MPH Field Experience Awards
2011 Report
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Expanded access to mental health services in Liberia by drafting training materials for clinicians that will elevate the level of care for major depression

I used my Field Experience Award to help fund a 4 week trip to Zwedru, Liberia to assist the NGO Tiyatien Health (TH) develop curricular materials on recognizing and treating depression in the Liberian context. These materials will be used for several one-week training sessions on mental health that TH will be conducting for primary care clinicians from throughout Grand Gedeh County in southeastern Liberia. Each of these sessions will train 25-30 clinicians (mostly physician assistants) in how to diagnose and treat both major depression and epilepsy. These training sessions are part of a broader effort, led by the Liberian government and assisted by NGOs such as TH and the Carter Center to expand access to basic mental health services throughout the country.

TH was founded in Zwedru in 2007 and began the first HIV treatment program in rural Liberia. Their approach relies not only on clinicians who can make diagnoses and prescribe medications, but also on a team of community health workers (CHWs), who can visit patients at home, run support groups and help patients get access to programs (one of which is run by TH) that can improve their economic situations. For the past year and a half TH has begun to offer care to patients who have either major depression or epilepsy, as well as HIV. In addition to offering direct clinical care to patients in Zwedru, TH has begun to offer training sessions, in conjunction with the Liberian Ministry of Health and the Grand Gedeh County Health Team in order to make its model of care available in a larger region. About 6 months ago they offered a training session on HIV care to clinicians throughout the County and a few months after that they started to train an initial cadre of CHWs from other parts of the county to assist with care to HIV patients. The trainings that I helped prepare will be an important part of the effort to similarly expand access to mental health services in other parts of the county.

Prior to travelling to Liberia, I worked with Drs. Larry Wissow of the Department of Health Behavior and Society and Matt Burkey, a psychiatry resident at JHH and co-director of mental health for TH to develop draft training materials. We relied heavily on the mhGAP Intervention Guide, a document published by WHO in October, 2010 that provides modules on several common mental disorders. In addition to the mhGAP depression module, which contains flow charts on diagnosing depression as well as various pharmacologic and non-pharmacologic treatments, we also based our preliminary work on existing protocols written for TH’s own clinicians. We also modified WHO’s recommendations for what we knew about the setting. For example, amitriptyline is the only available antidepressant medication in Liberia so it was the only drug discussed in the training materials. Also, there isn’t a single practicing psychiatrist in the entire country, so even in very difficult clinical situations, it would be impractical to recommend “referral to a specialist” as WHO’s materials sometimes do.

I arrived in Monrovia on the evening of December 26 and left on a 12 hour van ride to Zwedru the next morning. I spent my first few days in Zwedru getting to know many of the TH employees, including administrators responsible for organizing the training sessions, CHWs who are involved in the care of depressed patients and the two physician assistants who provide most of the direct clinical care to Tiyatien Health’s own patients in Zwedru. I also met leaders in Tubman Hospital (where the TH clinicians work and where most of our patients are recruited by
our community health workers), and officials from the County Health Team and the NGO Merlin, who will partner with TH in actually running the training sessions. I also spent several days shadowing our clinicians when they saw patients and going with CHWs as they recruited patients in the general outpatient clinic at the hospital, and ran support groups in neighborhoods throughout Zwedru.

In talking with people and observing the clinical work, I learned that much of the existing protocol for how people with depression should be treated was not being followed. The most glaring example was that when a patient was started on amitriptyline, they were always left on the very low (probably sub-therapeutic) starting dose indefinitely. In addition, patients were being given unrealistic expectations about how well and how quickly this medication was likely to work. In talking with the clinicians, I realized that if advice on how to dose medication and what to tell patients were embedded directly into the clinical forms that the clinicians have in front of them when they see patients, it could increase the quality of care.

I ended up initiating a process to work with the clinicians to make substantial changes to the existing protocol – to make it easier to follow while still providing a higher level of clinical care than is currently being provided. We also made changes to some of the clinical forms the clinicians use so that they will offer more direct guidance to the clinicians as well as continuing to serve as data collection forms. These changes were embedded into the training materials that will be used for the training sessions.

In addition to editing these training materials to reflect these concerns about patient care, we also made changes in order to better reflect the language that depressive symptoms are often described in. For example, one of the cardinal symptoms of depression in Liberia is “thinking too much.” It is also not uncommon for Liberian women with depression to present with a sensation of a hole in the middle of their head – what is called an “open mole.” In order to make these changes I spoke with both the clinicians and the CHWs – who tended to have less education then the clinicians and whose vocabulary was more similar to typical patients. I also used these sessions to develop case presentations drawn from their experience working with patients with depression. These presentations were designed to illustrate some of the key points about depression covered in the training. I did not have the opportunity to systematically interview patients in order to learn more about how psychiatric symptoms are talked about in the community, though another volunteer who recently arrived in Zwedru has undertaken this project.

My last week in Zwedru, I was joined by Dr. Leslie Vensel, an internist at MGH in Boston who has been working with TH. She focused more on developing materials for epilepsy training and worked with those from TH, Merlin and the County Health Team who will actually be leading the training sessions to practice giving the presentations that we developed and make further small refinements to the material. Dr. Vensel left Zwedru this past week and the first training session will begin this Monday (2/14). I remain in touch with several of the people I worked with in Zwedru and am excited to hear how this first session goes.
Conducted the first demographic surveillance system report for the malaria-endemic Chittagong Hills region Bangladesh to identify socio-demographic risk factors for symptomatic malaria

I spent December 28th, 2010 to January 21st, 2011 at ICDDR,B in Bangladesh working with the Mapping Malaria Epidemiology in Bangladesh team under Dr. Wasif Khan. Two and a half weeks were spent at the ICDDR,B headquarters in Dhaka and one and a half weeks were spent at the field office for the malaria project in Bandarban. My work included data cleaning, data management, data analysis, meeting with the people responsible for demographic surveillance at the Matlab field site, meeting with the Dhaka and Bandarban field teams, and making surveillance visits to participants’ homes. I also got oriented to the ICDDR,B hospital and research environment and staff. The time spent in Bangladesh at ICDDR,B was highly productive and the infrastructure for supporting visiting researchers was of the highest quality. In addition to Dr. Khan and his staff making sure that my research needs were met, a full-time staff person made sure that my lodging, transportation and general stay in Bangladesh went smoothly. I highly recommend supporting future MPH students visiting the ICDDR,B.

As a result of my time in Bangladesh, I produced the first Demographic surveillance system (DSS) report for the Bandarban field site, an MPH Capstone entitled Socio-Demographic Risk Factors for Symptomatic Malaria in a Newly Established Surveillance Region in the Chittagong Hills Tracts of Bangladesh, and a document outlining the data management, cleaning and analysis procedures for future reports. I participated in weekly meetings of the Mapping Malaria Epidemiology in Bangladesh team here at JHSPH and have become a key source for the team on the demographic aspect of the project. I also had the chance to prepare three conference posters related to my experience at JHSPH Global Health Day, ICDDR,B ASCON, and JHSPH World Malaria Day. Additionally, I will be preparing a manuscript with David Sack and David Sullivan on my results. Finally, my international field experience has also played a clear role in my securing a position with the Global Immunizations Division at CDC as part of my Epidemic Intelligence Service (EIS) fellowship.

My abstract for the Capstone, which summarizes key malaria-related results, follows:

Socio-Demographic Risk Factors for Symptomatic Malaria in a Newly Established Surveillance Region in the Chittagong Hills Tracts of Bangladesh
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High poverty and population density make malaria control difficult in Bangladesh. The Chittagong Hills Tracts comprise an agricultural region in southeast Bangladesh populated by many tribal groups that are culturally and linguistically distinct from the national Bengali ethnic majority. In the Chittagong Hills district of Bandarban, a prospective multi-faceted malaria surveillance collaboration between the Johns Hopkins Malaria Research Institute (JHMRI) and the International Center for Diarrhoeal Disease Research, Bangladesh (ICDDR, B) was established in 2009 to better understand malaria epidemiology in this endemic region. Here we present a socio-demographic characterization of the 20,558 people under surveillance in Rajbila and Kuhlalong unions within Bandarban Sadar Upazila, as well as individual-level socio-demographic risk factors for symptomatic malaria disease during the high season.

Differences were observed across unions and ethnicities in socio-demographic factors known to be risk factors for malaria infection and severe malaria disease, such as age, pregnancy, education and occupation. In univariate analysis, we observed a significantly increased odds of high-season malaria disease in children aged 1-4 (95%CI 1.1, 3.8) and 5-14 (95%CI 1.7, 4.0) compared with people aged 15+, as expected. However, we also observed 3.0-fold higher odds of symptomatic malaria in Rajbila versus Kuhlalong (p=<0.001) and 4.0-fold higher odds amongst tribal people versus Bengalis (p=0.019). These effects were independent and of similar magnitude and significance in a multivariate model including age, race and union of residence. Additionally, large variations in malaria disease amongst individual tribal groups were observed that are difficult to interpret since people live in ethnically homogenous villages; differences may reflect geographic proximity of households to mosquito breeding sites and other malaria cases, or real variation in rates of hemoglobinopathies, which are known to exist in the region. For people older than five years, those with 3-5 years and 6+ years of education (above average) had a 45% (95%CI 30%, 98%) and 50% (95%CI 26%, 95%) reduction in odds of malaria disease, respectively, compared to people with 0-2 years education (below average). In people aged 15+, the effects of race and education were confounded by occupation. After controlling for the effects of union of residence, age and sex, we observed a statistically significant increased odds of malaria disease amongst people doing day labor (2.5-fold, p=0.046) or a form of hillside agriculture practiced by tribal people called “jum” (4.3-fold, p=0.002), but not other agricultural occupations (p=0.304).

These results reveal socio-demographic risk factors for symptomatic malaria during the high-season in this Chittagong Hills surveillance region that will: (1) serve as a basis for future hypothesis-driven epidemiological studies, or (2) target future intervention strategies to high risk groups in order to conserve resources.
Conducted a needs assessment designed to reduce barriers to accessing maternal health clinics among the Tamang community in the Rasuwa district of Nepal

My experience during the break not only provided me with the opportunity to conduct a needs assessment for a struggling rural healthcare organization, but also taught me valuable lessons in conducting formative research, working independently, and the realities of doing research in the field. While I encountered difficulties with translation, information biases, computer malfunctions, and lack of commitment of field staff, I was still able to conduct the focus group and staff interviews, which I plan to use to provide information for my capstone project.

For my capstone I plan to use the formative research obtained from the needs assessment from my experience in combination with the literature reviews I have been researching from Baltimore to create a grant proposal that could benefit the future of the organization. Although I am still working to code the data from the focus groups, I observed many barriers to accessing maternal health services from my perspective as a researcher in the field.

Translating information from the formative research was one of the most important lessons I learned. The people I was interviewing spoke in Tamang, a language that is only spoken and not written. The woman who was helping me translate could not translate word-for-word and was only summarizing what people said. Luckily, I recorded all of the information and spent weeks in Nepal trying to find someone who could help me translate from the video, which once translated from Tamang into Tibetan and then into English provided me with some interesting data.

Interviewing women from the villages, community leaders, and healthcare workers revealed the need for more outreach about the clinic outside the villages. They only had 8 births there in the past year- some of this was due to a lack of awareness about the clinic outside of the villages, some was due to shyness of people (this will be expanded upon after coding). There was a lot of concern about the hours that the clinic was open as it was very irregular and at times was closed when people needed to use it. In terms of the clinic’s governance, women mentioned that there was a committee of women elected to oversee the monitoring of the health workers but that they were not involved though they wanted to be. The biggest concern for emergency help was transportation. Cost is an issue when it comes to transportation, and emergency transportation at a discounted value would really benefit the region. Interviewing medical staff and village leaders revealed the sentiment that the birthing facility was not equipped with the right materials for a safe delivery and that it needs more equipment and different kinds of medicines.
The remoteness and mountainous topography of the Rasuwa region made this project an interesting place to work. Despite the various maternal and child initiatives that have been conducted in Nepal, little information has reached this area. Despite being a close distance from Kathmandu (6-12 hour bus ride depending on the season), Rasuwa is among the 10 lowest scores on the human development index in Nepal. Many people I talked to had never traveled out of their own valley, let alone the next largest village or Katmandu, and when it comes to accessing healthcare services, more work needs to be done to bring better quality healthcare services to the villages.

In general the MPH field experience award was an amazing opportunity to translate the skills I have been learning to the realities of trying to apply them in the field to help an organization that is a sole provider of healthcare services in one of the most remote areas of Nepal. I was very fortunate to have this experience and I look forward to see the changes that will come in Rasuwa from the grant proposal.
The experience of working on the project at SEARCH, Gadchiroli was amazing. I worked on designing the framework for the operational analysis of the Pneumonia program. It was a wonderful project which I successfully completed and tested my framework with some preliminary data too. It was a great experience.

Terrain and Geography  Gadchiroli is an economically backward and predominantly tribal district in Maharashtra state. The experience of visiting this place with little public infrastructure, facilities and development was exciting. It is highly forested area with a civil war going on between the communist terrorists (Naxalites) and the government agencies (police/army). This has been going on for the last 20 years now, and has intensified in the last 5 years or so. There are areas in Gadchiroli where SEARCH conducts its camps, where it sends its ambulances, where a police van/vehicle would not dare to go, due to the threat of Naxalites. SEARCH provides good quality medical services, emergency transport services and research in such a dangerous area for the last 20 years!

Other health facilities in the area are almost non-existent. Government PHCs are mostly non-performing due to absenteeism on the part of the medical officer due to the terrain, political situation and quality of life.

Health Programs  SEARCH has many internationally known health programs. The Pneumonia program and the Home Based Neonatal Care program are well documented and famous.

Community Based Acute Respiratory Infection Program  The program has been successfully running for the last 22 years now! It was started with the goal of reducing <5 mortality and it has been achieving that goal for many years now. It was a wonderful opportunity to understand the working of the program in detail.

Major Activities
- Diagnosis of child/infant/neonate with respiratory symptoms as pneumonia.
- Treatment with the help of Gentamicin Injections (if neonate) otherwise by Oral Cotrimoxazole.
- Follow up visits to assess the situation of the patient
- Registration – of all children, children with pneumonia and other patients.

Home Based Neonatal Care Program  This program has been started in 1993 for the maternal and neonatal component of health. Home visits are conducted by trained community health workers, at regular intervals.

Major Activities
- Home visits by trained community health workers, before and after birth
• Registration of all eligible women, pregnant women, <5 children, births and deaths.
• Health education regarding nutrition, ANC, breastfeeding, baby care, etc.
• Role of a pediatrician – during home deliveries by the community health worker, managing complex cases like birth asphyxia.

This program has been very successful and has reduced the maternal and infant mortality in the area significantly.

Other Programs
De-Addiction Programs, Malaria Control Programs and Chronic Disease Management Programs are ongoing in these locations

Hospital Services
The hospital has been specially designed according to tribal design. Instead of a typical ward structure, special “kutirs” have been built to house indoor patients. It provides out-patient services and in-patient services. Surgical procedures like hysterectomy, etc. take place on a regular basis. Mental health camps, surgical camps and other specialty camps are conducted on regular intervals.

Research
All data is recorded, be it Pneumonia data, or the Home Based Neonatal Care Program data, or the Registration data. SEARCH has published a lot in esteemed journals like *Lancet*.
Examined long-term outcomes and impacts of post-tsunami programs in Aceh Province, Indonesia

During the month of January 2011 I was implementing a study in Aceh Province, Indonesia, to examine the contributions of displacement, pre-tsunami conditions, and humanitarian response to ‘durable solutions’ outcomes at present day. While there are many studies that examine the acute effects of natural disasters, and individual program evaluations evaluating the humanitarian response, there are few that have examined long-term outcomes and impacts of post-tsunami programs. The purpose of the study was to use the “Framework for Durable Solutions for Internally Displaced Persons” (United Nations Human Rights Council, 2010) in order to see if benchmarks for durable solutions were being met, and what the most important predictors of such outcomes were.

While the project work began in the Autumn of 2010 with the design of the conceptual framework and survey instruments, it was only in January 2011 where the field work began. During my time in Aceh, I was responsible for setting up the study, essentially from the ground up, such that data collection could be carried out and completed by March 2011. As such, when I arrived in Banda Aceh, I met with our local field coordinator – a member of a previous survey team – and together we established an office for the study, a relationship with a local university, and capacity built an ethical review committee at the university in order to ensure that our methodologies and objectives were consistent with local customs. From there we conducted preliminary qualitative interviews with village leaders in close to 30 villages and hired and trained the interview team in order to conduct research in those clusters in two parts of Aceh province.

Having worked in Aceh in 2007, it was rewarding and surprising to see the extent to which the cities had transformed. The hum of everyday life had returned, roads and buildings had been reconstructed, and there was little sign of international agencies working. These, it seemed, were positive markers for a new era of independence of Aceh from foreign aid and economic stability. While such anecdotes are reassuring, unemployment rates remain high (with some reporting as high as 30%), and depending on the extent of foreign assistance at the community-level, there remains a large sense of either disappointment or distrust of both the local government and the international humanitarian community.

After the tsunami, almost $13 billion of humanitarian and development assistance was provided to Aceh, but there exists no methodologically sound or comprehensive assessment of to what extent it was beneficial. Understanding the most important predictors of durable solutions now (whether they be employment, health or psychological wellbeing, community cohesiveness, beneficiary satisfaction and participation, or specific interventions by IGOs and NGOs) is particularly important in light of other large-scale natural disasters that have taken
place recently. This study was a ‘sister study’ to two others: one in Pakistan, examining the impact of flooding; and one in Haiti, examining the impact of the earthquake. These studies taken together provide a view of humanitarian assistance and the impact of natural disasters in the semi-acute, short-term, and long-term temporal scales. Only the study in Aceh, however, can provide useful insight into what strategies may be used by the humanitarian community that will best predict long-term outcomes.

Working in this environment was both challenging and rewarding. As many international agencies have withdrawn from Aceh over the past several years, we had to conduct the research without a local programmatic partner. As such, establishing logistics and hiring staff was a considerable feat. Managing expectations of both the study staff and the local communities had an important function – particularly in light of the massive amounts of resources that had once gone in to transforming the region into its current relative affluence. At the same time, however, we were warmly received by most communities, and being independent of any programmatic partner was an advantage in gaining the trust and honesty of local informants and interview participants. And, working with a study team formed de novo and comprised completely of local Acehnese counterparts was a welcome change from working in similar situations wherein the majority of my colleagues have been other expatriates. The greatest reward for me was the relationships I had with my own study staff, and the opportunity to build their capacities to either to continue this type of work, or forge a path of their own. While I taught them about research ethics, basic epidemiology, and sampling procedures, they taught me about resilience, patience, and the warmth and triumph of the human spirit.
Performed a needs assessment of reproductive health facilities and services for Caritas Liban, an anti-poverty and social justice NGO in Lebanon

First of all, I would like to thank the entire staff at Caritas Lebanon as well as those who afforded me this opportunity from the JHSPH, especially Dean Marie Diener-West; everyone’s kindness and candor will not soon be forgotten. My experience in Lebanon proved to be an incredibly fruitful one as well as a great opportunity to put public health practice into effect. I will remain forever grateful to all who helped make this project a reality.

My time in Lebanon proved to be an eye-opening experience, not only because of the cultural, social and political considerations of the country, but also for the immense kindness and generosity of all the Lebanese citizens I encountered. Regarding my particular project, quite a bit of the ‘refugee experience’ came to light, thanks to the countless hours Lebanese and Iraqis afforded me in conversations and interviews. It is plainly clear that Caritas is an invaluable asset to this community and the consequence of the work undertaken drastically affects the ease and potential for success in this community’s chances for triumph outside of Iraq.

Programmatically, I found Caritas to be among the best I have encountered. The staff are knowledgeable and apt, the resources available are top notch and the gratitude of all who enter CLMC’s doors realize this, even if they don’t say it enough. There is an intricate framework in place that addresses almost all arenas of concern for refugee populations, this is true thanks to integration of expertise from staff, funding from several domestic and international sources and the tireless support of a team that is both approachable yet intensely professional and driven.

More specifically, the work I undertook in Lebanon opened my eyes to the great breadth of issues faced by a vulnerable, displaced population. Unlike the rather simplistic view that many have regarding refugees, the opportunity to collaborate with a great wealth of talent afforded a better understanding of the scope of issues faced by displaced persons, from legal considerations to changes in familial dynamics to the potential for success in professional and academic endeavors for youths. Speaking with Iraqi and Lebanese youth, local community members, religious leaders, social workers and psychologists, and even elected officials; the views and beliefs of all helped to shape my recommendations and understanding of the true problems faced by displaced persons.

To conclude, I am left with an overarching sense of appreciation for the situations that displaced persons find themselves in. To work with Caritas is to understand what it is to be human, vulnerable and in need of support and direction on the part of staff and kind strangers. From one very humble perspective, Caritas Lebanon employs the cream of the crop in staff and leadership, tirelessly advocates for those it ministers to and provides resources to those most in need in a manner I have yet to witness anywhere else. I thank all of those involved for this opportunity and am indefinitely here to offer whatever support I can to the continued mission of this organization.
Performed a needs assessment of reproductive health facilities and services for
Caritas Liban, an anti-poverty and social justice NGO in Lebanon

Caritas is an international, non-governmental organization devoted to reducing poverty and campaigning for social justice. In Lebanon, Caritas Liban supports a variety of humanitarian aid and social and economic development programs that focus on needy and vulnerable groups, including victims of conflict, refugees, migrants, and unaccompanied minors. Much of its recent work has been emergency response in the aftermath of conflict, which has had significant effects among the Lebanese and other nations in the region, especially the Iraqi.

A country of only 4 million, Lebanon hosts over 10,000 refugees and over 400,000 migrant workers. The vast majority of refugees are Iraqi, but Lebanon has also resettled hundreds of Sudanese and Somali families. Female migrant workers usually work as domestic help in homes and are largely from the Philippines, Ethiopia, and Sri Lanka. Male migrant workers usually work in construction and are mostly from Syria, northern Africa, and the Indian subcontinent. This increasingly transitory unskilled labor force, combined with a complex legal environment, discriminatory attitudes by many Lebanese employers, urban living conditions, and periodic civil unrest, creates a unique and complex environment.

Caritas Liban had indicated that it was considering expanding its primary health care services to include reproductive health, and sought recommendations to do so. During my stay in Lebanon, I began by performing a needs assessment of Caritas’ reproductive health facilities and services, focusing on sexual health and sexually transmitted disease prevention. Based on the needs assessment findings, I created two concept papers for submission to UNFPA and other potential donors. The first concept paper described the creation of a reproductive health educational program targeting at-risk Iraqi and Lebanese youth at Caritas community centers and clinic facilities, with the potential to expand services to local secondary schools in a consultancy role. The second concept paper detailed the initiation of Voluntary Testing and Counseling (VCT) services for HIV and STIs at the Caritas primary clinic facilities. In addition to the concept papers and needs assessment, I developed comprehensive curricula for the educational programs and four lesson plans on HIV, sexually transmitted diseases, contraception and family planning, and common infectious diseases in Lebanon.

I initially joined this group to have the opportunity to work with Iraqi refugees and in order to gain further experience performing needs assessments. In practice, this experience was even more than I had hoped. Caritas Liban’s wealth of experience and situational expertise are admirable, but their dedicated staff and organized, approachable management truly set them apart from other NGOs that I have worked with. I want to thank Caritas for hosting us and introducing us to their wonderful country (to which I hope to return soon!) and to thank Hopkins, especially Shannon Doocy, Gil Burnham, and the MPH Office, for coordinating and financing our trip. The experience that I gained during this trip allowed me to practice and to contextualize the skills that I have learned in the classroom, and I am tremendously grateful for this opportunity.
Performed a study of the New Roots Community Farm at the International Rescue Committee (IRC), a US-based refugee resettlement organization in San Diego, California

From January 4th to 25th, 2011, I volunteered to perform a study in San Diego, CA, at the International Rescue Committee (IRC), a US-based refugee resettlement organization, on their New Roots Community Farm, a year-old, 2.3-acre site where resettled refugees and community members can farm plots of land. I interviewed 38 key informants, including IRC staff, refugee families (parents and youth participating as growers), and other community members working on the farm. I performed mostly informal individual interviews on-site, but also gathered focus groups from four different communities, in order to broaden the scope of my responses.

My interest was in learning about the structure of how the farm was developed, what roles individual participants play, and what do respondents describe in terms of the farm’s activities and functions: for example, as a means of generating income, of growing food for consumption, and of building community.

The first week of my time in San Diego, I was introduced to the key actors in the Food Security and Health teams at the IRC office. I spent the first few days orienting myself and performed an extensive literature and news search on existing models using agriculture for resettlement or recovery for vulnerable populations. I found many such models catering not only to refugees, but also to patients with mental illness, drug addicts, ex-prison inmates and others. These models focused on the health benefits of agriculture and community for these vulnerable populations, but also looked at the business model of the structures in terms of income-generating possibilities and skill-building for individuals.

Based on this review, I generated a list of questions to ask IRC staff about the farm’s structure and history, and questions to ask the growers about their experience at New Roots. I described to key informants that I was conducting this study as part of my training at Johns Hopkins and to potentially help IRC in other communities (particularly at the Baltimore IRC where I volunteer one day a week) to implement a similar model. I asked IRC staff in San Diego who the participants in the farm activities were. Because I did not seek to ask or record anyone’s personal information—questions about the farm relate to generalized perceptions—I asked for only verbal consent.

In the following weeks, I spent most days on the farm itself, making myself familiar to the growers. Once I had gained the trust of various community leaders, I organized focus groups with the Cambodians, the Somali-Bantu, the Latinos, and finally with the children of some growers at the nearby high school. I also interviewed individuals, as described above. I attempted to interview individuals from a variety of backgrounds: those with and without farming background, those who were and those who were not selling their produce to farmers’ markets, and from many different countries, with different lengths of stay in the United States.

In order to get a complete picture of the model, I also visited the IRC’s aquaponics farm, run by a refugee, and other community gardens in the city. My results will show a complete picture of the model and the experience of refugees working within it.
Africa, - a continent I had always hoped to visit but prior to this did not have the opportunity. The chance to travel to Africa was quite unexpected. After mentioning my interests in pediatric HIV/AIDS research and clinical care to my adviser – Dr. Ruff, she introduced the possibility of Lorraine and I working with her and her colleagues in Ethiopia. I was instantly excited. As the project idea came to fruition, I realized my chance to travel became closer and closer to reality. Upon being selected as a MPH field experience recipient my plans to travel to Ethiopia were solidified.

Given that this was my first journey to Africa many people asked me once I arrived in Ethiopia if the country “was what I expected.” I was not certain how to answer this question because truthfully speaking I did not formulate any expectations prior to arrival. I purposefully did this because I wanted what I could see and feel to create an impression instead of preconceived thoughts. I think this strategy of mine worked quite well. What I saw was a country of very diverse people of varied physical attributes, religions and tribal associations. I also saw a country that despite making significant strides away from economic strife and poverty, still constantly reminds its citizens and visitors that these battles are long gone. Every day I was asked for money by impoverished women with children on their back, disabled individuals or occasionally single adults. I have lived in low-economic settings during my lifetime but never before had the frank reality of severe poverty been thrown so forcefully in my face. At times, I felt hopeless knowing regardless of the monies I could donate to these individuals, this would never solve the greater issue at hand. Despite possessing these feelings however, the overwhelming sentiments I had during my visit were very positive. I felt at home in Ethiopia and definitely did not feel like a visitor.

Certainly an aspect of this trip that contributed greatly to my adaptability was the incredible efforts put forth by the JHU TSEHAI staff to ensure that we had a worthwhile experience. From the moment we arrived, we were provided reliable transportation with a
personal driver, and lodging. Beyond all of this however, was the incredible experience we had working on our project and interacting with the amazing TSEHAI group. Our adviser while in Ethiopia – Dr. Berhanu Gudetta, an alumni of JHUSPH assisted us in organizing a schedule that allowed us to visit 8 hospital sites between the two of us. At the hospital sites we examined the provision of PICT services, nutrition assessment and bactrim prophylaxis amongst HIV-exposed/infected children. Although initially I encountered mild frustrations in locating the information needed, in general visiting the various sites and interacting with the clinicians and staff there was absolutely enlightening and insightful.

At the end of our time in Ethiopia, Lorraine and I were asked to informally present our information to the TSEHAI team. This was definitely the highlight of the project. From the information we presented, we received important insight and recommendations regarding further study from the team. More importantly however, the productive discussion that followed our presentation placed value on our work and made it apparent that we had contributed not only to the team’s current efforts but assisted in guiding the team’s future directions – something that one could only hope to achieve with such a brief but invaluable field experience as this.
Provided JHSPH technical support for the HIV/AIDS Initiative Project to develop the Master Pediatric Protocol in Addis Ababa, Ethiopia

My MPH field experience involved exploring the feasibility of studying various components included in the Master Pediatric Protocol, a research study that Dr. Andrea Ruff is designing. The aims of that study will be to assess multiple areas important for the care and treatment of children in Ethiopia living with or exposed to HIV. A fellow MPH student, Nakiya Showell, and I worked with the research, clinical, and program specialists at JHU’s Technical Support for Ethiopian for HIV/AIDS Initiative (TSEHAI) Program and our faculty mentor who is also the P.I. of TSEHAI, Dr. Ruff, to design a plan which would allow us to thoroughly investigate the objectives of our research. We spent time at four hospitals each. The hospitals in Ethiopia’s capital city, Addis Ababa, which I assessed were Saint Paul Memorial Hospital and Zewditu Hospital. In the southern region of Ethiopia known as the Southern Nations, Nationalities, and Peoples’ Region (S.N.N.P.R.), I assessed the objectives at two hospitals, Yirgalem and Dilla Hospitals.

During the 4 week period we were in Ethiopia, I studied the scale-up of the Cotrimoxazole prophylaxis therapy program as well as Provider Initiated Counseling and Testing services at the health facilities named above. I was introduced to key members of the site support team that were responsible for the hospitals in the regions we were assessing. Each site support team consisted of a physician, a nurse, 2 monitoring and evaluation personnel, and 1 data collector. In the SNNPR, I was able to study my areas of interest in the hospitals on the same days that the site support team of those facilities were scheduled to visit those hospitals. The focus on transfer of expertise and capacity building that I observed at these site visits are major elements of technical support. The sustainable change this approach encourages is highly motivating and is related to the type of work I plan on doing in my future career.

My field experience represented a great opportunity to integrate various concepts I have been learning about throughout the year in my MPH coursework. Meeting the head Epidemiologist in TSHEAI’s central office and learning about how data that is included in the indicator database is collected and maintained was helpful from an information systems management perspective. Going to the 4 hospitals and evaluating the variations of how PICT
services are documented at each institution and exploring barriers to implementation in facilities/departments with low PICT uptake was interesting because disclosed areas where increased support, whether technical or educational, could encourage PICT scale-up. Learning about issues related to Cotrimoxazole adherence and perspectives from both health care providers and caregivers in the field was eye-opening since I had studied the literature related to this topic prior to my travels.

Although there were multiple highlights of my MPH field experience, attending the telemedicine conference at Black Lion Hospital in Addis Ababa and reviewing cases with Infectious Disease specialists live from Hopkins and NIH alongside physicians from Ethiopia was an amazing testament to how powerful of a tool technology represents clinically. We met a patient whose diagnosis had been made after her case was introduced during a past telemedicine conference. After missing 3 years of school because of her debilitating yet treatable disease, she was cured. It was amazing to see the practical application of this technology for the advancement of clinical education. This tool can change the lives of patients beyond a physician’s reach.

I am thankful to have been a part of this MPH Field Experience—I learned a great deal about the field of Pediatric HIV care, health systems strengthening, and about my future career goals.
Assisted with data collection and conducted an internal evaluation of clinic sites for a study of pregnancy intentions and incidence in HIV-positive women on antiretroviral therapy in Johannesburg, South Africa

“Pregnancy Intentions and Incidence in HIV-Positive Women on Antiretroviral Therapy in South Africa” is a prospective observational cohort study of HIV-positive, non-pregnant women who are currently receiving ART in South Africa. The overarching objective of the study is to further understanding of fertility desires, reproductive decision-making influences, and reproductive health outcomes in HIV-positive women on ART. To achieve this objective the study has two specific aims: 1) to characterize expressed fertility intentions and incidence in this cohort and assess relationships between outcomes and demographic, behavioral, and clinical outcomes and 2) to compare incidence rates of pregnancy between women on efavirenz versus nevirapine.

This study is run through the Reproductive Health and HIV Research Unit (RHRU), University of the Witwatersrand in Johannesburg, South Africa. Vivian Black, MBBCH, the Senior Clinical Programme Manager of Maternal Health of RHRU, serves as a co-principal investigator. Ms. Sheree Schwartz, a PhD candidate in epidemiology at the Johns Hopkins Bloomberg School of Public Health (JHSPH), is a co-principal investigator of the study and the study coordinator of the data collection team and has been the main contact at the field counterpart who offered to have me come and work on the study for two weeks in January.

MPH Field Experience Activities

I traveled to Johannesburg, South Africa to work with Ms. Schwartz during the period January 11th-January 24th to assist with data collection, data entry and conduct an internal evaluation of the study operations at the four clinic study sites. Each of these activities will be discussed briefly:

Data Collection: At this phase, patients are completing their involvement in the study by participating in a final exit interview. The exit interview instrument repeats some of the questions asked during the baseline interview and also probes more deeply into issues related to family planning, relationships, and sexual health that emerged as particularly important during the follow-up phase of the study. In order to gain familiarity with the study content and operations, I initially shadowed a study staff member conducting the interviews at the Hillbrow Community Clinic.

In addition to the exit interviews, study staff have recently begun an audit of patient medical records to confirm self-reports of CD4 counts, family planning methods, antiretroviral (ARV) regimens, and incident sexually transmitted infections during the study period. The study also had human subjects clearance to collect information on viral load, hemoglobin, liver function, incident TB, ARV side effects and any relevant sexual and reproductive information noted in the patient’s medical record. After an initial orientation to the audit forms and process, I spent a large majority of my time working in the clinics pulling participant files and completing the 2 medical record audits. I also completed and verified some of the audits completed by other study staff.
Data Entry At each study follow-up visit, a follow-up sheet was completed, documenting women’s current family planning use, pregnancy intentions, ARV regimen, pregnancy test results, and most recent CD4 count and date. I assisted with entering the data from over one thousand follow-up sheets into a double-entry database so as to compare and validate with the initial entry database. I also looked at the follow-sheets for each participant in aggregate to identify any queries to resolve. I assisted with pulling patient files or reviewing completed audits to reconcile these inconsistencies.

Internal Evaluation: As a novel contribution to the project, I conducted a small, internal evaluation of the study. All study field workers were interviewed to gather their views on the study operations and study findings and two clinic staff were interviewed, as well. I developed semi-structured interview questions, which examined the study operations in terms of training, relationships amongst the study staff and relationship with clinic staff as well as the study substance in terms of key themes and implications of the research. I am currently in the process of writing a report for Ms. Schwartz that synthesizes the findings from these conversations and identifies key lessons learned.

MPH Field Experience Reflection

Even though my time working with Ms. Schwartz and the study was short, I felt that I was able to contribute to the study while also gaining invaluable insight regarding the specific issue of fertility for HIV-positive women as well as about the process of clinically based field research more generally. Through working in the ARV clinics, interacting with the study participants directly and engaging with the study staff, I understood first-hand the complexity of sexual and reproductive health decision-making for these women. From relationship dynamics to stigma and discrimination, these women face a host of challenges and vulnerabilities that impact upon their fertility intentions. In particular, partner dynamics stood out as an incredibly significant factor, which was also highlighted by the study staff who suggested that if the study were to be repeated or expanded they would like to see men included. I was also struck by the lack of patient-centered care at the clinics and the need for much greater integration of sexual and reproductive health services within HIV care for this patient population.

More generally, participating in these three activities allowed me to gain some experience with field research. I was able to better understand both the challenges and opportunities of conducting a study such as this within a clinical setting. I was also able to shadow Ms. Schwartz in her management of the study team and operations and given her success as a manager, I now have an excellent example from which to draw on. Related to this, I am confident that Ms. Schwartz will be able to serve as a colleague and mentor as my career moves forward.

I am incredibly grateful for this opportunity offered by the MPH Field Experience Fund. This experience has certainly enriched my time studying at JHSPH, and I suspect that it will continue to shape both my immediate and long-term professional decisions.
Developed quality monitoring tools for a study on exclusivity of breastfeeding and its impact on the nutritional status of HIV-infected and uninfected lactating women in Botswana

I am most grateful to Dr. Rosemary Kobue-Lekalake, the Primary Investigator in the breastfeeding study, who welcomed me back and gave me unwavering support throughout my stay at NFTRC. Working with Dr. Kobue-Lekalake, her team at NFTRC and our collaborating partners was inspiring and gave me confidence that ours will be a better Botswana, as long as we continue to pull together in our efforts to serve this beautiful nation’s vulnerable populations. I am proud to continue to be associated with this study.

Breastfeeding promotion has been associated with improved child nutrition and survival. The World Health Organization promotes exclusive breastfeeding in the first 6 months of life as a means to improve nutritional, morbidity and mortality outcomes for children under the age of five. However, breastfeeding also presents risk for transmission of HIV from mother to child, and has thus caused a debate about the appropriateness of breastfeeding in the context of HIV. Botswana’s infant and young child feeding draft policy recommends exclusive breastfeeding for 6 months for both HIV-uninfected and HIV-infected mothers unless replacement feeding is affordable, feasible, acceptable, safe and sustainable. However, in Botswana, prevalence of exclusive breastfeeding by 4 months of age is only 23%, indicating a need for intensification of breastfeeding promotion. Concerns have previously been raised
about potential adverse health effects of breastfeeding on HIV-infected mother, including higher mortality and decline in CD4 count and body mass index.

In light of these contradicting concerns for the role of breastfeeding in child survival and maternal health in the context of HIV, the National Food Technology Research Centre (NFTRC) is spearheading a study to assess exclusivity of breastfeeding and its impact on nutritional status of HIV-infected and uninfected mothers in Kanye, Botswana. The study will recruit HIV-infected and uninfected pregnant women who chose to breastfeed their infants. HIV-infected study participants will receive antiretroviral therapy in line with Botswana’s PMTCT guidelines. The study objectives as outlined in NFTRC’s study protocol are:

- To assess accurately the exclusivity of breastfeeding by measuring intake of breast milk and other fluids with the deuterium dilution method.
- To investigate the effect of breastfeeding on the nutritional and health status of HIV-infected and HIV-uninfected mothers
- To compare the growth and morbidity of infants according to exclusivity of breastfeeding.

**Student project: Development of Quality Monitoring Tools for the Study**

As part of the study protocol, health workers and data collectors will provide infant feeding counseling to mothers on a routine basis. However, the protocol does not cover how investigators are going to support counselors to adhere to infant feeding counseling guidelines, nor are there standards against which counselors’ performance will be held. Moreover, health workers could not be blinded to the HIV-status of the mothers as they need to know the status to provide relevant counseling. This presents the possibility intervention bias, where health workers may provide better counseling to one arm of the study more than the other, and therefore influence the nutritional outcomes of the mothers differently. There is also no standardized way to monitor other components of the study including data collection, collection of saliva samples and hemoglobin testing. As a quality control measure to strengthen internal validity of the study, it was decided that I develop standardized quality monitoring tools to be used by investigators when providing support supervision to study personnel.

**Project Objectives:**

- Provide high quality Infant and Young Child Feeding (IYCF) counseling to mothers in both arms of the study in accordance with guidelines set out in the WHO training manual for IYCF
- Minimize bias in the quality of support provided to one study arm over the other
- Maintain high accuracy and precision in measuring anthropometry of participants throughout the study period
- Maintain high quality in techniques for assessment of human breast milk intake and rapid hemoglobin testing during the entire study duration
- Develop and pre-test quality monitoring supervisory tools for study investigators to use in monitoring of quality data collection, care and support for all mothers and babies involved in the study.
Interviewed physicians to identify social and cultural factors contributing to delayed breast cancer presentation among women in Jordan

Findings from studies in Iran and Iraq and previous data from Jordan highlighted the problems of delayed breast cancer presentation in the Middle East. The unique culture, social norms and traditions in the Middle East make it essential to examine the role of such factors in the phenomenon of delayed breast cancer diagnosis. This pilot study focused on the physicians’ perspectives considering their unique perspective coming from their regular contact with patients. The way physicians understand delayed breast cancer presentation and the way they react to the problem can assist us in understanding the social and cultural dimensions of delayed breast cancer presentation in the Middle East.

Logistics and operations

I arrived in Jordan on the evening of January 4, 2010. I was provided with a preliminary schedule via e-mail by Ms. Ruba Anastas at KHCC. I was scheduled to start the interviews on the morning of January 5, 2010. It was planned for me to interview twenty practicing physician at KHCC. Ms. Anastas asked for volunteers from multiple departments/disciplines at the center. The following departments/disciplines were represented in the interviewed physicians:

1- Radiology
2- Internal medicine
3- Surgery
4- Pathology
5- Early detection
6- Psychosocial services
7- Palliative care

Orientation

On the morning of the January 5, 2010, I arrived at the reception area within KHCC. I was met by Ms. Ruba who provided me with information regarding the layout of the center so that I could identify the location of the interviews.

Ms. Anastas accompanied me to Dr. Fadwa Aitiga’s office where I had a chance to further discuss the goals of the study. Dr, Atigga provided a thorough outline of the center’s comprehensive cancer care procedures and the interactions between the department as well as the growing research component at the center. Dr. Atigga discussed the challenges and the promises of cancer care at KHCC and reviewed the interview questions.
Study conduct

A cover sheet was printed to use in every interview highlighting the name of the study, the voluntary participation nature of the study and the IRB approval. We conducted interviews and met with officials from the Jordanian Breast Cancer Program in Um Uthayna. I met with the director of JBCP and two project managers, as well as a social worker at KHCC and a member of the Breast Cancer Survivor Group (SANAD). The meeting served to outline the psychosocial support for cancer patients within the social and cultural parameters in Jordan*. My exit interview was conducted with Dr. Attiga and Ms. Anastas on Wednesday January 12th after the final study interview, which provided an opportunity to clarify remaining issues raised from the interviews.

Future analysis and final thoughts

KHCC is a world class comprehensive cancer care center in the heart of the Middle East. KHCC is an ideal place to study the social and cultural impact of cancer as a disease, cancer treatment and prevention. The professionalism and high standard of KHCC staff were key elements in the success of the interviews and in the depth of the insights acquired from the physicians. Physicians at KHCC provided in depth insight on the interactive role that culture and society play in cancer, cancer therapy, and prevention in Jordan.

The analysis of the data collected will focus on the larger patterns of behaviors and not on individual action. Also we will try to format the final outline of this work in a way that can be useful to further the knowledge of those interested in cancer care in the region. The analysis will not only consider social and cultural barriers to cancer therapy and prevention but also consider how these barriers may serve as opportunities for improvement and suggest practical solutions and steps to counter the problems.

*In compliance with IRB procedures and requirements, meetings beyond the physicians at KHCC will not be included in the study and no data was collected from subjects at such meetings. Such meetings will only serve to further the researcher’s understanding of KHCC and the culture in general.
Evaluated the Indonesia Cervical Cancer Prevention Program (CECAP) with the Ministry of Health and JHPIEGO

The trip from January 4 to January 14, 2011 included visits to a clinic participating in CECAP, observation of mobile outreach, participation in a Ministry of Health/District Health Office meeting about the program, and discussions with JHPIEGO Indonesia staff and consultants Abigail Ati, Francisca Lambe, and Djoko Soetikno on the challenges the program faces, and strategies for the final program evaluation.

MAIN ACTIVITIES

1. **Assess evaluation tools’ suitability to meet project goals**
   We compiled a comprehensive list of evaluation objectives, and the corresponding tools that will be used to achieve those objectives. We also identified and prioritized tools that have not been developed that may be called for to meet project goals.

2. **Develop evaluation tools as needed**
   We developed a facility assessment tool, based on tools used for similar programs in Malawi and Guyana, made relevant for the Indonesian implementation of the program.

3. **Adapt clinic registration forms for improved follow-up**
   We developed an alternative registration form to be used at participating clinics. The updated form includes richer information to facilitate more effective management of patients requiring follow-up, and better information on follow-up for program evaluation.

4. **Address barriers to follow-up and to the single-visit-approach (see Appendix)**
   At the end of the trip, we drafted a set of recommendations for:
   - Increasing the number of women who return for cryotherapy
   - Improving communication with patients’ families
   - Improving follow-up of women who need cryotherapy or were referred to a hospital for suspected cancer or large lesions.

5. **Draft descriptions of the program site and of the program itself**
   We prepared a description of relevant demographic characteristics of the Karawang district (the site of the program under evaluation). We also prepared a description of the CECAP program to complement and add to less recent descriptions of the project.
Appendix: RECOMMENDATIONS

1. Additional data to collect on initial registration form:
   a. Mobile number
   b. Reason for visit

2. Methods to increase number of women who return for cryotherapy
   a. If the husband has a mobile phone, the provider should attempt to contact the husband during the client’s VIA screening in order to explain the need for cryotherapy, and obtain verbal permission when possible/sufficient.
   b. Make a separate Informed Consent form (instead of having the women take home her Status Form) that the client can take home to the husband
      i. On this form, include a brief explanation of the following:
         1. The implications of being VIA positive
         2. The importance of treatment with cryotherapy
         3. The need for use of condoms for 40 days
   c. Consider implementing DHO targets for cryotherapy in addition to the targets for screening.

3. Follow-up of women who need cryotherapy or were referred to the hospital for suspected cancer or large lesions
   a. Encourage all clients that are referred to the district hospital to communicate the results of the referral visit with the puskesmas and/or her kader.
   b. Encourage all Ob/Gyns at the district hospitals to contact the puskesma when they evaluate a client that was referred for a large lesion or suspected cancer in the interest of continuity of care
   c. Follow-up data management:
      i. Record all VIA positive women (including those with large lesions) and women with suspected cancer on the “Form Register Khusus IVA POSITIF and Curiga Kanker” at the initial visit
         1. **This form will serve as a master list of all women who need follow up
         2. Record the following information on the “Khusus” Form at the initial visit:
            a. Name
            b. Registration number
            c. Address (complete)
            d. Date of initial VIA exam
            e. Type of follow-up visit needed
ii. When the women come back for cryotherapy, find the woman’s entry on the “Khusus” Form and fill in the other data points, such as:
   1. Date of cryotherapy visit
   2. Repeat VIA exam results
   3. Length of time between initial visit and cryo visit

iii. When the puskesma receives notification (either from the district hospital, the kader, or the client herself) that a referred patient was evaluated, record the date of the evaluation on the “Khusus” form, and record the results of the evaluation on the Status Form

d. Audit of follow-up data
   i. At the time of writing the monthly report, take note of all women who either did not return for cryotherapy or there is no record of attendance at the referral visit
   ii. Follow-up of these women:
      1. Providers should attempt to contact directly by mobile (refer to Register Klein to see if they have a mobile number
      2. Providers should contact the Ob/Gyns directly
      3. After providers have performed steps 1 and 2, and there are still women who need follow-up, the providers should notify the kaders that they need to follow-up with the women at their home
Conducted survey of pediatric oncology nursing care 
at Black Lion Hospital in Addis Ababa, Ethiopia

There are dozens, maybe even hundreds, of NGOs in Ethiopia focused on HIV/AIDS, malaria, TB, and other infectious diseases, yet rarely do you hear the word “cancer”, even though more people worldwide die from cancer than from HIV/AIDS, malaria, and TB combined. In many Sub-Saharan African countries, little is available in terms of diagnosis and treatment for cancer, and pediatric cancer, an even smaller heterogeneous subset of cancer in general, receives almost no attention or resources.

In January 2011, I spent approximately three weeks visiting the Black Lion Hospital in Addis Ababa, Ethiopia at the invitation of Dr. Aziza Shad, pediatric oncologist at Georgetown University, Washington, DC, who is leading a twinning program between the two hospitals with the additional support of the International Network for Cancer Treatment and Research (INCTR), an NGO which focuses on cancer care in resource limited countries. The visit was in conjunction with the First International Symposium in Pediatric and Adolescent Cancer from January 18-21, 2011 held in Addis Ababa and also sponsored by the Mathiwos Wondu-Ye Ethiopia Cancer Society. Before departure, a questionnaire was developed to gather background information about the oncology nursing care that is provided on this pediatric unit at Black Lion Hospital. Currently, Black Lion is the only hospital within Ethiopia- a country of nearly 88 million- that offers pediatric cancer treatment. This questionnaire was sent to the nurse contacts within Black Lion hospital before the arrival of our team. As a pediatric hematology/oncology nurse myself, the goal was to assess overall the current practices in pediatric cancer treatment and chemotherapy administration within Ethiopia, but my project specifically focused on the role that nurses play.

The questionnaire helped us to explore the Ethiopian pediatric oncology nursing team’s way of practicing nursing care in the context of their organizational, institutional, political, social, cultural, and individual factors that shape nursing practice in this institution and we then used this information to develop teaching modules. The nurses at Black Lion requested information on the various pediatric cancers that are present on this unit, as well as specific information on chemotherapy preparation and administration, in addition to other nursing care related topics such as safety. Three members of the visiting nursing team, including myself, took the five most frequent cancer diagnoses from the available data and a list of chemotherapy that was believed to be in use on the unit and created teaching modules along with written handout materials.

Upon arrival we also spent time conducting a nursing focus group about the strengths and challenges of caring for children with cancer within Ethiopia. The pediatric nurses from Black Lion, as well as nurses from outside Addis Ababa (total approximately 28), attended a full day of didactic teaching at Black Lion Hospital on Tuesday January 18 which focused on chemotherapy preparation, administration, and the management of the side effects of chemotherapy. We also spent a great amount of time on the unit in Black Lion Hospital to observe chemotherapy preparation and administration by Ethiopian nurses, to talk to the children and families, and to distribute five duffle bags of donated supplies, including stethoscopes, gloves, and toys for the children. On Thursday and Friday January 19 and 20, the
nurses from Black Lion Hospitals and other surrounding Ethiopian hospitals joined the physicians and pharmacists attending the third and fourth day of the *First International Symposium in Pediatric and Adolescent Cancer* to learn about palliative care and supportive care.

While I truly enjoyed and learned from my time in Ethiopia, I was overwhelmed by the severity of disease seen and yet amazed at the nurses’ resourcefulness and tenacity in treating such patients. I firmly believe that the place of your birth should not dictate whether or not one has access to adequate and appropriate disease treatments, and my training as an MPH student at Bloomberg School of Public Health has taught me that extraordinary things can be accomplished even in circumstances that are less than ideal. My hope is that our assessments and recommendations will help to shape the future implementation of the three year project and children in Ethiopia will someday enjoy the same survival rates as those in developed countries of the west.

(All photos used with permission.)

*C.R. English (left) with 2 other visiting oncology nurses.*

*Nurses in attendance at conference.*
Ethiopian nurse wearing appropriate protective gear to mix chemotherapy.

Pediatric oncology patients at Black Lion Hospital, Addis Ababa, Ethiopia.
Evaluated a continuing medical education program for nurses and midwives in Kampala, Uganda

Project Summary

My project in Uganda over the January intersession was extremely successful. As I detailed in my initial project outline, the proposed project was a partnership with the Uganda Nursing and Midwifery Council (UNMC), Makerere University, and Johns Hopkins University to evaluate a distance education series for nurses throughout the country. For the pilot education program, the Nursing Council and Makerere nursing faculty had identified hypertension as a priority for continuing education. A series of five lectures were given by the various topics pertaining to hypertension. These lectures were prepared and recorded in October of 2010. The CD-ROMs were completed by the end of November, and the program was launched in mid-December, with a videoconference.

After the nurses had completed the CD-ROM course, I traveled to Uganda in January to conduct the evaluation of the education program, with the help of the nursing faculty at Makerere School of Nursing in Kampala, Uganda. The evaluation of the education program had two major components: (1) key informant interviews (KII) and focus group discussions with a subset of nurses who had taken the course (our goal was to obtain 25 KII’s and several focus groups; a total of 22 KII’s and 1 focus group were conducted upon completion of the evaluation), (2) an paper (and/or email) survey to nurses who have taken the course and have an email address (we acknowledge that not every nurse will have an email address; for those that don’t, we will use paper surveys). I initially devoted a large amount of my time in Kampala to making contact with the nurses and midwives who had received the CD-ROMs in December and scheduling interviews and focus groups. I did this mainly through e-mail, phone calls, and text messaging. In conducting the interviews and focus groups, I was able to gain an appreciation and understanding of the challenges to accessing information due to the technological barriers that currently exist in Uganda, as well as the students’ strong desire to learn through new technologies (such as the CD-ROM course).

Project’s potential impact

This CME program evaluation is vital to the program’s success in that it has the potential to provide feedback regarding how the program can be improved upon and how effective the program was in reaching nurses living and working in rural areas of Uganda. It also has the potential to provide incentive for funding additional CME CD-ROM courses on other topics (which the students expressed a great interest in).

Outcomes/deliverables of project

We have now collected data from a series of KII’s and one focus group, and are awaiting the results of the email/paper surveys. The results thus far have been extremely encouraging and provide strong support for the CD-ROM CME course. We are hopeful that with the data we’ve collected thus far and the survey results, we will have the ability to determine the capacity for expansion to further topics, and promote the use of multi-media technology to educate healthcare professionals in low income, resource poor countries, such as Uganda.
As an internal medicine physician, I have had the unfortunate experience of seeing firsthand the morbidity and mortality associated with tobacco use. The burden of secondhand smoke (SHS) is more ambiguous diagnostically, but it too is a deadly modifiable exposure. During the last month, I had the opportunity to develop a broader population-based perspective about this concerning problem in clinical medicine—I spent several weeks in the capital city of Dhaka, Bangladesh collecting vital data concerning smoke exposure in public buildings. The project is just one component of a global endeavor to ban smoking in public places, a policy undertaking that originates from the 2003 World Health Organization (WHO) Framework Convention on Tobacco Control. Eliminating SHS, of course, ultimately requires targeting primary smokers. Given that SHS is most often an involuntary exposure, its elimination in public places is truly essential in preserving public health.

Under the direction of the Institute of Global Tobacco Control (IGTC) here at the Johns Hopkins Bloomberg School of Public Health and with the collaboration of the WHO and the Bangladesh Centre for Communication Programs (BCCP) in Dhaka, I met with officials at five hospitals, three government buildings and one elementary school to discuss current smoking policies, place air nicotine monitors and test the air for particulate matter under 2.5 microns (PM2.5 testing). The air nicotine monitoring required placement of passive nicotine monitors for one week’s duration, as per previously described IGTC protocols. The monitors were specifically attached to the ceiling of frequented rooms, such as waiting rooms, patient floors or offices, bathrooms, cafeterias and stairwells. Observations concerning numbers of people in the room, the presence of active smokers and the smell of smoke, and room size were noted during three visits (initial placement, mid-week visit to verify monitor presence, and removal day). The monitors were, for the most part, left intact and are currently being processed by a Johns Hopkins laboratory to quantify the amount of nicotine absorbed. In addition to direct nicotine quantification with these monitors, PM2.5 testing was performed to quantify additional pollutants that are often components of SHS and because of their small size (less than 2.5 microns!), can penetrate the lower airways and cause respiratory difficulties. PM2.5 testing is used as a surrogate for SHS exposure, but must be adjusted for other known harmful air pollutants when using it as a marker for SHS. The results of the PM2.5 testing are currently being analyzed and compiled from the various sites of data collection.

In addition to learning the technical aspects of using air nicotine monitors and the PM2.5 machine, I had the incredible opportunity to interact with accomplished individuals in the field of public health and work in a setting wrought with public health crises. My colleagues at the WHO and BCCP were physicians like myself who had redirected their careers from clinical practice to public health; their work in tobacco control was inspirational and their mentorship was invaluable to me from a personal and professional perspective.

Once compiled, the data from the nicotine and PM2.5 monitoring in Dhaka will be used to direct current smoking policies. The government buildings visited during my trip, in particular, smelled of smoke in most rooms, often with workers smoking in their shared offices (albeit hiding their cigarettes during my visits!) and in the canteens. The hospitals and school
appeared to be enforcing smoke-free policies in the areas visited, but data from the monitors will be useful in identifying unobserved behaviors. The collected data will be further compiled with previously collected data from restaurants and entertainment venues in Dhaka, which will then be presented directly by the WHO and BCCP to the Ministry of Health. The ultimate goal of our efforts is to create smoke-free environments, protecting vulnerable nonsmokers from the deadly exposure of SHS.

My few weeks in Dhaka were certainly an experience I will forever remember. I am excited by the fieldwork I was able to conduct during the last month, and I believe the experience perfectly complements my clinical work and current academic experience. I am even more eager about the policy-guiding implications of this research; the ability to protect large groups of people from SHS through a preventative approach is certainly a feat that cannot be accomplished in clinical medicine alone. This approach is one that I will utilize keenly as I continue my career as a cardiologist and public health practitioner.
Background
Second-hand smoke (SHS) is a combination of mainstream smoke exhaled by the smoker and sidestream smoke given off by the burning end of the tobacco product. Exposure to SHS can theoretically occur anywhere, including home, work, and public places such as restaurants and bars. Furthermore, SHS exposure is involuntary and represents a serious public health problem among nonsmokers, especially vulnerable children and women.

Among adults, SHS is associated with a 25-30% increased risk of heart disease and a 20-30% increased risk of lung cancer in otherwise healthy nonsmokers. SHS is classified by the International Agency for Research on Cancer (IARC) as a group 1 carcinogen, or a known human carcinogen; therefore, there is indeed no risk free level of exposure. In addition, SHS is associated with the development of both acute and chronic respiratory disease, as well as cerebrovascular events. Among children, there is an increased risk of developing sudden infant death syndrome (SIDS), acute and chronic respiratory infections including the development and worsening of asthma, middle ear infections, and an overall reduction in lung maturity. Among pregnant women, SHS is associated with low birthweight and may also contribute to preterm delivery and the development of prenatal and postnatal malignancies.

According to the World Health Organization (WHO) classification of the tobacco epidemic, Japan is defined as stage two, which is characterized by a greater than 50% smoking prevalence among men, a low prevalence among women, and a rising number of young smokers. Stage two is also characterized by low public awareness of the health effects of smoking and insufficient support from public and political sectors for the implementation of tobacco regulations and educational programs.

There is little information regarding indoor pollution caused by smoking in Japan. The aim of our project is to provide scientific evidence that can support legislation that forbids SHS in order to protect the population from the adverse effects of SHS exposure.

Current status in the three countries of interest:

<table>
<thead>
<tr>
<th>Country</th>
<th>Smoking Prevalence*</th>
<th>Current legislation against SHS 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>50-59%</td>
<td>Ban exists in many public places and taxis, but only 1% of restaurants impose a total ban on smoking</td>
</tr>
</tbody>
</table>

*among males age 15 and over 12

Objectives
- To quantify exposure to SHS by measuring air nicotine and fine particulate matter (PM2.5) levels in public places in Tokyo, Japan.
- To compare air levels of nicotine and PM2.5 in multiple public settings.
- To identify baseline air nicotine and PM2.5 levels for monitoring progress in tobacco control policies in Japan.
Data Collection

SHS is estimated by active sampling measuring PM$_{2.5}$ using a TSI SidePak AM510 Personal Aerosol Monitor and passive sampling of vapor-phase nicotine using a filter badge treated with sodium bisulfate which will be analyzed in Dr. Patrick Breysse’s laboratory at JHSPH. The airborne concentration of nicotine will be calculated by dividing the number of [grams of detected nicotine] by the volume of air sampled, which is the number of minutes of sampling multiplied by the flow rate. The SidePak provides real time measurements that are stored in the SidePak’s memory and will be downloaded for data analysis at JHSPH. PM$_{2.5}$ monitoring will be conducted in a building for 30 minutes, while air nicotine monitors will be left over for 7 days.

Results

Data collected from January 7 to January 24

PM2.5
27 places monitored in Tokyo, Japan

Nicotine
14 monitors placed in 6 restaurants
6 monitors placed in 3 entertainment venues

Total 20 monitors placed; 19 monitors set correctly for a week, 1 monitor was mistakenly displaced by workers

Regarding the obtainment of permission to place nicotine monitors, all the restaurants and entertainment venues were cooperative and provided permission for the research. The data is now being analyzed and statistical data will be achieved soon.