

INTRODUCTION:

Water is a basic necessity that so many of us take for granted. Here in the United States, clean water is as close as turning on the faucet; however, for much of the world, it is not as simple to have access to clean water. Such is the case for inhabitants of Loreto, Peru, on whom my project focuses. I plan to spend the summer in the region of Loreto collecting data as part of an in-depth needs assessment on the communities located on six branches of the Amazon River. Compilation of this data will result in base-line health statistics for the area, which can be used to compare and track disease patterns and mortality rates. Logistically, my project would be accomplished by traveling on the Amazon Hope, which is a floating clinic that travels up these rivers visiting villages, serving the medical needs of the inhabitants.

BACKGROUND:

Not long after I started at KU Med, I was volunteering at Jaydoc when I overheard a second year student talking about a recent trip to Peru. Upon further inquiry, I discovered that he and a friend had started a non-profit called the Coalition for Global Community Health, whose mission is to improve community health in the area of Iquitos, Peru. For the people of this area and the surrounding river communities, the river is their life source; it is essential for every part of their day, including travel since there are no major roads connecting the communities. Unfortunately, the same water source they are getting drinking water from is also where refuse and bodily waste are dumped; therefore waterborne diseases represent a major health concern.

The CGCH is hoping to work with local government, community members, and Engineers Without Borders to improve water sanitation methods by means of developing sustainable water filters and biological latrines, which in turn will help lower illness and

mortality rates in the area. The more I discovered, the more sold I was on the project, and after meeting with the Director of Operations, we were both quite excited about the positive potential of my project if selected.

For me, this project incorporates many of my major interests. I have always loved to travel to new places, and as a former Spanish major it would be great to keep my skills fresh. Community health and international aid are also areas that I am very attracted to; I am strongly considering participating in Doctors Without Borders after I become a physician.

Although I was inspired about this program before, my eyes have since been opened to what a monumental issue this really is. Recently in our GI module, we have spent considerable time talking about different waterborne illnesses, and it struck me how simple of a solution it is to cure many of them, but they still have such high mortalities in areas where there is not access to clean water. Thousands of people are still dying from these diseases within our lifetime, and those most affected are children. In 1990, cholera epidemic caused 10,000 child deaths in Peru that could have been avoided if proper sanitation and potable water were available. Oral rehydration and avoiding contact with infected waste sounds easy, but for those who do not have access to clean water and latrines that is not really possible.

DESCRIPTION

Up to this point, no data has been collected on the people living along these six river branches, but we plan to initiate an in-depth needs assessment for the following branches of the Amazon River in Loreto, Peru: the Amazon, Tigre, Ucayali, Marañon, Manati, and Puinahua Rivers. The first needs assessment would give the base-line health statistics for the hundreds of river communities.

Efforts have not been made to understand how the patterns of disease are affected by season (flood and dry season), age, and degree of removal from "modern civilization" in the Amazon region of Peru. We hope to compile an ongoing, in-depth analysis of these things in order to best educate ourselves, other non-profit organizations in Loreto, and the government about how best to tackle the health concerns for those living in high risk within the Amazon Jungle. The needs assessment will cover the following for each village visited on each separate river system: current or previous government, NGO aid, local government organizational methods, cultural analysis, clean water availability, sanitation measures, population size, types and numbers of infection/disease with age correlation, and medications given.

To collect this information, I plan to work with the crew of Amazon Hope, a floating clinic that travels up and down the different river systems, stopping at villages along the way. This clinic is operated through a joint collaboration between Vine Trust and Scripture Union Peru with a base clinic in Iquitos. Each day Amazon Hope docks at a different village where the team members along with an interpreter meet with the village leader and then begin seeing patients. During this time, I would be conducting the needs assessments with village leaders. At the end of each day I would statistically record the diagnosis of each patient and the medications given, keeping track of age and sex of the patients as well as a number of other factors. We estimate that each river system should take approximately two weeks for data collection.

Besides conducting the needs assessment, I hope to spend time with some of the doctors on Amazon Hope, seeing how medical treatment functions in such a unique environment. During the time between trips on the river, I plan to help out at the base clinic in Iquitos. I am also interested in observing how indigenous medicine and "Western" medicine play into the lives of patients.

Eventually, the Coalition for Global Community Health will work with Engineers Without Borders to help deliver a model for sustainable construction of water filters and biological latrines. They hope to supply one river system (the Manati River) with latrines and water filters by 2016 and continue with the subsequent river systems. The CGCH and affiliates will continue to visit the same river systems and communities every three months so they can continue to assess and meet the needs of the villages. We expect to see the pattern for illness and child mortality rates decrease drastically once clean water and sanitation measures have been introduced. Once they have collected significant statistical data that shows a decrease in illness and mortality rates CGCH plans to take our research to WHO and different governmental branches within Peru to make efforts to influence government health policy in the Loreto district of Peru.

Timeline:

Early March- Submit survey to IRB for approval

May 29th- Fly out of MCI to Iquitos, Peru

May 30th- Arrive and meet up with CGCH

May 31st-June 13th- Collect data from first river branch

June 14th-16th- Iquitos

June 17th-July 3rd- Collect data from second river branch

July 4th- Iquitos

July 5th-20th- Collect data from third river branch

July 23rd- Fly from Iquitos, Peru to MCI

Total Length of Project: 8 weeks

METHODS

As previously mentioned, I have been in contact with Chase Hamilton, the President and Director of Operations for CGCH, for several months. Since he has been to this area of Peru many times and spent a summer on Amazon Hope I am working through him as my primary contact. Starting in early March, he will be in Peru with CGCH and will have in-person contact with the others on Amazon Hope. Chase has helped me establish contact with Dr. Ronald Ramirez, the physician in charge of Amazon Hope as well. It is through Dr. Ramirez and his team that I will be conducting my study. While in Peru, I plan to spend the bulk of my time onboard Amazon Hope. There are quarters for those who volunteer and work on the boat, and I have requested a spot for June and July. At this point, it is not certain which river system Amazon Hope will be traveling to once I arrive, but the floating clinic cycles through the different branches, and I have been assured that I will receive more information as the trip approaches.

In Iquitos, near the clinic that Amazon Hope is based out of there is a hotel called La Lampara that physicians and volunteers may stay at free of charge while working. I will stay there while in Iquitos. Besides getting from the airport to the clinic, which can be achieved via taxi, I should not have many other transportation costs. Although I am not going to be conducting many direct interviews with patients, I have made initial contact with the IRB and am developing my survey to submit to the Human Subjects Committee for approval. Once assigned a mentor, I will work with him or her to develop the protocol of our investigations that will be submitted for IRB approval.

BUDGET

Round-Trip Airfare to Iquitos, Peru	\$1300.00
Room and Board on Amazon Hope	\$900.00
<u>Travel/Miscellaneous</u>	<u>\$300.00</u>
Total	\$2500.00

* I realize that any expenses over the \$2500 will be my sole responsibility and have planned accordingly.

----- Forwarded message -----

From: **Ronald Ramirez** <ronaldtony_21@hotmail.com>

Date: Mon, Jan 7, 2013 at 4:49 PM

Subject: RE: Peru Possibilities

To: Chase Hamilton <chase.hamilton22@gmail.com>

Cc: "Robert Alexander (Vine trust)" <robert@vinetrust.org>

I will be pleased to work with your organization to help the people in Manatí river.

Since the last year, every participation of volunteers in the trips are coordinated and booked by Robert Alexander from the Vine Trust, please contact him to his e-mail robert@vinetrust.org and he will let you know how you can book in the trips for these dates.

Looking forward to hearing from you

Ronald

BIBLIOGRAPHY

Fishback, James L. "Infections of the GI Tract." Wahl Hall East Auditorium, Kansas City, KS. 11 Feb. 2013.

Lecture.

<http://www.cgchealth.org/>

http://www.iqitostimes.com/hope_floats.htm

<http://www.scriptureunionperu.org/>

<http://www.vinetrust.org/>