of 3.9, health care with 3.7, water & sanitation with 3.6 and with the lowest score, livelihoods with 3.5. The slightly higher priority for nutrition is a logical priority given the very low incomes and separately observes malnutrition among children. According to the World Health Organization, nutrition is a significant component of health and development associated with better infant, child, and maternal health, stronger immune systems, safer pregnancy and childbirth, a lower risk of noncommunicable diseases (such as diabetes and cardiovascular disease), and longer life[14].

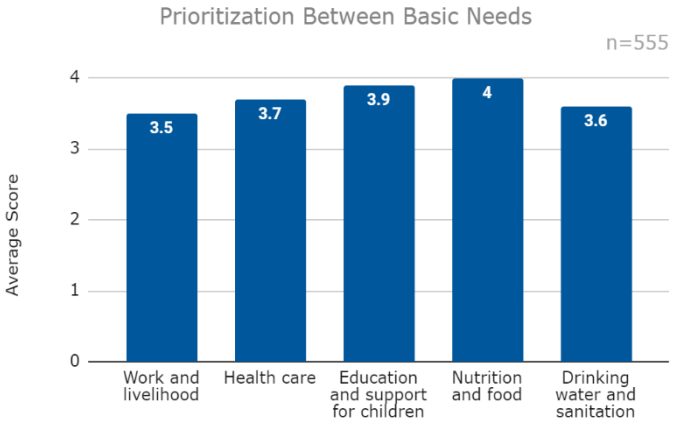


Figure 25. Prioritization Between Basic Needs.

9.3- Other Community Priorities

Respondents were asked an open-ended question about any other need in the community. The top need identified was latrines (17.4%), followed by the need for a health unit with a doctor or nurse (16.6%), then need for basic food baskets (14.9%) and electricity (12.2%).

We recommend increased support to the health sector, particularly seeking to bring additional medical professionals to the clinics, such as an experienced nurse or doctor. Additionally, incentives or assistance in the construction of latrines would improve health outcomes. Finally, there is a widespread need for improved livelihood opportunities, as that would have a direct impact on

[14] https://www.who.int/health-topics/nutrition#tab=tab_1

growth, and represents an essential input in any production of goods and services, supporting the community's development.

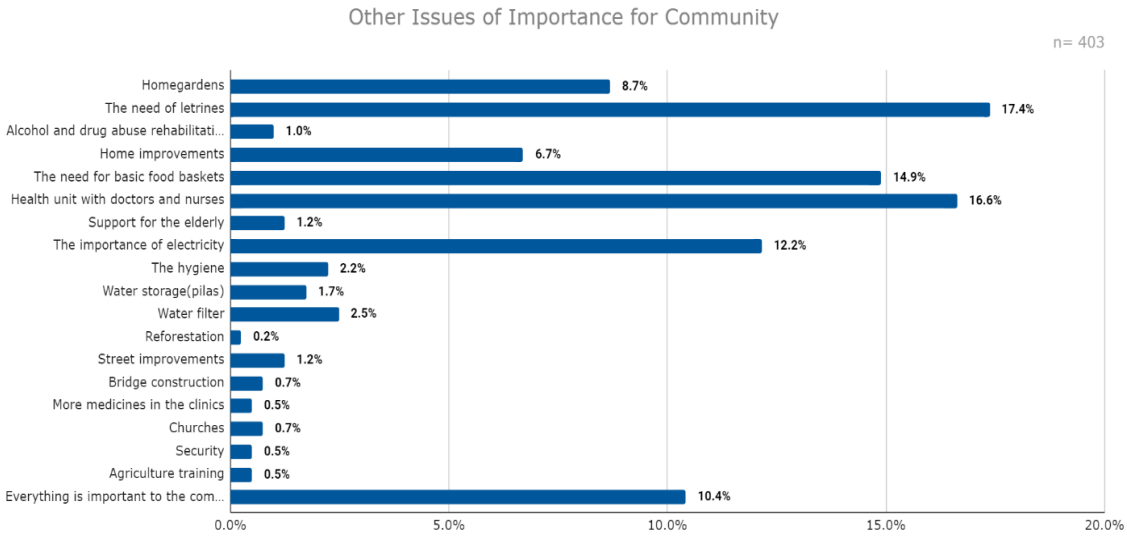


Figure 26. Other Issues of Importance for Community.

Image 9. VHCMB Water project constructed in collaboration with La Paz Rotary Club and the City Hall of Comayagua.

10. Conclusions

This assessment finds widespread poverty, and a widespread need for additional services. These include health, nutrition, education, livelihoods, and general community development. It also finds a relatively low awareness or understanding of several areas such as financial literacy, agricultural techniques, domestic violence prevention, disability, and mental health promotion.

Specific guidance on programming is included in the recommendations (see section #2), with sector opportunities or programmatic approaches that will address the concerns raised here. There is need for additional health programming, especially in raising the level of services in rural clinics to address the remaining health needs, such as an experienced nurse or doctor. School attendance is another area of urgent need, with parental education about the important of school attendance, and expansion of the secondary school offerings, and the improvement quality of primary schools.

There is also a need for several areas of assistance that will require partners, such as latrines, agricultural capacity building, expansion of the electrical grid, and greater educational capacity.

Finally, the assessment is this location's largest and most authoritative quantitative assessment in recent years, but also identifies a few areas needing additional research. These additional lines in inquiry are integrated within the recommendations section. We did identify some indicators of positive impact in programming through longitudinal comparison, although impact measurement will become increasingly clear in coming years as we perform repeat annual assessments or assess comparable rural communities in the surrounding areas.

11. Question Set from Survey

These questions were supplemented by Key Informant Interviews

1. Fecha
2. Encuestador
3. Nombre de la comunidad
4. Disclosure & Opt-in
5. Nombre de la familia
6. Número de celular o teléfono de la familia
7. Localización
8. ¿Cuántas personas viven en el hogar?
9. ¿Cuál es el nombre de jefe/jefa de casa?
10. Podría decirnos la edad y género de cada uno de los miembros de la casa:
11. Edad (jefe de la casa)
12. Edad (jefa de la casa)
13. Otros miembros del hogar por género y edad
14. ¿De qué material es la mayor parte del piso de esta vivienda?
15. ¿Cuántos cuartos se usan para dormir?
16. ¿Tiene esta vivienda un cuarto exclusivamente para cocinar?
17. ¿Tiene una chimenea el fogón de esta casa?
18. ¿Tiene electricidad esta casa?
19. ¿Tiene una refrigeradora en buenas condiciones en esta casa?
20. ¿Tiene televisión en casa?
21. ¿Ustedes cultivan granos básicos, frutas o vegetales?
22. ¿Es la cosecha para consumo familiar?
23. ¿Qué le gustaría cultivar en el huerto familiar?
24. ¿Alguien en su hogar ha participado en capacitación de siembra de granos básicos, frutas o vegetales?
25. Si cultivan café o corta café cuánto reciben en ingreso de cosecha anual:
26. ¿Cuál es la ocupación principal del jefe/jefa del hogar?
27. En su ocupación principal, ¿trabaja como empleado asalariado?
28. ¿cuántos miembros del hogar trabajan como empleados asalariados?
29. ¿Cuánto es el ingreso mensual del hogar?
30. Si tienen un niño/a menor de 5 años: ¿En las últimas dos semanas, su niño/a ha enfermado de:
31. ¿Hay alguien en la casa con una enfermedad grave?
32. ¿Cuál es la clínica rural más cercana a su vivienda?
33. ¿Cuál es el nombre de la clínica más cercana?
34. ¿Cuánto tiempo le toma llegar a la clínica rural de la brigada?
35. En los últimos 3 meses, ¿Algún miembro del hogar ha ido a la clínica rural de la brigada para recibir atención en salud?
36. ¿Usted considera que el trabajador de salud de la clínica rural de la brigada está disponible para darle la atención que necesita?
37. ¿Usted considera que le brindaron la atención necesaria para su problema de salud?
    a. Si la respuesta es "no" especifique las razones
38. ¿Ha muerto un miembro del hogar el año pasado?
39. ¿De qué edad?
40. ¿De qué murió?
41. En los últimos 3 meses, ¿el niño/a del hogar dejó de comer por falta de alimentos?
42. ¿Cómo obtiene el agua que utiliza en la vivienda?
    a. Si no es del sistema tubería, ¿De dónde?
    b. Si no es del sistema tubería, ¿Qué utiliza para tratar el agua?
43. ¿En su vivienda hay una letrina?
44. ¿Los niños entre 6 y 16 años en su casa están estudiando?
45. ¿De los niños entre 6 y 16 años en su casa, cuántos están estudiando?
46. Si la respuesta es "algunos" o "ninguno", ¿Cuántos niños(as) no asisten a la escuela?
47. Especifique las razones por las que los niños "NO" asisten a la escuela:
48. ¿Cuál es el nivel educativo más alto que alcanzó la jefa/esposa del hogar?
49. ¿Cuál es el nivel educativo más alto que alcanzó la jefe/esposo del hogar?
50. ¿Hay algún miembro del hogar que esté fuera del país?
    a. Si la respuesta es "si" que especifique las razones de su salida del país
51. ¿Usted cree que en la comunidad existen problemas de violencia y abuso doméstico?
52. ¿Usted cree que en la comunidad existen problemas de salud mental como depresión o ansiedad?
53. Queremos ayudar en el desarrollo de la comunidad. ¿Cuál es el nivel de importancia que hay en cada una de los siguientes temas para su comunidad:
    a. Trabajo o medios de subsistencia
    b. Cuidado de la salud
    c. Educación y apoyo a los niños
    d. Nutrición y alimentos
    e. Agua potable y saneamiento básico
54. ¿Qué otro tema a parte de los mencionados considera que es muy importante para usted?
55. Thanks, any questions, and closure.

12. About the VHC Medical Brigade

The VHC Medical Brigade is a health and development NGO dedicated to serving Honduras' most vulnerable communities. Our Rural Development Program focuses on providing clean water, healthcare, and education through rural clinics and schools. Our International Medical Program aims to improve health infrastructure in Honduras through the provision of supplies and equipment, medical trips, and training of local health professionals. Sustainable impact, local ownership, and empowering the most vulnerable are integral to everything we do.

For over two decades, the Brigade has served the most vulnerable and underserved populations in Honduras. Founded in 1999 as a response to the devastation caused by Hurricane Mitch, the Brigade provided crucial aid relief to those in need. As time passed, we recognized the importance of transitioning from short-term aid relief to sustainable development work. Today, we continue to work alongside Honduran staff, volunteers, and community leaders to improve healthcare, access to clean water, and education.

> **Our Mission:** We empower Hondurans to bring health and sustainable development to the most vulnerable.
>
> **Our Vision:** Healthy Honduran Communities

We would love to hear any questions or feedback about this report:

Email: Admin@vhcmedicalbrigade.org

Website: www.vhcmedicalbrigade.org

Facebook: https://www.facebook.com/vhcmedicalbrigade/

Instagram: https://www.instagram.com/vhcmedicalbrigade/

Youtube: https://www.youtube.com/channel/UCbvLOsAdaiHHC3xg_K-DH1Q

VHC Medical Brigade

CONTACT US

571-260-3590 | Admin@vhcmedicalbrigade.org