Karina Moreno Bueno, Pocket Colposcope Training, Implementation, and Colposcopy Exam Workflow

I am very grateful for the opportunity that the DUCIGS gave me in helping fund my research trip this summer. I traveled to both Lima, Peru and Puntarenas, Costa Rica for around two-weeks in August, 2019. In summary, in both Costa Rica and Peru I worked on Pocket Colposcope Training and Implementation. The Pocket Colposcope is a high-quality, low-cost and portable colposcope that was designed by Duke’s Center for Global Women’s Health Technologies (GWHT) in Dr. Nimmi Ramanujam’s lab.

I developed and implemented a comprehensive and culturally appropriate training manual for the device and met with community health care providers to implement training for both image concordance and the use of the Pocket Colposcope. Furthermore, in Costa Rica, I conducted stakeholder assessment, conducted monitoring and evaluation of the device used in the Latin American ESTAMPA Study for Cervical Cancer Prevention. This device is now being used in the ESTAMPA study which is taking place all across Latin America but will be specifically used in Costa Rica. The ESTAMPA study is evaluating different methods and novel molecular techniques for triage of HPV+ women to recommend screening approaches in different settings, thereby, being able to increase access to cervical cancer screening to marginalized women.

When comparing the training that I first delivered in Peru compared to Costa Rica, one of the biggest differences was who I was giving the training to. In Costa Rica, only specialized gynecologists can perform a colposcopy exam and obstetricians and nurses are only allowed to assist. The drastic difference in what medical personnel can and cannot perform colposcopies makes a difference in reproductive health inequities. For example, in Costa Rica, although only physicians can perform colposcopies, many women still have access to colposcopy services. This is because: Costa Rica’s health care system is set up to pay and provide more resources to the Public Sector compared to the Private Sector, the government provides preventive health services regarding HPV and cervical cancer, and because the government pays for community health workers to go to EVERY single Costa Rican resident to deliver reproductive health pamphlets regarding HPV. Paired with the government’s effort in implementing federal programs to prevent loss of follow-up, this allows for women to have an increased access to HPV testing, prevention and colposcopies with minimal barriers. The minimal barriers include being in rural areas which is why I was helping implement training on a low-cost portable colposcope, the Pocket Colposcope.

In Peru, the disparities are drastically higher. The lack of access to reproductive health care was exacerbated by the new mandate that was passed by congress with backing of the private sector. The new normative for any form of reproductive cancer has to be screened and diagnosed by an onco-gynecologist, meaning that only people with that specialty can legally perform colposcopies. This mandate greatly limits the access to a colposcopy due to the fact that the distribution of onco-gynecologists is great among the Peruvian population and the number of people with that specialty is extremely low in Peru. This sets the bar even higher for who can perform colposcopies, and thus, who will receive the procedure. In recent years, obstetricians were legally allowed to perform colposcopies and were trained to do so. Unfortunately, even if obstetricians perform the procedure now, the diagnosis and screening can be marked as invalid, meaning that the patient would have to go out of their way to have the procedure re-done by an onco-gynecologist. Due to the politics related to increased finances in the private sector,
obstetrics is no longer recognized by the Ministry of Health to perform colposcopies. In the past year, this has culminated in having health centers and hospitals give many women appointments for colposcopies, HPV testing, etc., for appointments both physically and months away which has resulted in great loss of follow-up. This has also resulted in doctors who are performing the procedure to not know how to do the procedure as well as the obstetricians who were doing the procedure for years. This has led to many doctors not doing the procedure and not recognizing abnormalities as well.

I worked on some additional in Costa Rica that will lead into writing a manuscript with other members in Duke’s Center for GWHT. I conducted research on the workflow and procedures surrounding a typical colposcopy exam to better optimize and design new technologies to make screening for cervical cancer more accessible. I did so via interviewing local medical professionals such as gynecologists and obstetricians. With this research, I got the opportunity to meet verily passionate doctors and obstetricians — part of the ESTAMPA study — determined to reduce cervical cancer rates.

My trip in Peru was also very productive. Although, I’d like to just bring one experience up that greatly encouraged my drive for the work that I do. My first day in Lima, Peru ended with a trip to the outskirts of the city and meeting the HOPE Ladies. These women are part of an initiative implemented by Dr. Garcia (the former Minister of Health) to increase HPV testing, cervical cancer awareness, and self-sustainability via micro-financing. HOPE Ladies are trained volunteers and agents of change whom educate women in their community about cervical cancer and prevention, and they distribute self-testing HPV kits. For each HPV kit that they sell and give to women costs 10 soles; the HOPE ladies keep 5 soles and the other 5 soles are used to pay for and process the HPV test. These women explained the HOPE project as a way of giving women an economic opportunity, and therefore, a sense of empowerment through being able to provide for themselves. Several HOPE ladies also explained that because they go around in their communities teaching their fellow female peers about their body and health, they feel that they increase both their own empowerment and their fellow peers. They explained that being able to help other women learn about their bodies and take charge of their own reproductive and sexual health allows them to give back to their community and in control of their health, thus, feeling extremely empowered.

Being able to actually see how passionate these women are in wanting to be agents of change for women’s sexual and reproductive health excites me to know that we will be working with them through our research initiatives. It’s refreshing to see that these women really care about women’s health rights and access to healthcare. It all reminds me once again why our lab is doing the research that we do and why our center for GWHT is creating human-centered women’s technologies. The passion behind these women is astounding. It’s so astounding and inspiring that if the event of meeting them were the only thing planned on our agenda for the trip, I would have been satisfied with the research trip. The innovative clinical tools that our center has developed, such as the Pocket Colposcope and the Callascope, definitely have a place with the HOPE project model. The Callascope is one of our lab’s newer technologies, it is based off the Pocket Colposcope and intended for self-use. When we demonstrated the Callascope to the HOPE ladies and explained that it can be used for self-HPV testing and cervix visualization, they were ecstatic about the device. They viewed it as another element to helping prevent cervical cancer. It was thrilling to hear how excited they were to have the possibility of distributing this technology to other women so that they could increase access of HPV testing. The HOPE ladies explained that they loved the Callascope because it has the ability to give women an option to
visualize their own cervix and show any possible abnormalities to their partners. They explained that because seeing is believing, the device serves as evidence for women’s concerns about their pain and for wanting to go to the doctor. They explained that the Callascope would add an element that would allow their partners to value the women’s voice regarding her health concerns and shy away from their ignorance and machismo. It was evident that our technologies would allow women to gain the confidence in taking control of their health and fight against cervical cancer.

Seeing how passionate these women are about getting involved with the women in their community and spreading awareness about cervical cancer is amazing. These women go out into their communities teaching women about their reproductive health and convincing women to take HPV tests ALL on top of their other duties including—housework, cooking 3 meals a day, taking their children to school, and many more duties. I met a specific HOPE lady that told us about how she wakes up at 2:30 am EVERY SINGLE DAY to begin her routine. She wakes up at 2:30 am to begin her cooking for a national program called Vaso de Leche, a program that helps feed single mothers and their children. She then has to finish cooking and serving food until around 6:30 am when she has to stop and cook breakfast for her children and prepare to drop them off at school. After that, she cleans her entire house, prepare lunch for her children, and then go pick them up from school at 2:30 pm. From then, she goes to do her work for HOPE in her community until around 5 pm when she has to prepare dinner for everyone. By the time she finishes that and eats dinner, it is 9 pm and time to go to bed.

The incredibly busy day doesn’t surprise me, especially given that the environment that she is surrounded by includes machismo and stereotypical gender roles. It’s something that I’m am used to seeing in my own environment—expecting women to be practically “superwomen” in completing all the household and children duties on top of work and extra-curriculars. But this person doesn’t have to go out in her community to help women, she doesn’t have to add the HOPE project to her incredibly busy daily-schedule. But she chooses to do so. Although many say that they have to interact with women up to 3 or 4 times before they buy and take an HPV test, they still choose to persist and educate their fellow female-peers. She chooses to help her fellow women in her community in the name of preventing cervical cancer. It seems to me that she is choosing to recognize that because she has the knowledge of cervical cancer and prevention, she therefore has the duty to educate other women who don’t have access to this information, whether due to physical or cultural constraints. In her choosing to make the ethical decision to put other women’s needs before her needs—for example, she could instead use that time to rest—she’s taking upon her duty as a global citizen to address and highlight the issues hindering health inequality caused by the unsettled political climate around reproductive and sexual health in both the private and public sectors. HOPE ladies are empowering the disenfranchised members of society to ensure that basic resources for health are accessible in order to prevent cervical cancer regardless of a disadvantaged background. HOPE ladies are aiding in the reduction of health disparities and not standing idly leaving a community of women without the advocacy for having access to sexual and reproductive health services. HOPE ladies recognize that structured systems like their health system s were not built to benefit women and they recognize the disparities pertaining to women and health. HOPE ladies are inspirational from all aspects. They have identified that the health system is built around a sex and gender gap, and they are determined to make sure that everyone knows about it.

It was a great experience to work with such passionate and determined people. No woman should die from cervical cancer! The plight of fighting for access to reproductive and
sexual health care is a journey in which implementing the Pocket Colposcope will definitely help increase sexual and reproductive health services in more health centers in hopes of increasing access to these services to more women.