

AGROSALUD, MEDICINE IN THE GUATEMALAN COUNTYSIDE

Fernand Rene Alvarez III

The Agrosalud experience is unique and extremely rewarding. It is a test of self-reliance. I would recommend this program only for experienced third world travelers, or for those whose adventurous spirit overpowers the desire for comfort. This is an opportunity for the visiting medical student to do as much or as little as she feels comfortable. There is no limit, however, to the good a student can do for the health of these impoverished people.

During my four-week stay in Guatemala, I had the opportunity to work on three different fincas (plantations). These fincas are among many who contract the organization Agrosalud to manage the health care of the agricultural workers. On each finca is a health care "promotor" who is minimally trained to dispense the medicine to the walk-in patients. All the promotors have very weak to no clinical skills and dispense medicines somewhat indiscriminately. The cost of these medicines (orders of magnitude cheaper than in the States) is then deducted from the workers monthly paycheck (about \$50). There is no diagnostic procedures available, including urine analysis, pregnancy tests, stool analysis, blood test etc. Doctors will make monthly visits, which are more for teaching the promotor than for seeing patients, these doctors make about \$1000/month. Supervisors also make regular visits for public health measures as well as keeping track of the medicines. The walk in patients can present with just about anything, since the nearest health care facility of any kind is usually over 45 minutes away and only when transportation is available, which is seldom.

The first Finca I went to was the largest pineapple plantation in Guatemala. The 250 workers of this finca use machetes to produce several million pineapples per year and live in bamboo shacks with latrines. The second finca was a sweltering coastal banana plantation, with about 1500 inhabitants who live in military style box houses. The third was a coffee plantation high in one of the most beautiful lush mountainous regions in the world, consisting of three small villages populated solely by the agricultural workers and their families. On all the plantations there are sizable populations of migrant workers who live in large barracks or outside under a large rain shelter. These are the most ill, and make up a disproportionate number of the walk-in visits. They also convey transmittable diseases to the permanent inhabitants. On all the fincas, Major health care issues are sanitation, water, lack of family planing, pesticide and machete related injuries. (machete was the only tool used by a vast majority of the agricultural laborers on all the plantations.) The visiting student should review suturing techniques and management for superficial wounds) The majority of patients have respiratory and or diarrhea illness. Nutrition and hygiene education is lacking. On one finca I found an epidemic of Bell's palsy. On another there were many cases of hepatitis. Infant mortality was staggering on all fincas. I began to collect data on this too late, it would be an excellent and simple exercise for a student to do epidemiological study of infant mortality on the fincas. Literacy is extremely low. I saw no mothers taking prenatal vitamins despite babies being born with spinal chord defects and hydrocephalus. I met almost no women over 90 lbs. not breastfeeding a child, and almost no women over 25 who didn't have at least one dead child. Of all the walk in patients we saw I sent only two on the long journey more advanced health care facilities. Trips are often made to houses when the patients are too sick to come to the clinic. At each finca I participated in the routine public health visits to each and every house. These are done for regular deparasitation and for weighing the children. Students will also go to the schools where public health measures such as eyesight testing and fluoride treatments take place.

So what can the visiting student do?

If the visiting student arrives and acts as though she is in charge, the health care promotor will behave accordingly, waiting for the students prompt before doing anything for patients. If the student arrives and just sits and watches, the health care promotor will resume the activity of distributing medicine. I feel that there is a happy medium between these two extremes. I found it useful to observe the interactions between the promotors and the patients, which was usually very minimal, and then demonstrate for the promotor what further questions need to be asked and what can be sought after on physical exam (such as distinguishing between viral and bacterial illness). The promotors know almost no physical exam techniques. I found it useful to have the pocket Barbara Bate's book to teach the most important exam

techniques out of. This and stanford antibiotic guide are the two most useful books one can bring. Each of the promoters has a Spanish copy of "where there is no doctor". This is an excellent book and the student should be able to read the whole thing during of time at the clinic, It is excellent for teaching the promoters , since it is in Spanish. I brought an English copy of it with me but found it unnecessary. During ones time on the finca a student will have the opportunity to talk with someone from every household, presenting an excellent chance for epidemiological investigation and primary preventative education, regarding nutrition, family planning and hygiene. The student should have a reviewed the indications, side effects, dosing... of all the drugs used on the fincas. These are;

TMP/SMX
TETRACYCLINE
AMP
PEN PROC. AND BENZ
CHLOREMPHENICAL
ERITHRO
MEBENDAZOL
METRONIDAZOL
CHLOROQUINE
SULFACETAMIDE
AMOX
NISTATIN
PHENOBARB
ACETAMINOPHEN
LACT. RINGERS
ASPIRIN
SOME ANTIHISTAMINE
THEOPHYLINE
SOME ANTACID
SODIUM BICARB
DERMASTOP- ANTIBIOTIC/ANTIFUNGAL/STEROID
ATROPINE- FOR PESTICIDE TOXICITY
EPINEPHRINE
ANTIVENOM
QUAFENISIN
DEPOPROVERA
METAMIZOL

That's it, best of luck.

- Students should bring Flashlight, Swiss Army knife, Bates, Stanford, Pocket Pharmacopoeia, Lonely Planet travel book (La Ruta Maya). Presents for the children (dead tennis balls were a big hit), don't bring medicine with you it is cheaper to buy it there and everything is over the counter. Weekend are free to travel, I recommend Lake Atitlan (Pana., San Marcos, San Pedro). Either before or after it is worth a trip to spend several days at Tikal.