

I. International Practicum Academic Summary

In the time before my travels to Honduras, I shadowed Dr. Deborah Bartholomew in her colposcopy clinic to gain a better understanding of the standard of care for HPV and cervical cancer in the United States. Through her advice on resources to use, I achieved a basic understanding of the flowchart used to further screen and treat abnormal pap smear results. While in Honduras, I shadowed Dr. Galo to view standard practice in his clinic. Although he offers the liquid based cytology, which is common practice in the U.S., this is more expensive so he generally performs the standard pap smear. Various studies have differing results as to whether one is more accurate than the other; however, studies done in Honduras show inaccuracies in pap smear reading and insufficiencies in proper sampling from the cervixes. He also performs digital colposcopies on patients before they have abnormal pap smear results. In the U.S. generally a colposcopy is performed when there are abnormal cells detected in a pap smear or liquid based cytology to determine the severity of the dysplasia and also guide the physician in taking a biopsy of the cells. With the digital colposcopy he visually reviews many of his patients' cervixes without abnormal pap smear results. When he finds a high grade dysplasia he removes the abnormal cells generally with cryotherapy, unless a more invasive procedure is indicated by the severity of the cells. Most interesting was that he recommends pap smear screening every sixth months. In the U.S. the National Cancer Institute recommends screening every 2 years after the age of 21 until age 30, then every three years as long as pap smear results are normal (<http://www.cancer.gov/cancertopics/factsheet/detection/Pap-test#a10>).

Through our interviews we discovered that most women share similar barriers to completing the recommended screening practices. The lack of money available to spend on the travel to clinics and also the screening itself seemed to be mentioned most often. Also, many women did not fully understand the concept of pap smears as a preventative screening practice, and indicated that they only got pap smears when they showed signs of infection. Finally, there were a smaller number of women who had never heard of cervical cancer or pap smears and therefore had never received one. As we analyze the data we collected in the interviews, we will be able to better address this objective and find the statistically significant barriers reported to lack of screening.

The relationship PODEMOS has built with the communities in which it operates its biannual clinics gave us an instant trust and credibility with the women. They were extremely willing to participate, and eager to learn more about cervical cancer and HPV risks and proper screening practices. Through further evaluation of the interview responses, we will be able to better determine the cultural and socioeconomic barriers to their understanding and screening practices. With this information we will be able to develop an intervention to address these barriers. The women's willingness to participate, and eagerness for more information gives me confidence that women will be equally receptive to future efforts as we

move forward.

After conducting many interviews and learning where many of the women have gone in the past to receive their pap smears, we decided to visit these different clinics. Visiting the clinics gave us a more complete picture of the available ob/gyn care for the women. Most clinics the women in the communities attended were lower cost, subsidized clinics that specialize in women's health care. Since most women cited cost as a major barrier to receiving care, we were interested in how much the clinics charge for their services, what types of services are available, where their funding comes from, and their opinions on whether or not women regularly get screening and understand their risks. One clinic, "Clinica S.O.S." was a single physician who said it was her "trata con dios" (deal with God) to serve the impoverished of Honduras, charged \$220 Lempira (about \$11.50) for a pap smear, which she would send to a lab in San Pedro and women would return 15 days later for their results. When asked about her thoughts on why women do not receive screening regularly she said there still is not a culture to have regular screening. We also visited Marie Stopes, which is an international non profit that provides health care for women. The foundation started in San Pedro Sula, but has since expanded to eight locations throughout Honduras. They charge \$170 Lempira (about \$9). In a pamphlet they have for their patients about "la citologia" (pap smear) it suggests they get screening once a year to detect and prevent cancer development. We also visited ASHONPLAFA which is a non-profit organization that works to better the quality of life of the Honduran family through medical services. They provide much gynecological care to women and family planning options with their 24 clinics throughout the country. They charge \$150 Lempira (about \$8). When we asked the general director of the clinic about women's screening practices she said she felt the majority of women get screened every six months, but that some do not because of fear of the exam. Finally we visited the centro de salud, which is the public health clinic in each city. It provides extremely low cost services (a pap smear costs about 7 lempira, or 50 cents), but many women we interviewed reported that they did not go their to get screened because of the extremely long wait times and the even longer wait to receive results. The clinic said that they try to see as many patients as they can everyday, but even with each physician seeing 36 patients per day they are unable to accommodate everyone who seeks care. Sometimes people who come and wait will not be able to see the doctor and must return the next day. Also, the results take at least a month from the tests.

My last objective, to design and implement a publishable study, is still in the process of being completed. We successfully interviewed one hundred women in the communities. Now we will code and enter the data into a program in order to statistically evaluate it. I am excited to see our results and work with the data in order to publish and share our results.

II. Voucher Systems to Combat Financial Strains on Cervical Cancer Screening Adherence (See attached report)

III. RESPONSIBILITIES, FEEDBACK, EXPERIENCES

For the first ten days, I participated in the PODEMOS service trip. We held five days of clinic in three communities outside of Progreso, Honduras. The clinics allowed for extensive clinical experience. Hearing a variety of different pathology with my stethoscope and seeing so much with my oto-ophthalmoscope gave relevance to the CAPS classes I had throughout the year. Additionally, I was able to continually practice my medical Spanish communicating with the patients. The patients were extremely grateful for our services, encouraging me to want to go back for another trip next year.



Figure 1 PODEMOS clinic in Siete de Abril

During my time in Progreso, we coordinated daily transportation with a local taxi driver who serves as the PODEMOS driver to and from the communities in which we conducted the surveys. We arrived at the communities around 9am each morning and stayed through the afternoon. We went door to door requesting women's participation in the interview. With only three negative responses, we

had an overwhelmingly positive experience while recruiting women. The women in the communities were extremely hospitable and would even take out fans and chairs for us in their simple, often dirt-floored homes to make us more comfortable. The interviews generally lasted about a half hour, and we reimbursed them for their time with a small bag we made containing shampoo, conditioner, lotion, and shower gel. The interviews were conducted entirely in Spanish based on the survey tool developed before our departure. Many women had additional questions about our project, and many even asked us if we would be coming back to do pap smears the following day.



Figure 2 Interviewing women in Monte de Olvios



In the afternoons, Shannon and I sometimes went to Dr. Napoleon Galo's clinic from 3:30pm-7:30pm to assist him with patients. He was eager to teach us and also give us hands on experience

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with his patients. I learned how to perform pap smears and fetal ultrasounds, as well as observe a procedure not done in the United States, the insufflation of CO2 into the uterus and fallopian tubes. The gas travels through the fallopian tubes in an effort to open them and treat infertility.



Figure 3 In Dr. Galo's clinic

Since each interview did not take as long as we had originally anticipated, and we did not want to overstay our welcome at the new living accommodations we acquired after our original house was robbed, we decided to explore other clinics in Honduras during our last two weeks in the country. PODEMOS often orders its medications through a clinic in La Ceiba, which is heavily supported by a Columbus physician, Dr. Jay Martin. We were able to visit the



Figure 4 The clinic in La Ceiba "Salud Total"

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clinic and even attend a service at the Honduran church that runs the facility. Seeing the clinic and the other work the church does in the surrounding communities building houses provided a concrete example of how PODEMOS could expand in the future.



Figure 5 The doctor's exam room in Salud Total

After La Ceiba, we traveled to Roatan to visit Clinica Esperanza. This clinic is run by a U.S. nurse named Peggy Stranges. With its state of the art computer system that tracks patients as they move through the different stations of the clinic (triage, seeing the physician or physician's assistant, and pharmacy), the organization set this facility apart from the others we visited. It receives a tremendous amount of support from the U.S., as well as Roatan residents. It also has a steady stream of volunteers from the United States.

When we originally planned our stay in Honduras, we envisioned ourselves interviewing all day everyday for the six weeks we stayed beyond the PODEMOS clinic portion of the trip. Our research project concerning women's knowledge and attitudes about cervical cancer and HPV and their current screening practices went much more smoothly and therefore more quickly than we had originally anticipated. Luckily, this provided us with some flexibility to deal with other events that took place while we were in Honduras. Soon after settling into the home we had arranged to stay in for our time in Progreso, we were robbed. Luckily we were not home and no one was injured; nevertheless, with a perfect blueprint of how to make future entries into our home, we did not want to remain in that location. Dr. Napoleon Galo, our Honduran advisor for the project, was kind enough to offer his family's home for us for the remainder of our time there. The comfort and safety of their home was extremely generous. Additionally, living

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with a Honduran family provided complete immersion in the culture and also a great amount of Spanish practice. Everything from learning to cook tortillas with their cook, to getting impromptu Honduran history lessons from Dr. Galo's 93 year old father who lives in the family's home greatly enriched my learning experience beyond just women's health care in Honduras.

I would highly recommend a similar experience for other medical students between their first and second years. Designing and implementing a project catered to my interests has given me an investment in the project's success beyond resume building. Dr. Galo is extremely accommodating and anxious to share the knowledge he has accumulated over 30 years of OB/GYN practice. He welcomed all of us to return for a rotation during our third or fourth years. In the future, I would try to arrange to stay in a Honduran family's home or at the hotel in which PODEMOS stays. Although these options might be more expensive, safety would not be an issue and the overall experience would probably be better. Spanish language ability is a necessity for any future students spending the summer in Progreso. It is not a typical tourist destination, so most people speak minimal English at best. This makes for great practice for students who are competent in Spanish, but does exclude students who are not.