

**Honduras Trip Report – October 2014**  
Department of Family Medicine, University of Rochester

<b>Participants</b>	
<u>Faculty</u> Douglas Stockman	<u>Medical Students</u> Joshua Back Hyo Jyung
<u>Residents</u> Rachel Long Colleen Loo-Gross Amanda Pannu Navi Pannu Annie Pfahl	<u>Dentists</u> None
<u>Other Doctors</u> Tom Gregg Yule Lee	<u>Unitarian Church</u> None
	<u>Interpreters</u> Alex, Lester, Lowell, Sharon, Jonathan

### **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 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 October 2014 trip.

### **Travel and General Comments**

There were no problems with travel. Due to the need for residents to come back mid week to take a test, we arrived in San Jose on a weekend, which limited our time in clinic. Even with the reduced number of clinic sessions we were quite busy. A small proportion of the group were sick with diarrhea, upper respiratory infections, and/or rashes. Many of those suffering continued to work! We again enjoyed the excellent Honduran cooking of Maria, so food was eaten in abundance and trip members loved not having to do dishes for 2 weeks! The rainy season was still active so we had significant rain for the first 7-8 days of the trip. This trip, members worked very hard and people really pulled together to function as a group. The people also dealt well with the primitive conditions and always had a positive can-do attitude.

### **Meetings**

Much of our time in San Jose is spent in meetings. We work very hard to ensure excellent communication with San Jose residents. We want to understand the important issues for the San Jose people and work closely with them. Our first Sunday in San Jose was spent meeting with representatives from the villages. This two hour meeting helps define what projects will be pursued during our two weeks in Honduras. Then throughout the two weeks other smaller meetings that address specific projects occur. It is not uncommon to have 2-3 meetings a day on various topics. The main communal meeting went exceptionally well this trip. Villagers were very open and talkative; which

often does not happen in this very reserved culture. We learned more about how projects were going and tweaks to improve interventions.

### **Year-long Volunteer**

We are very fortunate to have a UR medical student, Joshua Back, take a year out from medical school between his third and fourth year. Although he cannot practice medicine, he will be invaluable at accelerating our many development projects in San Jose! His medical school project will involve performing home surveys on all homes in the area. This will give us a better idea of the health of the population and help target the poorest homes for interventions. Joshua is the son of a graduate of our program, Ephraim Back.

### **Education & Schools**

#### Scholarship Program

The First Unitarian Church's scholarship program currently supports twenty-five scholars to obtain education beyond elementary school. School attendance is only mandatory through the sixth grade and many families in the San Jose area cannot afford to send their children to school beyond the sixth grade. This program offers upper level education to those students who have excelled in school and show promising future but cannot afford to live and attend school in San Marcos. Even though the scholarship program selects high achieving students, many of them struggle in San Marcos due to the different grading system and academic rigor. In an effort to further support our scholars, two tutors were hired to offer additional training. One of the tutors, Lowell Tatum, was hired in May, 2014, to provide daily tutoring sessions in English. For students who have consistently attended the tutoring sessions, their English grades have improved tremendously. It was evident during this brigade that scholars greatly appreciated their tutor and come to him for homework assistance outside of tutoring sessions. During this brigade, Lowell also met with individual scholars and parents to discuss their academic performances and ways to improve.

During this brigade twenty-five students applied for a scholarship for the next academic year. The application process uses multiple sources of information to increase the chance of long term academic success. The majority of students who apply do not get a scholarship, in part due to limitations on available donations. During the brigade every applicant completed an entrance examination. Additional information comes from the sixth grade teachers in the community who showed great interest in providing the necessary information in support of their applications. One of the schools, Portillon, recently started teaching a seventh grade class and hopes to expand to eight grade next year. The teachers and parents of the school are excited about this opportunity to provide upper level education to students within the community. They have written a proposal to provide scholarship to students to attend their school beyond sixth grade instead of going to San Marcos. The First Unitarian Church's scholarship program committee has decided to fund 10 new scholars and support the new Portillon middle school.

Another additional request from the San Jose parents involves offering scholarships to attend technical schools. The current scholarship program places students on a track to become teachers, nurses, and



*Rachel helps Joshua read a urine dipstick*

office workers. Parents suggested that providing scholarships to prepare students for jobs as carpenters, electricians, and mechanics may increase the number of students finding jobs in a shorter time. The Unitarian Church will consider this as an option.

### Student Education

The brigade accomplished much in the area of education. Our curriculum was two fold: one developed by the first Unitarian Church of Rochester and the second by the University of Rochester. The former was a creative and engaging way to teach the students colors in English utilizing a colorful parachute. The children would run underneath the parachute if the color they were holding was called, while the other students would lift the parachute. Despite variable knowledge of English between schools, by the end of the lesson all the students were able to participate in and enjoy the game. This game was followed by a skit on hand hygiene, which was extremely pertinent since many of the children were getting colds. Afterwards a discussion on the skit ensured that the children understood the main points of the skit, which were washing your hands frequently, especially if you were sick and after using the restroom, and before eating.



*Parachute being used to teach colors in English to school children*

One of my favorite parts of this activity was in Guanacaste. Unfortunately, the kids were struggling with how to play the game. The director who was very young saw this and ran under the parachute after calling the color he was holding. He then waved to the children of the same color to join him. All the children laughed and all of them regardless of color ran into tackle him. It was a very sweet moment that showed how much the teachers cared about the children and how much the children loved their teachers and their school.

Afterwards I talked with the same director, and it was amazing to me that he was already coming up with different ways to utilize the parachute in terms of games and learning activities. He also told us that there was a need for teacher curriculums, specifically in English, to help them teach since English education is required by the government. He was also hoping that a curriculum about sexual education and puberty could be developed since the teachers were finding it to be a difficult subject. It was fantastic to see how the teachers were trying to get better at what they did, and tried to help the children anyway they could. Although there was



*"Cover Your Cough" education to school children*



much accomplished on this trip, it is clear that there is still a lot of work that needs to be done. N.P

### **Microfinance**

The microfinance program, a joint effort between the Unitarian Church and Highland Family Medicine Global Health, is designed to improve economic infrastructure by making very small loans to entrepreneurs, selected based on the quality of their business plans. This is an important function in this region with many people subsisting on less than \$2 per day. The program has been operating since May 2008. Loans are to be paid back at the time of the next semiannual brigade, with a 2% interest charge added, an interest rate much lower than the prevailing rates in the region. 22 loans were made in October 2014, with L25,200 (\$1,200) loaned. Highlights are below.

- Number of loans to first-time recipients: 14.
- Average loan amount to first-time recipients: L479 (\$23).
- Number of loans to reapplicants: 8.
- Average loan to reapplicants: L2,313 (\$110).
- Number of loans made May 2008- October 2014: 112 loans.
- Number of loan recipients May 2008-October 2014: 52 people.
- Amount loaned from May 2008 to October 2014: L178,890 (\$8500)
- Amount paid back from May 2008 to October 2014: L136,054 (\$6479).
- Number of people who paid back their loan in full in Oct 2014: 11
- Number of people who paid back their loan in part in Oct 2014: 9.
- Number of people who have an outstanding loan for which they have never made a payment: 5.
- Total amount collected in Oct 2014 from loan recipients: L21,953 (\$1045).



*Hyo teaching a micro-finance business class*

During this trip, we again held all microfinance classes and loan applications on one day. Beginning and advanced classes were held for loan applicants. After the classes, each applicant presented their business plan at individual interviews, where they detailed their costs and expected profits. Applications were evaluated by a committee consisting of 2 microfinance committee members from Rochester and one community member from the San Jose area who had successfully paid off loans in the past. This year, 22 microloans were granted, of which 13 went to people transporting and selling fruit, vegetables, grains or other food products. 4 loans went for baking or cooking businesses, 3 loans were for textile sewing businesses, and 2 loans were for farmers.

Microfinance loans are helpful to individuals by their own self-reports; this year one recipient stated that the loan allowed her to buy more food for her family, and other recipients stated that the loans helped them to expand their business or to make more money.

--Micro-finance Committee Members: Joshua Back, Hyo Jyung, Amanda Pannu, Tom Gregg

### **Medical care**

The clinic was very busy this trip. Interestingly, the clinic is now open two days a week, when we are not in San Jose, with a simply trained community health worker (CHW) provided by a Shoulder to

Shoulder program. It is great the community now has some access to health care while we are not in San Jose. We were concerned though that the CHW was not able to take vital signs such as blood pressure, heart rate or respiratory rate. Two different CHWs rotated through the clinic during our time so we were unable to train the CHWs. By their report, the CHWs see about 5-10 patients per week. This is similar to what the CHWs we trained a few years ago had experienced.



*Tom, with the help of interpreter Alex teaches a mother how to give medications to her children*

#### Return of D.

A year ago we shared the story of D., a four year old whose parents raced across the hillside paths carrying their seizing daughter in their arms. We were able to quickly stop her seizure with an injectable medication, but it was clear that she had been suffering continuing brain damage with each subsequent seizure. We faced the tough decision of what to do to control her seizures going forward, after the brigade returned to the states. Although unconventional, we decided to teach her parents how to administer the injections in the case of a prolonged seizure, provided them with vials of the medication and carefully written instructions detailing how to prepare and administer the seizure medication. In contrast, this year the family arrives at clinic almost unnoticed, with a sense of poise and quiet confidence so absent last year. In the exam room, her father carefully unwraps the laminated instructions that we had given him last year and that the family carries with them wherever they go. They've used it twice he says. Both seizures occurred when she was sick, lasted 15-20 min, and responded quickly to medication. She seems completely transformed from last year, a reeling ball of giggles when approached with a tickling finger and speaking in full sentences when the tickling finally stops. Her father no longer worries if she will survive, but now he asks what can be done to catch her up and ready her for kindergarten. R.L., J.B.

#### Home visits

“Would you mind, do you have time? There's a couple just up the road. He's broken his waist and she's dying of a fever that won't quit.” We've just returned from a 10 hr hike and tour of recent projects, but she's right, we do have time. Their son-in-law greets us at the road and leads us back through a grove of mango and calabash trees. A scant frame of a man lays flat under mounds of blankets and a walker stands next the bed – altogether out of place and otherworldly in this bare world of concrete and rough hewn wood. He wants us to know he's been in this bed for an entire year. He had broken his hip after a fall and was lucky enough to get surgical correction, placing a metal plate. However, his family could not afford the weekly trips to the city for his physical therapy and, now a year later, his leg still doesn't bend well. He wants to sit but he can't and he is in pain all the time. A quick physical assessment reveals a body atrophied at all



*Bambulance (bamboo ambulance) is used to carry an elderly woman to the clinic*

points, barely more than a skeleton, but still trying so hard to be mobile. I think of what happens to a patient who fractures their hip in the States – 5 days in bed requires weeks of inpatient rehabilitation and painful physical therapy. How does one begin to rehabilitate after 12 months in bed and with no therapist to guide the process? We review exercises that he can do to improve mobility and we prescribe medications for controlling pain. His face livens, filled with a new sense of hope, but we know that without infrastructure for true rehabilitation, he will likely not walk on his own again. We walk home in the darkness, our path clear in the moonlight, a new understanding of "resource poor" settling silently on our shoulders. R.L., J.B.

### **Dental Program**

We had no dentist this trip so curative dental care was not possible. We brought more fluoride and Joshua will distribute when school restarts in February. Teachers continue to struggle with mixing the fluoride packets up correctly and giving the fluoride rinse to the children twice a week. We saw some children in the clinic whose teeth suggested they were getting the twice weekly fluoride treatment.

### **Parteras and Health Promoters**

As with prior brigades, a meeting was held with parteras (midwives) and health volunteers as part of ongoing efforts to support local health leaders as well as to better educate ourselves regarding the issues and needs of the community. The prepared discussion topic was nutrition in pregnancy, as previously requested by the local group. While there is more information that women and families may be lacking about nutrition in pregnancy, the parteras and health volunteers agree that the primary issue affecting prenatal nutrition remains an economic one. The representatives from San Jose communities did confirm, however, that all pregnant women from their communities seem to be attending prenatal care through the Centro de Salud, where care includes monthly prenatal visits and provision of prenatal vitamins. It is not clear whether all mothers, however, understand fully the importance of prenatal vitamins on the pregnancy. Further questions also led to education regarding malnourished infants, understanding the reason and concern for a sunken fontanelle in the newborn, and knowing how to identify normal versus abnormal stool output in infants.



*Girl lives with grandmother in a simple hut*

Other discussion included review of the involvement of parteras with deliveries and intrapartum care. The parteras reported that they continue to have less involvement with actual deliveries in the setting of the government push to encourage all mothers to deliver at health care facilities in recent years. None of those present had attended more than one delivery within the past year, while some had attended none. They do continue to provide support to pregnant women and at times assist with ensuring they get to a facility for delivery. Of the four San Jose communities represented at the meeting, all report that the majority of women are delivering babies at the hospital. Again, makeshift obstetrical kits were provided in case of emergency deliveries at home or in transit to the health care facility. As our group continues to move forward in working with the greater San Jose community, we hope to further reflect on how



best to provide support to these dedicated health volunteers and parteras, such as with a stronger focus on infant and child health.  
C.L-G, A.P

### **Las Delicias**

Our friend and on-the-ground community organizer, Manuel, led a small group from our delegation on a tour around Delicias - a group of communities just across the Chocuara River. They are collectively the farthest and poorest communities we work with, and thus have been the last to participate in many of our projects. Since our last brigade Manuel has helped construct 17 improved cook-stoves and 6 latrines in the area of Las Delicias - serving 23 families and >130 people. In advance of our trip, Manuel had called for community meetings in each of the small villages we passed through. We met with groups of 5-12 men and women who expressed the needs of their neighbors and relatives – ways to make their water safe to drink, better cook stoves, latrines and a specific water access project in the community of Coyolar. During these conversations we were struck by Manuel's clarity of vision, his kind and confident demeanor, and his ability to artfully teach the techniques of both construction and community organizing upon which the success of these projects rely. With the brigade only being “on-the-ground” twice a year, it is clear that for true short-term success and long-term sustainability, members of the community must assume leading roles in both project coordination and innovation. We have clearly found such a partner in Manuel. R.L.



*Traditional cookstove makes kitchen a foul dangerous place*

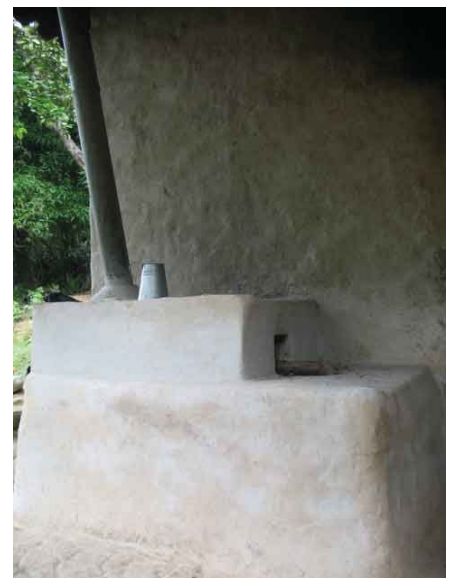
### **Home Surveys**

Formal home surveys were not completed this trip due to time and personnel constraints. We met with representatives of the local government health center to combine efforts on completing home surveys for all the homes in the San Jose area. Joshua will be working on this project over the next 10 months.

### **Cookstoves**

The improved cookstoves we designed remain a very desirable “appliance”. 17 new stoves were built over the past six months. All but two were built in Delicias. We purchased additional materials this trip and have enough supplies on site to build 30 new stoves. We have installed over 237 improved cookstoves to date.

Background - People interested in getting a cookstove for their home must attend an educational meeting. After they better understand how to build the stove, they must build the mud or adobe block table that supports the stove. Then the villager pays about \$5 for the stove that costs about \$45 to build. The main expense for the stove involve a large flat metal plate which is the cooking surface and the metal pipe for the chimney. The rest of the stove is made from local materials. This allows the stove owner to perform their own repairs as needed without outside financial help. Given our “see one, do one, teach one” approach, the owner has

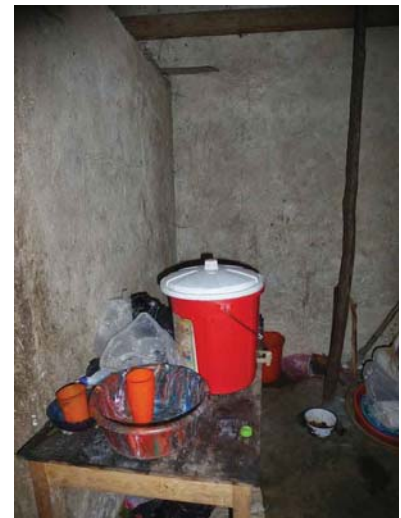


*New improved cookstove makes the kitchen safe and more efficient*

helped build at least two stoves and is capable of repairing any problems with their stove.

### **Agriculture**

In years past we introduced new vegetable seeds to expand the types of nutritious foods available. These seeds were hybrids so the seeds could not be harvested from the vegetables and used for the next growing season. This trip we brought in 9,000 heirloom seeds for over 20 vegetable types. These non-hybrid seeds can be harvested from the vegetables and used for the next planting. Unfortunately, the seeds were stopped at the airport and held by Honduras customs. A Honduran interpreter from our group was able to travel back to the capital and complete the multi-step government process to have the seeds released. This little snag doubled the price we paid for the seeds and we did not get the seeds until about 3 days before we returned to the US. We anticipate Joshua will begin the process of helping progressive farmers use the new seeds.



*Water filters can be found in many kitchens where they help reduce diarrhea*

### **Water Projects**

#### *Piped water projects*

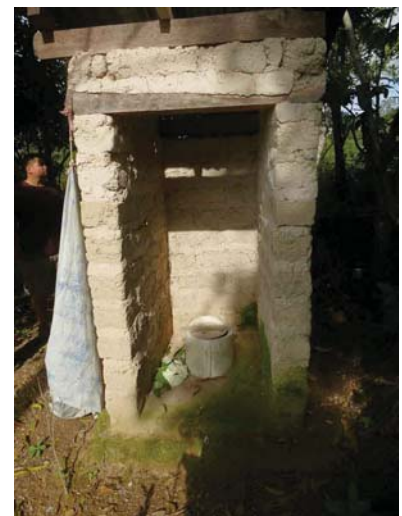
The Coyolar water project has not progressed over the past 5 months. The community has been busy building a new school and did not have the time to dig the 2 km of trench to bury the pipe. We will pick this project back up when the school is completed.

The Portillon piped water project struggles due to a poorly built 4,000 gallon water tank. For part of the project they used dirt-contaminated sand. The end result is a weakness in one part of the tank wall that leaks. We agreed to supply the cement needed to rebuild the wall of the tank. Water is available in the homes, but the tank can only hold about 1,000 gallons at this time. In addition to helping repair the water tank, a new home is being added to this project. We purchased the additional supplies to allow this new home access to the piped water.

The la Calera piped water project (our first project) continues to work well. They are building a new school. We purchased additional materials to allow the school to receive the piped water.

#### *Government Water Project*

The piped water project that the government started more than 5 years ago still struggles with multiple problems. Guanacaste and San Jose Centro still do not have water. Part of the problem has been an error either in the design of the system or the implementation. Due to significant elevation changes, the pressure in the main water lines was so great that the pipes kept bursting. Each community has to pay additional money to purchase new pipe that has a higher pressure rating. We assisted San Jose Centro with part of their financial obligation. It remains unclear when the water will be flowing in Guanacaste and San Jose Centro.



*A latrine we helped build contains infections to reduce diarrhea*



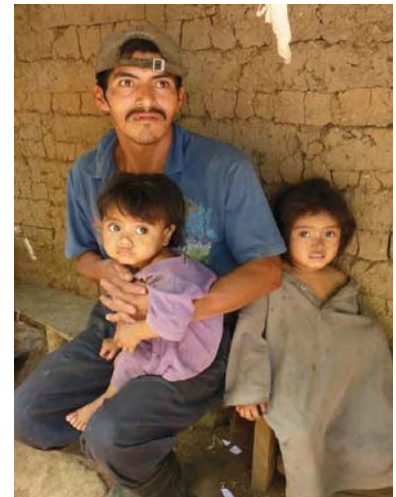
### *Water Filters*

The desire for water filters remains high. The area residents realize the benefit of safe drinking water. We had an interruption in obtaining ceramic water filters for over a year. Many people asked for water filters but we were unable to provide any. We are happy to report we were able to get 100 filters delivered to San Jose this trip. The one down side is the filters now cost about \$25 each, up from \$20. We used to charge \$2 per filter. We are now charging \$2.50 per filter.

### *Latrines*

The demand for ventilated improved pit (VIP) latrines remains high and 6 more have been built over the past 6 months. All of these new latrines were built in the Delicias area. During the rainy season it can be difficult to dig the 10 foot deep hole because the open hole can fill with water and the walls can collapse. To date we have helped build over 134 latrines. We purchased additional supplies to build more latrines and expect many more will be built over the coming dry season.

*Background* - For a home owner, building a latrine requires a huge amount of work. They first have to dig the hole using a pickax and shovel. This can take 2-4 days of back breaking work. Then they have to do two days of communal labor as payment for all the materials we provide. Next they must help with the construction of a latrine at another home. This educates them through hands on activity what is needed to build the latrine. Then they have to come to San Jose Centro to cut the ree-bar and carry the bar to their home. Next, they have to carry three bags of cement (100 lb each) back to their home. For the most distant families, this means making three to five trips with up to 100 lb on their back walking up and down mountain trails for up to three hours. If they do not have sand and gravel near their home, they must also carry these materials on their backs. Even with all this work, the latrines are very popular. Given the huge amount of work involved, we do not charge money for latrines. We pay over \$100 for each latrine and feel it is money well spent.



*There are no jobs in the area so this man works infrequently as a day laborer*

### **Your Help is Needed**

We believe in low cost, simple technology solutions that the Hondurans can learn and maintain on their own. We are doing a great job in this respect. However, even simple interventions cost money. To continue the exceptional work we are doing in Honduras, we need more funds. If you have the financial ability and appreciate the great improvements our activities are bringing to rural Honduras, please take a minute and donate to our project. Donations are tax deductible if you itemize your taxes. We are very fortunate to have the assistance of the Department of Family Medicine and dedicated volunteers to almost eliminate overhead expenses. Therefore, your donation will reach the Hondurans and not be spent on less helpful expenses such as rent for a dedicated US office or US-based secretarial support. If you would like to donate to the San Jose project, please make a check payable to “HH Foundation – GH Fund HFM”. Mail the check to “Highland Family Medicine 777 Clinton Ave, South Rochester, NY 14620 Attn: Douglas Stockman”.

## Summary

The greater Rochester Family Medicine community has touched so many lives in Honduras and the Hondurans have enriched so many of our lives. This cross-cultural project is realizing huge benefits for everyone involved. The scholarship students gain confidence as well as a chance at a path out of poverty. The micro-loan program is also helping adults find a way out of poverty. Seeing the smiles and appreciation as people display their running water, new cookstove, or water filter is so rewarding. Through these very intimate person-to-person exchanges we maintain hope that a better world will become a reality one community at a time. Thanks to everyone for their continued support to make this project such a great success.

Douglas Stockman, MD  
Director, Global and Refugee Health

Barbara Gawinski, PhD  
Associate Director, Global and Refugee Health

Thanks to other trip members who wrote parts of this report.



*From L to R: Lowell, Alex, Sharon, Rachel, Colleen, Joshua, Navi, Amanda, Doug, Hyo, Tom, Annie, Lester, Yule.*