

# Honduras Trip Report – May 2014

Department of Family Medicine, University of Rochester

Participants	
<u>Faculty</u> Scott Hartman Douglas Stockman	<u>Dentists</u> Lina Vega Gregory Cygan
<u>Residents</u> Tom Gregg Jean Hamlin Yule Lee Liz Meehan Quang Nguyen Assunta Ritieni Sandra Rodriguez	<u>Unitarian Church</u> Paul Suwijn  <u>Interpreters</u> Alex, Lester, Lowell, Sandy  <u>Shoulder to Shoulder Representative</u> Ever Bonio

## 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 May 2014 trip.

## Travel and General Comments

There were no problems with travel. Due to flight availability we arrived one day earlier than usual. This enabled the group to do a great job setting the medical and dental clinics up. A significant proportion of the group was 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 started early again this year. We had rain at least once every 24 hours, sometimes exceedingly heavy. Many local people were busy planting corn because of the rains. The trip members worked very hard and people really pulled together to function as a group.

## 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.



## Education & Schools

### Scholarship Program

For the sixth year, the First Unitarian Church of Rochester continues to support scholarship children in their education in middle and high school. Children in the communities are required to make an hour to three hour commute to the middle school each way. Parents are required to purchase uniforms for class and gym, school supplies, books, and tests. This often prohibits most children from obtaining education beyond the 6<sup>th</sup> grade.

Twenty-seven students currently received scholarship for 2014 to continue in this upper level of education outside their home community. From the impact of malnourishment and the limitations of rural elementary education, these children continue to have difficulty in Math, Spanish and English. This year, the Honduran government has increased the passing grade from 60% to 70%. Additionally, the government will only provide one week of summer school for those students failing courses. Some of these scholarship children are at risk for failing. The First Unitarian Church hired a tutor to help the students improve their math and Spanish scores. They have also engaged a full-time tutor in English for the balance of this academic year to help focus on improving their comprehension and success on tests.

#### **Personal story**

The adobe house was clean and well-kept. Along the pathway leading to the house, flowers were just starting to bloom. Petunias grew in plastic bags serving as makeshift pots. Several impatiens stood, surrounded by white wooden stakes serving as a makeshift fence, presumably protecting them from the dog, two pigs and chickens roaming the home. The entrance way to the house was front and center, the door set 2-3 feet in, providing shade and protection from the sudden downpours during this rainy season. In the entrance way, one could see the pride of this family. School certificates and diplomas were framed and hung over the doorway. A pair of mobiles hung from the ceiling. The house proudly proclaiming that students lived among its walls.

This is where Jose Isac Bautista lives. A seventh grader at the school in San Marcos, he is a recipient of one of the scholarships from the Unitarian church that was involved in our brigade. I remember him from the impromptu tutoring session we had a few days ago at the clinic. He had strong, angular Lencan features, wore a red baseball cap, and was relatively quiet within the group. Today in talking with us, he was still reserved, but polite and smiled easily. He said that he enjoyed school and was hoping to continue on from middle school into technical school.

Talking with Jose and seeing the evident pride of his family highlighted to me the importance of the work that we do in Honduras. Providing a scholarship not only supports him in going to school, it supports his family and enhances prospects for their futures.

--Yule Lee



### Teacher Education Program

First Unitarian Church Honduras Curriculum Committee has provided teaching packets and materials for the last six years. These packets are to be used by the San Jose teachers to try new teaching techniques and topics. Building on the math curriculum of May 2013, This trip, they offered another math curriculum for the rural elementary school teachers using playing cards. Paul Suwijn, with the helpful hand of other trip members, offered a half-day workshop using a series of mathematical card games centered on reinforcing basic arithmetic skills. Curriculum materials and an abundance of basic

school supplies, generously provided by members of the First Unitarian Church of Rochester, were also provided to our network of elementary schools. The teachers enjoyed their workshop and look forward to additional in-services at the next brigade's visit in the Fall 2014.

--Paul S.

### Student Education

The May brigade approached several elementary schools to offer health education on issues that the schools thought were important to address. The San Jose Centro teachers expressed an interest in having alcohol and substance abuse education for their 4<sup>th</sup> through 6<sup>th</sup> grade classes. They commented on the importance of discussing cocaine use which they believe is coming into the region. The October 2013 brigade had focused on puberty and sex education for these same grades at San Jose Centro. The professors were interested in continuing education on this topic as well. Portillon and Guanacaste teachers also expressed interest in substance abuse as well as sex education since the prior brigade had not yet traveled to these areas to provide health education. We therefore traveled to these areas to give presentations to these students. The majority of students were aged 11-13.



*Jean Hamlin helps a scholarship student with homework.*

We developed and performed a skit focused on peer pressure and both alcohol and cocaine use. We followed with a discussion. The students were engaged during the skit and the discussion and were able to respond correctly to questions posed about the skit and alcohol and substance abuse.

For the puberty/sex education lecture, the class was then split by gender. The male leaders from the brigade worked with the boys in the class while the female leaders split off with the girls in the class. We found that at our first school (Portillon), the girls were not very engaged in the discussion. We modified our approach while keeping with what seemed to work well. For our second school, San Jose Centro, we began the presentation with a conversation between two “amigas” about puberty, sex and consequences of unprotected sexual. The brigade leaders asked questions of the students based on information that was discussed during the conversation. We noted that the girls at San Jose Centro were more engaged than the girls at the other schools. This may be because the girls at Portillon and Guanacaste had less education on the topic.

We used our visits as an opportunity to gather more information from the professors regarding the health concerns of the community and discussed expanding health education to the adult population. We were unable to make a trip to Portreros, but discussed health education topics of interest for the future brigade.

### Dental Health Education

We developed a song aimed at encouraging children to brush their teeth. We performed this song in Guanacaste and San Jose Centro in conjunction with dental health efforts led by the dental team. The children enjoyed the song and sang and danced along. We found it was best to put the words up on the board to make it easier to follow along. The lyrics are posted on blackboard.

## Microfinance

The microfinance project for Spring 2014 was both rewarding and challenging. We made 12 low-interest loans, ranging from \$15 to \$175. The loans funded businesses ranging from fruit transport (a common local occupation) to a plant nursery (the only one of its kind in the department of San Marcos de la Sierra). However, loan repayment was low this brigade, and thus loan amounts were reduced and less qualified applicants did not receive loans.

Since its inception six years ago, 78 percent of loans have been repaid in full for completed loan cycles. Of the loans from the fall 2013 brigade, 7 out of 15 were repaid in full, with an additional 4 people making partial payments of at least the 2% interest. Because of low repayment, we have reached a point where the total amount of money in the community from uncollected loans is greater than the amount of money our brigade was able to lend out. In some cases, people have diverted the business loans to cover food and medical expenses. In some cases, they have invested the money in their businesses, but have not yet recouped the investment. In other cases, recipients who defaulted have not talked with us, despite attempts to reach them by letter or phone. We continue to offer incentives for repayment. Only those who have repaid are eligible for new loans and participation in projects such as cook stoves, water filters, and scholarships for children. (The medical clinic is available to all.) We have also continued giving out certificates and holding a celebratory lunch to honor those who have repaid their loans.

This brigade, we improved our business education classes by including new material, as suggested by previous loan recipients who had felt that our classes were repetitive. Modules from the nonprofit *Freedom From Hunger* covered new topics such as soliciting feedback from customers to improve a business, choosing complementary products to sell, and seizing new opportunities to sell products. New loan recipients attended an introductory class followed by an intermediate class, and prior loan recipients attended an advanced class.

An unexpected benefit of the separate advanced class was that it led to an open group discussion about the program with prior loan recipients, offering us valuable feedback. The main suggestions during this discussion were to increase loan size and increase repayment rates. Community members feel that larger loans would allow them to pursue more ambitious projects, and are especially important in the beginning of a business, when more seed money is needed. At the same time, they were understanding of the fact that funds are limited, and did not want to

Maria Damacia Lopez Gutierrez came to the business class balancing a container of fresh bread on her head. In addition to the crowd gathering for the microfinance program, there was a large meeting for children and parents involved in our scholarship program, and Ms. Lopez Gutierrez sees any gathering as a business opportunity. She started out making tamales and selling them at soccer games, and then expanded to bread, and she regularly brings her products to the market, holiday celebrations, and even parent-teacher meetings at local schools. During her microfinance interview this year, she almost convinced a member of our brigade to buy a chicken.



Ms. Lopez Gutierrez reports that being involved in the program has helped her in many ways. She uses her profits to buy school supplies for her children and better food for the whole family. She is investing her profits in livestock, and was also able to put aside some money in case of an emergency. When she became ill and had to go to the hospital in La Esperanza, she was able to pay. "This program saved my life," she said. "Thank you." By the end of the day, Ms. Lopez Gutierrez had sold all of her bread, and she walked home with an empty container on her head and her fourth microfinance loan in her pocket.

--Jean Hamlin



reduce the overall number of participants in the program. There was a debate among community members about whether they felt the names of defaulters should be publicized. Eventually, the group decided it was reasonable to publicize the names of long term defaulters, who had made no payments at all in one and a half year. The names of three men were then publicized. Women in our program, who make up the majority of our loan recipients, have a higher repayment rate than men (85% versus 50%).

Prior loan recipients told us that the program has improved their businesses and their quality of life. They have expanded their products and sought out new markets. Their profits have helped them to provide food for their families, pay for medical expenses, and buy school supplies for their children. Despite the challenges, in tangible ways, the microfinance program is helping the people of San Jose, Honduras.

### **Medical care**

The clinic patient volume was steady but not overwhelming. Common problems such as colds, worms, heart burn, and arthritis were again seen frequently. We had one man come in with congestive heart failure due to a chagas disease infection more than 20 years earlier. This parasitic infection is transmitted when insects that are common in San Jose bite a person. The infection can cause a mild illness shortly after the bite, but the real problem comes years later when the infection destroys the heart or the intestines. This infection is fairly common in the San Jose area. Government testing of children found a number of children infected by the parasite.



*Liz cares for a young girl*

### **Pharmacy**

During the Spring 2014 brigade to San Jose, the pharmacy continued to support the work of the clinic. The pharmacy, historically the largest in the region, currently stocks over 200 medications, including antibiotics, diabetes medications, antihypertensives, and antiparasitics. The guiding philosophy of the pharmacy is that in order to support the people of San Jose, medications are available at a nominal cost. This philosophical paradigm continued to be put into place during the Spring brigade. The latest innovation in the pharmacy is computerization of medication and supply inventory records. During the past several years, the medications have been untouched between brigades, allowing for the initiation of an inventory system.

### **Dental Program**

After two years without a dental team, goals needed to be reestablished. One of the primary objectives of the trip was to reevaluate the current status of the dental disease control program and also to lay the ground work for future programs. WHO style exams and interviews were the principle means of this reevaluation. We had the opportunity to visit four schools and performed 153 WHO exams on the children attending San Jose Central School, Guanacaste, Portillon and the school of Coyolar from Delicias. The results of those exams were both encouraging and frustrating. We found generalized poor oral hygiene and the DMFT (a measure of dental health) results were collected to be analyzed. During the Teachers' educational meeting schools showed a renewed interest in the fluoride program. In addition to renewing fluoride supplies in our San Jose schools, fluoride was delivered to two new schools outside our catchment area – Rancho and el Salitre. The teachers reported interruptions in the

fluoride rinse program due to several changes during the school year: new teachers and challenges in the curriculum. It should be noted that all the teachers are familiar with the benefits and delivery of fluoride.

Another part of this brigade was to see patients in the dental clinic. Poor oral hygiene and untreated oral diseases have a significant impact on quality of life of this community. There is limited access to dental care with the closest option being Santa Lucia or Concepcion (both options are too costly for the vast majority of the San Jose population). We treated 109 patients and performed 128 tooth extractions as an emergency treatment, 16 ART restorations, and 13 scalings and root planning.

We were able to clean some children's teeth with hand scaling and fluoride varnish application. Dr. Cygan was able to perform surgical procedures such as Alveoplasty and also he had the opportunity to perform new (actually old) techniques: mallet and chisel to remove alveolar bone.

A healthy smile is essential for the overall health of an individual because of speech, nutrition, and social factors. It is not unheard of in the United States for permanent teeth to be extracted in children. However, it has a major impact on the oral health of individuals. The people in San Jose are very accustomed to asking for curative care, such as pulling teeth. However, it is through prevention that we can ensure more people keep more teeth for a longer part of their lives. We see the pictures of children smiling and can see that they have teeth. However, when we look at adults we can see that many permanent teeth are missing. It is important for us to help generations understand that you don't have to lose your teeth as an adult, just as you did when you were a child.

--Lina V & Gregory C

### **Parteras and Health Promoters**

We invited the community *parteras* (lay midwives) and *promodores de salud* (health promoters) to a meeting to discuss their experiences. As they trickled in, they started telling their stories. One midwife from Guanacaste told us about how she has been delivering babies since 1989 and has never lost a mom or baby. Now that the laws require all patients to deliver at a hospital or birth center, the role of the *parteras* has changed. They do counseling and encourage patients to attend monthly checks at a government clinic (1-3 hour walk). They also must encourage women to go to La Esperanza or Concepcion for delivery, more than a one hour drive. Patients must pay for their delivery at the hospital prior to leaving. If women refuse to do this because they prefer to deliver at home, the *parteras* must not help them at all during their pregnancy. If they



*Sandra gives an anesthetic block before a dental procedure*



*Midwife and health promoter meeting*

were to help deliver at home they will go to jail. We sensed a general sadness about the change in law and resultant change in roles. As the meeting concluded, the *parteras* requested emergency supplies for the inevitable deliveries on the road to the hospital.

The *promodores de salud* shared their own problems. Most importantly, are the lack of resources. Although their position is supported by the government, they are provided little monetary assistance. They have trouble obtaining small things that we take for granted including a flashlight and poncho for travel to their community members' home at night or in the rain. They were even requesting things like pens and pencils from us for basic documentation. They have to use their personal money to get any of these supplies but they work as volunteers. Similar to the *parteras*, the *promodores* also have the risk of going to jail hanging over them. One former *promodor* shared his experience outside of our meeting of his decision to leave his work because of this risk. Health promoters are required to have a certain level of training, otherwise they can go to jail. Even still, their passion for their work was obvious. They take responsibility for the health of their communities. It seems they especially focus on maternal and childhood health.

We spent most of our time listening to stories to obtain a better level of understanding of the work the *parteras* and *promodores* are doing. We asked what type of education would be helpful to receive in the future. They expressed interest in learning more about nutrition. They find people often have vitamins but don't take them. They think if they understand specific vitamins and the reasons they're needed, they can educate the community members and encourage compliance. The *parteras* also requested education on nutrition during the prenatal period, as well as education regarding routine newborn care. We also thought more education about dental health would be beneficial for the *promodores*. The dental program this trip found minimal improvement in the dental health of the youth. They found that some kids had toothbrushes but didn't use them. Their programs mostly focus on education and fluoride prevention in the schools. The *promodores* could assist in educating families to reinforce the work done in schools.

--Liz and Sandra

### **Las Delicias**

An adventuresome group hiked to the nearest Delicias community, Coyolar, on their day off. They left at 6 am and returned by 4:30 pm having hiked most of that time up and down mountains. Although very tired, they reported back on the great progress being made in Coyolar of cookstove and latrine creation. Due to the time and distance it would have taken, they were unable to view the water source for the Coyolar piped water project. Our efforts to expand interventions into the very distant township of Delicias are progressing as planned.

### **Home Surveys**

Surveys of area families in their homes were started by Drs. Elizabeth Brown and Lindsay Phillips in order to obtain general information on the health status of various communities in San Jose in the areas of child and maternal health, HIV awareness, sanitation, nutrition, access to healthcare and 'sense of community'. This information could then be used as a crude measure of progress (or regression) over time. The home surveys



*Delcias hikers must go down before climbing the ridge in front of them*

involve hiking to people's homes, asking them targeted questions and observing how they live. Some of the homes visited can take more than two hours of hiking to reach. Twenty-nine surveys were obtained in the November 2007 trip. More recent data were obtained by Dr. Katherine Eisenberg. On this trip the team obtained 15 surveys from 5 communities: El Portillon (5 surveys), Guanacaste (4 surveys), San Jose Centro (2 surveys), Mangal (1 survey), and Las Delicias (3 surveys). The interviewees were generous with their time, and the process of the survey was instructive in and of itself. Given our small sample size, it is difficult to distill any conclusions. Nevertheless, the following observations were made:

1. Almost every family was up-to-date with their childhood vaccinations.
2. Children held the highest level of education (out of parents and grandparents) 64% of the time.
3. One pregnancy loss in obstetrics was reported by 3 families. The others reported no loss.
4. Eight out of the fifteen interviewees have not heard of HIV.
5. 9 out of thirteen families use latrines.
6. 11 out of fourteen families purified their water
7. 8 out of 15 families had 2 food groups represented in their diet; one family had only one.
8. 60% of the time, water could be obtained in less than 15 minutes. However, one family traveled 2 hours for water during the dry season.
9. 12 out of 14 families reported feeling safe in their communities
10. 9 out of 14 interviewees judged their health to be "very good."

### **Cookstoves**

The improved cookstoves we designed remain a very desirable "appliance". In October 2013 we purchased the parts to build 40 cookstoves but only parts for 18 cookstoves were delivered while we were in San Jose in October. The additional parts were not delivered over the past 6 month. This trip we ensured the remaining cookstove parts were delivered and we purchased and had delivered 25 additional cookstove parts for a total of 47. This should remove lack of materials as a barrier to building stoves for people who want them. Even with this delay, we have installed over 220 improved cookstoves to date.

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

### **Agriculture**

We provided materials for a new fish farm in el Horno/Mangal in October. We met with the farmer and reviewed with them the process of building the fish farm. They have started digging the hole this month because the rains have softened the ground up enough to ease digging. Upon questioning, the farmer understands the process of farm construction and maintenance. The one challenge as always is getting farmers to discard small fish fry after the existing fish start reproducing. When a fish farm has too many fish, all fish do not grow to their full size but consume significant food. By culling the majority of small



fry the remaining fish make the most weight for the food available. This means a better harvest for the farmer.

## **Water Projects**

### *Piped water projects*

We ordered materials for a piped water project in the village of Coyolar in Delicias in October. The materials were only delivered in April so the project is not yet complete. They have built the damn to collect the water coming from a natural spring. The 20 inch deep trenches for the pipes started being dug in late April. The villagers will dig about 2 km (~1.2 miles) of trench for this project and 12 homes will be helped. This will be the sixth piped water project we have helped create. Another piped water project in Guanacaste is in the early evaluation phase.

### *Water Filters*

The desire for water filters remains high. The area residents realize the benefit of safe drinking water. Unfortunately, we have experienced an interruption in our supply of filters. We ordered 50 filter in October 2013 but none were delivered. We are trying again to get 50 filters for San Jose. The artisan shop where they are made is 6 hours away and therefore is difficult to visit during our time in Honduras.

### *Latrines*

The demand for ventilated improved pit (VIP) latrines remains high and 22 more have been built over the past 6 months. To date we have helped build over 128 latrines. We are excited about the growing interest for latrines in villages that compose the Delicias township. They accounted for 20 of the 22 latrines built this last 6 months. 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. Surprisingly, the village of Coyolar in the Delicias township is most motivated at this time to get latrines.



*Tom learns about latrine building*

## **Evening Educational Program:**

Each evening the group meets after dinner for about 2 hours. We review the highlights of the day and what was learned. Then one member of the group gives a presentation on a talk related to global health or to Honduras. Some of the medical talks this trip involved common infectious diseases in Honduras including chagas disease, child dental health, and dengue. Other talks dealt with Honduran history, and with how the drug trade is leading to deforestation and hurting the poor. Natural remedies and water were other talks.

## 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 Hondurans, 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  
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Barbara Gawinski, PhD  
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Thanks to other trip members who wrote parts of this report.

