

Honduras Trip Report – Spring 2023

Department of Family Medicine, University of Rochester

Participants	
<u>Faculty</u> Sophina Calderon, Stephen Schultz, Doug Stockman	<u>Residents</u> Yoni Abress, Jaclyn Grode
<u>Interpreters</u> Diego, Heydi, Claudia, Dania	<u>MCH/OB Fellow</u> Sarah Watler
	<u>Cook</u> Melissa and sister Liset

Introduction

The Department of Family Medicine at the University of Rochester operates a Global Health Program. This year-round program travels twice a year for two weeks at a time to rural Honduras. The Department has partnered with a rural community called San Jose, San Marcos de la Sierra in the Southwestern state of Intibucá, 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 Spring 2023 trip.



Bus loaded with supplies heading to San Jose after arriving in Honduras

Travel and General Comments

The travel part of the trip to Honduras was uneventful. During the Fall trip many of our medications and supplies were confiscated by the government at the airport. We learned about the government's new process to import medicines and paid a Honduran lawyer (required step) \$500 to get approval to bring medicines and supplies into Honduras at the airport. Surprisingly, although we expected to spend hours in customs at the airport they didn't really search our luggage and didn't even bother looking at our approval documents. We will need to go through the same time consuming and expensive process for our Fall trip just in case customs decides to inspect our luggage.

The food cooked for us by sisters Melissa and Liset was very good. We had electricity for the entire trip. Water was the main challenge. There is no running water in the area so we rely on rain for our water for bathing and washing dishes etc. We didn't have appreciable rain during the trip. This required members to reduce how often they bathed and instead of bathing with 3 gallons of water they would bathe with 2 gallons or less of water. Trip members didn't complain and pulled together.



Kitchen where all our food is cooked. Making bread in this photo.

Politics and Headaches

The problems we experienced previously with local politics has seemed to calm down. The vast majority of the San Jose inhabitants support our program and all the interventions we bring to their community. At the national level there are definitely changes with a different party in power. The medication importation process is one example. Another example is when I took money out from our Honduran bank account I was surprised to find the government taxed the withdrawal to take our own money out of our bank account.

Education & Schools

The First Unitarian Church of Rochester has been partnering with the Department of Family Medicine at the University of Rochester since 2008. Initial financial support from the First U aided in efforts for cistern construction, water pipes, and faucets to run water in family homes. Thereafter a committee was developed to work on a scholarship program to advance children's education. Most children in San Jose only attended school up to 6th grade. In grade school there are multiple children of different class years in the same classroom. The teaching format is memorization-based and the children are often not prepared to go beyond 6th grade. Initially brigade members stayed at the school in a classroom, but First U (and Doug) provided funding to build the volunteer house to avoid stopping children from using their classroom during brigades.

At present there are 32 scholarship recipients. The scholarship is intended to pay for uniforms, backpacks, books, and other school supplies. It also funds the room and board for the children that go to high school in San Marcos in order to avoid an up to 6 hour round trip walk to and from school each day from their hometowns. In an effort to see where the children live with room and board outside of the home, two brigade members went to San Marcos, a two hour walk from San Jose. However, there was a school closure that day and the brigade members were unable to meet with the principal or see the children. Professor Ronéy who is director of the Portillon school system assists the scholarship program in providing the scholarship requirement packets to the children and collecting their grade reports. The scholarship recipients must have a signature from parents of homework completion, community service, a budget of how they will use their scholarship, a letter of appreciation to their First U donor, and grade reports from school to receive their scholarship. Of the 32 recipients from this brigade, only one student had dropped out and two had questionable status as there was no copy of their grades from school. Less than 6 children had failed 2 or more of their classes. Overall, the scholarship program continues to be a successful and supportive part of the brigade. Two present recipients hope to become nurses and one recently graduated from university, now working as a lab technician. Multiple parents hope to sign up their children for brigades moving forward.

Sarah



Scholarship student and parent checking in with Sarah and Heydi

Tomas

Tomas is a regular companion during our trips. Up until a few months ago we thought Tomas suffered only from Schizophrenia. We then received a report from an older woman who has lived in San Jose for years that Tomas was thrown off a mountainside by an angry brother and sustained a traumatic head

injury. We feed Tomas with excess food and give him his biannual bath and new clothes. In return he collects firewood to keep our cook fires going. Although he weighs about 125 pounds he carried trees twice his weight up and down mountainsides to bring to our cook stove.



Tomas upon our arrival and before a bath



Tomas all cleaned up in his GQ pose



Tomas carrying a tree up and down mountainsides

Medical Care

Clinic cases were a typical mix of problems. The most common diagnoses were: GERD, worm infections (patient reported), viral URIs, headaches, allergies, osteoarthritis of various locations, and about 200 other diagnoses. The residents and fellow got to do many joint injections. The medical clinic saw about 90 patients. Over the years we have witnessed San Jose residents begin to develop chronic diseases similar to US populations. Previously all sick people suffered from infectious diseases, injuries, and overuse conditions. As a percentage of the population achieves some level of financial security and junk foods and sugared drinks make their appearance in the area we are beginning to see patients with diabetes and hypertension.

Cases/Scenarios

Jackie's observations:

I see a man and his adolescent son. The father is thirsty all the time and feels a pain in his stomach when he eats. His knees have also been hurting. A point of care test shows a glucose of 249, which indicates a new diagnosis of diabetes. He already has hypertension. We have two medication options in the pharmacy for glycemic control: metformin and glipizide. I prescribe metformin and talked about diet changes - he currently drinks several glasses of homemade fruit juice per day. He is my first patient with GERD-like symptoms of the trip but certainly not the last. There is a helpful book of anatomy which we use to go through why his stomach and throat are hurting and why his knees are becoming more painful over time. We also do knee injections for his bilateral likely osteoarthritis. His son has blurry vision and pain in one eye going on for a year, worse when studying at night. An eye exam shows a large corneal lesion. After initially denying injury, he then recalls that he has been riding



Visual problems

a motorcycle without a helmet or eye protection and sometimes his eyes have hurt afterwards. I show him a picture of his own eye and discuss that we can't repair the damage or the blurry vision and prescribe ketorolac eye drops and artificial tears for pain control.

Of the several rashes I saw, one stood out to me: a woman in her 20s had an itchy rash for 2 months. It started on her left hip and spread to both sides of her trunk. It was quite itchy. She had been seen at another clinic previously and had been prescribed amoxicillin and what sounded like a cream for fungal causes. We're unsure of the cause, but are thinking along the lines of an inflammatory skin condition given the duration and her prior treatment without response. I prescribe a steroid cream and tell her to come back in a few days if it is not improved. We don't see her the next week, so hopefully it helped



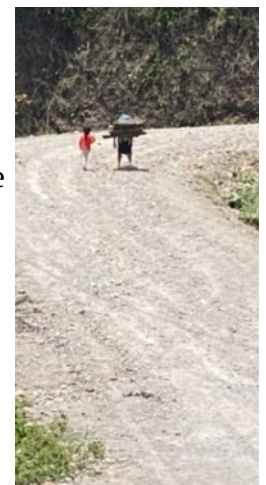
Rash. No dermatologist here

One afternoon, a woman in her 60s came in for fever and cough for a month. She was febrile in the room to 102.4 F. Her cough had been bloody recently and this was scary for her. With more discussion, she felt that she had had weight loss (her current weight was 80lb) and also loss of appetite. Anyone else sick in the house? No. Any night sweats? Ahorita, no. Anyone with tuberculosis? Well, they told me I had tuberculosis and I had 6 months of treatment. When? 20 years ago. Did they do an X ray then? Oh, yes. Just to be sure, we go over tuberculosis and common symptoms and diagnosis and treatments. And she says, yes, yes, this happened 20 years ago to me. Timelines, as our interpreters remind me when I gather history, are not always reliable with folks from San Jose. So I'm not quite sure how long she's truly been febrile or if her positive diagnosis of TB was 2 decades ago. She looks chronically ill and her lung sounds are more diminished on the right side. I decide to treat her for community acquired pneumonia but warn her that the antibiotics I prescribe today will not help if this is the TB coming back. I check her intake sheet - she is illiterate. I write a letter so that if she goes to the hospital in the city she can give it to a doctor or nurse there. She is hopeful that the antibiotics I gave her today will help the fever and cough go away. I am less confident in this and urge her to take the letter to La Esperanza.

Yoni's observations:

When I began my medical training at the University of Rochester, one of my main goals was to be part of the San Jose Partners program. I was drawn to the sustainability and continuity of the program. Though as I got closer to the trip, I did not fully understand what I could do there medically. Maybe treat parasites, worms? How would I treat chronic conditions when I do not have access to all the diagnostic tools? How can I work without the support staff that has guided and spoiled me through my training?

From the lens of the biopsychosocial model, I often get stuck in the bio part. It feels comfortable giving medications or working up a medical complaint. My job as a resident in Rochester is always in the context of a bigger multi-disciplinary team that allows me to focus on certain aspects of care. As a result, I often lose sight of what makes up the health of an individual. In San Jose, we were six Gringos, seven Honduran super-people, and one (hyper?)active four year old. As a result, there is no room to specialize. In clinic, this means I am a clinician,



Carrying 50-80 lbs of firewood up a hill

pharmacist, custodian, coordinator, photographer, and baby-sitter. I quickly realized this was not enough to address the health needs of San Jose. Every day, I would be in clinic, and Doug would have a longer lineup of people waiting to see him. They came to see Dr. Douglas for his skills in engineering, water filtration, plumbing, fogon (stove) building, and solar panel expertise. He was both part of and a leader in the community.

On one of the clinic days, I had a 50 year old female who presented with light-headedness and knee pain. She began to feel lightheaded several hours after breakfast and lunch, and it was always relieved by meals. Her knee pain, presumably osteoarthritis, was worse with exertion, most prominent at night. She lives in Mangal, which is the neighboring village. I walked to this village on my second day. It was (VERY) steep, rocky/slippery, and it took me about an hour each way. It was 30C (86F) & humid. I was short of breath throughout. Supplies needed: 1L of water, food, and good hiking shoes. After that walk, I was done for the day. The same walk the patient did to the clinic, she does for water, food, and wood. She is 4"10, ~100 lb, and can only afford flip flops. Rest is not possible. Ice is unattainable. She can only afford to eat tortillas and beans. I realized quickly that I will not be able to treat the knee pain or lightheadedness with the medical tools I normally use. Her medical issues were lack of access to water and food insecurity, complicated by osteoarthritis and lightheadedness. Doing a knee injection or giving food temporarily would be a band-aid. What she really needed aligned more with the skills of Dr. Douglas.

When Doug melts PVC pipes to the shape of a gutter, it becomes a vessel for water during the rainy season. A pila (container) would help store this water. The two hour walk would no longer be needed. Her nutritional need would be reduced. Rest becomes a possibility. Lightheadedness would be prevented. This would have more effect on this patient's health than any physical exam or medication I could give. That is global health. As I left clinic that day, I felt exhausted and was kvetching about the layer of sweat covering my body. I saw the same patient carrying wood on her head. She did not complain for a second and carried on. I learned a lot that day.

Home Visits

Mangal home visit:

We heard news that in the winter of this year, a young woman passed away at home 6 days after giving birth. Her son was being cared for by relatives, but they were in need of more formula. On the day before clinic opened, Diego, Yoni, and I walked down to Mangal, Diego carrying a few cans of formula. We were unsure of the address of the house, but found it with multiple redirections from neighbors. At the home we met the family: Grandmother, two young uncles, an older male neighbor, and the 4 month old baby, asleep in a hammock in the kitchen area outside. The grandmother was in the house receiving, courtesy of a traveling nurse, an infusion of vitamins. We talked as she received her treatment. She had no concerns about the baby, just that he was still only taking formula. We chatted about when he could start trying solid foods - he seemed pretty close by her report of his development. Starter solid foods in this area of Honduras would be something similar to mashed squash. We then turned our attention to the baby, who was very plump and held his head up very well. He took no issue with our basic exam and had the courtesy to wait to urinate until he was no longer on Yoni's lap. We translated the instructions on the cans of formula and bid farewell.

Jackie

San Jose Home Visit

On Friday, N [the 14 year old with a 2 month old baby] brought the baby in to be seen for a cough. While she was preparing to go back, we talked for a bit about how she and her husband built a new house (2 rooms) right next to their first house (1 room). They are hoping that the solar install can be moved to the new house soon. She also asked about the water filters and she planned to buy one. Then she set off down the rocky path with her baby in her arms. On Sunday afternoon, Claudia and I bring her a water filter, following Don Lorenzo. We climb over a barbed wire fence, wind around cowpies, and tromp down switchback after switchback with the filter bucket swinging. We're breathing hard as we see a house with dogs. Here? The next? The next? No. No. No. After several more downward scrambles we see a house with an overflowing bucket - N's husband's mother's house. Just down the path is our destination - the last house in San Jose. N is sitting outside feeding the baby and smiles as we catch our breaths. Her husband's siblings giggle and whisper as Claudia teaches N how to use and clean the filter. N then shows us her new house. The bedroom is complete - there's a wooden bed frame, a shelf, and a few pictures of the Virgin Mary. The other room is full of building supplies for now - but N and her husband plan for it to become the kitchen. She cooks over an open fire for now. Once she saves more, she is hoping to build a fagon. She pays for the filter and off we climb, back up the mountain. It takes 40 minutes there and 40 minutes back, minus the stopping. Jackie



14 yo mother in her new home under construction

Dental Care

Curative Dental Care

No dentist was able to join our group this trip. Many people were disappointed by this.

Fluoride Varnish

The majority of the group took a hike to the Guanacaste school to apply fluoride varnish to the school children. Due to scheduling challenges we could not varnish the teeth of as many children as we hoped.

Sarah's observations:

The clinic in comparison to prior brigades had overall less total patient visits. An apparent reason for this is the community desire for dentistry. Most patients per interpreter reports prior to the start of this brigade, and in discussion with the people who most frequently stopped us while walking on our way to other small villages, want their teeth pulled by the dentist. Many patients who arrived to clinic first requested to see a dentist for teeth pulling, then per the one to three hour walk they made, sometimes starting at 5:00AM, they would stay for a medical consult. We did hike an hour to Guanacaste, another local town, to place fluoride varnish on the children's teeth at school. However, because of the Mother's Day holiday, less than half of the children were present.



Mom with baby

Dresses/Used Clothing

We brought 20 dresses for young girls that were made and donated by retired Rochester school teachers. The dresses are beautiful and include underwear and a hand bag containing a home-made doll. As time allowed, the Honduran interpreters would identify particularly poor girls and give them the dresses. It was such a great experience to see these girls faces light up with joy as they received what was clearly the nicest piece of clothing they own. Thanks go out to the teachers who donated their time, expertise, and money to make such lovely dresses. We hope to continue this project in the future. In addition to the dresses, the Honduran interpreters distributed used clothing they brought. So many people in the San Jose area do not have serviceable clothing. It is great to see one Honduran helping another.



Fluoride varnish treatment to children at the Guanacaste school

Feminine Supplies

Most women in the world do not have enough money to buy feminine supplies for monthly menstruation. They use old cloths they reuse. A group hand sews reusable feminine pads. We introduced the pads to a couple women to try. If acceptable we hope to bring and distribute more supplies to interested area women.

Sarah's observations:

Maria Santos Bautista Guitierrez and Maria Rosa Bautista are two sisters who came to visit Doug regarding solar panel installation. They were very interested to know about the reusable sanitary napkins for periods. They felt the reusable napkins would be easy to use as the clip on napkin holders fit smoothly around panties and expressed it may feel more refreshing. In talking to 16 and 17 year old girls at clinic, they normally use pads and not tampons that they purchase at the store. Older women use rags torn from clothing. A large issue for all women is management of period cramps, though it was difficult to assess if cramps prevent them from performing work or going to school. Young infants often wear no diapers or just have one plastic diaper. If they soil themselves, their parents will just take off their shorts and give a new set or continue to let them use the same prior diaper. Often the person holding the infant will also be soiled. A potential future project could be assessment of reusable diapers.



Young girl all smiles after getting a dress and a doll

Rural Development Projects

Fogons (cook stoves)

The cook-stoves we designed years ago remain one of the most popular interventions. Over the past 6 months another 15 stoves were built. We bought enough materials this trip to build 15 more cook-stoves. The stoves reduce smoke exposure in the home, reduce burn risk, and use less firewood than an open fire. During home visits we noted that some people did not build the stove as designed. It appears we need to restart classes to demonstrate how to make the stove correctly to get the most benefit from our help. Doug build two forms/molds this trip. One to be used for the actual stove

construction and one to serve as a model as we teach others about the recommended construction techniques.

Pilas

Pilas are cement water storage tank/kitchen sink/laundry area made on-site. Many people cannot afford the \$125 in materials to build a pila. Since we started subsidizing pila construction many more people have built pilas in their home. Our foreman, Edys, helped complete another 12 pilas since February and we purchased enough materials to build another 15 pilas in the coming months.

Latrines

Edys helped complete 6 latrines since October. We bought enough materials this trip to build another 10 latrines.

Water Filters

Most of the water people use in the area for drinking is contaminated and can lead to diarrhea, especially in children. Many years ago we introduced ceramic water filters that are made in Honduras. Edys sold 8 filters in the past 6 months. While we were in San Jose we sold another 6 filters. Given this relatively small investment reduces diarrhea in children and possibly reduces childhood deaths, it is money well spent.

Barrels and Gutters

Edys gave out 12 barrels and PVC pipe to make a gutter. We gave out 3 more while in San Jose and bought 15 more barrels.

Solar Electricity

A significant proportion of the people living in the communities we have partnered with do not have access to electricity from the government/electric company. Part of the reason is because of the cost to a home owner, but mostly because the houses are so widely spaced apart along rugged mountains that the electric company does not find installing wires in the region cost effective. Having no electricity means these people are in the dark from about 6 pm when the sun sets until about 5 am when the sun rises. Even during the day the inside of homes can be quite dark. Additionally, people have no way to charge their cell phones. A few years ago a company installed simple solar electric systems into a limited number of interested homes. Although recipients found the intervention transformative, only a small number of houses benefited from the intervention.

As of January 2023 we had installed the 10 systems we had shipped previously. About one year ago the new mayor for the county suggested he had funding to install solar systems in all the houses for those who wanted them. Because of this we only shipped a small number of systems last year. Area residents suggested this statement by the mayor was very unlikely to happen. One year later there has been no movement by the government to install solar systems in the area. Therefore we are shipping another 25 systems but they are not yet in Honduras.



Yoni doing a great job installing a solar panel on a roof



Steve and Doug with Guadalupe and her first light in her home



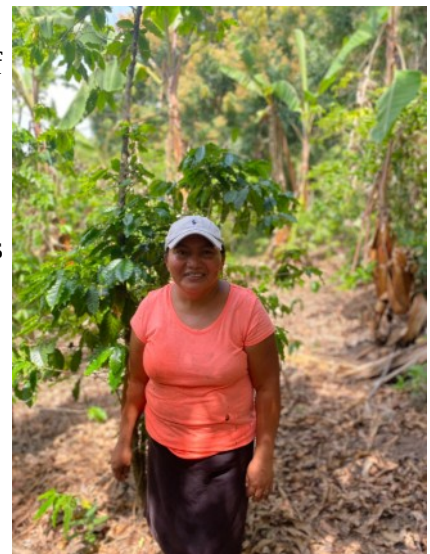
Locally made battery boxes wired up and ready for installs

This trip we installed the 4 systems we had in San Jose. The systems are quite simple. The homeowner gets a solar panel, battery, associated wires and controller, 4 LED light bulbs, and the ability to charge devices using a USB plug. The system costs us about \$500 not including shipping costs. The home owner pays about \$42 for the system. We do the installation, following a required education class. Reports from prior solar system installations have been very positive. All systems are functioning as expected and people are happy. Word has spread about the solar program with about 100 people on a waiting list. The hardest part for many of the installs will be hiking to remote locations on very steep mountain sides. We are still looking to train a Honduran to do these distant installs.

Agriculture

Coffee harvest starts around mid November and ends in January-February. The coffee we brought back this trip is from the harvest that finished in February 2023. We got 90 lbs of Indio and 40 lbs of Lempira from Maria Gloria, 50 lbs of organic Lempira from Margarito Sanchez. They had more coffee to give us but we are limited by what we can carry on the plane. The coffee that Doug sold earlier this year returned about \$12/lb compared to \$2.45 they would make if sold locally. The Farm to Table approach really helps these hard working local farmers. Thank you for supporting this effort.

The scorpion peppers we introduced a few years back continue to grow well. Many people are asking for the “delicious peppers”. They are among the top 5 hottest peppers in the world. Previously we introduced the Carolina Reaper pepper which is even hotter than the Scorpion pepper. Unfortunately it did not grow well due to disease and insects. The same farmer, Maria Gloria, gave us raw



Maria Gloria in front of a coffee tree

cashews to plant. We have asked a farmer who lives next to the volunteer house to grow these trees from the seed so we can transplant to the land by our house. It will be at least 5 years before a harvest is possible but we hope the cashew seeds will bear fruit in the future.

Update on Project Status (updated 5/25/2023)

Project	Completed	Project	Completed
Cook stoves	427	Scholarships	150+ students, 36 current scholars
Filters	549	Fluoride varnish	50 children this trip
Latrines	194	Fish farms	6
Pilas	226	Piped water systems	5 communities
Heirloom seeds	>18,000 given	Barrels and gutters	>44
Solar systems	14		

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. As is true for all development projects, there will be set backs. These are learning opportunities and allow us to improve future interventions. This cross-cultural project is realizing huge benefits for everyone involved, even with a few setbacks. The scholarship students gain confidence as well as a chance for a path out of poverty. Seeing the smiles and appreciation as people display their running water, new cook-stove, 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



Liset, Steve, Heydi, Jackie, Dania, Sarah, Claudia, Daniel, Doug, Melissa, Diego, Sophina, Yoni



Sophina sharing bubbles with school children



Sophina made traditional Navajo bread



Jackie educating a mother while holding her child on how to give medicines correctly



Jackie removing a Nexplanon



Yoni carrying 100 pounds of cement on his shoulder



Yoni injecting a patient's knee



Sarah performing an OB ultrasound



Sarah injecting patient's shoulder



Steve “precepting” Yoni on making a plaque



Steve teaching Jackie about knee injections