

Honduras Trip Report – May 2007
Department of Family Medicine, University of Rochester

Participants	
<u>Attendings</u> Douglas Stockman Lois Van Tol <u>Residents</u> Nancy Albrecht Vidush Athyal Elizabeth Brown, Chief/Attending Matt Devine Helen Ireland <u>Interpreter</u> David Martinez, from Honduras	<u>Dental</u> Frank Carberry, DDS <u>Nurses / NP Students</u> Traci Salter Jonathan Davis <u>CWR Medical Student</u> Melissa Smith-Parrish <u>Volunteer</u> Jonathan Hamm – lives in San Jose

Introduction

The Department of Family Medicine at the University of Rochester operates a Global Health Program. This year-round program offers didactic training throughout the year and travels twice a year for two weeks at a time to rural Honduras. The Department has partnered with an NGO called Shoulder to Shoulder and a rural community called San Jose San Marcos de la Sierra in the Southwestern state of Intibuca, Honduras. The needs of the target community are great and go way beyond curative medicine. By listening to the concerns of the local community members and performing qualitative community assessment, we are creating interventions designed to address the common problems. Below is a report from our May 2007 trip.

Travel

The flight to Honduras was uneventful. We were met at the airport and transported to a local hotel without problems. We made it to San Jose the following day without event. Vidush came a few days later. Unfortunately, one of Vidush's bags, that contained school and community library books, did not arrive with Vidush. We were able to get the bag a few days later. The trip home was uneventful. We stayed the night in El Progreso and made our way to the airport for an early morning flight. Our first two flights were on time but our last leg of the trip was slightly delayed. We all returned to Rochester safely and in good health.

Meeting:

The first full day after our arrival we held a meeting with village representatives to discuss the goals of the brigade, projects that we hoped to accomplish and to hear their ideas. There were about 30 villagers from Mangal, El Horno, Guanocaste, La Callera, Portillon, and San Jose Centro. There was much excitement regarding the improved cookstove, and it was decided that each community would make a list of who had cookstoves and who still needed them. The decision was also made to form committees in each community for community libraries, and instead of giving books to the school teachers, we would give them to the community library. There was interest in more water projects and villagers were invited to come on Monday morning to start building the ferro-cement tank. This meeting

reminded us of many differences in this community as it was very difficult to encourage the community members to speak out. This is likely due to the culture in which only the leader of the meeting speaks.

Curative Health Care Projects

Clinical Care

Common health problems included: scabies, pneumonia, diarrhea, arthritis, fungal infections, skin infections, vision problems, dental problems and a number of chronic conditions including long standing malnutrition. In the older patients, visual problems are huge. We did not have an ophthalmology specialist so we just had patients try out various pairs of glasses until they found one that worked for them. Several patients with serious issues such as “jumping eyes” with severe visual deficits could not afford the bus transportation to the hospital. Our evaluation and assistance at times allows connections to more specialized care.

Basic data from the clinic																					
<p><u>Visit Data</u></p> <ul style="list-style-type: none"> ● 175 visits or 25 visits/day ● Children < 5 = 22 ● Children 5-17 yo = 37 ● Adults = 116 <p><u>Children 2-5 yo</u></p> <ul style="list-style-type: none"> ● Average BMI = 16.34 (which is good in this age range) <p><u>Common Complaints</u></p> <ul style="list-style-type: none"> ● Scabies ● Parasitic worms ● Arthritis ● Abdominal pain ● URI/LRTI ● Diarrhea ● Rashes ● Eye problems – cataracts, infections, myopia, etc. 	<p><u>Adults (18+years)</u></p> <ul style="list-style-type: none"> ● Average weight = 121 lbs ● Average height = 60 inches ● Average BMI = 23.5 ● Percent with obesity = 3% ● Average SBP = 114 ● Average DBP = 60 ● Percent with systolic high blood pressure = 7% ● Percent with systolic and diastolic high blood pressure = < 1% <p><u>Where patients came from</u></p> <table border="0"> <tr><td>San Marcos</td><td>9</td></tr> <tr><td>Solitare</td><td>2</td></tr> <tr><td>El Rancho</td><td>28</td></tr> <tr><td>La Calera</td><td>12</td></tr> <tr><td>Guanacoste</td><td>8</td></tr> <tr><td>Portreros</td><td>9</td></tr> <tr><td>El Horno</td><td>16</td></tr> <tr><td>San Jose Centro</td><td>38</td></tr> <tr><td>Portillion</td><td>19</td></tr> <tr><td>El Mangal</td><td>34</td></tr> </table>	San Marcos	9	Solitare	2	El Rancho	28	La Calera	12	Guanacoste	8	Portreros	9	El Horno	16	San Jose Centro	38	Portillion	19	El Mangal	34
San Marcos	9																				
Solitare	2																				
El Rancho	28																				
La Calera	12																				
Guanacoste	8																				
Portreros	9																				
El Horno	16																				
San Jose Centro	38																				
Portillion	19																				
El Mangal	34																				

We realize as we treat many of these problems just how important our preventive measures as discussed below really are. Curative health care will not fix many of these problems. Only through preventing the causes of ill health will we ever reduce the disease burden in this population.

Throughout the trip, we were able to record basic vital signs of all of the patients that were seen in the clinic. Overall, we averaged approximately 25 visits per day, and the dentist saw approximately 20 patients per day. We had a shortage of interpreters so we were all kept very busy throughout the day to day operations.

Prior to our arrival, there had been the initiation of a national strike of Honduran doctors. The strike

began approximately 4 to 5 weeks before we arrived. The local physicians were still performing emergent surgeries however they were not taking any elective cases until an agreement was reached between the Cuban trained Hondurans versus the Honduran trained doctors. Through talking with our local translator it appears as though the problem has stemmed from Honduran trained doctors wanting a more strict policy regarding training for all physicians practicing in Honduras. There are many Cuban trained doctors practicing in Honduras and their training is one year shorter than Honduran trained physicians. Therefore, the Honduran doctors were upset about the Cuban doctor's ability to practice with less training and experience. One nice aspect of Cuban doctors is they are more likely to work in under-served areas.

Since this strike had been ongoing for a few weeks, we saw some cases that had not been treated due to there being no doctors available. There was a gentleman that we saw from Mangal that had been in a car accident and had an anterior shoulder dislocation which required surgical repair but was not deemed an emergency. Therefore, this gentleman presented to us with a frozen shoulder that had been out of place for the last four weeks.

We saw a continuity patient that had suffered a right ankle fracture over 1 1/2 years ago. When we saw this woman last October and the proceeding May, she appeared to have what looked like a bone infection developing in her previously repaired right ankle. After taking over four trips to the capital to see the surgeons for her infection, they removed the plate and screws in her ankle only days before the strike began. Her spirits were high and she was walking with a cane. She was able to walk from her home up the path to meet us when we came to meet her during a home visit.

We also saw a woman who appeared to have a malignant melanoma on her nose. She had been to San Marcos, and was told that it was cancer. However, no biopsy had been done of this lesion. This lesion was removed and the tissue was brought back to the United States and sent to a pathologist at Ohio State for evaluation and diagnosis. We will follow up with her when the community worker begins working sometime this summer.

Dental Care

We offered both curative and preventive dental care.

Curative care – We had a dentist with us again, making this Frank Carberry's second trip to San Jose with our group. He spear-headed the dental operations managing the very busy dental clinic during our brigade. He provided teaching to our residents in doing extractions, draining abscesses and restorative dentistry. He is also a firm advocate for preventive dentistry.

Preventive care – The fluoride program in San Jose Centro is going well. A local woman, Francisca Hernandez, has been great about preparing fluoride rinse twice a week for the school children and the teachers have been treating the children whenever school is in session. A tooth decay study done before the fluoride program was compared to a survey done this trip. There was a 95% reduction in active dental caries. This is a phenomenal success. Although the fluoride program was introduced into each of the five local schools, San Jose Centro is the only one still running the intervention. We are confident that as teachers and parents from other schools hear about these results, they will work with us to remove barriers to the fluoride program. The water from three separate natural springs were tested. All three had some fluoride and one source had an adequate amount of fluoride to help protect teeth.



Frank extracting a tooth while teaching Matt and Nancy



School children spitting out the fluoride rinse

Water Projects

Slow Sand Filters

The first slow sand filter we placed in (Mangal) six months ago is working well. Another filter has been placed at a year round water source in San Jose Centro. A group of 13 families in Mangal requested a slow sand filter at their water source. This filter was built and placed into operation during this trip. The local communities obtain ownership of the project by providing the gravel and labor. Slow sand filters are advantageous given their low cost, simple operation and reliability. Properly functioning filters are known to achieve greater than 99.9% *Giardia* cyst removal.



Slow sand filter in San Jose Centro



Matt helping build a slow sand filter in Mangal

Ferro-cement Water Tank

We built our first ferro-cement water tank. This type of tank costs much less than a tank made from cement block or ready-made plastic tanks. This will allow us to build significantly more tanks with less money. The designed tank is 12 feet in diameter and can hold up to 4,500 gallons of rainwater. This should allow most families to have water throughout the year. The water will be safer to drink and will significantly reduce the amount of work women and children must do collecting water. This first tank was a test to ensure the Hondurans could maintain high quality construction standards and ensure cultural acceptance. The water tank is curing right now. We will start filling the tank with rainwater in

about 6 more weeks. We plan on constructing similar tanks at homes that have no other options for water during the dry season.



Wrapping chicken wire around the form before plastering



Ferro-cement tank being plastered

Piped Water

We identified natural springs that can be used to improve water access for some families. Although there are limited natural springs in relation to homes, this method of water collection and delivery is less costly than building ferro-cement tanks. We will build a stone and cement wall around the natural spring and then pipe the water closer to homes that are downhill from the source. One community member agreed 6 months ago to allow the use of his water source. This trip, he refused to allow use of his water. Therefore, we met with multiple other land owners to identify possible year round water sources. To date, we have five land owners who have agreed to work with us to improve water access using natural springs. There are a number of barriers that need to be overcome to make this project a success. The community members who use the source need to help build the dam and perform routine upkeep. Many community members are worried that the source will not provide enough water for everyone to use and that other people will steal from the source or the equipment. We anticipate building at least one retaining wall during the fall trip. If this intervention is successful, we plan to construct similar walls at all available springs.

Flocculation Tanks

Through collaboration with another NGO, two flocculation tanks were installed in the village of La Calera and a third tank is being installed. This village is located near the Rio San Juan which has abundant water flow year round. The water quality is poor though with a significant coliform count (fecal contamination) and the water remains brown due to suspended dirt. The flocculation unit is composed of two tanks. In the upper tank, water is mixed with a small amount of alum. This clears the water. This clear water is then placed into a second tank where chlorination of the water occurs. The result is clear water that is safe to drink. Because of the need for chemicals, families will have to pay about 5 cents/month. This was deemed by community members to be acceptable. The recipient of the first system proudly showed his clear potable water shortly after the system was operational.



Flocculation & chlorination tanks ready for use



Testing the water for purity before drinking

In-home water filters

We were finally able to get four test units of a Honduran made in-home water filter. These will be placed in four test homes to evaluate the acceptance and functionality of the units. We hope to report back following the fall trip.

Latrines

Jonathan has constructed 2 latrines over the past six months. One is a simple pit latrine. The other latrine is a two hole composting latrine. Only one side is used until full. Then the full side is sealed off for 5-10 years while the other side is used. Once the second side is full, the first side is emptied of the decomposed/composted material. The cycle is then repeated. We will see how the composting latrine works out and build more as the demand dictates.

Cookstoves

The cookstove project has been the most successful intervention to date. We have installed 52 improved cookstoves in the past six months (mainly due to Jonathan Hamm's hard work). The program is so successful that we depleted our local supplier of cookstove parts. Once he re-stocked his inventory, we purchased enough materials to build 50 more stoves. We are working with community members to enable local people to work more closely together and reduce the need for Jonathan to oversee the construction of every stove. This should also speed up deployment. Ideally, every home in the catchment area that wants a stove will get one. The stoves cost about \$23 each for the metal parts. The recipient pays about \$6, supplies all the local materials and does all the manual labor. Our program funds the remaining \$17. Women using the new stove state wood use have reduced by 50%-80% and the kitchen is now smoke free. Just about every person I met asked when they could get the improved stove. We even have people coming in from outside the catchment area asking for the stove.



Improved cook-stoves. Note the white walls.

Microfinance

Due to the water project being our main focus this trip and taking up much of our time, we did not expand micro-finance activities. We met with Francisca about her bread-making venture. We clarified some misunderstandings and made some suggestions to improve her market share. Teaching basic business and marketing concepts can be challenging for people that cannot read or write. We problem solved methods of keeping track of expenses and revenues to capitalize on profits. We hope to pursue other micro-finance opportunities during the fall trip.

Prior to the trip we met with members of the Simon school of business at the University of Rochester. They seemed very interested in the work we are doing. We will investigate different options in which we can be more efficient in providing micro-finance projects to local Hondurans.

We met with multiple local citizens to discuss their ideas for successful businesses. Embroidery is done by some of the local women in some of the villages. It is known that most other Central American countries have businesses that entail using handicrafts. This does not appear common amongst the current San Jose population. In future trips, we will continue to explore ideas and ventures with the San Jose community.

Health Surveys

With community health volunteers and Jonathan's help, we completed 4 of the rapid assessment surveys in San Jose Centro, 4 in Portillon and 4 in El Horno. All of the Shoulder to Shoulder sites are using these surveys and the information will be gathered and analyzed together. The process of collecting the surveys was challenging as many times the health questions did not make sense to the people we were interviewing. It was very tempting to hint at answers instead of letting the participants give their own answers. We did notice a difference among the different communities with regards to their ease at answering the survey questions. We hope to continue to do more of the surveys in these 3 communities and expand to the other communities.

Community Libraries/Education:

Casamiro, the health volunteer in Portillon, helped form the first community library. On the day we did

the health surveys, five group members (Nancy, Tracy, Jonathon Davis, Jonathan Hamm, Elizabeth), brought the books, a soccer ball and jump rope to Portillon. Each of the 35 books was marked with the community of Portillon. They were excited to begin expanding the opportunities for children and adults reading. Casimiro is also considering offering fluoride rinse at the same time the community library is opened. We unfortunately weren't able to go to the school that day as the teachers weren't there. Manuel from San Jose Centro is in charge of San Jose's community library which included more than 35 books, a soccer ball, jump rope and a small globe. El Horno, Mangal, La Callera, and Guanocaste have books set aside for them as well, however there were not committees set up yet to ensure the books will be protected for the community. Jonathan will distribute them after the committees are set up. Adult books about water and sanitation, Where There is No Doctor and Where There is No Dentist were also given to communities.

Agriculture

No interventions were pursued this trip due to time and personnel constraints.

Project Heifer

We spoke with community members about possible interest in applying for a Heifer International project. Heifer International is a non-profit organization based in Little Rock, Arkansas whose goal is to build sustainable international development. The organization works with communities by providing animals that are owned and cared for by individual families with the understanding that the first offspring is passed on to another family. Education on sustainable agricultural practices and care of the animals is an important part of the project.

Community members were very excited about this possibility and leaders from San Jose and El Horno wrote letters, obtained 55 signatures from community members and organized a committee composed of 5 women and 4 men. The communities were most interested in pigs, chickens and cows. We will help to facilitate their application to Heifer and will offer to partner with Heifer on this project.

Midwife Meetings

We met with three midwives in the area, distributed birth kits and copies in Spanish of the book "Where Women Have No Doctor." . The midwives requested more training on various health topics. Because most of the midwives are not able to read or write, we will be developing popular education modules that utilize role playing and visual learning. Some of us traveled to Santa Lucia to see the clinic there and hear about a folic acid supplementation program for women of childbearing age. We plan to coordinate on women's health projects with other Shoulder to Shoulder participants.

Summary

The group members worked very hard in this resource poor area (including a lack of interpreters). Much was accomplished and our efforts in San Jose are already bearing fruit. Our activities are truly special when compared to other University-based health care projects. We are building a long term relationship with San Jose and are attacking the causes of ill health where they start. I am confident our Global Health program in Honduras will reap great rewards for everyone involved, both in Honduras and the US. Our next trip will occur in late October and we already have more people wanting to go than we can accommodate.

A special thanks goes to Jonathan Hamm, our volunteer in San Jose, who has really moved our projects forward. He will be returning to the US within a few months. We wish him well in the next stage of

his life.

Douglas Stockman
Director, Global and Refugee Health

Thanks to Matt, Elizabeth and Lois for helping write parts of this report.



May 2007 Honduras Group