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R25 International Practicum Report

I. Academic Summary

Having participated in multiple medical trips to Honduras and worked closely with our medication ordering for our patients with diabetes and hypertension, it was clear that major gaps existed between the care we provided and what we aimed to provide. In order to bridge the gap we knew a better understanding of our patient population was necessary. Understanding our patient's barriers to proper adherence as well as their attitudes and beliefs towards the "westernized" style of medicine that we offer would be key in improving patient outcomes. Current available research recognizes the importance of patient adherence and notes the significant negative health and economic consequences that result from poor patient adherence. In 2003 the World Health Organization published a 200 page document citing the importance of adherence to treatment of chronic diseases worldwide from a social, health and economic perspective.[1] Also a study from the School of Public Health at UCLA notes "adherence to the medical regimen is the single most significant clinical problem in the management of patients with essential hypertension" and "self-reports are the most accurate measure of compliance."[2] Multiple other studies note proper measurement tools and cite a need for further investigation in this area.[3,4,5] This research study is unique in the population it studies and its potential to be applied to similar communities in the U.S. By assessing the correlation between education and adherence a guideline can be created to help minimize factors that exacerbate poor adherence.

Our research design was centered on the diabetic and hypertensive patients currently being treated by the medical brigade PODEMOS from the Ohio State University. Patients must have restocked their medication at the most recent PODEMOS medical brigade visit. Data would be collected in personal interviews conducted by the research team. The primary goal of the preparation and implementation of the project was to design and implement a publishable study in the field of global health. Never having designed a study myself this was a laborious task but rewarding nonetheless. After working diligently with my research mentor to cross every "t" and dot every "i", I felt confident with our study design and research plan. On the second day of data collection in country I realized that our research design was well structured in terms of the data we could collect with patients, but faltered in terms of the difficulty locating patients and the near impossibility of follow up interviews. We were able to focus on the data that was truly important and obtain it. When talking with patients we aimed to collect data that could quantify a correlation between patient understanding of medication use and proper adherence, identify the most common adverse events leading to cessation of proper medication adherence, identify major and minor barriers to safe medication use in patients taking medications chronically (financial, transportation, knowledge, storage, clean water, etc.) and assess basic cultural beliefs and level of trust of "non-natural" medication use. We are about to implement the data analysis phase of our project but via being present in the interviews it seems as if level of education (defined as years of school completed) had a close relationship with patient understanding of the medication and proper regimen. Many of the

common reasons for cessation of medication use were lack of medication and headaches. Major barriers to safe medication use of medications taken chronically were mostly based on financial constraints or lack of access (i.e. the hospital was out of the medication). Most patients seemed to have no problem or not be bothered much by the use of "westernized medicine." Our last goal was to explore pharmaceutical access, distribution, law and pricing as it affects the impoverished communities surrounding El Progreso, Honduras. In the town of El Progreso there are many pharmacies (upwards of 6 or 7) stocked with a rather large inventory of regularly prescribed medications (blood pressure, diabetes, cold, flu, infection, etc.). Most medication can be purchased without a prescription and in any quantity from one to how ever many are available. Many pills cost between 50 cents and one dollar and the pharmacist makes most recommendations in terms of which medication to use and what regimen is appropriate. Controlled substances were not stocked in local pharmacies. This was important to understand in terms of what is available to the patients of PODEMOS if they have proper transportation and finances to purchase medication. The majority of our patients interviewed stated that they never have bought medication from the pharmacy. At times the public hospital has medication they give out for free, but their supplies are quickly exhausted.

With the completed interviews and the research of the resources around El Progreso, I am optimistic about the changes PODEMOS can implement to improve our patient care and outcomes. Hopefully this information can be used to aid other populations with similar demographics that have barriers to high quality medical care.

II. Do humanitarian medical missions help or harm? See attached.

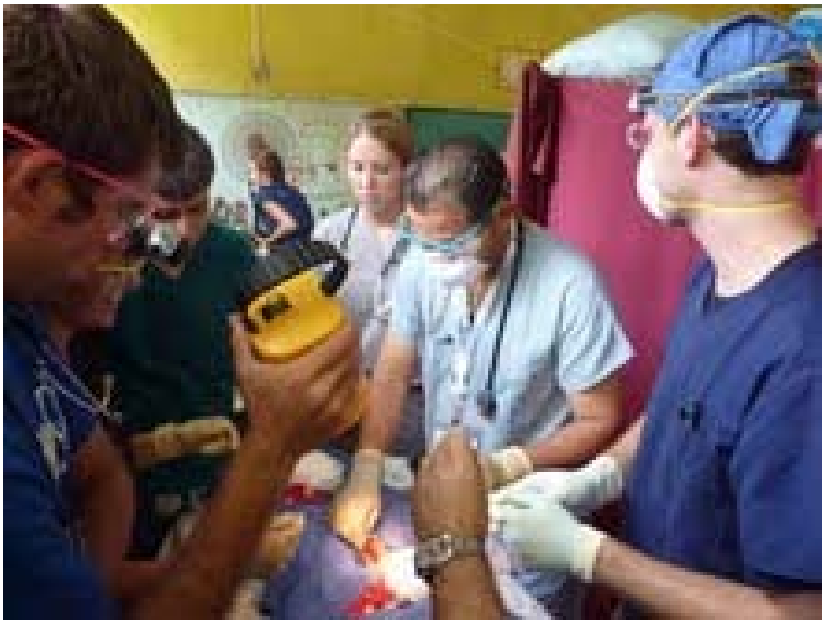
III. Responsibilities, feedback, and overall assessment

Our research team was made up of five professional students from Ohio State College of Medicine and Pharmacy. All five members helped with data collection of two separate research projects. My main responsibility was to coordinate the workings of the pharmaceutical based study. Our group would be up and headed to the communities of our patients around 9am and we would work into the afternoon. I compiled a list of eligible patients from the communities and we would go around asking if anyone knew which houses our patients lived in. Unfortunately, despite knowing which neighborhood the patients lived in it was an arduous task to locate them. We spent hours searching each day usually to complete two or three interviews. When we did locate patients I conducted the primary interview which consisted of about 35 questions and took around 30 minutes to complete. Patients were very willing to participate in the study and did everything they could, with the resources they had, to make us comfortable during the interview.

Research team about to conduct interviews

Research team walking back to the community of Monte de Olivos

Our data collection was completed much more quickly than anticipated so we were able to visit many of the clinics and mobile medical missions around Honduras. It was extremely valuable to see what resources other clinics offered and how they were organized. As we continue to do work in this region we constantly seek out methods that others have found effective.



Research team volunteering at international medical brigade about 30 minutes from El Progreso

Our travels also took us to the city of La Ceiba to the clinic Salud Total. They have a large permanent establishment staff by Honduran medical professionals. They do medical work, schooling, and home building.

Medical building of the Salud Total campus

Thanks to Dr. Jay Martin for putting us into contact with the wonderful people of Salud Total. We spent one day exploring the medical and housing projects they are working on. They were

very hospitable and we accepted an invitation to attend a “high energy celebration” at their church. It was a neat experience and this clinic shows the large influence that religion plays with medical work in Honduras.

From La Ceiba we traveled to Roatan, one of the bay islands of Honduras. Here we volunteered at Clinica Esperanza, a well-equipped medical clinic managed by a U.S. nurse, Peggy Stanges. It was by far the most sophisticated public clinic we visited with an impressive inventory tracking and patient history system. We worked on whatever task was needed but much of our time was spent in the pharmacy or translating for the physicians. It was interesting to see a place that gave high quality health care and had seemingly low overhead.

Our time and travel through Honduras did not fit the original plan, but it certainly did not take away any value of the trip. I believe the work we were able to complete and the places we were able to visit collectively taught us much more than we anticipated this summer. Though we had a mishap with a break in and some stolen goods, an opportunity to live and work closely with a trusted friend resulted. Though we finished our data collection much more quickly than anticipated, we learned how to travel and find accommodations in a different country. It was exhausting to always be on the move and sleep in rather humble establishments but the ability to improvise and continually seek out valuable experiences allowed us to embrace all that Honduras had to offer. It will surely serve us well in our future work here and abroad.

Though we took the “path less traveled” in terms of our stay in Honduras, it was a wonderful experience. I learned an incredible amount from the creation of the project, getting approved

by the IRB and all of our experiences in country. I would highly recommend this type of experience to other professional students.