

# Honduras Trip Report

May 2006

## Participants

<u>DFMUR Members</u> Teresa Allen Shirish Balachandra (S.B.) Matt Devine Nao Sakurai Steve Kim Barbara Gawinski (B.G.) Lindsay Phillips (L.P.) Douglas Stockman	<u>Nursing School</u> Brenda Cooley, RN, FNP Katie Cooley, UR student, (daughter of Brenda) Patricia (Mandy) Weir, RN, NP student
<u>Peace Corps Volunteers</u> Mary Anne, arrived 5/15/06 Crystal Rowland, arrived 05/16/2006 Jonathan Hamm, arrived 05/16/2006	<u>Dentistry</u> Frank Carberry, DDS Mike Adsit, DDS - resident
	<u>Interpreters</u> Carlos Lopez, interpreter, 18 yo, from SPS, Honduras in 12th grade Lauren Harris, interpreter, 22 yo, free-lance Ben Orkin , 15 yo, interpreter, Attending high school for 1 yr in Honduras

## Introduction

This is the 6th trip by the Department of Family Medicine, University of Rochester (DFMUR) to Honduras and our second trip to the Department's project site, San Jose San Marcos de Sierra. The group was composed of a mixture of DFMUR providers, NPs and students from the School of Nursing, a UR college student, a dentist, a dental resident, and a mixture of interpreters. The trip combined curative care and multiple rural development/preventive measures.

## Summary

This second trip to San Jose had a very heavy focus on preventive health activities. Many projects were started that will reduce ill health in the future. We spent more time learning about the community and their problems. We got to know the leaders better as well as met with other community members to gain a better understanding from non-leaders. Given our belief that preventing sickness before it happens is easier than treating sickness after it happens, we worked hard to implement projects that would achieve this goal. Some of the projects started included focus groups with women and traditional midwives, learning how to build improved cookstoves, building a slow sand filter, two agricultural projects, a dental fluoride program, future water interventions were further defined, more villages and water sources were GPS mapped, and plans for the future clinic were discussed with our Honduran counterparts. In addition to the above projects, patients were seen in both the dental and medical clinic. This was the first time we offered dental services. In the medical clinic, we introduced the revolving drug fund concept. This drug fund will make the villagers more self-sufficient while improving the availability of essential medications.

This group was large and very diverse. Everyone performed exceptionally well and worked very well together. The individuals on this trip are impressive people that selflessly worked to help Hondurans and each other. This trip solidified our relationship with San Jose and started health interventions that will improve the health of many. There are more great things to come for the DFMUR Global Health Program in collaboration with San Jose.

### Travel and Setup

Travel went very well this trip. There were no travel difficulties. We arrived in San Jose on Sunday May 7th. We picked up 3 interpreters along the way.

### Water for the Group

One of the big concerns for this trip was the uncertainty about water for bathing. We arrived at the end of the dry season. In November 2005, we installed a 650 gallon black plastic tank that was filled from a seasonal stream. Given the 6 months of dry season, the water tank was empty and the seasonal stream had dried up. Prior to our arrival, the villagers carried water uphill from a distant year round water source. Then to everyone's relief, the first rain of the season occurred the night we arrived in San Jose. The week before, the villagers installed a gutter on one roof that emptied into the black water tank. That first night of heavy rain completely filled the black plastic tank and another concrete cistern next to our sleeping quarters. This allowed every member of our group to take a 2-3 gallon bucket bath at least once a day.

### Curative Health Care

Due to school being in session, the medical clinic was held in a different building than last year. The villagers created 3 consultation areas in one room and a place for our pharmacy in another room. We had many medications shipped to Honduras a few months ago. Although we still lacked some specialty medications, we had ample supplies to meet the demand.

This trip we implemented the revolving drug fund concept. The Honduran Ministry of Health will not provide medications for the San Jose clinic. Therefore, the San Jose people must become self sufficient and pay for their own medications. Under the revolving drug fund, we buy medications in bulk amounts at very reduced rates. Patients pay just enough to cover the costs of the medicines and there is no profit on the selling of medicines. The money collected is then used to replace the dispensed medications. Almost all patients paid less than \$1.00 US for



*Dr. Devine removing an extra thumb*

treatment and all medications. There were only 5 patients that could not afford their treatment at the time of the visit.

Visit volume to the medical clinic was reduced this trip compared to last trip. Previously it seemed that many patients came to get free medications. In part because of the revolving drug fund, people mainly came because they were sick and not just to get medications. Another possible reason for the reduced volume was related to the weather. The first rain of the rainy season made the ground soft and easy to work. Therefore, many potential patients went to their farms to work.

Medical problems were similar to previous trips. Pneumonia, worm infections, scabies, burns, UTI's, arthritis, etc. were very common. An NP got to do a shoulder injection. A first year resident removed an extra thumb from a boy. A number of possible TB cases were seen. Many home visits were made. A 1-2 hour walk up and down mountains to see a very sick patient in their hut gives a new meaning to home visit.

### Dental Clinic

This is the first time dentists joined our group. Dental problems are very common and quality dental care is almost non-existent in Honduras. The dentist and dental resident were very busy doing extractions, draining abscesses and restorative dentistry. This is probably the first time white composite fillings were used anywhere in the San Jose area. It was not uncommon to extract 4-6 rotted teeth per person.

The dentist, Frank Carberry, is a strong proponent of preventive dentistry and feels fluoride treatments have a huge potential to reduce dental disease. A fluoride rinse program was started this trip in San Jose school children. Two community members were identified and trained in running the fluoride rinse program. This involves mixing the fluoride then administering 5 ml of the mouthwash to each child. After 5 minutes of swishing the child spits out the rinse. This procedure occurs twice a week. The fluoride stops the progression of dental caries (cavities). Next trip we hope to extend the program to other villages.



*Mike Adsit, dental resident, working on a patient while teaching Shirish, DFM R1. Carlos is interpreting.*

### Community Health Worker (CHW)

DFMUR can only be present in Honduras operating the clinic one month out of the year. Therefore, we need a health worker to run the clinic for the rest of the year. A local woman Alia, has completed six months of her one year CHW training. She visited with us on a Saturday when she came home for the weekend. We paid 80% of her \$500 tuition and the community paid the other 20%. We reviewed her grades and she is doing well. We had Alia work in the pharmacy for a few hours. She did very well and even

caught one medication error. She learned about the revolving drug fund and why it is important. From this exposure we believe she will do well. Given the limited training and her young age, we will need to support her, but we believe she will be a great asset to the community.

### Improved cookstove

Everyone in San Jose must use wood for cooking. The vast majority of women use a traditional stove design that makes the kitchen very smoky and wastes large amounts of firewood. A woman can spend more than one hour a day collecting wood. It is not uncommon to see a woman carrying a 50 lb bundle of wood up a mountainside. Not only does this waste an hour of her day, but this is a huge expenditure of calories that a malnourished woman cannot afford to expend. Any technology that can reduce wood use will help the woman and therefore the family be more healthy.



*Women carrying firewood up a hill.*



*Improved cookstove.  
Note the white walls.*



*One Honduran lady teaching another Honduran lady how to build an improved cookstove*

Prior to this trip, a group working in Honduras called PESA was identified that is introducing a simple new stove design. The design reduces/eliminates smoke in the kitchen and can reduce wood use by almost half. It is a very simple design than uses mainly local materials along with \$20 for a metal chimney and metal plate as the cooking surface. A local woman was identified with an interest in building the new stove. We met with PESA representatives and visited an area improved cookstove. The local woman was impressed and hopes to build one at her home. Because she took the time to learn more and has an interest, we agreed to purchase the metal parts of the stove. She still has to gather all the local materials and build the stove. As payback, she must be an ambassador and educate other local woman about the stove's performance and benefits.

### Slow Sand Water Filter

Even when people have access to water, it is usually of very low quality and contaminated. In many countries, including Honduras, streams are essentially open sewers. This leads to significant diarrheal disease. A simple technology exists called a slow sand filter. This filter can removed 99.99% of all pathogens. We built a test slow sand filter and placed it next to the water source of one community. If culturally acceptable, more filters will be built on the next trip.



*Building a slow sand filter at the water source*

One problem we ran into was finding the plastic 55 gallon drum we have decided to use for the filter. Shortly before we left we identified a low cost source. The filter requires the plastic barrel, a few PVC pipe parts, rocks and sand. It is hard to believe that such a simple technology can reduce diarrheal disease burden.

### Agricultural project

Most people in the area are less than subsistence farmers. This limited crop production contributes to malnutrition. Last trip we identified 4 progressive farmers and took them to a regional farm that is using improved farming techniques. This trip two of the farmers agreed to try test gardens using some of the techniques we learned from the last trip. The two farmers we are working with have a large fund of knowledge that should help them succeed. Part of the process is to teach them more about conducting agricultural experiments. They seemed advanced in this respect compared to other local farmers. Therefore, in addition to expanding their knowledge base and experimental skills, we are providing a small amount of materials. Terracing, drip irrigation, new crop types, green manuring and improved fertilizer use are being tried. If all goes as planned, the new farming techniques will improve production and other farmers will see the benefit of the new methods. Next trip we hope to expand our experimentation to include fish farming.



*Test plot that has been terraced and barbed-wire fenced.*

### Women's Focus group

It has been shown time and again that educating women and empowering them improves the health of the family more than educating the men. Women from our group met with women from the San Jose area to gain a better appreciation of the challenges women face in this community. A number of topics were discussed and explored.

About 15 women and their small children attended an hour long meeting focusing on women's health issues. Older children hovered at the barred windows watching the exchange. Greetings and appreciation for their time and honoring them in a discussion about their own health gained much attention for the 15 women. Teri Allen, through Lauren, presented women's health topics: process of conception and methods of family planning (natural family planning, condoms, OCP's, Depo-Provera, IUD, Tubal ligation). Several women shared their experiences with using a variety of methods. Barbara Gawinski conducted a condom use demonstration on a carrot. One woman practiced the techniques, much laughter was had by all. Free condoms were distributed to those interested, more than half the women accepted the offer, some requested more condoms. The group concluded with a clear interest in meeting again in 6 months. Suggestions were given for them to try to meet on their own and invite local health care experts to present on topic of their interest. One woman identified herself as knowledgeable about family planning. The group requested discussion about how to provide better nutrition to their families [BG].



*Barbara and Terri working with interpreter, Lauren, during woman's focus group.*

### Water project

Lack of access to even a bare minimum of water remains a huge problem for this area. We had hoped to build a test ferro-cement water tank (cistern) this trip but had difficulty finding some supplies and ran out of time. We did identify through PESA a local training class on building ferro-cement water tanks. In concert with Peace Corps and PESA, we hope to train a local volunteer in the building techniques.

Finding naturally occurring springs large enough to meet the population's water needs has not been successful.

Given the very mountainous area, machine drilling remains very difficult. Additionally, most homes are very far from their nearest neighbor. This makes delivering water from a central water source, such as a well, costly. The best option for most families appears to

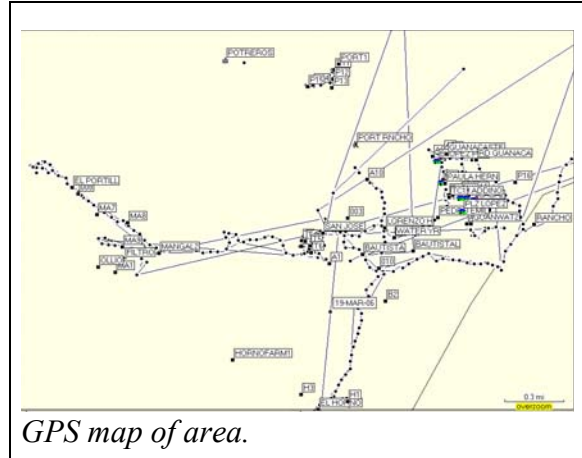


*Honduran man next to water source that 12 families rely on as their only water source.*

be collecting rain water and storing in a locally-made ferro-cement water tank. This will be a major project for the next trip. The cost for supplies was gathered this trip. We have also met with Rochester-area Rotary Club leaders and will request funding to build the ferro-cement water tanks.

### GPS mapping

The two most distant villages that make up San Jose, Portrerros and Los Calaros were mapped this trip. We have now GPS mapped all 8 villages that comprise the San Jose area. Additional water sources were also GPS mapped. The two test farm plots were mapped.



*GPS map of area.*

### School Improvement program

We visited the 5 area schools and distributed school supplies, books and letters to the teachers. We solicited their support for our other projects and encouraged their thoughts on how we could support education and learning in their communities. In addition to school supplies, they identified the need for educational games, instruments and teaching aids. They were also interested in the ideas of shared supplies and of school libraries.



*Meeting with El Horno teachers.*

We agreed to meet as a large group during the November brigade [LP].

### Community Networking

We met with the doctor in San Marcos, the new mayor and many members of the local community leadership. The mayor sponsored a community forum for SJ which was attended by approximately 75 people. There were presentations on alcoholism and on the importance of tax collection [LP].

### Nutrition

Nutrition continues to be a primary concern.

CARE had been providing a supplemental nutrition program for at least the last 7 years. Their commitment ended March 2006 and so they are no longer serving the community. It is unclear how many families they supported or how people will now get enough to eat.

Growth records are kept in each community for children <2yo but we have only seen the ones for SJC. N Sakurai reviewed these as well but they generally show that about 60% of children have not been meeting their growth expectations even with the supplemental food program.

All schools have a supplemental nutrition program which may consist of Merinda (an oatmeal type drink) and tortillas/ rice/ beans for lunch. It is unclear where the food comes from - CARE, government, community leaders were different answers given. In El Horno there is no food currently and so children are sent home for lunch.

In October 2005, we provided formula for a 3 month old baby that was starving because her mother's milk never came in. We saw the baby in followup. She is still small, but alive and healthy. We provided more formula for another 3 months at a 65% discount. [LP]



### Clinic construction

Basic floor plans for the proposed clinic and education center with dormitory were created a few months ago and shared with the San Jose people this visit. They agreed with the basic outline of both structures. More land needs to be purchased to fit both structures. The villagers are working on identifying the additional land. The San Marcos Mayor is working with area builders to get an estimate for construction. Over the next year DFMUR will raise the funds needed to build the structures.

### Midwife Meetings

Among the most encouraging and exciting of our endeavors during this trip was the initiation of collaboration with local traditional midwives. This began as an initial meeting with the 'point person,' an extremely dynamic and motivated woman named Maria Calixta near the village of El Horno (about 45 min. walk from San Jose). She then helped us convene a second meeting involving three other midwives in the area, a health volunteer from Mangal who is interested in becoming a midwife, and even a patient (!)-- a G12P11 woman at about 30 wks GA. Both meetings took place at Maria Calixta's residence. A brief summary of the midwives' work and situation follows:

There are apparently 5 midwives working in our catchment area (one was not present for the meeting). They all work pro bono for the most part; if families are able, they may offer some compensation (e.g. food), though this is the exception rather than the rule given the extreme poverty of the area. Among the most prominent issues/problems mentioned by the midwives were preterm labor/premature birth and malpresentation. They did allude to locally available herbs/products used for analgesia and tocolysis, and we hope to further discuss and identify these in the future. It was difficult for them to quantify, but they estimated approximately 30 births/year/provider. For the most part, they reported that mothers and babies were doing well assuming the pregnancy

progressed to at least 30-32 weeks. Given the extraordinarily limited resources in the area, we found this to be very encouraging. The midwife's role is remarkably comprehensive: she follows mom throughout the pregnancy (usually from 3-4 months' GA till birth) with monthly visits, then continues to follow the dyad monthly for 2 years. In so doing, she plays a crucial educational role in terms of contraception/family planning, nutrition, child growth and development, etc. Interestingly, though we asked several times and in several different ways, post-partum hemorrhage does not appear to be a significant complication in the area. This may be a consequence of relatively lower birthweights, the absence of induction/augmentation, prevalence of grand multiparity (paradoxically, though this is a risk factor itself, it also may suggest relatively shorter second stage of labor), and/or other factors of which we're not yet aware. According to the midwives, tears requiring repair (which they don't do) are exceedingly rare. They all reported doing fairly routine versions, and one of them reported having caught 7 footling breeches in her career!! (Quite obviously, we stand to learn a tremendous amount.) They reported very infrequent transfers to the local health center (San Marcos); indications included transverse lie, prolonged/non-progressing labor, retained placenta, and significant tears.

As far as collaborative/educational objectives, the midwives were very excited about workshops on preterm labor, vaginal breech delivery, and contraception. When it comes to the latter two subjects, there may not be much (if anything) for us to 'teach'; nevertheless, they're very excited about practicing with models/mannequins, and sharing ideas and experiences. Our meetings during this trip were extremely encouraging, and we look forward to a fruitful collaboration in the future [S.B.]

#### DFMUR and Other NGO's

DFMUR continues to work under the umbrella organization Shoulder to Shoulder. Given we are only in Honduras twice a year for two weeks each trip, we need to partner with other non-governmental organizations. We met with the newly elected mayor of San Marcos de Sierra of which San Jose is part. We met with PESA representatives as mentioned above and we were a sort of magnet for a number of Peace Corps volunteers. We need to take advantage of the skills and resources of other NGO's to move our multiple projects forward. We want to work in concert with the government whenever possible.

#### Closing Thoughts

This trip was a huge success. A very diverse group of people worked together in difficult circumstances to accomplish a large number of tasks. Getting any tasks done in a developing country can be difficult. What we accomplished on this trip is truly amazing.

The Fall trip will happen in late October – early November. We plan to build on the current projects and devote more time and energy to water projects. We hope to keep the group size to 12 people and will include DFM personnel, dentists, NP students and medical students. Peace Corps volunteers have already suggested they want to be part of the group. Great things are ahead for the DFM – San Jose project.