Infectious Disease Eradication in Amazonian and Highland Ecuador

Quito, Ecuador/Puyo, Ecuador

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Julia Lewis

Myself and other CFHI students wearing traditional Shuar hats while staying in the jungle.

The Basilica, Quito.

My name is Julia Lewis and I participated in the Infectious Disease Eradication in Amazonian and Highland Ecuador Program during the months of February and March. I felt honored to receive this scholarship since receiving it meant that Child Family Health International recognized my passion for serving the Ecuadorian communities and also for my willingness to learn from them in return.

During my stay in Ecuador I first studied Spanish daily at the language school in Quito. Each day I would eat a small breakfast of bread, fresh fruit, and tea before walking down a very steep hill to the school. The first week of classes were the most difficult as my Spanish was a bit rusty and my brain was still thinking in English. The second week I began my clinical work at Fundacion Medica Mosquera in Plaza del Teatro in the historic downtown area of Quito. The first day I worked in the hospitalization department with a young female physician. Our first case was an older woman presenting with signs of appendicitis. As we sat in the consultation room taking the history, the physician asked about what medicines had been used. The patient mentioned the only thing she had tried was tea of manzanilla, a very common remedy for abdominal pain. Herbal remedies are frequently used in Ecuador, as many of the indigenous groups are very knowledgeable of medicinal uses of plants. This knowledge is prevalent within the Ecuadorian culture in general, as many Ecuadorians use home remedies in place of Western medical treatments. Many patients, throughout my clinic work, had used various teas, herbs, and foods as medical remedies. We returned to Clinica Mosquera for the remaining week and traveled to Puyo that Friday to begin a six-week stay in the jungle.

Clinica Mosquera, Plaza del Teatro, Quito.

Puyo, Ecuador

Puyo, a much slower paced and peaceful pueblo, was a nice departure from the hustle and bustle of Quito. Each week I visited several different clinics, some a short twenty-minute bus ride from Puyo, others very deep into the jungle taking an hour to two hours to reach. These trips were my favorite as I was able to see beautiful views as we drove deeper and deeper into the jungle. One such clinic was in Arajuno, a very

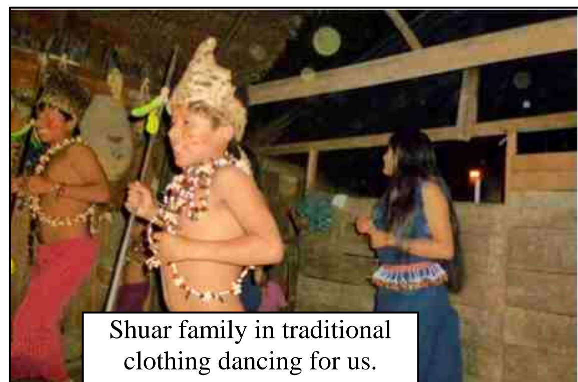
small pueblo, or town about two and a half hours away from Puyo. We saw various cases of upper respiratory infections, parasitosis, and even a suspected case of malaria. There was also a follow up visit in the emergency room of a young boy who had cut himself in the leg with a machete. He received several stitches and the family had placed various plant remedies on the wound to aid in the healing process. They spoke no Spanish, but spoke Quechua, the language of one of the indigenous group who live in the eastern part of Ecuador deep within the protected jungle.

Our little sleeping hut in the jungle.

Four other students and I had the opportunity to stay with a Shuar family who lived about four and a half hours outside of Pitirishca, in a community only reachable by hiking deep into the jungle. We spent three days with the family learning about their use of plants for medicinal purposes and experiencing their way of living. We feasted on yucca, plantains, choclo (corn), and various fruits I had never tasted before. During our last night staying with this family, the father explained that his knowledge about plants and their medicinal uses had been passed down from his father and he continued passing this information to his children. I asked him how long it takes to learn this information. He told me there were three things you needed to learn about the plants: identification by sight, how to prepare them, and the uses. All of this information, he said, would take a month to learn. He told us stories about how he used the plants for different medicinal purposes. It was then I realized how important this moment was for both him and all of us. Thousands of years of knowledge, passed down solely through memory, were being shared with us. At this moment I wished there was more time to share this knowledge with us, future medical practitioners.

A delicious meal of palm, yucca, and plantains.

A Shuar Kitchen: preparing a remedy for sore throat and cough.


Shuar family in traditional clothing dancing for us.

One of many plants used for medicinal purposes.

While working with one of the younger physicians completing her rural year in Puyo, the most commonly encountered medical condition among the young students of a primary school in El Dorado was parasitosis, with malnutrition a close second. Both were a result of less than optimal living conditions and lack of resources. Many patients I encountered did not have running water, bathrooms, or electricity. The health implications are endless, with parasitosis as a good example. It is certainly more challenging to provide care when your patient has difficulty paying for the medications you prescribe or the glucometer necessary for their daily insulin checks. These are things we, as Americans and other members of developed countries take for granted, yet they are the daily essentials that make it challenging to manage your patients.

Financial disparity is just one major obstacle in patient care. Lack of education is another difficult matter when managing patients, but by talking to patients about disease prevention, management, and processes, one can significantly impact disease resolution and control. I witnessed this many times within the clinics as well as through personally providing information to patients. Several of my days were spent with the Malaria Services in a neighborhood outside of Tena educating patients on the symptoms of dengue fever, the importance of seeing a doctor if anyone experienced said symptoms, and how to prevent the spread of mosquitoes within their homes. The idea was that if a patient knows what signs to look for and knows it is a time sensitive matter, they could be proactive in seeking medical care.

My time spent at the La Asociacion de Diabeticos e Hipertensos de Pastaza was eye opening in terms of well-structured, interactive patient driven care. This center, in Puyo, was designed to serve patients with diabetes and hypertension. It offered various programs for education, medical care, and exercise. As I approached the center on my second dday, I was greeted by a large group of women eagerly waiting for their daily dance class, designed to engage diabetic patients in physical activity. Later that day, most of the same women returned to the clinic for an afternoon talk on managing their diabetes. The enthusiasm was astounding, and to have these patients so actively involved in their medical care proved successful in controlling weight, blood pressure, and body mass index, as I witnessed from many patients. This was a

Preparing to fumigate for dengue.

great example of how educating and empowering a patient leads to a combined effort to reach a healthy state of living.

This idea of educating your patients is no different in the United States, however, in Ecuador, the added challenge was reaching out to communities who did not readily have access to a nearby subcentro. In response to a case of malaria within a community near Tena, I joined the Malaria Services in traveling to a remote community to fumigate, look for mosquito larvae in standing water, and educate about disease prevention. The entire community gathered, listening attentively, as Dr. Torres explained the transmission of malaria as well as its prevention. How much more hands on can you get in providing medical care, empowering the community through health education?

As healthcare workers our vocation functions to serve others, and with this in mind it is our duty to educate our patients about their illnesses, how to prevent illness, and how their lifestyles may contribute to personal well being. In Ecuador, it is very common for people to utilize herbal medicine in the form of teas and juices, application of plants to wounds, and even sniffing up herbs into the nose. These treatments are very common, widely accepted and well known within the medical community. This is not something exclusive to Ecuador as there are many forms of herbal remedies used in the United States as well. It is important that as health care workers we are aware of what home remedies have been tried because sometimes they may interfere with or change the outcome of pharmaceutical treatments. Too often I have not witnessed these important questions being asked within the hospitals of the U.S.

Parque Etnobotanico Omaere: teaches you about Quechua and Shuar communities as well as plant uses.

Dr. Torres addresses a community about malaria.

If a patient cannot come to you, go to them. One day I accompanied one of the nurses, from the subcentro in Pitirishca, to several of the nearby secondary schools to administer vaccines. We caught a ride from one of the doctors to the first school, but we walked to the next, thankfully avoiding a rainstorm that had swept through. Unfortunately, we could not avoid the puddles and mud as we trekked to a small school house with only about eight children. The rest of the afternoon was spent walking down the road to reach several other schools to ensure each student received their required vaccinations, checking off their names after the adequate dose and number of vaccines had been administered.

It was through these experiences, amongst many others that my passion for infectious disease and global health grew stronger. Aside from cases of sepsis, pneumonia, and antibiotic resistant bacterial strains, tropical medicine and infectious disease are virtually nonexistent in the United States. I witnessed cases of parasitosis, leishmania, and malaria in Ecuador that would have been very difficult to see back home. I learned standard medical treatments for these conditions, clinical manifestations, and how these diseases were commonly acquired based on living conditions. My most interesting and enjoyable experiences were with the Servicios contra Malaria. The work there was extremely fascinating, hands on, and directly impacted the communities.

Not only has my desire to practice medicine abroad been strengthened by these experiences, I have a better sense of dynamics shaping medical care elsewhere as well as some challenges that may present themselves in patient care not present within my usual U.S. clinical setting. My future career will likely be centered on serving communities in need, hopefully through organizations like the CDC, the World Health Organization, or other medical services in infection control, treatment, and education. I would like to live in a country like Ecuador, serving communities that need medical care.

At Madre Tierra with Nancita, the nurse.