

## **Doug's Honduras Trip Report Spring 2021**

**Department of Family Medicine University of Rochester**

Due to COVID, the Department was unable to send people to Honduras in May 2021. I decided to go by myself on my vacation time. This report is a summary of what I experienced and accomplished. Unfortunately, I often don't take photos. My apologies.

### **Travel**

Travel was without incident. Getting there only took 9 hours and three planes. Coming home took 27 hours requiring an overnight in Miami. Travel within Honduras was accomplished with a rented truck (truck did not break down this trip). Driving in the capital city, Tegucigalpa, is always interesting. Most roads do not have street name signs. More interesting is that most intersections do not have stop signs or stop lights. Adding to this confusion are the motorbikes zooming in and out of lines of cars and the very hilly roads full of pot holes. The right of way is often decided by who pushes their car harder into a stream of moving traffic.



*Interpreters: Melissa with mask on and Paulet*

### **General Comments**

Banking in Honduras is always an experience. The first day in Honduras I spent 3.5 hours in a bank to deposit money in three accounts and attempt to access my account from online (which didn't work). I had to sign my name at least 25 times during that first visit to the bank. I tried to get the online account to work again on my last full day in Honduras. 2.5 hours later online access worked once, but I still cannot access the account from here in the US. If I do not access my account for about 3 months, the accounts are made dormant and I have to go through multiple steps to activate the account again.

I did get to see more of Honduras this trip. Usually we go directly to San Jose and then back to Tegucigalpa on the last day. No, I didn't go to the beaches of Roatán. I visited a restaurant with a view north of Tegucigalpa. I visited a moderate sized town/city called Santa Barbara for one of the interpreters. On the way out of Honduras, I had to get a COVID test in order to fly so drove around the city of Siguatepeque and spent the night there before driving to the airport the next day. Although Honduras is known for gangs and violence, the vast majority of Hondurans are lovely people who enjoy family and fun.

### **Water Filters**

Prior to arriving in Honduras I received a report that the water filters we had in San Jose were just about depleted. Additionally, a number of filters I bought in October had broken in transit. This most likely occurred because when I transported 50 filters in the back of the pick up truck in October, the truck broke down requiring multiple transfers of the filters between trucks. I decided to purchase 200 filters and pay a large truck to transport the filters to San Jose. I was able to get most of this set up prior to arriving in San Jose with the help of our Honduran interpreters. The ceramic filters (think clay flower pots) are made in Honduras by an artisan who lives about 90 minutes south of the capital Tegucigalpa. This is about 6 hours from San Jose. The best price I found for transport was a driver who lives in Rancho and we use him regularly. The interpreter Melissa agreed to go with him. There

were all sorts of problems along the way, but about 14 hours after Melissa left San Jose at 5 am, the 200 filters made it to San Jose.

### **Scholarship Students and Education During COVID**

I met with Roney Amaya, who oversees the scholarship program and is a major contact person between the San Jose community and ourselves. Most of our scholarship students attend middle school in San Marcos. Unfortunately, COVID has really hampered the educational process in the San Jose region. Every 15 days, middle school students walk 1-2.5 hours to San Marcos to get a new packet of papers, which they use to self-teach, and drop off their work from the previous packet. Most students' parents cannot read so scholars cannot turn to their parents for help learning the material in these take-home packets. While I was there, the students were having their first series of exams. I am afraid grades may not be very good. Initially, there were in-school classes but 3 teachers in San Marcos got COVID so the school was closed. There were some on-line classes offered but so many students do not have smart phones (and definitely not computers) and with minimal to no cell data for internet access, on-line classes became impossible.



*Ceramic water filter*

The village of San Jose Centro (SJC) had built the buildings for a middle school in the town about 18 months ago, but as of yet, the SJC middle school is not functioning. With the help of the Unitarian Church of Rochester, the village of Portillon built a middle school in their town. They were also forced to use twice monthly educational packets because of COVID.

Grade schools (grades 1-6) in the area have students attend school on either Monday or Friday mornings. In theory, those 3-4 hours are used to identify learning problems in specific children. I could not get a feel for how effective this approach was at helping these young kids. I fear many of these children will not be able to read, even by 5<sup>th</sup> grade.

I met with parents from Salitre and later had a phone meeting with the principal of the school in Salitre. This town is not part of San Jose. About 3-4 years ago, we expanded some of our other interventions to Salitre, but did not offer scholarships. Scholarships require a 3-year commitment from a donor at a cost of about \$400/year. This year, we agreed to offer scholarships to 4 students starting in February 2022. Ideally, we will identify 4 bright, promising students from very poor homes who would not have a chance to go to middle school due to the expense. On a side note, about 1 year ago we initiated a new project giving 55-gallon barrels and home-made gutters to 20 homes in Salitre. Those who got the materials found the intervention very helpful. Hopefully on the next trip we can expand this project. When I met with the parents, they related how there is no water in Salitre. During the dry season, people walk at least 2 hours to find a small collection of water. The collection of water is so small, they have to wait for it to refill before they can fill a 5-gallon container.



*Barrels and gutters for Salitre in 2019*

Our current scholar program helps students who attend traditional middle and high schools. This educational path helps students become nurses, teachers, lab technicians, etc.—what we might call ‘white collar’ jobs. Not every child has an interest in these types of future careers. For years, we have thought about a scholarship for technical/vocational schools. The nearest school is 2-2.5 hours bus ride away. I have asked Roney and

Paulet (interpreter) to gather more information. We are hopeful we can offer scholarships to students interested in technical schools. Honduras needs more highly-qualified electricians, plumbers, mechanics, etc.

The two most successful scholars are doing well. Antonia had been a kindergarten teacher in Portillon. She transferred to the nearby school in Potrereros while she gets a degree. This degree will allow her to receive a higher salary and become a tenured teacher. She continues to do well, balancing work, school, and family. Wilmer has always been exceptional in terms of his academic skills. He is in school to become a lab technician and continues to do well, although the COVID problem has hurt his grades. Internet access remains a major problem. Early in the COVID pandemic, the government hired him for a 6-month contract and paid him \$500/month as a lab technician. This level of income is never seen by anyone in the San Jose community.

Six months ago we helped provide the area school children with masks and alcohol for hand sanitizer. We did the same thing this trip purchasing 800 masks and many gallons of alcohol and spray bottles to be used for hand sanitizing. I suggested children store their masks (with names on) in school given the majority of masks do not last more than a few days outside of school.

### **Agriculture/Coffee**

I met with Maria Gloria, the farmer who has provided all our coffee to date. I paid her for the coffee we sold in November and put an order in for another 60 pounds of coffee to bring back to the US for this trip. She has been trying multiple other crops and has had some success. Tree crops generally take 4-5 years after planting before the first harvest so they are a long term investment. Lemon trees, giant mangoes, and cacao trees (chocolate) are growing well. I suggested planting more trees each season given they are growing well. The hope is to diversify her crop to offset global market fluctuations.

Multiple heirloom seed types have been given to Gloria and she has grown many of them successfully. The crop with the best chance for a local market are the scorpion hot peppers. So far, she has mainly sold the peppers out of her home to neighbors. She has been selling the peppers with the seeds removed (so others cannot grow). People who have tried the peppers really enjoy them and some people have started paying more per pound for these special peppers. We explored advertising, marketing and expanding her sales beyond just her near neighbors. We identified concrete steps she can take to use the hot peppers as a cash crop. She was very excited to hear these 'new' ideas that she never thought about before. I told her she is a very good farmer but needs to start thinking about marketing and sales. We agreed she will expand her pepper crop and implement the marketing/sales side of her business now. We discussed drying and grinding some of the peppers as a way to increase her potential sales, even when peppers are out of season. She will also plant some of the other seeds that have grown well before and see if we can create a market for those.



*Maria Gloria and a few of her hot peppers*

### **Meeting with Local Project Manager and restarting projects**

Edys Reyes oversees our projects. Because of limits to supplies from last fall, he ran out of materials long before many people got the projects they wanted. He was able to complete 5 pilas, 7 fogóns (cook stoves) and 4 latrines. He also sold 17 water filters. Over the next 6 months, he has arranged to build

24 pilas, 6 fogons, and 9 latrines. As we hiked around the San Jose area, we found multiple other people who were asking about getting these projects. Hopefully they will contact Edys and get on the list. One of the biggest interventions we needed to accomplish this trip was to replenish the materials to build these projects. Before I left, 2 of the 4 truckloads of materials were delivered to the San Jose storeroom. I cut enough planchas (flat metal plates) for cook stoves to make another 18 cook stoves. We bought 194, 100-lb bags of cement and have so far delivered 65 bags to San Jose. Cement spoils if it sits around too long so the next 2 truck loads will bring the rest of the cement at a later date. Hopefully Edys and the truck driver will work together to replenish the cement when needed so as to avoid spoiling. At least when I left, this was all arranged.

Edys completed a project we discussed a year ago to install gutters on the clinic that put rain water into our 4,000 gallon water tank. Water is scarce in this area of Honduras. When the brigade comes we sometimes have no water for bathing and washing dishes, especially in May after 5 months of the dry season. The gutters allow us to capture any rains that happen before we arrive. Over the next 6 months, Edys will work on replacing the metal sheets that form the top of the water tank. Ideally, we will seal the top better to reduce the amount of garbage and dead animals that get into the tank.



*A pila is a cement tank used to store water, a work surface for food preparation, and an area for doing laundry by hand*

### **Poverty Reduction and Job Creation**

In absolute poverty, sustainable interventions are not possible. With very few jobs in Honduras, and even less jobs in rural areas, as soon as external resources are withdrawn, people must return to a bare existence. We continue to struggle with ways to create jobs in the San Jose area. I met with multiple people to explore job creation opportunities. Any jobs that are created must bring money from outside the area into the area. One crazy idea I am considering now combines the resources San Jose has (stunning beauty and simple crops) with the fact that many people pass by the San Jose area every day on the one road that was paved a few years ago. Creating a small restaurant that combines the scenic views from Doug's Point (I didn't name it) with locally produced foodstuffs where possible, may create multiple jobs both in the restaurant and in the small farms surrounding the main road. While in San Jose, I started considering locations for a possible restaurant. Of course, these are just ideas right now and over 50% of small businesses fail, but something needs to be tried. See me if you want to hear more details.

Another job creation opportunity is probably a few years off and involves combining scholarship students and a mechanics shop. There are no mechanics shops for an hour drive in either direction on this one main road. Again, this idea is just in the concept phase.

In the past, we have tried bee keeping/honey, bread making, handicrafts, and small scale agricultural projects with limited success. We will continue to expand our coffee sales but hope to find a market for coffee closer than the US.



*View from Doug's Point*

## Medical care

I was not in San Jose to provide medical care and did not open the clinic while there. However, people do find a doctor when they are around. Below are a few cases I addressed while in Honduras.

- 72-year-old male who developed left-sided weakness and speech problems. Initial reports suggested to me this was a simple stroke. I went and did a home visit. I found an elderly male in the front room of the house who was clearly unresponsive. The extended family were in the small front room and provided all the history. He was a known alcoholic who over the past 6-12 months had worsening memory issues. There was no history of high blood pressure or diabetes. About 6 weeks ago he developed dizziness and would sometimes fall. He has no history of severe headaches. About 4 weeks before my visit, he had a fall and struck his head. His condition deteriorated more rapidly after that. He developed left-sided weakness and problems with speech. The family took him to an area hospital which did not have x-ray or other imaging tests available. Basic blood tests (CBC, BMP) were almost normal as was a urine test. The hospital suggested an herbal injection and said he needed to go to San Pedro Sula (major city several hours away) for further evaluation. The family had bought some of the herbal treatment but watched the patient's condition continue to deteriorate. They were struggling to buy this treatment which had drained all family resources and did not seem to help. They definitely could not afford to take the patient to the big city hospital. I reviewed with the family the test results, my belief that the expensive herbal injection would probably not treat this condition, and that advanced imaging, such as a head CT scan, was the most appropriate next step. It is definitely possible the patient had bleeding around the brain, such as a subdural hematoma from his fall. His condition worsened after the fall to the point where he was unresponsive and incontinent of urine along with his left-sided weakness. It is also possible he had another space occupying lesion. A stroke seemed less likely based on the history I obtained. This case illustrates to me the fact that much of the world's population suffer and die from potentially correctable problems because of lack of health care – both from no health care available and because the financial resources preclude accessing health care.
- Man with known diabetes losing weight. He is well known to our clinic. I was visiting him for other reasons and noted he looked very thin again. He admitted to not taking medicines every day and again drinking large amounts of soda with sugar. He was thirsty all the time and urinated often. We had brought a glucometer and test strips before COVID, but those supplies were long gone. I reviewed my belief that his glucose level was way too high, discussed the complications from this situation, encouraged him to stop all sugared drinks, reviewed his medications and why he should take them every day, and I suggested other medicines he may be able to find locally. His wife was listening, so maybe there is hope he will comply.
- 8-year-old girl with a bad rash 1-2 times a year. Mom and dad stopped by the volunteer house (without the girl) to provide the story. Given I could not see the patient or the rash I was only guessing at best. The description of the rash suggests she was having hives/urticaria. The parents could not identify any new exposures or triggers and there were no respiratory or swallowing difficulties. I educated the parents, wrote down names of medications that might help, and gave them a couple pills of benadryl to try the next time she gets a rash.
- 11-year-old boy who fell out of a mango tree and injured his leg. His older sister (a former scholarship graduate) said every time he tried to walk, his leg would bleed and he had too much pain to come to me. Therefore, the 2 interpreters and I made a home visit. Fortunately it was only a 30-minute hike away (considered a next door neighbor to the volunteer house in local terms) and the views were spectacular. He had a burst laceration over his left shin and his left ankle was swollen with tenderness over his lateral malleolus (outer ankle bone). The cut was open and the family had put some local grasses into the wound earlier. I reviewed basic wound care, including how to keep the wound clean and covered, signs of infection, possible

antibiotics to use if infected, signs of a possible blood clot and how to reduce the chance of that happening, and treatment for a possible broken ankle. The family was particularly worried for the boy because last year a girl (one of our scholars) had hurt her leg and had died following the injury. The family cannot afford area medical care so they are in a worried state.



*Spectacular views while making home visit*



*Boy with injured leg after dressing wound using boiled rags*



*The patient's home with older sister Gloria and an unimproved cook stove*

### **COVID in Honduras**

While in Honduras, I was unable to get hard data on COVID infections and deaths. Most of the information for COVID's effect local to San Jose was from the teacher Roney and his anecdotal reports. One elderly woman from Rancho died from presumed COVID while I was there. Roney himself had COVID months before. Three teachers in San Marcos had COVID. Roney heard reports there were many COVID deaths in la Esperanza which is the closest city to San Jose. Given a report suggests all of Honduras has only received 20,000 COVID vaccine doses to date, herd immunity in Honduras may only be reached when enough people have been infected to provide immunity.

### **Solar Panel Systems and Electricity**

The majority of the inhabitants in San Jose do not have access to electricity. When the sun goes down, they are in the dark. Almost more importantly for young people, if they have a cell phone, they cannot charge the phone. Given a wind turbine and solar panels have made all the electricity in my Webster house for the past 21 years, I see solar as a viable option for isolated homes in San Jose. A few years ago, I noticed some homes did have a small solar system. This trip I was able to ask more questions and evaluate one of the installed systems. The San Marcos mayor's office may have more details about the program and who did the installations but I didn't have the time this trip to get to San Marcos. I have asked someone from San Jose to gather more information for me. What I learned from an end-user is that for about \$6/month payments for 5 years, they can get a simple solar system that can power 2-3 lights for 4 hours a night and run small items (less than 250 watts). This may not seem like much for power-hungry Americans (hair dryer 1,000-1,500 watts), but it allows children to study in the evening and cooking to be accomplished when the food can actually be seen.

I evaluated one of these systems. Given what I saw, the system was definitely subsidized and the homeowner was only paying part of the real cost. Unfortunately, the system I saw had been struck by lightning so they only had lights now and could not run small chargers or appliances. I educated them on how to get around this barrier for charging cell phones and let them borrow some cables to make that a reality. When I told them the price to replace the damaged part, they realized there was no hope that they could afford it.

I evaluated another solar system that was not part of the above-mentioned program during a home visit for another reason. The system had worked for about 12+ years but recently had stopped working. I did not have test equipment with me but I evaluated the system then educated the owner's son on how to perform system testing. He came to the volunteer house and I gave him a meter to perform the testing. Based on what he reported back, they need a new battery. Hopefully when I return they will have the system running again. Most solar panels can last 25+ years, but batteries may only last 2-12 years depending on how well they are cared for.

### **Solar Food Dryer**

The majority of the world's population does not have access to a grocery store where fresh fruits and vegetables are flown in from around the world. Fruits and vegetables are very seasonal and only available for 2-4 months a year. Dehydrating foods is one way of preserving seasonal produce for consumption during off-season times. I got to play with a solar food dryer I built a few years back. I tested drying cilantro, hot peppers, and broccoli. All dried out quite well inside the solar food dryer. I identified a person who wants to experiment further with the dryer.

### **Summary**

In 2005 we committed to the people of San Jose that we would work together to improve their lives and ours. COVID has definitely put a strain on this collaboration by reducing our visibility and activity in the town. Many people commented that having at least me come during COVID has reassured community members that the relationship is still intact. Scholarship children who wrote letters to their donors also express the importance of those letters that encourage and inspire them to continue their hard work of studying and test taking. It is great to keep these much-needed interventions and projects going. Much of what we do is life changing for many of these inhabitants. Our program remains strong and continues to help the needy in our world. I have always said that changes occur at a generational pace. I am happy with the community-level improvements we have helped accomplish over the past 16 years.



*Solar food dryer*

### **How You Can Help**

Thank you so much to the Highland Family Medicine family and the Unitarian Church for their continued support. Our work in Honduras would not be possible without this support. There are a couple ways you can help support us financially without actually donating money. When you shop at Amazon, please do so through the link on the [www.sanjosepartners.org](http://www.sanjosepartners.org) website. The Amazon link found on the website's home page allows us to receive 4% of your purchase price as a direct donation from Amazon. It adds nothing to your cost. Another way to support our San Jose efforts is to participate in the Silent Auction that is held every December. All money raised supports our Honduras project. If you are creative, donate one or more of your creations to the auction. Everyone is welcome to bid on items in the auction. This is a great way to get Christmas gifts for family and friends.

The easiest way to support our efforts is to visit the Donate link on the [www.sanjosepartners.org](http://www.sanjosepartners.org) website and make a donation. For Highland and UR employees, you can even have the money taken out from your paycheck. Most likely you will not miss a few dollars from your paycheck, but the benefits for thousands of other humans will be life changing.

**Update on Project Status** (updated May 17<sup>th</sup>, 2021). Numbers undercounted, in general, due to poor book keeping.

<b>Project</b>	<b>Completed</b>	<b>Project</b>	<b>Completed</b>
Cookstoves	370	Scholarships	100+ students, 36 current scholars
Filters	419	Fluoride varnish	>470 children Oct 2019
Latrines	163	Fish farms	6
Pilas	141	Piped water systems	5 communities
Heirloom seeds	>15,000 given		