

Honduras Trip Report – May 2013
Department of Family Medicine, University of Rochester

Participants	
<u>Faculty</u> Stephen Schultz Douglas Stockman	<u>Unitarian Church</u> Barbara Gawinski, PhD
<u>Residents</u> <ul style="list-style-type: none">• R-1s: Jean Hamlin, Rachel Long, Colleen Loo Gross,• R-2s: Sophina Calderon, Kate Eisenberg, Jillian Moore, Brendan O'Connor	<u>Interpreters</u> Catherine, Foncho, Genesis, Paulette
	<u>Shoulder to Shoulder Representatives</u> Ever, Marvin
	<u>Dentist</u> None

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 2013 trip.

Travel and General Comments

There were no problems with travel. Less than half of the group got diarrhea and treatment worked promptly. 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! Water was a concern for much of the trip. May is the end of the dry season. Although we had rain for part of 2-3 nights early in the trip (and captured water coming off the roofs in buckets and bins), it was not enough to fully meet the needs of the travelers. For the first 8 days it was so humid the surrounding mountains could not be appreciated due to all the moisture in the air. Near the end of the trip the humidity dropped some and the spectacular views were enjoyed. Participants worked hard, worked well as a team, got much accomplished, learned much, and had fun.

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. The Sunday we arrived in San Jose was spent meeting with representative from the villages. This three 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.

Water Projects

Piped water projects

For the past 3-4 trips, community members from Coyolar, in the township of Delicias have requested our help creating a piped water system for their community. We have finally made some headway on this project. This trip a simple collection structure was built around a naturally occurring spring and the water output from the spring was measured. Given the spring is producing almost 15 gallons of water per minute at the end of the dry season, we are now working with the community members to design a piped water system. Hopefully we can have a functioning system by the end of this year.

The government water project for San Jose that will bring water from 40 km (~25 miles) away and was started about four years ago may be closer to finally working. Water is flowing to communities a few miles closer to the water source than San Jose. Road work is being done by the government and has destroyed the pipes to San Jose. We are working on a temporary fix so that San Jose Centro (a small percentage of the San Jose township) residents can get water to their homes.

Water Filters

The small ceramic (clay) Potters for Peace filters we introduced to the area continue to work well and are much sought after. People outside the project area continue to request these filters. The one downside of the filters are that they do not filter enough water per day for a large family. We have so far not allowed families to purchase two filters because we have limits on how many filters we have the resources to purchase, and many homes still do not have any filter. We also do not allow people outside our project area to purchase filters because of the cost. Each filter costs about \$18. This is too costly for most people in the area so we request \$2 which is much more affordable.

We introduced slow sand filters to the area when we first started working in San Jose. Although the up front cost is more than double the cost of a Potters for Peace filter, they can filter more water and can last many years with appropriate care. The San Jose people preferred the Potters for Peace filters so we have moved in this direction. Now a few people have expressed an interest in the slow sand filter due to the need for increased filtering capacity in homes with more than about 8 people. We educated a family this trip on how to build the slow sand filter and provided the barrel with the required plumbing. They have already collected the locally required materials and feel confident they can build the filter. We will check in with them in six months and see how the project went and visit their home to troubleshoot any problems that arose.

Latrines

The demand for ventilated improved pit (VIP) latrines remains high. To date we have helped build over 110 latrines. A number of people already have the 10 foot deep hole ready and construction will start in the next few days. For a home owner, building a latrine requires a huge amount of work. They first have to dig the hole using a pickaxe and shovel. This can take 2-3 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. Given the health benefits, we feel it is money well spent. Surprisingly, the village of Coyolar in the Delicias township is most motivated at this time to get latrines. They are a 3-4 hour walk away from San Jose Centro, so they have to do the most work to get the raw materials to their homes.

The community of Guanacaste has at times been challenged with working together. Presently a new teacher and the community president have done a great job making things happen. They requested we help them build two flush latrines for the school. We provided the raw materials this trip and hope to have photos of the completed latrines when we visit in October.

Pilas

It is a common practice in Honduras for most homes to have something called a pila. This handmade structure serves as a water storage tank, a kitchen sink, and a laundry/washing area. Because water is in such short supply, most homes fill up their pila when water is available and then use the water from the pila throughout the day or week as needed. The pila has a built-in washboard so that people can wash clothing by hand. It also serves as a common work surface while cooking. We have completed another 21 pilas over the past six months for a total of 75 pilas. We had hoped for more pilas to be built over the past six months but we had some challenges getting raw materials delivered to the project site. We hope this problem is resolved.

Education & Schools

School Visits

During our 10 days in San Jose, we were able to visit four out of the six area schools serving over 300 students (Guanacaste, Potrerros, Portillon and San Jose Centro; missing El Horno and Las Delicias). We had quite the agenda to accomplish within each visit, addressing dental, medical and psychosocial domains. Each school received a first aid kit, fluoride supplies, tooth brushing education, pillowcase dresses for the girls, and large amounts of school supplies, which had been collected by a local Rochester teen. The largest activity involved a class project (see below).



Jill runs a skit on bullying at the Portillon school

School Health Education Project

The school education project was again successful at reaching many children through visits to area schools. Goals included providing teachers and students with information on physical and psychosocial health and to model an interactive, creative teaching style. All seven residents and two of the faculty participated in this project over the course of our time in Honduras. Using teaching materials designed by 2nd year resident Jen Hathorn, we performed a series of skits and activities at each school. The focus this time was on emotions and actions with a “Be a Hero, Be a Friend” theme. We started with a discussion of local and national heroes (Lempira!) and discussed how our emotions and actions can affect others. Four children from each school were selected to come to the front. Each child was given a tube of frosting and asked to squeeze some out onto a line of tape. To their



Kate helping with Hero construction



Child from Potrereros attempts to put frosting back in squeeze tube

surprise, we then asked them to put the frosting back in the tube! All the children gamely tried to replace the frosting, with varying levels of success. We discussed how our words are like the frosting – difficult to take back once they come out. We followed this up with two skits that had some students being bullied, while other students reached out to befriend them. In our final exercise we traced an outline of one child from each classroom onto a large sheet of paper and had the whole class participate in giving the outline features and decorations – a classroom hero that they worked together to create! The teachers were receptive and encouraging of our teaching efforts. (Kate Eisenberg)

Unitarian Church Scholarship Program

The Department has partnered with the Unitarian Church of Rochester to provide scholarships for children to continue their education beyond sixth grade. Prior to the scholarship program, about 5 children per year from our area were able to attend middle school. The Unitarian Church funds about 20 scholars per year and is in its fifth year of operation. This trip, Sophina Calderon and Barbara Gawinski focused on meeting with the new middle/high school principal and explaining our scholarship program. They conducting six home visits for eight middle school children who receive room and board stipends. Photographs were taken of all students to share with the church and private scholarship donors.

Barbara Gawinski with Catherine Maldonado (interpreter) met with seventeen families to discuss their continued involvement in the scholarship program. Students who completed their requirement were eligible to receive the second installment of scholarship dollars. (Two 11th grade students attend high school in La Esperanza and San Pedro Sula, but not submit paperwork yet, two student's families did not request ongoing funding, and two students chose to attend colegio out of the region, which the scholarship program does not support.) 8th, 9th, and 10th grade students are performing well with average overall grade of 70.2. Students in Grade 7 are not performing well with average grade of 58.3. The San Jose Tutor had discontinued in his tutoring role. We were unaware of this change, so a replacement tutor was not identified until this trip. Magdelano Hernandez Ramos from El Horno, a new university educated Guanacaste teacher, interviewed with Barbara and Sophina and will hopefully be hired by month's end, which will provide the children time to bring up their grades. Parents reported there will be no summer school this year. Many of our new students will have difficulty without that additional teaching time. (Barbara Gawinski)



Barbara with scholars and their parents

English Teaching Session with School Teachers

Sixteen elementary school teachers from five communities attended a three-hour in-service curriculum created by Ed Wiltse and Kirsten Nagle from the Curriculum and Religious Education committee of the Honduras Task Force of the First Unitarian Church of Rochester. Brigade members, Brendan O'Connor and Jean Hamlin, had piloted the curriculum with children from communities in San Jose and Los

Potreros to tests its applicability prior to the in-service. The curriculum demonstrated both small group and large classroom learning through playing with dice for equation creation and solution. All teachers and students enjoyed themselves while learning. The concepts of addition and multiplication were well received; however, the concept of negative numbers in subtraction equations ($3-6= -3$) seemed difficult for some of the teachers to understand and be able to apply to their classrooms. The game of creating a probability bell shaped curve demonstrated the active engagement of a group of 16 student/teachers calling out numbers and watching the distribution of the sum of two dice. The math curriculum concluded with students/teachers demonstrating the variety of equations that could be generated to reach the sum from 2 to 12 with two different color dice. More advanced concepts could be offered using 3 or more dice. The possibilities for math curriculum are endless, but time ran short so after practicing numbers in English we moved to the English curriculum. Each community school received 100 playing dice and assorted pages of instructions and work sheets to use in grades K through 6. Thanks to Brendan O'Connor, Sophina Calderon, Kate Eisenberg, and Paulet Fogon (interpreter) for their work on this project. (Barbara Gawinski)

The English curriculum began with the singing practice of English number using “Five Little Ducks” lead by Kate Eisenberg and Brendan O’Conner, then moved to focus on the pronunciation practice of words associated with family roles, relationships, transitions and a variety of job titles. Teachers/students used word banks and short scripted conversations in small groups and shared a large production of the scripted conversation. The lesson concluded and much laughter was shared as Brendan O’Conner created a live sculpted three generation family with teachers acting out the family transitions of coupling, marriage, birth, leaving home, adding in-laws and grandchildren, divorce due to violence, and illness and death. (Barbara Gawinski)

At the conclusion of the in-service, Ronnie of Portillon presented to his colleagues the need for a replacement tutor for the students, since Santo Froglan has not been able to tutor this academic year. Magdelano Hernandez Ramos of El Horno, a new teacher in Guanacaste, submitted his name as a new tutor. Marvin Cacho and Even Bonillo from Shoulder to Shoulder will speak with him about the contract. Barbara Gawinski provided the students’ and parents’ names, grades, and villages. The first parent and student meeting will be held in San Jose on May 25. All parents have been notified and are enthusiastic about the return of tutoring. (Barbara Gawinski)



Brendan teaches family relationships in English to school teachers by having the teachers act out family genograms

Microfinance

This brigade, the microfinance committee gave out 16 loans to rural Hondurans with small businesses. Examples of businesses include baking bread, breeding pigs, concessions sales at soccer games, and selling fruit. This brigade also had a focus on improving communication and collaboration with local small business leaders.

One success this brigade was loan collection. Since 2009, our microfinance program has given out 44 loans, and 38 have been now been repaid in full. This brigade, we were able to collect many previously outstanding loans. When we talked with people who had defaulted, the most common reason that people gave for delaying loan repayment was becoming ill or having to cover medical expenses for a child. One man, however, reported that his business was thriving, but he had chosen to invest the money in a manner that would not allow him to repay the loan on time. There was a marked gender breakdown in loan repayment--all the Honduran women have repaid their loans in full.

The educational lessons focused on separating business money from personal money, building a business that stands out from the competition, and preparing for unexpected events. We asked business leaders to stand up and teach during portions of the class, drawing on their own experiences. At the end of the business class, which was held in the morning, we awarded certificates to all those who had successfully repaid their prior loans. A lunch was served in their honor, funded by private donations, with all business class participants in attendance as well. We sent out letters of invitation on our first day in San Jose, with hopes that positive reinforcements would improve loan repayment. Over 33 people stayed into the afternoon to apply for a loan. Some prior loan recipients also gave us advice about which local proposals would be good investments for our program. Brendan O'Connor oversaw all final decisions, with each interviewer from the brigade committee consulting him before a loan was extended.

We are very grateful to our fellow brigade members for their help in this project. They acted in skits for educational classes, collected loan money, registered participants, and interviewed new loan applicants. We are also grateful to our Microfinance Committee Members for their generosity and work creating bylaws to guide the project. (Jean Hamlin)

Personal Profile

Maria Lopez is a 48 year old married woman with four children. Like most residents of Guanacaste, she is very poor and must survive on less than \$2/day. We gave her a micro-loan to purchase materials to make tamales for sale at local gatherings. She reports back that she sells about 130 tamales per week and she can make a profit of up to \$14/week. Through this increase in family income she has purchased chickens for eggs for the family to eat and has saved over \$70 which represents the family's total savings for future needs. Maria's story is a great example of how a little assistance can have a profound impact on people's lives.



A personal story of the challenges faced by Hondurans

Only 2 recent loan recipients did not contact our brigade regarding loan repayment. I made a home visit to one man, Sylvestre, who owed L1020 (\$51). Foncho, our interpreter, came with me.

Sylvestre and his wife, both in their 20s, live with their three children in a tiny home without even a latrine. Sylvestre politely asked us to sit down on some stones when we arrived, and apologized for missing the meeting due to work. Then he lifted his shirt, and showed me three scars from bullet wounds, as well as a large scar down his lower abdomen.

Thieves had attacked Sylvestre near the bank in La Esperanza, stealing his loan money before he had a chance to invest it, as well as a remittance from a cousin in the United States. He almost died, and was briefly hospitalized because of his injuries. He now works for another man, selling goods at the market. He gave us 20 L (\$1) for interest, and promised to repay the principal over the course of two brigades.

According to the microfinance bylaws, at least a quarter of a loan plus interest must be paid in order for a family to remain eligible for Shoulder to Shoulder projects, such as water filters, cook stoves, latrines, and school scholarships. The loan must be paid in full before the household is eligible for another.

On the hike back to San Jose Centro, Foncho and I asked community members along the road about Sylvestre, and they verified his story and spoke well of the young man's character. It seemed wrong to collect the loan from Sylvestre when he had been the victim of crime and unable to put any of the funds to use. After discussing it with my colleagues, I paid the young man's loan, explaining things in a letter and asking not to share the news with the community. He reported the family was relieved to have the debt paid, and is interested in a latrine next brigade.

I share this story because it leaves me with a sense not of accomplishment, but of unease. Foncho thought perhaps we should return the interest; perhaps we should donate things to the children, who were not properly clothed. Part of me agreed, but I felt the tension between an individual approach and a programmatic approach. I wondered if further charity would lead to resentment in the community and conflict with our programmatic approach to supply people with tools to improve their lives. I held back. Upon my return to the United States, I talked about it with my neighbor, a retired teacher from East High School. "I've felt that conflict, as a teacher. You want to avoid favoritism, and yet certain kids and situations speak to your heart." she paused. "I felt that all the time." (Jean Hamlin)

Medical care

The clinic operated every day we were there, except on Sunday, when we were only open for emergencies (2 seen). Patient volume was about the same as most trips. The table to the right lists the most common diagnoses. We had a few people with pneumonia and a number of rashes we were unsure of the cause. Trip members made a number of home visits for very sick patients. Their stories are listed below.

Diagnosis	DxFreq
ALLERGIC RHINITIS	15
GERD	14
WORMS	11
VIRAL URI	8
RASH	4
BACKACHE	4
MYALGIAS	4

Home Visits

1. Juana is an elderly woman whose leg was injured by a falling rock. She received stitches the same day by a Honduran nurse, but the wound became infected. Our group made home visits to Juana, debriding her wound and delivering antibiotics, pain medication, and wound care supplies. At first the family followed instructions, but then they decided to leave the wound open to the air and stop using the medicine we had given them. On my third and final visit, Juana was laying in bed with her family around her and traditional medicine on her forehead and leg. The family was worried she may be dying. It is difficult balancing what we feel is the best approach to treating a medical condition with the cultural desires of the patient and their family. We returned to the US before the wound was healed, so we will have to wait another 6 months to see how Juana did. (Jean Hamlin)



Juana's leg wound

2. Rachel, Jean and Jill hiked to see an older man who had suffered an arm wound after falling down the hillside near his home in Guanacaste. He had self treated the area by sprinkling Penicillin dust over the bleeding area. The wound was cleaned of the surrounding dirt and this powder, and Xeroform/gauze

dressing was applied. He next complained of chest pain and pointed to his ribcage. He noted pain only when he coughed or lied down to sleep. On exam, he was found to have a nondisplaced rib fracture. He also had a scarf wrapped around his abdomen with newspaper containing herbal medication held close to his skin. This was the second patient on this brigade to have such a finding. He declined any analgesics at first, and was left with dressing supplies and a short supply of Ibuprofen.

While assisting with the microfinance loan classes, lunch and applications, Kate and Rachel recognized an ill-appearing female child who was coughing throughout her mother's application process. Mother and child were recommended to visit the clinic, where the child was found to have a fever of 103 and lung exam significant for a suspected pneumonia. She was treated with antipyretics and antibiotics. It was a great example of teamwork and the ability to doctor even when one is not in the office or clinic! (Jill Moore)

Cookstoves

The improved cookstoves we designed remain a very desirable “appliance” with over 180 completed. Although parts for 27 more cookstoves were ordered six months ago, they never got delivered so the amount of stoves constructed was less than hoped (12 new stoves built before materials were depleted). We were able to get these parts delivered during our time in San Jose this trip, so we anticipate an increase in the number of stoves to be constructed over the next six months. 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 \$6 for the stove that costs about \$50 to build. The main expense for the stove involves 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

Families continue to express interest in our fish farms project. These tilapia fish farms serve as an additional food source, providing increased access to protein in an area where malnutrition has been an issue. They also provide some families with supplemental income when they are able to sell some of their harvest. The main barrier to creating a fish farm is having a flat piece of land with a year-round water source. In addition, families have to dig a 3-6 foot deep pond by hand, which can take weeks with a pickax and shovel.

We had visits from fish farm owners and group members visited a couple area fish farms. They are all going well and a number of families have built second fish farms to increase production. It is always amazing to see tilapia come out of small holes filled with muddy water. We did not identify any new families this trip who had the water and land resources available to start a fish farm.

Dental Program

Dental problems remain a major cause of pain and suffering for the people of San Jose. We were unable to have a dentist join our group this trip. Dr. Lina Vega, who heads our dental program, had hoped to go, but her new job in Texas would not allow her to take the time off. Another dentist had expressed an interest, but was unable to leave his business and family for the two week trip. We continue to look for

a dentist who can commit to the two weeks and feel comfortable working in an environment with minimal resources.

Oral Health Projects

Although we did not have a dentist with us this brigade, we did continue to promote oral health in the region, particularly for children. We again provided area schools with 6 months worth of fluoride. According to the dentists who were in last May's brigade, this has resulted in notable improvements in tooth remineralization for children participating in the program. The teachers at each school give fluoride rinses to the children twice a week. We reviewed administration instructions with the teachers (1.5L water per fluoride packet, 5mL per child, don't swallow!) and had a school-wide fluoride rinse demonstration at the Potrerros school. While at the schools we distributed toothbrushes and toothpaste for each child and had interactive tooth brushing demonstrations. Most children said they did not have a toothbrush at home but would like to brush their teeth more. The kids loved the idea of humming a short song to help them estimate the 2 minutes needed for brushing, which we practiced doing all together. We encouraged them to take home what they had learned to their parents and siblings. (Kate Eisenberg)



Fluoride spitting contest



Steve attempts to engage young children in how to brush

Woman's Health

Day #4 of our trip marked the meeting of the midwives, health volunteers and “*madreguias*” (mother guides). Six local women traveled from Portillon, Guanacaste, San Jose Centro and Potrerros. The meeting felt more like an intimate conversation, as the women shared their stories and wisdom from years of experience. We discovered that 50-75% of births are delivered at the hospital in Esperanza, and that the government is now charging the women for this service. This marked a change from last year, when both the parteras and patients were paid as incentive to travel and deliver at the hospital. There are monthly meetings for all of the pregnant women of the area at the health center in San Marcos. There, a physician will conduct a group lesson followed by individual exams of each patient. The physician will tell each patient when to go to the hospital (usually ~3 weeks before her due date). The parteras continue to have the responsibility of



Partera and volunteer review anatomy

assisting any home births and reporting birth weight and height. They also receive separate lessons from the physician at the monthly meetings in San Marcos, and occasionally have larger meetings or conferences in Tegucigalpa and Esperanza. The health volunteers remind women of the monthly meeting dates, update the health center with the number of pregnancies in their community and help conduct the monthly baby weighing sessions. The madreguias reinforce topics such as vitamin supplementation and breast feeding among women in their area, but do not receive any support or teaching from the government. After sharing this information, the women then asked that we share information with them. We discussed cesarean sections (indications for this and implications on future pregnancies), breech deliveries, mastitis and handed out posters and mother/baby anatomy. (Jill Moore)

Donated Dresses

Various brigade members distributed one hundred cotton handmade dresses created and donated by Betty Ryan of Webster to three communities. The girls loved the new addition in Guanacaste, Los Portreros and San Jose. Thank you Mrs Ryan for your generosity. (Barbara Gawinski)



Girls in donated dresses

Odds & Ends and General Comments

Given we do not have US personnel on the ground in San Jose year round, we continually explore methods to improve outcomes/project completion when we are not there. Although achieving improvements can be difficult, the program will be more sustainable if Hondurans can reliably run programs without direct supervision. We are making progress on this front and have improved project tracking.

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, MD”.

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. 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

