

Trip to Peten, Guatemala  
November 7-14

We spent Sunday in Pueblo Nuevo seeing patients in a newly built home (belonging to the son of one of the community leaders that is not yet inhabited). Very nice structure with central “foyer” and 4 separate rooms.

\*They are nearly finished with a new brick building just in front of the existing school building (in the front corner of the fenced area), which is going to be for a “kindergarten” classroom.

\*We did H.pylori tests on 11 symptomatic women, and all were positive. We were unable to treat any of them, but need to follow up on this.

\*We did heights and weights on all kids we saw, and gave albendazole and vitamins, since they are out of school until January and will not be getting these until then.

\*We shared a watermelon from the garden. They had about 6 small ones left that they saved for us, but apparently harvested about 200 that were good size.

We spent Monday through Thursday at the clinic at El Mango. On Monday we spent a couple of hours talking with Marleni (health promoter/ nurse) and found out:

\*Marleni is in charge of a whole district (Santa Ana area) which includes 14 villages, including Mango, and Pueblo Nuevo, as well as others (Juleque included). She, or one of her helpers, visits each village one day each month to address the needs of the village.

\*Marleni estimates that there are 300 new children born in the district each year. This equates to about 7,750 children in the district currently.

→She estimates that there are 352 children in Pueblo Nuevo and 1432 children in Mango.

\*The government does supply vaccines for children and pregnant women as follows:

-BCG at birth

-oral polio at 2, 4, 6 & 18 months & 4 yrs

-pentavalent (DTwP, Hib, HepB) at 2, 4, 6 months

-MMR @ 12 months

-DTwP @ 18 mos, 4 yrs

→Marleni indicated that prior to 2002 there were several families who did not get vaccinations, but there was a pertussis outbreak that year, and now all but 1 family in Mango receive vaccinations.

→They do go house to house to offer/ administer vaccines in each community.

\*They also administer vitamin A at 6, 12, 18, 24, 30, 36, 42, 48 & 54 months

\*They administer iron and folic acid at 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57 & 60 months

\*They give Td to all women when they initially become pregnant, and then 6 months later. They repeat this every 10 years during child bearing years.

\*All women receive folic acid (5 mg weekly) and iron (300 mg weekly) during pregnancy. They give them a month’s supply at a time, and ask the women to come in each month to get their supply.

→ In talking with the pregnant women there, apparently not all of them take advantage of this offering, since I would estimate that half of them told me they were not taking their folic acid or iron, or at least not routinely.

\*Marleni indicated that most women were going into San Benito to deliver at the hospital, but from asking patients where they had delivered or were planning to deliver, I would estimate that at least half of the currently pregnant women planned to deliver at home with a comedrona.

\*Marleni indicated that it was not too difficult for women to get a ride into the hospital if there was a complication with labor (usually the comedrona will help arrange this).

\*Other diseases which are a problem are Dengue (a biphasic distribution of disease in April/ May, and then in Aug through Dec), and Malaria.

→ Marleni thinks the biggest problem is that, although there is 'running water' in most of the homes in Mango, from the water tower, it is only turned on for 1 hour each day. So people run water and store it in buckets/ containers which sit around and attract mosquitos. The water is not purified, so it promotes other diseases as well.

\*They do see some pneumonia, and Marleni would love to have an aerosol machine (we took one and left it with her, as well as some albuterol) because she must send children into San Benito for aerosols. She feels she is trained well enough to know which children can safely stay in Mango and which ones need to go the hospital for further treatment. She does not always have antibiotics available for those kids who might need them.

\*Dehydration does occur during some seasons with gastroenteritis. They do have a "glucosoral" solution (a packet of powder that is to be mixed with water. I brought one back with me) to be used as an oral rehydration solution.

\*Children can attend school FREE from ages 4 to 12, and are provided meals 3 days per week in the school in El Mango. From ages 12-16, children can attend school but must pay for it.

\*Women can have pap smears done at the clinic in El Mango (by Marleni), but the samples are apparently sent to Poptun, and Marleni indicated that she does them 2 or 3 times a year on some women, but almost never gets any results back. If there is an abnormal result, a woman would have to go to Poptun to be treated.

\*Marleni can supply OCP's, injection (like depo-provera), and a "collar" (rhythm method) for contraception. Some women choose to have a tubal ligation when they do not want any more children.

We asked Marleni what she saw as the biggest problems of the people in her district. She indicated:

KIDS: Skin problems and Malnutrition

ADULTS: ulcers

Her wish still includes: carbamazepine, glyburide, metformin (we left her some), BP meds, and antibiotics for adults.

On Friday, we went to see the “malnutrition clinic” in Dolores, which is about an hour’s drive from Flores. On the way we stopped at a small clinic in a small village (can’t remember the name), and spoke to one of the women who helps train the comedronas.

\*She indicated that when a comedrona is first getting trained, she comes to their center about 4 days each month to learn what she needs. After 2 years of this, she is allowed to be on her own. Then, she will come for 1 day every month or 2 for continued learning.

\*They do have the availability of supplies such as things to clamp the cord, things to suck out the babies mouth, etc. But these things must be purchased, so she couldn’t tell me if all of the comedronas had/ used these things or not.

The malnutrition clinic was actually an inpatient facility sponsored by the catholic church where they take children (up to 36 at a time) who have been identified as “at risk”, usually either because they recently had surgery or an illness, or were in a difficulty family situation, and keep them in their facility for up to several months to feed them and restore their nutrition. They seem to do a very good job with the children, but seem to focus on just a few at fairly high resource utilization.

Biggest struggle during the week was the balance between emphasizing the “preventive” stuff and having the people expect us to address the “acute” things. Everyone has headaches, back pain, stomach pain, gastritis. They truly do work their bodies so hard and have true physical complaints, but we did not go prepared to address all of these adequately (medication-wise), so I believe we disappointed many.

H. pylori is a big problem! Simon Lai, the Family Medicine resident who went with me, is going to complete a project looking at eradication strategies. More to come.

## My Summary:

1. The vaccination system in Guatemala actually seems to be well-developed. They are offered the needed vaccines, and seem to have a way to ensure that most everyone is getting them.
2. Vaccinations, as well as vitamin supplementation during pregnancy, are available, but women may not be taking advantage of them as much as they should.
3. Nutrition and water are a problem. Some families apparently truly struggle day to day just to feed their children. They fear that tomorrow there might not be enough water, so they store water (which gets dirtier and attracts pests)
4. We need to figure out how to work with the current government programs to encourage people to take advantage of those things which are already available(esp. vitamins and immunizations)
5. People really seemed to appreciate the fact that we were there AGAIN! Many women returned for ultrasounds that Anne had seen in July. We followed up on abnormal pap smears. There seemed to be acknowledgement that the continuity was appreciated.

## Where to go from here:

1. Gather more information from the comedronas “in the field”, especially in Mango and Pueblo Nuevo to see if they really do have the information and supplies they need, or what we could do to facilitate this.
2. Continue to educate the people about the importance of clean water, and not having “standing water” to help eliminate some disease vectors.
3. Nutrition source for children (KAH?) and a means to have it regularly available. I would LOVE to be able to start a true outpatient malnutrition clinic where we could monitor parameters of children and supply them with meals, healthy water, and eliminate simple things (dental issues, parasites, anemia).
4. Dental care is a big problem. They have to pay for any dental care, and don't have good access to toothpaste/ tooth brushes. This will continue to be an area of concentration for me and my family! ☺
5. We saw a couple of sad cases of burns in infants from open fires/ candles. This needs to be addressed.
6. Continued, consistent presence and further fact-finding are needed. Anne, what are you doing in February? ☺ I feel like we are on the right track...just have to keep building it a few inches at a time.