Empowering Community Health Workers in Guatemala

LIBERTY UNIVERSITY

Grace Sibert, BSPHc; Andrea Harper, MPH; Dr. Oswald Attin, MSHS, PhD; Dr. Castillo, MD, MPH, CPH

Abstract

Background:
Community health workers (CHW) have been integral in helping middle- and low-income countries. This research paper discusses the benefits of the involvement of CHWs in health screenings.
Methods:
Health screenings were performed for three rural communities in Guatemala, alongside a church in Zacapa, to identify community wide health risks. The screenings included a detailed questionnaire that collected demographic data, height and weight, a blood glucose check, a hemoglobin check, and a blood pressure reading. Additional nutritional data was collected to understand diet patterns and habits. In-depth educational sessions were done with the CHWs, emphasizing preventative care, and the teach-back method was used to verify the effectiveness of instruction.
Results:
Educational efforts were measured by accurate demonstrations and correct answers to questions at the end of the sessions. The results yielded 47% of the CHW's displayed a correct return demonstration on the first try, 33% did on their second try, and 20% on their third.
Conclusion/Limitations/Recommendations:
The study allowed for health screenings and education, along with the resources to continue screenings independently. Some limitations of this study include participant age or previous illness, along with the missing data from the 2020 trip, which was postponed due to COVID-19 Recommendations include first-aid response training to combat the limited emergency medical services and additional studies to continually educate the communities in Guatemala.

Introduction

For Globally, a shortage of skilled and professionally trained healthcare workers has brought to light the importance and usefulness of community health workers. Community health workers (CHWs) are defined by the World Health Organization as members of the community who are not trained health professionals and are chosen and trained to work in their own communities (Huang et al., 2018). The value of CHWs goes beyond the fact that they are already conveniently placed in their communities of need, but rather the fact that they are able to develop a rapport with those whom they live around and provide care that is centered around their community's needs. A CHW can be of any age, gender, nationality, or even educational level (Lehmann et al., 2021). The most important requirement needed to be a community health worker is a willingness to learn and a dedication to their community.

The COVID-19 pandemic that devastated the world shed light on the many insecurities that are found in the public health sector and specifically in Guatemala. Not only did Guatemala suffer from health and social insecurities, but there was a nutritional strain as well. For a country that already has high rates of malnutrition in children, as high as 48%, limited access to affordable and fresh foods creates a massive impact (Corvalán, n.d.). This was shown when completing health screenings in the rural areas of Guatemala, where participants were found to have high blood sugar or low hemoglobin. A very large percentage of the Guatemalan population is made up of indigenous peoples, who are disproportionately affected by chronic illnesses. The health screenings revealed that diabetes and kidney disease are among the most common health issues, which are closely related to nutritional habits and the age of the participants. In conjunction with the health screenings, cultural awareness was used to communicate with members of the community. The education of a group of community health workers was chosen as the intervention to address a community need.

Methods

For this research, the teaching method used to instruct the community health workers in the health screenings was assigning roles to interview patients and register them in the registry, followed by an educational class at the end of the screening. CHWs are extremely important in this role, as they are the first point of contact with the patient prior to the health screening and can use their local knowledge and beliefs to explain health in simple terms, as well as share care and concern to motivate behavioral change (Mohajer & Singh, 2018). Prior to departing on the trip, a questionnaire including general demographic information and in-depth question was formulated to collect data on the patients. These were carefully formulated, created, and then translated into Spanish. Additionally, a health screening form (represented in Figure 1) and a training brochure (represented in Figure 2) were both made prior to the trip to aid in the screening. The training brochure served as a guide and visual for each CHW during the educational session that was held after the health screenings. After completing the health screening the patients were eligible to have a medical consultation with Dr. Castillo and Andrea Harper. The patients were asked about reoccurring chronic diseases and the health screening results were compared to normal values. Once the health screenings were completed for the day, the community health workers were gathered in a group and given a presentation from the group leaders. A presentation was put together to explain the importance of preventative medicine and health screenings in the community. Then, blood pressure checks, hemoglobin checks, and blood sugar checks were demonstrated, and the returns were demonstrated with the CHWs. The team made sure to include an informational piece about the regular values that should be found for each reading. After the session, the CHWs were asked questions to evaluate the effectiveness of the training session.

Figure 1 demonstrates the health screening form that was filled out by the graduate students with the help of the community health workers for each participant, that was then reviewed with the provider.

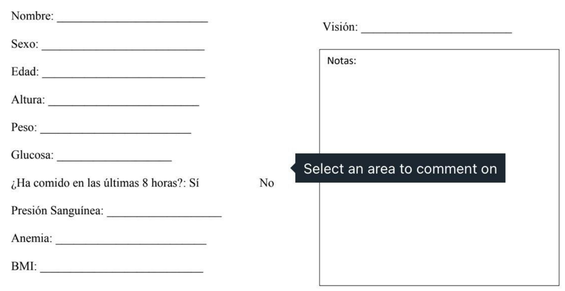


Figure 4 represents the averages of the values taken from the quantitative values of each health screening evaluated in 2021. The younger population, ages 11 to 17, is represented by the blue row, while the population of ages 18 and over is represented by the orange column.

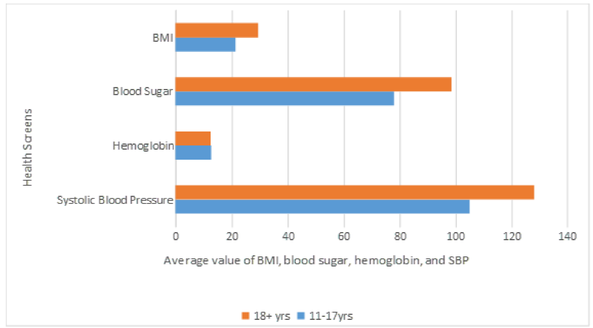
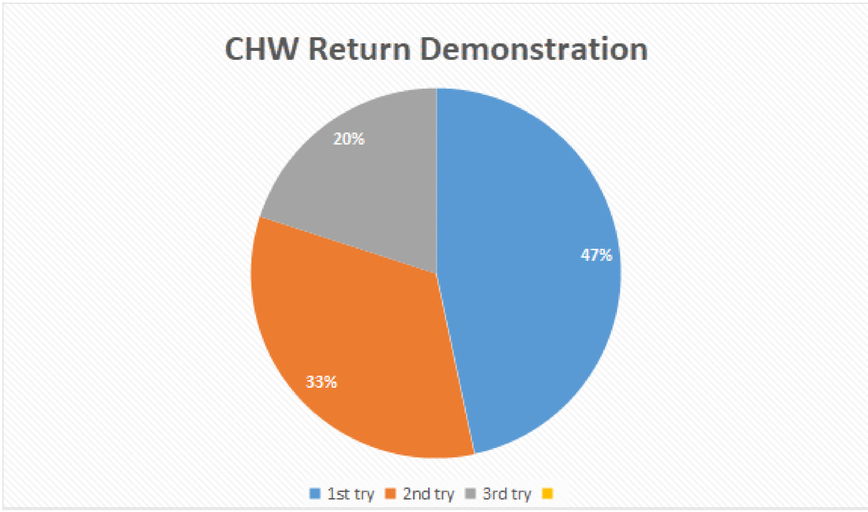


Figure 2 is a brochure in Spanish that was created by a graduate student in 2019 and translated by members of the team for use in the educational portion of the CHW training session.

Figure 6 is a visual representation of the percentage of community health workers who did a correct return demonstration on the first try, second try, or third try after the educational session.



Results and Conclusion

Results:
The data above does not represent every single participant that attended the health screenings. The total was more than 237, but some data could not be used due to gaps in information that did not allow for a full depiction of the data. There were more participants over the age of 17 (82.4%) in comparison to those who were between the ages of 11 and 17 (17.6%); additionally there were more female participants (75.8%) in comparison to their male counterparts (24.2%). The data represented by the figures above showed that participants over the age of 17 had higher BMIs, higher systolic blood pressures, and lower hemoglobin values than those participants who were between the ages of 11 and 17. The same was found to be true when comparing the data with the 2019 data for systolic blood pressure and blood sugars. Figure 6 indicates how effective the educational efforts and sessions were with the community health workers, based on the return demonstration and questions asked at the end of the session. Almost half of the group was able to do an accurate return demonstration of the skills taught and answer the questions at the end correctly on the first try. The other half was able to do this on the second and third tries.

Conclusions:
This result from the health screenings correlates with the fact that young adolescents between the ages of 10 and 14 have the lowest risk of death of all age groups, although ages 10 and 24 have the highest probability of dying in many countries including Latin America (Adolescent, 2021). Though this is the case, deaths are not related to chronic illnesses such as hypertension or diabetes but rather unintentional injuries, violence, mental health, alcohol, and drug use, etc. (Huang et al., 2018). Even with our teams' short time in Guatemala, health screenings and education were provided to a large population. Our team was able to leave supplies, a registry, and education in these communities which allows them to continue the health screenings on their own so they can monitor their health. With the education and resources provided, our hope is to see the health screen readings improve, as well as the nutrient density of this population's diet, to lessen the burden of chronic diseases.

Limitations and Recommendations

Limitations:
Some of the participants were too young to have their blood checked or their blood pressure measured. Additionally, data from the previous trip was missing BMI values and hemoglobin values, so these were unable to be compared to previous years. Due to the COVID-19 pandemic, a group was unable to continue the health screenings in 2020, leaving over a year gap in data that could have been collected and studied.

Recommendations:
Implement a first aid response for first responders to provide medical aid while the victim waits for emergency medical services. The skills and tools that can be taught from this would be valuable to any community health worker to identify and respond to medical emergencies if they were to present at a general health screening. This is a very crucial problem to address due to the fact that less than 1% of populations in low-income countries have access to emergency medical transportation services (Kironji et al., 2018).

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