

# STUDENT REFLECTION BY CHRISTIE HENSHAW

## REFLECTIONS ON A SUMMER RESEARCH STUDENTSHIP THROUGH THE ASANTE RESEARCH PARTNERSHIP IN ELDORET, KENYA



My 10-week international health research experience in Eldoret, Kenya (June to August 2009) made possible through the Medical Alumni Association (MAA) and Dr. Elva May Rowe Fund was a formative and defining experience. I have completed research with refugee populations in Canada, studied tropical infectious diseases, and volunteered previously in Africa; at this time in my medical training, the opportunity to assemble the best of the skills I had gained from these into a cohesive learning experience by conducting research in a developing country was significant.

### **Previous Experience**

In a previous seven-month volunteer term in Africa (Benin, Liberia, and South Africa), I was exposed to medical work in developing nations where meager resources were prioritized for those who might live. It was here I first saw the beauty of the hope offered by medical science juxtaposed with the harsh reality of its inevitable shortcomings, but I had never wanted to be a part of it more. Most significantly, I gained a stronger, more focused determination for empowering individuals to become advocates for their health. Upon returning to Canada, I began to consider that global health research offered a critical opportunity to influence health issues in the developing world through sustainable, culturally sensitive and contextually relevant means. It is a way to share ideas, develop best practices, and learn from the experience of the broader academic community. I highly valued the opportunity to return to Africa this summer in a research capacity; this provided an appropriate opportunity to meaningfully contribute to global health without overstepping the well-placed boundaries applied to the “developing” medical skills of the first year-medical student in Toronto.

### **On the Value of and Established Research Partnership**

The opportunity to be involved in research in Eldoret, Kenya is based out of the ASANTE Research Consortium, a group of North American universities which partner with Moi University Medical School, and more specifically, the

Moi Teaching and Referral Hospital in research and practical initiatives. Based on the strength of the Indiana University Kenya Partnership (instrumental to the development of medical school at Moi University), the program provides the necessary foundation and infrastructure for successful international research collaborations. Because of this framework, a strong network of partnerships, expertise, and experience was available in Toronto and waiting in Kenya. Especially in Africa, pre-established relationships were found to be essential to the navigation of an unfamiliar academic and healthcare setting; the ten-week project time frame would not have been sufficient to develop these from the ground-up.

### **Shared Experience**

My experience and research project was shared with Julie Wright, another first year medical student at the University of Toronto. The ability to share the experience, and reflect and process with another Toronto student was valuable, and is continuing to be so after returning. We approached the experience with few preconceived expectations of what the research or summer experience would entail. It was our aim to contribute in any way that best met the needs of the research program, our Kenyan counterparts, and hospital community. This attitude helped considerably, and the flexibility it encouraged became critical to our success.

### **Research Project**

Our project involved the assessment of quality of care (as measured by patient and health worker satisfaction, the duration of clinical encounters, and accuracy of recorded information) at the busy antenatal clinic at MTRH before and following the implementation of electronic records (set to occur this summer). Although such records may seem elaborate, electronic management of medical information has been found to improve delivery of patient care, staff efficiency, and reporting of public health data to the Ministry of Health in developing countries.

The antenatal clinic at MTRH provides primary antenatal and postnatal care and education, gynecological and family planning outpatient services, counseling for prevention of mother to child transmission of infectious diseases, immunizations for children under five, and community health initiatives including malaria prevention and a safe water initiative. A delay in the transition to electronic records modified our original objective to conduct pre and post assessments this summer, but collection of baseline data remained feasible. Although very busy, nurses and staff at the clinic provided invaluable support, insight, and guidance. We found it very intimidating for many women visiting the clinic to be approached by a “muzungu” (white person/foreigner) seeking their opinion as to the quality of care received. Of greater concern was confusion related to language barriers, which developed when we were unable to explain our purpose for approaching the women. In such cases, clinical staff were instrumental to resolving confusion, but we had some concerns that this was detracting from their heavy workload. Although our patient satisfaction survey was available in both English and Kiswahili, we quickly learned that while many women were fluent in Swahili and preferred this language to English, many could not read Kiswahili as English instruction predominates in the Kenyan school system. Having a designated translator available for such instances or to mediate when required would be helpful for future clinical projects.

### **Timeline and International Health Research Setbacks**

We began work on our shared research project in March 2009 in attempt to submit applications for ethical approval in Toronto and Kenya prior to our arrival. Despite this, all of the details were finally resolved and the appropriate approval secured in late July, 6 weeks into our time in Kenya. This resulted in the modification of our original project in scope and objectives, but also enabled us to take advantage of learning opportunities (attending lectures, learning from visiting faculty, participating in broader community outreach initiatives) and to be involved in initial stages of another research project also in partnership with the University of Toronto. Through this, we began work on writing a protocol for a neoadjuvant cisplatin regime for HIV+ women with cervical cancer (80% of cervical cancer deaths occur in the developing world, where a lack of resources for women's health and/or screening programs means most cases are diagnosed at later stages where few treatment options are possible/affordable). This was a new and challenging area for us, but helped to further our understanding of emerging and pertinent global health concerns. As we worked toward starting our original project (which remained our first priority), our Kenyan supervisor Dr. Omenge was a valuable resource and encourager: having spent time in Toronto, he had an appreciation for the academic environment from which we came, and provided helpful research guidance and cultural insight.

### **IU House and Academic Community**

We lived at "IU House" throughout our time in Kenya, a well-established residence for visiting academics, physicians, residents, and medical students staying for varying lengths of time. The accommodation was more than adequate, and seemed luxurious at times in comparison to Kenyan standards. This community became a central part of our experience, providing us with a place to work, to meet with others pursuing a similar opportunity and to learn from them, to discuss, and to become more involved in relevant learning. Having a constant supply of medical experts (some from the University of Toronto!), residents, and medical students further along in their training helped to provide context and clinical insight for our experiences. We attended lectures for Kenyan and North American medical students, observed ward rounds on a morning when it was lead predominantly for North American Students by a resident from Indiana (so as not to take learning opportunities from Kenyan medical students), participated in "Fire Side Chats" where relevant medical and social issues were explored from an academic perspective, and spent time volunteering at initiatives associated with the IU Kenya Partnership, including working at a farm which provides food for HIV patients and their families, and volunteering at the Sally Test Centre which provides activities for children at MTRH and care for abandoned babies. In addition, the IU-Kenya partnership has become highly developed to provide antiretroviral therapy for HIV/AIDS patients across Western Kenya through AMPATH (the Academic Model for Access to Healthcare), a subset of the partnership. Through this, we were able to learn about a highly effective model for providing access to antiretroviral therapy (through which common treatment procedures are disseminated to a flowchart which can be applied by clinical officers (non-physician medical professionals) at rural sites; more complicated treatment decisions are made at major centres, i.e MTRH), and to visit a rural clinic with Dr. Joe Mamlin, the founder of AMPATH and an inspirational clinical role model.

Through a tutor working out of IU House, we were able to take basic Swahili lessons which were instrumental to forming some of our clinical relationships. For our purposes, living in an academic community with access to

internet and the guidance of others was critical to accomplishing our research objects. Had we come for a clinical encounter or to work more closely with Kenyan medical students, living at the medical student residence would have provided greater opportunities for learning and developing shared experiences. We were grateful for opportunities to meet up with 2 Kenyan medical students who had completed an elective rotation in Toronto in spring 2009. Having first connected with the students in Toronto, it was great to reconnect with them in Kenya, listen to their insights as to differences in medical training between Kenya and Canada, and to meet other Kenyan medical students.

### **Reflections on Healthcare in Kenya**

Overall, less than a paucity of medical services, it is disjointed development and a systemic discontinuity of care which I found most challenging to understand this summer. For example, the hospital has an MRI, but may not have amoxicillin available. Lumbar punctures and bone marrow aspirations are possible (~1/day for the patient who needs it most/can afford to pay), but basic blood gas readings cannot be obtained to open up a world of diagnostic potential. A patient could realistically to pay for a CT scan at 70 shillings (less 1 dollar CAD), but the cost of being on supplementary oxygen is often prohibitive. Having spent time in Africa before, I found not the poverty in Kenya to be shocking, but was most surprised by such disparities and evident gaps. In my time in Benin and Liberia, patients died as a consequence of abject poverty and resource disparities. As unfair as this may sound, it is understandable – it is easy to pinpoint why the patient did not receive treatment; because it was not available. While that situation is frustrating, it is also empowering; although you are working against ill-defined complicated, multifaceted problems, there is satisfaction and gratification in working against something tangible. I found the issues to be different in Kenya – there's still poverty and disparity, but there is also more corruption, and poor health outcomes are less easily understood when access to treatment is theoretically available.

### **Conclusion**

At the end of the day, although it may seem like the only feasible approach, no one goes into medicine or development work to be a utilitarian or because they were inspired by one... we choose these things because they are heroic, idealistic, and because we believe at some level that change is possible. As such, although we observed vast disparities this summer, the opportunities to appreciate how global health research and partnership can combat these were more significant. We were presented with so many outstanding examples of clinicians (both Kenyan and North American) and researchers who were both inspiring and providing good examples of how global health partnerships can significantly improve health outcomes this summer. To this end, the experience was relevant, well-timed, and provided substantial insight into a global health career – I cannot express enough thanks for the opportunity to learn so broadly this summer!

# STUDENT REFLECTION BY EVELYN DUNN

## MY FINAL ROTATION IN MEDICAL SCHOOL: AN EXPERIENCE IN KENYA

When I set out to do this elective I had a number of goals that I wanted to accomplish: to improve my communication skills with both patients and members of the inter-professional health team, to continue to develop my clinical skills, to challenge myself to adapt to working in a new culture and environment wholly different from that of my previous experiences, to learn about how resource limitation and also allocation affect management plans in resource-poor countries, and so on. One of my more personal objectives was to explore a new part of the world, and through this to improve my understanding of what the human experience can be for different people. I believe through this elective that I achieved all of these goals, and also grew as an individual more than I could have anticipated.

I have no doubt this experience has improved my ability as a new resident and future practicing physician to deliver compassionate, patient-centered care. Learning to adapt my skills, techniques, and plans of care for patients in resource-constrained settings will also prove to be an invaluable experience in my future training and practice. The patient encounters I had in Kenya will stay with me in my memory – in the initial visit to the Gynecology ward I met approximately 10 women, all younger than myself, who were suffering from late stage cervical cancers. This is unheard of in Canada, but is a hugely devastating disease of women throughout Africa. While the presentation and stage of disease was generally far worse than I have observed in Canada, there are such great gains that can be made in the care of women in Kenya. The potential to make dramatic impacts on both morbidity and mortality is very exciting as a young professional in healthcare. It is remarkable and inspiring to have observed and participated in this.

Learning about the importance of teaching and working within the system there, as opposed to attempting to transplant our system overseas to a place without the resources to do so is something one must realize when participating in these types of exchanges. Giving them the skills and useful materials to stand on their own and to function without continual support from overseas faculty is key for these partnerships to flourish. Another obvious but important realization for myself was that what might never be considered an appropriate option in Canada could be a feasible option in other settings where disease, resources, and beliefs are wholly different. This elective challenged and changed my beliefs of what I consider compassionate and appropriate care, and I believe I will be a better physician because of this.

These 5 weeks in Kenya acted to reinforce my commitment to women's health from a global perspective and my desire to continue to participate in learning opportunities and clinical experiences outside of North America. Partnerships such as this one with the Moi Teaching and Referral Hospital provide exceptional opportunities for students like myself, as well as staff persons to be part of something that will make great impacts on the lives of many.

# STUDENT REFLECTION BY HEATHER MILLAR

## WOMEN'S REPRODUCTIVE HEALTH IN WESTERN KENYA



Evelyn Dunn with Mosiko, one of the Gynecology Oncology patients, her son and her sister.

The Department of Obstetrics and Gynecology at the University of Toronto and the Departments of Reproductive Health at Moi University and Moi Teaching and Referral Hospital in Eldoret, Kenya entered into a partnership – AMPATH-RH – in 2006 as part of the long standing the AMPATH (Academic Model Providing Access to Healthcare) Consortium between Moi and other North American academic institutions, led by Indiana University. The aim of AMPATH-RH is to improve women's reproductive health care in Western Kenya, with a focus on maternal morbidity and mortality, cervical cancer treatment and prevention and obstetric fistula prevention and repair. The partnership seeks to achieve these goals through clinical care, education and research.

For my final clerkship rotation in 4th year medical school, I spent 5 weeks at the Moi Teaching and Referral Hospital in the Department of Reproductive Health as part of this partnership. I spent 2 weeks on Labour and Delivery, 1 week on the Ante- and Post-Partum ward and 2 weeks with a newly-developed Gynecologic Oncology group (2 Kenyan physicians, 1 Canadian Gynecologic Oncologist visiting to help train, and a couple of nurses). I acted as a final year medical student and was given responsibilities that, overall, were at the same level as those I would be given in Canada (with some opportunities for more hands-on experience than I may have received at home). I also worked with an American cardiologist living in Eldoret to develop a protocol for the care of women with cardiac disease in pregnancy.

This was my second trip to Eldoret (the 1st was in 2008 as a summer research student) and my sixth visit to a low resource country. Before medical school, I completed a Masters of International Public Health with a focus on low resource settings. I felt that I was prepared in many ways for what I would experience in Eldoret. However, I have never done clinical work in this setting and I found that this experience affected me in new ways and on a different level emotionally. In the end, I felt a renewed excitement for global health and a desire to continue to be involved in this partnership throughout my residency training in Obstetrics and Gynecology.

### **Working in a low resource public health care system**

Once I got settled in to my elective, I quickly developed the daily experience of feeling frustrated by the health care system. By the end of the day, I often felt that I had to “get out of there”. The lack of resources – which, academically, I knew existed – was emotionally frustrating in practice. There were days where there was no IV solution in the hospital, where I had to run around for 20 minutes to find an IV cannula, where there was no blood, and where we could not do a sterile speculum exam because there were no speculums. Sometimes there was no paper for progress notes. There was no soap at the sinks and, often, only one bottle of sanitizer that was used for cleaning hands and for wiping down beds. In addition, it felt like there was no sense of urgency on the part of staff. Antibiotics were not given as scheduled, IV’s were not started, and orders written in a chart were not carried out. I heard stories about a woman dying of post-partum hemorrhage because there was no blood readily available and no one ran to find some. I also experienced a lack of accountability on the part of staff for their actions. I saw a couple of medical errors on the part of interns, nurses and physicians that, in Canada, would have resulted in an investigation and, possibly, probation. At MTRH, however, none of this occurred. Patients usually do not ask many questions, explanations for medical decisions may or may not be given to them and they may not even know that a mistake has been made.

Even though I thought I was prepared for much of this reality, when trying to work within it, I could not help becoming frustrated. I tried to be patient and friendly and to remind myself that I was a guest in this country and in this health care system. However, I often felt like screaming. When I left the hospital in the evenings and when I arrived back in Canada, it was a little easier to reflect on the system as a whole and to try to understand why some of these realities might exist. In a public hospital in a low resource country, where it is normal for supplies not to be available, it makes sense that health care workers would have to accept not having what they need. It seems that it would be difficult to maintain a sense of urgency when, for example, there is no blood to run for or when the right antibiotics are not available. Also, when illness and death are common and the public hospital offers the best care available to the poor, it must be hard for patients to demand better (or know that better might be possible). In Canada, where almost everyone has some level of formal education and now, has access to the internet, patients are incredibly well informed. Many Kenyans, I imagine, do not have this same knowledge and, therefore, are not able to ask the questions that would challenge their nurses and doctors to provide information. While it is easy to philosophize about all of the big picture explanations, the emotional reactions I had on a daily basis gave me some understanding of what it really means to work in a low resource health care system.

### **Medical education**

After two visits to MTRH and interactions with the Kenyan medical students who have come to Toronto through the AMPATH partnership, I have had some exposure to and discussion about medical education in Eldoret. It seems that Kenyan medical students have much more book knowledge than we do but have less opportunity to develop their clinical knowledge (at least when they are students). Morning rounds involve one staff physician and approximately 30 medical students moving from bed to bed. It is very difficult to hear anything and, as a student, the opportunity to practice presenting histories and physicals is limited. After rounds, students would often have lectures to attend or would go study. They had little responsibility in the management of patients. Certainly, I did not see a single

Kenyan medical student on Labour and Delivery. In the OR, again, there would be a group of them observing, trying to get a glimpse of the surgery. Once they are done medical school, Kenyan medical students become interns and suddenly, are given a lot of clinical responsibility without the same level of supervision that is provided to interns in Canada.

I wonder what affects the system of medical education in Eldoret. Like all other aspects of health care, I imagine that it suffers somewhat from a lack of resources. Most physicians work in both the private and public health care systems because the public system does not pay well enough. They receive little financial reward for teaching medical students. Medical school seems to be a more didactic experience than it is in Canada and students are not rewarded adequately for involvement in day-to-day patient care. Education – for all levels of physicians or physicians-in-training in Eldoret and in Toronto – seems to me to be one of the most salient benefits of the AMPATH partnership. From speaking with one of the Kenyan students who did a rotation in Toronto, I know that he now spends time on the wards managing patients with the nurses and interns – and enjoys it. Another Kenyan student has described how, upon returning home from Toronto, he wants to spend more time communicating with his patients. From my trips to Kenya, I have realized that many Kenyan students know a lot more than I do about medicine. I have learned how to deliver a baby without all of the amenities that are taken for granted at home. I appreciate on a more personal level that our public health programs and our health care system in Canada make a difference in women's lives. I know that this will make me a better clinician as I start my own career back in Canada. While I was in Eldoret, Dr. Barry Rosen, a Gynecologic Oncologist, was visiting from Toronto to help with the development of Gynecologic Oncology prevention and treatment programs. It was inspiring to see Kenyan and Canadian physicians working together and learning from each other.

### **Oncology**

Cervical cancer in developing countries has been a long-standing interest of mine – since I first learned about it at a women's health conference in 2003. This visit to Kenya, however, was the first time that I truly experienced firsthand the devastating impact that it has on women's lives. Throughout my two weeks on Gynecologic Oncology, I saw many young women who were going to die from their advanced cervical cancers, cancers that we never see in Canada because of our screening and treatment programs. I remember a woman in her 30's who had come from a village to be seen in the clinic. When we walked in to the room, Dr. Rosen said quietly to the other medical student and me, "I can tell by the smell that she has at least Stage 3 cervical cancer". In addition to facing death at such a young age, she was facing the embarrassment of the smell and of copious vaginal discharge as well as severe pain as the cancer spread throughout her pelvis. Over the two weeks, I also saw a number of women with vulvar cancers the size of oranges, suffering again through pain, discomfort, embarrassment and fear. I helped to look after a young woman with advanced ovarian cancer. I was struck by the knowledge that these women were my peers (many of them were my age or only a few years older!) and that, in most cases, their deaths were preventable.

Meeting these women and seeing their suffering made me feel both sad and hopeful. It was such an obvious example of the disparity between women in Canada and women in the developing world. And it made me feel that maybe this is a cause I want to focus on as part of my career. It encompasses so many important issues – poverty, health care



system resources, public health, and women's sexual and reproductive rights. Pap screening and, now, the HPV vaccine, have the ability to almost eradicate cervical cancer. And yet, these women do not have access to these technologies because of the part of the world in which they were born, because these programs so far have been too costly to deliver or, perhaps, have not been a priority. For me, pap screening is a routine part of my health care. For my peers in Kenya, it is not accessible and, for many, it is something of which they have no knowledge. Gynecologic cancers may also become advanced in many cases because they affect a part of women's bodies that is considered private and that is not discussed publicly. Women's wombs are considered central to their identity and the idea of losing this part of themselves is another factor preventing them from seeking health care. During one cervical cancer teaching session with a group of nurses, the head nurse spoke at length about their role as educated women to 'spread the word' about cervical cancer and to make its prevention and treatment a new movement in Kenya. I felt inspired and excited. I saw real potential to change the course of a preventable disease and, at the same time, to advance women's health and women's rights.

## **Relationships**



With my friend Tecla, a Kenyan nurse, and her children, Chemutai and Andrew. I met Tecla the first time I was in Eldoret and enjoyed seeing her again.

As with all of my clerkship rotations so far, the most memorable part of my elective in Kenya will be my interactions with patients and with co-workers. I spent part of a day with a young woman who was in labour with her first child. She was nervous but incredibly strong. In Kenya, many husbands are not involved in the delivery. However, her young husband seemed to want to be with her and, once I told him how to help, he stayed for the whole thing. She ended up needing a c-section for failure to progress and, when I went to see her in recovery, he was still with her. He told me he had stayed for all of it because he loved her. Compared with some of the upsetting experiences and frustrations that I seemed to have every day, this couple made me smile and reminded me that love exists in every culture. A young woman with advanced ovarian cancer also touched me. We met as she was being prepared to have a large debulking surgery. She was incredibly thin and had lost her hair from chemotherapy. But, she had a smile that lit up her whole face and made it impossible not to smile back. She was intelligent and inquisitive and grateful for everything. When the other medical student and I said goodbye to her on our last day, she thanked us for caring about her. She said that her family had mostly abandoned her since she had become sick.

Another woman on the Post-Partum ward, only 25 years old, quietly thanked the medical team every day for saving her life, after an urgent c-section for almost unbelievable polyhydramnios. She had a twin pregnancy and had not had any prenatal care. She was gentle and shy and she smiled with her eyes. The nurse from the Gynecologic Oncology team told us one day about how her mother had passed away from cervical cancer and how her older sister had raised her. She talked about how committed she felt to cervical cancer programs because she felt that no one deserved to lose their mother at such a young age from such a preventable illness.

These brief relationships are what make medicine real for me and are what make me want to be a doctor. In Eldoret, they made women's health issues in low resource countries real for me. From these women (and, at times, their partners), I was given a glimpse of the strength required to face health problems that my friends and I will never even have to consider. I felt and saw universal emotions of sadness, fear, gratitude and joy. And I imagined how it would feel if my mother, sister, daughter or best friend had to experience illness in the way that Kenyan women do. This is what makes me want to be involved in improving global women's health.

### **Conclusion**

The AMPATH-RH partnership is one of the main reasons that I ranked the University of Toronto first for my Obstetrics and Gynaecology residency training. Of my experiences so far in developing countries, my time in Eldoret and my overall experiences with the partnership have been the closest to how I imagine incorporating global health into my career. Despite feeling frustrated at times, when I finished my 5 weeks in Kenya, I felt inspired and excited about the possibility of going back. The partnership seems to be an example of true long-term commitment to women's health in a low resource country with a genuine focus on skill development not only for Toronto physicians (and medical students!) but also for Kenyan health professionals. I feel excited about the potential of this partnership and honoured to have had the opportunity to be involved in it as a medical student.