MPH Field Experience Grants

2014 REPORT

JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH

615 N. Wolfe St.
Baltimore, MD 21205
www.jhsph.edu
INDIVIDUAL APPLICATIONS

4 .................... *Priyanka Argarwal: Quantifying the National Burden and Risk Factors for Missing and Damaged Teeth in Nepal
(Field Research)

Faculty Mentor: Keith West
Location: Nepal

6 .................... *Madeleine Beebe: Using mHealth to Improve Women’s Antenatal Care Experiences and Future Care Seeking in Rural Mali
(Field Research)

Faculty Mentor: Peter Winch
Location: Mali

8 .................... *Marissa Boeck: The Implementation & Assessment of a Trauma Registry in Santa Cruz de la Sierra, Bolivia
(Field Research)

Faculty Mentor: Henry Perry
Location: Bolivia

10 .................... *Vanessa Cavallera: Capacity building for child mental health in refugee camps in Kenya
(Service-Oriented)

Faculty Mentor: Cortland Robinson
Location: Kenya

12 .................... Natalie Chan: Evaluation of the Impact of an Immersion Social Medicine Course
(Field Research)

Faculty Mentor: Andrea Ruff
Location: Uganda

15 .................... Natalie Draisin: Road Safety in 10 Countries: Targeting the Countries Responsible for Half of the World’s Traffic Related Deaths
(Service-Oriented)

Faculty Mentor: Stephen Teret
Location: Geneva
Group Applications

17 .................... Hoa (Holly) Vo and Nicholas Degner: Assessing the accuracy of disease burden data and the temporal trends in diarrhea and pneumonia as reported to the Macha Research Trust in Zambia
(Field Research)

Faculty Mentor: William Moss
Location: Zambia

19 .................... Christian Larsen and Molly Sauer: Field Validation of Malaria Surveillance Program in Southern Zambia
(Field Research)

Faculty Mentor: Clive Shiff and William Moss
Location: Zambia

22 .................... *Martin Tibuakuu, Fares Alsaled, and Joseph Alphonsus Nindow: Improving Patient Flow and Access to Eye Care In Rural Ghana - Partnering with Unite for Sight
(Service-Oriented)

Faculty Mentor: Marie Diener-West and David Friedman
Location: Ghana

Friends of Maiti Nepal Award Recipients 2014-2015

23 .................... Nicky Mehtani and Rebecca Willett: Shifting Perspectives from Experiential to Data Driven Community Outreach Activities that Combat Human Trafficking in Rural Nepal
(Service-Oriented)

Faculty Mentor: Alain Labrique
Location: Nepal

CRDR (Center for Refugee and Disaster Response) Humanitarian Assistance Fund Award 2014-2015

25 .................... Nada Alnaji and Ruba Sahab: NCD Guidelines and mHealth Records for Refugees in Lebanon
(Field Research)

Faculty Mentor: Shannon Doocy
Location: Lebanon

* INDICATES RECIPIENT OF JOHN BLACK GRANT MPH FIELD EXPERIENCE GRANT.
**Introduction:** Funding for this project was provided to support three primary objectives: (i) design an oral health component to the existing POSHAN Nepal survey, (ii) pretest the new survey questions in an in-group setting, and (iii) develop the instructional procedures and train Nepal-based enumerators on data collection for this new module. This report critically reflects on the activities and the practical lessons learned at each stage including but not limited to the strategy used to prepare the questionnaire and the modifications that resulted from training and testing the questionnaire on the surveyors. I also consider the potential benefits of such an exercise particularly in building a common team vision and managing issues of validation and robustness.

**Context:** Among the many contemporary public health problems facing the developing world, little is known about the prevalence or severity of dental disease and its impact on malnutrition. In Nepal, sparse data and common observations suggest a substantial oral health problem persists, but data are lacking to estimate prevalence. Further, it is known that few primary care workers are trained to provide such care. This project aimed to develop and pretest the feasibility of protocols appropriate for a field survey-based assessment of missing, damaged and mottled teeth among preschool children and women of reproductive ages, standardize a team of interviewers to carry out basic dental examinations and ask oral health questions, and develop the questions to incorporate dental assessment procedures into a planned national survey across representative geographic regions in Nepal in the summer of 2015 – the first such survey ever.

**Module Design:** In preparation for the training to be conducted in Nepal in March 2015, I first developed the tooth assessment module for inclusion in PoSHAN’s pre-existing survey, with the aim of collecting cross-sectional data on the burden of dental disease in Nepal and testing associations between dental disease and various risk factors. The module posed questions about oral hygiene habits, the history of dental disease, hygiene supplies used, ease of access to dental treatment, and a self-reported measure of missing, damaged, and mottled teeth. The questionnaire was translated into the Nepali language by the Kathmandu-based team, and simplified to be easily understood by a non-technical audience.

**Pretesting the Quantitative Data Survey Instrument:** The oral health module was administered to a team of 21 field surveyors in Kathmandu in the form of an iterated simulation exercise. People were divided into pairs and each pair alternately took on the role of the examiner and the respondent. This turned out to be useful because it allowed us to incorporate experiential, personal attitudes, improve internal and external validity, correct ambiguous or inappropriate translation, sort through any socio-cultural misinterpretation of the questions and rewrite those questions which may have been infeasible in the field. Linguistic concerns emerged in the framing of a few questions: for example, one query was meant to probe at a history of chewing problems for the respondent given dental disease. However, in its translation, the question appeared to ask whether a respondent has had any problems chewing food on a regular basis irrespective of dental disease. After prolonged discussion with the enumerators and the research team, the question was explicitly changed to generate an answer to the desired query. Furthermore, we increased the number of specific dental problem and treatment choices in the survey. These additional suggestions were made from

---

*Priyanka Argarwal: Quantifying the National Burden and Risk Factors for Missing and Damaged Teeth in Nepal* (Field Research)

Faculty Mentor: Keith West
Location: Nepal
feedback and discussion with the enumerators. I am confident that this exercise will help us gather more robust, reliable data in any future field application.

**Training:** Familiarizing the team with the structure of the human mouth and the mechanics of identifying the onset of caries was an important component of the training because the success of the project depends partly on the ability of the surveyors to assess oral health and produce precise data within a reasonable amount of time. Dental models were used for these drills – one, a replica of a healthy, normal oral cavity to demonstrate how the oral cavity can be divided into six sections based on type and function of teeth; and the other, showing sets of damaged, carious, and missing teeth. Photographic images helped visually demonstrate various maladies including carious teeth, grossly carious teeth, tooth necrosis, root stumps, cracked and chipped teeth, and mottled teeth. The discussion forum that ensued allowed participants to think out loud, clarify concepts and diagrams, rework our coding schema, and share notes.

**Conclusion:** The necessity and value of the training reinforced the bleak situation in Nepal vis-à-vis public awareness of oral hygiene. Dental treatment, as mentioned often by the participants, is not deemed a priority given the high costs of preventive treatment and lack of knowledge, unless preceded by severe physical pain. Team training like the one I was involved in is not a panacea for all the potential problems that could crop up in the future survey; however it goes a long way in guiding the vision of the team, and enabling us to get communities to begin to think about oral hygiene as an important component of health. Following the pretest, I have revised and updated the tooth assessment module, the instructional material, and the manual of operations used by the surveyors during the interview process. This includes additions on details about various treatment options, diagrams of the oral cavity, and incorporating some scenarios that were enacted during the mock sessions as aids for coding.

The project was also valuable from a personal point of view. Although I am from Nepal, this is the first time that I have been involved in a training program of this sort. It offered a chance to broaden my personal horizon from clinical work into the domain of public health at large. I have built positive, new relationships as a result – both, in Nepal and Baltimore – and expect to carry these relationships long into the future.
Conducted an assessment of a district health system to lay the groundwork for formative research on maternal health interventions in Sélingué, Mali.

On New Year’s Day I boarded a flight to Mali. I had visited Mali once before in 2011 while in nursing school. On my previous visit to Mali, I helped to conduct a descriptive study of the work environment and practice of rural auxiliary midwives, called matrones. This January I was again in Mali to work on a maternal health project, though in a different part of the country and with a different team of collaborators.

I am working on a project led by Dr. Peter Winch that is conducting formative research to explore how novel mHealth technologies can be used to improve maternal health in Sélingué, a rural health district in Southwest Mali. The project is a collaboration between JHSPH and the University of Bamako (USTTB). The grant was funded by NIH in the fall, at which point I began working to prepare IRB submissions and develop the intervention content. In November, two of our Malian colleagues, both physicians and doctoral students in public health in Bamako, joined us for a month of exchange. Oumar and Moctar’s time in Baltimore set the stage for my trip to Mali— not only did we put in many hours planning the project, we also traveled to New York City, went to a dance party in Brooklyn, and went ice skating in Patterson Park. When I arrived in Mali in January, I was welcomed as family.

The primary objectives of my trip were (a) to conduct an assessment of the health system in Sélingué, (b) to develop a written synthesis of the visit for use by the larger project team, and (c) to work with local collaborators to develop an initial intervention concept, informed by the findings of the site visit. I began by working with Oumar, Moctar, and Seydou Doumbia, the Dean of USTTB’s Schools of Medicine and Public Health, to develop a plan for the site visit. The goal of our visit was to understand the landscape of health care provision in Sélingué, with a particular emphasis on maternal and community health services. The information gathered was meant to inform site selection and development of data collection instruments for the parent study. Specifically, we aimed to collect information on the local hierarchies of care, how referrals are structured and directed, the availability of transport for obstetric emergencies, and the role of community health workers. We also focused on identifying challenges and gaps within the health system that could be addressed by mHealth interventions.

Sélingué health district is located 120 km southwest of Bamako, or 2-4 hours depending on your vehicle and the state of the roads. Sélingué is defined by the large hydroelectric dam that sits at the top of the district, forming the 409 km² artificial Lake Sélingué below. The lake splits into two arms, effectively isolating the populations that live in the area between the two arms. There is one paved road in Sélingué Health District, which runs through the town of Sélingué and ends at the dam. Sélingué is home to 91,425 inhabitants, whose main activities are farming (rice cultivation and gardening) and fishing on the lake. The district referral hospital, or Centre de Santé de Référence (CSRef), is located in Sélingué Town and led by Dr. Dadé Haidara, the Médecin Chef. The rest of the district is divided into seven health zones (sub-districts), each of
which is anchored by a community health center, or Centre de Santé Communautaire (CSCom), typically led by a nurse. Specialty services, including radiography, surgery, anesthesia, and most lab tests, are only available in Sélingué Town.

In the course of our assessment, we spent several days at the referral hospital, and also traveled throughout the health district to visit several community health centers and one village. We elicited information and feedback through three activities: (1) Visits to local health facilities to document availability of health services and current interventions in place; (2) sharing plans for future data collection and eliciting feedback from health workers (physicians, midwives, matrones, nurses, CHWs); (3) document review of digital files and paper records. We also modified an existing map of the health district to reflect the distribution of health facilities. We then triangulated information from these various sources in order to characterize the structure, strengths, and weaknesses of maternal health delivery in Sélingué.

The site visit yielded a practical understanding of the many elements, stakeholders and relationships that make up the health system in Sélingué. We also had the opportunity to introduce the project and begin building relationships with key local contacts. Last but not least, we identified several priority areas to be addressed by the intervention:

- Underutilization of health services:
  - Poor antenatal care compliance
  - Late entry and low completion rates
- Persistence of home birth without a skilled provider
- Preeclampsia/Eclampsia: high incidence, late recognition, implicated in several maternal deaths
- Absence of emergency transport for women in labor
- Dearth of services at the community level and lack of coordination between community health workers and facility-level health workers
- Lack of supervision, communication, feedback, and accountability mechanisms at all levels of the health system

Returning to Bamako, we synthesized our findings and distributed them to team members in Mali and the US. We were also joined by Peter Winch, my faculty mentor and the PI on this project. The remainder of the trip was spent discussing the findings of our site visit with various local collaborators, including faculty at USTTB, Save the Children, and the national organization for information technology in health, or the Association Nationale de la Technologie et de L’information Malienne (ANTIM). Additional meetings among the project team yielded a detailed draft of the intervention concept and an outline of action items moving forward.

The work we completed in Mali in January has served as a platform for our ongoing efforts since returning to the US. We are now laying the groundwork for baseline surveys and qualitative interviews over the summer, to be followed by intervention activities in the fall. My participation in this project, my travel to Mali, and my ensuing growth as a public health practitioner and novice researcher— all of these extraordinary opportunities were facilitated by my receipt of the MPH Field Experience Award. I feel extremely grateful for the experiences I have been able to access through that funding. Before traveling back to Mali in January I was planning to pursue a domestic midwifery program in the US after graduating from the MPH program. Instead, I will move to Mali in June to continue developing my public health skillset as a field coordinator for this project, and to continue investing in my relationships with Malian colleagues and friends.
As part of my Johns Hopkins Bloomberg School of Public Health Master of Public Health (MPH) degree, I traveled to Santa Cruz de la Sierra, Bolivia for twelve days in January 2015 to complete my practicum project which was a pilot study of a trauma registry. This experience was supported by a competitive MPH Field Experience Fund Award and received Institutional Review Board approval through Northwestern University. Project objectives included visiting and assessing the three prospective trauma registry sites as well as performing a trial run of the registry at one of the facilities.

PROJECT ACCOMPLISHMENTS

While in Bolivia I was mainly stationed at Clinica Foianini, run by Dr. Esteban Foianini who was our main contact for the project. I made multiple site visits to each of the three participating facilities, meeting with key personnel involved with the project. I completed both the World Health Organization’s Brief Essential Trauma Care Checklist, as well as a revised PIPES (Personnel, Infrastructure, Procedures, Equipment and Supplies) Surgical Assessment Tool for a baseline capacity evaluation of each hospital. I also analyzed the trauma flow and made tentative basic registry operating plans at each facility for when I return after graduation, including the identification of data collectors, overseers, and data validation techniques.

Furthermore, we initiated the trauma registry at Clinica Foianini. The emergency room nurses are charged with completing the paper forms, copies of which will be placed in both the patient’s medical chart and our research files for future entry into the online database. The head nurse is responsible for ensuring the completeness of the forms, as well as verifying that all trauma patients are being captured. This latter task is possible due to new procedures we introduced within the electronic charting system, as well as trauma patient documentation methods in medical records. In conjunction with the human resources department at Clinica Foianini and the Bolivian chapter of the Association of Medical Doctors of Asia, we initiated the search for a trauma registrar, who will be charged with overseeing the registry once we incorporate additional facilities.

EXPANDED OBJECTIVES

In response to numerous discussions with local healthcare personnel regarding the state of the trauma system in Santa Cruz, our project aims expanded to include the improvement of emergency medical and rescue services through first responder training. I met with firefighters and additional key emergency response personnel who expressed a strong interest in more accessible and affordable training opportunities. AMDA-Bolivia the non-governmental organization, managed by Dr. Foianini, which offers all standard life support courses in Bolivia is interested in backing this endeavor. This would create a sustainable, low-cost or free training course for lay people and healthcare workers alike, which would continue after my year of research ends. Models under consideration include a course developed through the Northwestern Trauma and Surgical Initiative or the ACS TEAM course.
Towards the end of my time in Bolivia I met with health secretaries at the city and department level, both of whom were highly intrigued with our proposals on the further development of a trauma system in Santa Cruz. So much so, in fact, that they requested to add an additional, second-tier hospital to our registry project and pledged the necessary support to help ensure the endeavor is a success. This is in agreement with the Ministry of Health’s slogan “Health…a right to live well,” which includes the vital steps of adequate emergency response and trauma care.
Dadaab is located in Northern Kenya and is composed by five refugee camps of which three (Dagahaley, Ifo and Hagadera) were established in 1991/92, and two (Ifo 2 and Kambioos) in 2011. The vast majority of the refugees (96%) are from Somalia, with most others from Ethiopia. Data show that children and youth constitute 60% of the total population in Dadaab (about 214,300 children in November 2014). In refugee settings, people with mental health conditions are often “invisible”, are not likely to be identified and tend not to be included in assistance programs. All of this is even truer for children.

The specific objectives of my mission with UNHCR in January were:
1. To assess MHPSS needs among child and adolescent refugees and the capacity of staff of UNHCR partners to identify and address priority mental health and neurological conditions in children;
2. To provide staff of UNHCR partners and refugee volunteers with basic knowledge on how to deliver psychosocial support for refugee children and adolescents;
3. To provide training to staff of UNHCR partners (health and non-health) around MHPSS problems of children and youth;
4. To provide recommendations to strengthen cooperation between various actors dealing with child and adolescent MHPSS, and guidance around future activities to strengthen child and adolescent mental health in the refugee operation.

During the first part of the mission (10 days) I conducted the needs assessment on child mental health through key informant interviews. I visited the camps and the facilities of UNHCR implementing partner NGOs in the five camps, had meetings with the focal points for MH activities and informal interviews with refugees.

The second part of the mission (7 days) focused on the analysis of the needs assessment and the development and organization of four trainings. Given the prolonged displacement situation in Dadaab, both the WHO mhGAP Intervention Guide training material and the pre-final draft of the WHO/UNHCR version for humanitarian settings have been used as resources. The training aimed to build capacity in technical and refugee staff. Participants were 6 psychosocial counselors, 4 clinicians from three of the four health agencies (IRC, MSF, RCK) and CVT, 33 community workers (CHWs, social workers, rehabilitation workers, animators and mental health assistants), and 10 primary school teachers. The training focused on epilepsy in childhood and behavioral disorders in children for all the participants, with adaptation of content based on the role of the trainees. One additional module on developmental disorders was included in the training for community workers and teachers. The training for teachers focused on understanding of basic child mental health conditions, awareness raising, suggestions for inclusive education, and how to create a healthy psychosocial environment.

The last part of the mission (4 days) aimed to develop recommendations and provide feedback to partner
organizations actively working with children. With this purpose I participated to the MHPSS working group meeting on the last day of the mission. A summary of the needs assessment, recommendations and outcome of trainings will be provided for internal use to UNHCR.

This has been an amazing experience for my personal and professional development. I found inspiring motivation in the people I worked with that have been serving in Dadaab for many years, never letting themselves be overwhelmed by the magnitude of the displacement and needs. In such settings one can feel that nothing that is being done is enough to really make a difference, but the people in the field reminded me that even though public health is about “millions at a time”, every person that you can help also makes a difference.
Natalie Chan: Evaluation of the Impact of an Immersion Social Medicine Course
(Field Research)

Faculty Mentor: Andrea Ruff
Location: Uganda

The goal of my practicum was to help SocMed Global conduct a program evaluation of their social medicine education program, a course entitled: “Beyond the Biological Basis of Disease: The Social and Economic Causation of Illness”. This was a particularly meaningful experience for me as I was once a student of the program, and was so inspired by SocMed’s mission that I had become a part of the organization as a founding board member in 2012.

When we think about the role of public health, we often envision service provision, or research on recipient populations. However, in order to build a community of dedicated and passionate public health practitioners, it is also important to pay attention to the process of training of public health professionals. What I felt was unique and especially exciting about my experience was that the focus was on training the future generation of leaders in public health, social medicine and social justice. Currently what is often lacking especially in medical education is the emphasis on the broader social determinants of health, which is overshadowed by the emphasis on teaching biomedicine. As the title of the SocMed course states, the goal of the class is really to help students explore what is beyond the biological basis of disease and to understand the social, economic, cultural, historical, and other root causes of illness. SocMed engages students in building effective partnerships through facilitating self-reflection of personal experiences with power, privilege, race, class, gender, and sexual orientation. In the spirit of praxis, which is a model of education that combines critical reflection with action, the course give students the opportunity to discern their role in global health and social medicine through facilitated, in-depth conversations with core faculty and peers. By conducting a formal impact assessment, our goal was to better understand how our SocMed curriculum helps shape student attitudes and empower them to take on challenges with a social medicine perspective. We want to be able to share a formal evaluation of the strengths of our approach, in hopes of inspiring a widespread adoption of social medicine curricula for medical and health professional schools worldwide.

Our evaluation used both of surveys, interviews and focus group discussions to explore how students and alumni perceived the SocMed experience and its impact on their personal growth and their aspirations for engaging in ways to promote health equity. The survey was divided into six sections that were guided by the spheres of influence the SocMed curriculum aims to have through its approach of personal, praxis and partnership. The first section comprises of demographics and previous exposure to diversity; the second explores career path and future intentions; the third delves into the personal, examining self-reflection, transformation and growth; the fourth focuses on partnership, global identity, cultural competence and international connections; the fifth is about praxis and activist and social justice tendencies; and finally the sixth section asks for feedback on the SocMed program’s structure and elements of our organization’s function. The focus group gave me an opportunity to explore what aspects of the SocMed experience current students felt were especially conducive to their learning, and what aspects were challenging. Overwhelmingly, the students provided positive and constructive responses to help enhance what SocMed could do during the course, and afterwards for its alumni to continue sustaining a strong network of leaders in social medicine.
During my time in Uganda, I also had the opportunity to meet with several SocMed alumni, some of whom I have known, and many others I met for the first time. What was fascinating was our ability to immediately connect because of our common experience as alumni, and perhaps more importantly, our shared passion for social medicine. While there were disheartening stories that reminded me of my own struggles to maintain a focus on achieving health equity, there were equally stories that were very encouraging. I found listening to the Ugandan alumni’s accounts of how they have continued to live out and incorporate the principles of social medicine into their clinical practice very humbling. Prior to our conversations, I had a preconceived notion that most alumni, and in particular those who worked in resource-poor settings, would have the greatest challenges in serving high volumes of patients and being able to go the extra mile to pay attention to and respond to the diverse social determinants of their patients. Like many alumni from high-income countries, I found it difficult to keep pace with the expectation of being a medical trainee and my desire to address the broader needs of families under the structural constraints of the health system; thus, it was especially refreshing to hear how others have been able to create big and small successes in practicing social medicine.

Being inspired by the students – the Focus15ForHealth Campaign

This was the first time that I returned to Uganda after 4 years, with my last visit having been a student in the SocMed course back in 2011. The warmth of the people was apparent from the time that my younger brother, Stefan, and I landed in Uganda. It felt like going back to a second home, catching up with friends and mentors I had known from my times there during medical school. As my third visit to Uganda, I began to truly appreciate the value of returning to a country and establishing sustained partnerships and connections. Sharing this experience with Stefan was also very special, and I was glad he enjoyed a journey that is off the beaten path for his first trip to East Africa.

The most rewarding part of my experience in Uganda was meeting the students in the class of 2015, and being infected with their enthusiasm and energy. Witnessing their growth and transformation as health professional students learning about social medicine was very inspiring and heart-warming. I spent time observing how students engaged in the classroom as they went through different modalities of learning and saw how they bonded as they immersed themselves in deep discussions about challenging topics such as the legacy of colonialism. I also enjoyed getting to know the class through our every day conversations over tea break and other social gatherings.

What impressed me the most about the class was the collective effort they have put in for their #Focus15ForHealth advocacy project, which highlights the power of SocMed’s pedagogy of praxis that provides tools to take action to promote health equity. As part of the course, student groups develop project ideas early on and the class votes on a topic they want to move forward with such that they have time in the remaining weeks of the course to implement their plan. The class chose the issue of addressing health sector spending to improve health outcomes of Ugandans and decrease brain drain after learning about the current local efforts from activists and organizations that were invited to present during the course. Their goal was to put pressure on the Ugandan government to follow through on their promise of increasing health sector expenditures to 15% of its budget from the current 9%. The 15% represents the commitment of 15% of the national budget to health sector improvements, as outlined by the Abuja Declaration that President Museveni had signed in 2001. The students drafted a letter and delivered it to President Museveni shortly after the completion of the SocMed course, and followed this action with a strong social media campaign, #Focus15ForHealth. They filmed an effective video to spread the word about their cause, created a photo campaign to involve others, and launched an online petition to collect more signatures to support their call to action. They were also able to get the attention of local media and politicians. As a group of students from across the
globe: Uganda, Rwanda, Zimbabwe, Lebanon, Argentina and the United States, the students have continued to work together on this campaign even after returning to their home countries. I am so proud of all of them and I cannot wait to see where this campaign continues to go. It is moments like these that demonstrate the potential of a strong network of leaders in social justice; I am eager to learn more about how SocMed can continue to foster the growth of its students and alumni through the final stages of our program evaluation.
Natalie Draisin: Road Safety in 10 Countries: Targeting the countries responsible for half of the world’s traffic related deaths (Service-Oriented)

Faculty Mentor: Stephen Teret
Location: Geneva

As part of the World Health Organization Road Safety team in the Division of Violence and Injury Prevention and Disability, I had the opportunity to work on a variety of projects. I worked directly for Elena Altieri, a communications officer, and took on other responsibilities as well.

Elena needed help creating a road safety reporting guide, co-authored with the Pulitzer Center. It was at risk of not being published because it was so far behind, so she needed someone to seek and incorporate comments. As per Elena, this guide would not have come to fruition without my help. I helped liaise with contributing journalists, re-formatted the guide to make it more readable, and provided edits. The experience put me in contact with many renowned reporters, including the director of the Pulitzer Center. Working on the project taught me the challenges of working with a donor and regional offices, who both have very different interests and perspectives. The guide will be distributed internationally, with three target audiences: first, editors of news agencies who need to understand the importance of reporting on road safety, second, reporters who already report on road safety but need ideas for new angles and ideas, and third, reporters who are new to reporting on road safety and need guidance in how to do so. It will be impossible to measure the impact of the guide, but if it resulted in an article that saved one life, we succeeded.

The second deliverable was a social marketing guide which highlights best practices from social marketing campaigns funded by Bloomberg Philanthropies and executed by WHO regional offices. The intention was to highlight what worked well and could be replicated, and what should be improved. I helped bring the perspective of a student to the guide, which was important because it may very well land on the desks of students studying social marketing. Elena was kind in giving me free reign to add to the guide. I edited the entire guide and found areas for improvement, before incorporating comments of others. The guide will also be distributed internationally.

A related deliverable was a report on all of the social marketing campaigns funded by Bloomberg Philanthropies, to disseminate findings to the Philanthropy itself. Bloomberg has pledged funding for another five years of road safety work, which is why it is crucial for WHO to maintain its relationship with the donor for the years to come. These social marketing campaigns focused on drunk driving prevention, helmet use, and seat belt use, and could be replicated in other areas. Completing this guide involved connecting with country offices to better understand campaign evaluations and represent them accurately.

WHO also provides fact sheets for journalists reporting on road safety. Additional Bloomberg-funded deliverables were six fact sheets on road safety: basic facts, the role of WHO, key risk factors, common road safety myths, data FAQ, and resources. Journalists can turn to these online fact sheets to enhance their reporting. Assisting with the production of these fact sheets involved editing, liaising with the designer, and finding and purchasing photographs. It was also an interesting lesson in WHO’s editing process. If the document is not intended for print media, the review isn’t as heavy and sometimes is surprisingly put online with minor errors in it because it is cheaper than paying a designer to correct them. WHO walks a fine line between perfecting documents and publishing them expediently, as well as refining the process to save money. If WHO could hire a student to do the design work, they would save a lot. It was fascinating to watch how
staff choose their words, frame statistics, and highlight information, as well as the interpersonal dynamics that come into play in the publishing process.

Another deliverable was a case study about the WHO Journalism Fellowship in Cambodia, where journalists were chosen to improve their road safety reporting skills. A former Hopkins student wrote the case study and I had the opportunity to edit and expand upon it. The case study pulls out best practices from the fellowship in Cambodia and encourages other countries to apply for the fellowship as well.

I am drafting my own case study, utilizing my fluency in French to understand the relationship between the French government disseminating road safety information to journalists, and journalists in turn producing quality articles. I am looking at press releases from the French government and comparing them to articles from media monitoring services that collect news about road safety. After classifying articles based on whether or not they are directly, indirectly, or possibly related to the press releases, or unrelated, I will explain the trend and also highlight best practices for going beyond the government press release in road safety reporting. This deliverable will be completed upon my return to Hopkins.

Going beyond my role, I also helped with a Technical Consultation on Drugged Driving. Officials from countries around the world gathered at WHO in Geneva to discuss the problem of drugged driving, and how to solve it. It was fascinating to gain insight on the problem, which is well documented in some countries and not well documented in others. Surprisingly, many countries do not test for drugs after making an arrest, they only test for alcohol because it is less expensive. Those that do test for both substances find that they are often used simultaneously, which exacerbates the effect on driving. Spain has an interesting intervention where they test everyone caught speeding for drugs and catch about a thousand people per week. The problem is that in countries like India where there is a documented drug problem and a documented high rate of road traffic crashes, the two cannot be addressed as a drug driving problem unless there is evidence. However, the problem is so severe that we cannot afford to wait, placing us in an interesting paradox.

As a deliverable for this meeting, I am helping to draft a report for internal dissemination, and perhaps as a consultation project later, a policy brief for external use. The meeting was particularly helpful in making connections, and coincidentally, was attended by Ralph Hingson of NIAAA, who was the main audience for a clinic I was involved in with my advisor, Steve Teret. Geneva is a very small world.

My time at WHO helped me better understand the role of the organization and its partners in road safety. It has only increased my commitment to the field, which is unique in that it has a very tangible problem with a proven solution. The biggest hurdle is making every level of the field come together to address the problem in a way that best meets the needs of the region at hand.

Working at WHO has also opened doors in obtaining a job upon the completion of my MPH/MBA program. I am fortunate that my director was willing to put me in touch with key players in the field and recommend me for full time opportunities. I am extremely grateful to Hopkins, the MPH Field Experience Fund, and my advisor Steve Teret, for enabling me to have this incredibly valuable experience.

PS – I will add one funny side comment. There are so many Hopkins graduates at WHO that the school is sometimes referred to as the ‘Hopkins Mafia.’
Hoa (Holly) Vo and Nicholas Degner: Assessing the accuracy of disease burden data and the temporal trends in diarrhea and pneumonia as reported to the Macha Research Trust in Zambia (Field Research)

Faculty Mentor: William Moss
Location: Zambia

Our practicum experience took place from December 29, 2014 to January 20, 2015 in Zambia. Our project primarily took place at the Malaria Institute in Macha, a small rural community consisting of a few thousand residents in the Southern Province of Zambia. The Malaria Institute was established in 2005 in collaboration with the Johns Hopkins Bloomberg School of Public Health. It is located on a mission that was established by the Brethren in Christ Church in the early 1900s and contains a regionally renowned hospital, Macha Mission Hospital, which opened its doors in 1957.

Our research was split into three areas: improving malaria reactive case detection, assessing the incidence of pneumonia and diarrhea in children under 5 in the area, and analyzing temporal trends in malaria pathology at Macha Mission Hospital. The region has seen a dramatic decline in malaria in the past 10 years. To monitor the prevalence of malaria in the region, the field team at the Malaria Institute had originally performed surveys of randomly selected houses in which the inhabitants were tested using rapid diagnostic tests and blood smears. Although the research team found almost no cases of malaria, there was still a steady flow of cases entering the wards at the hospital. This resulted in a change in protocol to move from passive household surveys to the active surveillance method of reactive case detection. Whenever a patient presented to one of the 14 district health posts with malaria, the field team would be sent to the patient’s house and test every person living within 150 meters of the household. At the start of 2015, the protocol was revised to extend to a 250 meter radius, which was a change that required permission from the heads of the surrounding villages involved in the study. Depending on the site involved, both informal (sitting under a tree) and formal (meeting in a clinic room with community organizers following an agenda of presentations) gatherings took place to introduce the change in protocol. We had the privilege to present the protocol changes and to be involved in the discussion on multiple occasions. During our time at Macha, we would accompany the field team on all of their reactive case detection outings. In areas of clustered houses, it was often difficult for the field team to determine which houses did and did not lay within the 150 or 250-meter radius. Our hope was to create detailed maps of the surrounding area, noting ecologic and environmental factors. Once the maps were completed, we would attempt to correlate malaria cases with certain ecologic factors, such as ditches with standing water, maize fields, and species of livestock.

Another component of our project was related to Zambia’s recent introduction of a nationwide campaign to vaccinate all children under 5 against rotavirus and pneumococcus. As part of a new method of reporting diseases introduced by the Malaria Institute, each health outpost had a person designated to send weekly counts of malaria, pneumonia, and diarrhea to the institute via SMS. We visited health outposts to look at health registers to determine how well they matched what was reported via SMS and to collect data to assess temporal trends in incidence. We found that relying on a single person at each clinic created a lot of difficulties, because that person would often leave for weeks at a time or move on to a different job without training their replacement of the specifics of the protocol. Although incomplete for these reasons, our data did show a moderate decrease in the incidence since record keeping began.
Finally, through work with local research staff in Macha, we had the privilege to collect and analyze data on pediatric admissions at Macha Mission Hospital since 2004. We are interested in assessing whether decreasing malaria prevalence results in increased cerebral and severe malaria due to lack of immunogenicity from early childhood exposure.
Christian Larsen and Molly Sauer: Field Validation of Malaria Surveillance Program in Southern Zambia
(Field Research)

Faculty Mentor: Clive Shiff and William Moss
Location: Zambia

From January 3-17, 2015, our team was based in Macha, Zambia, at the Macha Research Trust/Malaria Institute at Macha (MRT/MIAM). Our project focused on validating the existing malaria surveillance and reporting systems in place in Southern Province, Zambia. There are currently two reporting systems for malaria in this region—a government-run national program and a regional program run by MRT/MIAM—and both use SMS reporting to gather information about malaria testing, positive cases, and resource stocks. Our aim was to collect weekly data from both systems for comparison, and then to cross-check these counts against clinic registers at 14 rural health centers to validate the reporting systems, identify possible barriers to accurate reporting, and examine the role of rural clinics within the larger health system in Zambia. We also proposed to review case data for pneumonia, diarrhea, and non-malaria febrile diseases to gain insight into the validity of the reporting system for these conditions and explore possibilities for expansion. It is important to note that these diseases are not included in the national reporting system but are collected by the regional MRT/MIAM system.

Both data systems emphasize rapid diagnostic test (RDT) use and results. The nationwide malaria reporting system is coordinated through the National Malaria Control Centre (NMCC), collecting data about clinic attendance, tests conducted, positive results, and testing and treatment supply levels. This data is hosted in the DHIS2 database system, available to registered users. A second reporting system, which gathers data from the Macha and Nchelenge regions of Zambia and the Mutasa region of Zimbabwe, is coordinated by MRT/MIAM as part of the ICEMR project. This system gathers information about tests conducted, positive cases, treated cases, diagnostic supplies, and pneumonia and diarrhea cases. Data is housed in the REDCap system and in local files in Macha. Participants are incentivized to report through an airtime credit of 20 kwacha (about $3.00) for each weekly submission; an SMS costs about 20 ngwee (about $0.03) but the incentive accounts for the time required to tabulate data.

After arriving in Macha and discussing this proposal with the MRT/MIAM team, we determined that traveling to clinics specifically for this project would be neither feasible nor cost-effective. Macha is only accessible by dirt road, and many of the clinics require long drives through extremely rural areas; further, the cost of fuel in Zambia is high. Instead, wherever possible we traveled with teams already heading to the field, and we visited multiple clinics per day. Our time at each clinic was limited, but there was a greater likelihood of visiting all 14 clinics in the area. We also adjusted our planned time period for review; the project was set up to evaluate and validate data for the period November 25, 2013 through January 4, 2015, to include a full year of data and allow for comparison of validity before and after the previous (May 2014) review.

As a pilot, we first visited the Macha, as MRT/MIAM is located on the Macha Mission Hospital grounds. We reviewed their RDT register, which lists each RDT conducted and its results, for malaria data and the outpatient department (OPD) register for pneumonia, diarrhea, and fever data. We quickly found that the case definitions used for pneumonia and diarrhea were unclear, and that we simply did not have enough time to accurately gather a full year of data from the OPD registers at each health center. We modified our methods accordingly, opting to review a sub-sample of the pneumonia and diarrhea data by selecting one week of
data from four different months over the year and developing clear definitions for pneumonia and diarrhea. At each health center, we met with the in-charge, explained the basic project (with assistance from MRT/MIAM staff fluent in Tonga), and reviewed the RDT and OPD registers. We also conducted a basic interview to supplement the raw data and allow us to identify possible obstacles in the reporting system and sources of error between the systems. Each register was reviewed by hand and cases were counted manually for each week, for a total of 58 weeks for the RDT register and 4 weeks for the OPD register. All records are handwritten, which provided a challenge in trying to accurately collect and interpret diagnoses by date and age.

In addition to these clinical visits, we were also able to join the field team on some site visits to mosquito trapping locations and index case homesteads. This provided us with cultural competency experience and a better understanding of the typical housing, family life, and resources for residents of this region.

We are still analyzing the data gathered through this project but, overall, most health centers are reporting their malaria cases to both systems with regular frequency. We found that the positive case counts for malaria tended to be consistent or fairly close across the two reporting systems and the clinic registers. Conversely, the total number of RDTs used was more frequently inconsistent. There was also a recurring issue across several sites where one system was ahead or behind by a week. For pneumonia, diarrhea, and febrile diseases, we found that the case definition varied significantly between clinical providers for pneumonia and diarrhea.

This project provided us with an outstanding opportunity to explore the existing health system in rural Southern Province, as a case study of similar health systems in developing countries. We learned a tremendous amount about the strategies and challenges associated with mHealth systems and the need for a relatively reliable clinical system underlying the public health surveillance system. Specifically, our experiences working with multiple rural clinics showed that varied or subjective case definitions can limit the utility of broad surveillance and reporting systems. This is particularly challenging for surveillance for conditions that lack a definitive test; we experienced this with the pneumonia and diarrhea reporting system. This is in sharp contrast to the malaria surveillance system, which relies on a clear diagnostic method (RDT) and provides more reliable, or at least comparable, data.

We also gained significant experience in developing and maintaining community partnerships and ensuring continuity of institutional knowledge. MRT/MIAM has worked directly with health clinics in each of the three target regions for several years, resulting in strong partnerships between institute and clinic staff. This was apparent when we traveled to each site with MRT/MIAM representatives, who are seen as reliable resources for information and support. However, we also experienced issues at sites where key staff involved in reporting or oversight of data collection and reporting had been transferred or otherwise left their position. In these cases, we saw that reporting was deeply impacted by changes to staff responsibilities and roles.

Our cultural competency and communication skills were also enhanced. For example, we developed a set of standardized questions to discuss with clinic staff, and only after the first few interviews did we recognize that the terms we used did not translate well into the colloquial English in this region. We had also based our questions on theoretical problems but, as we conducted the interviews and register reviews, we recognized that many of our perceived potential obstacles were irrelevant and there were many other challenges and potential sources of error that we had not considered. We also learned to adapt to limited technological resources and to recognize the environmental obstacles of working in areas with transportation shortages, relatively poor infrastructure, and weather limitations (our project was conducted during the rainy season).

Overall, this experience provided us with an invaluable experience in a rural, developing world setting that
we would otherwise not have gained if not for the generous funding, strong supervision and guidance provided by JHSPH, as well as the kindness and hospitality of MRT/MIAM and health center staff. In addition to gaining essential knowledge about designing, implementing, and evaluating surveillance systems, and understanding the role of rural health centers and independent research institutions within a larger health system, our data will also support MRT/MIAM activities and help optimize the existing reporting system to collect consistent, reliable data about malaria, pneumonia, and diarrhea. On a more personal level, we were thrilled to visit Zambia during such an exciting time. Presidential elections were held just a day after our return to Baltimore, so our stay was marked by the opportunity to experience the political climate of the country and engage those we met in discussion about their views of the electoral system and candidates. This was a great cultural experience provided us with a greater understanding of the people of Zambia, as well as the country in which our project was conducted.
Practicum Experience Activities Completed:

Of the 25 million people living in Ghana, an estimated 200,000 people are blind and over 600,000 more are visually impaired.1 In most cases, affected victims live in extreme poverty and are inhabitants of hard-to-reach villages.1 We saw the need for affordable, accessible, and efficient strategies to deliver quality eye care in Ghana. We partnered with Unite For Sight and its partner clinic, Crystal Eye Clinic in Accra, to learn and also document their highly successful outreach strategies employed to provide sustainable quality healthcare to 100-300 patients each day and sometimes 500 patients in a single day. We interviewed the Medical Director of Crystal Eye Clinic, five (5) local health workers and six (6) community health volunteers from four (4) different villages to understand their strategies. A key finding of our project is that community health volunteers are the main drivers of Crystal Eye Clinic’s successful outreach programs. They serve as peer educators and mobilize people during outreaches. These volunteers offer their services free of charge and feel fulfilled by the positive impact of Unite For Sight’s initiative in their respective communities. We fundraised $1,800 each, totaling $5,400 to provide free eye surgeries for people living in poverty. We also donated a total of 1,800 reading glasses to the local eye clinics to be distributed for free to patients. We served as part of a well-organized outreach team that travelled 1-4 hours from the clinic each day to deliver free eye care. We participated in health education programs, patient intake & registration, and also performed visual acuity testing for patients.

Practicum Project Impact Assessment:

Our final document will be distributed to all Unite For Sight’s partner clinics in Ghana as well as in Honduras and in India for their own reference on how to provide access to free, quality and sustainable eye care in rural areas. It will also be included on the Unite For Sight website for use and adaptation by others involved in Global health.

Self Reflection:

Through our practicum project, we understood the complexities and realities of global health delivery in resource-poor settings. The need for integration of local volunteers in Global health delivery cannot be over emphasized. This aspect of our project complemented our Program Planning Skills acquired from the MPH program with hands-on experience. Also, we matured in our Health Communication skills through the many health education programs we organized during our volunteer work in Ghana. Our practicum experience also offered us the opportunity to take online courses in Global Health, Social Entrepreneurship, Cultural Competency, Volunteer Ethics & Professionalism and other eye care related courses from Unite For Sight’s Global Health University, culminating in a certificate in Global Health and program Delivery.

Reference:

Friends of Maiti Nepal Award Recipients 2014-2015

NICKY MEHTANI AND REBECCA WILLETT: Shifting Perspectives from Experiential to Data Driven Community Outreach Activities that Combat Human Trafficking in Rural Nepal (Service-Oriented)

Faculty Mentor: Alain Labrique
Location: Nepal

Founded in 1993, Maiti Nepal is a registered non-governmental social welfare organization that combats the exploitation, violence and trafficking of children and women in Nepal. In addition to implementing trafficking prevention activities, interception programs, rescue expeditions, and a rehabilitation center for survivors of sex trafficking, Maiti Nepal works to bring justice for victimized women by launching investigations and waging legal battles against their perpetrators.

Due to a lack of steady employment options, women living in rural villages are at the greatest risk of being trafficked. Maiti Nepal’s newest prevention initiative—the NAANI Program—was inaugurated in 2011 to specifically target this demographic. A prevention program aimed at raising awareness on human trafficking, safe migration, gender-based violence and women’s rights, the NAANI program was designed using the framework of a Community Health Worker (CHW) program, in which young women serve as advocates against human trafficking for their own village communities. These young women, termed NAANIs, travel on foot and educate local groups with special attention to girls who are at severe risk of trafficking.

Over the three months leading up to our travel to Nepal, we outlined our project through several meetings with Dr. Alain Labrique—our faculty mentor—and held weekly Skype meetings with our Project Coordinator, Craig Appl, a former MPH student and JHU Global mHealth Initiative Intern, who now lives in Kathmandu and works at Maiti Nepal as a part-time information technologist.

Our initial plan was to develop a mobile data collection tool to streamline the data management component of the NAANI Program. The goal was to develop a simple method to create a data set from the information that NAANIs were already collecting and reporting to their supervisors regarding their daily outreach activities and the demographics of the audiences they were reaching. This data set would be compared to a data set that Craig had been creating on the demographics of the survivors of human trafficking at the Maiti Nepal Rehabilitation Center. Comparing the two data sets would allow us to provide evidence for the utility of the NAANI program by statistically verifying that the recipients of the program’s outreach activities were of a similar demographic and were affected by similar risk factors as those who had been trafficked in the past.

However, upon arrival to Nepal in December 2014, we learned that the NAANI Program was at risk of losing funding in February 2015, so moving forward with our plan to build a mobile data collection tool was no longer in the best interest of the organization. Therefore, we instead conducted a formal evaluation of the NAANI Program so that improvements could be made if a revamped version of the program were to be funded in the future, as is anticipated. The details of this program evaluation are outlined below:

During our 3-week visit, we had the opportunity to observe the NAANI program in action, as well as to interview NAANIs and their supervisors. We each conducted a separate field visit, and observed NAANIs
working in two rural districts—one in Makwanpur and another in Nuwakot. Upon returning to Kathmandu, we discussed our findings with the NAANI program coordinator in order to verify the accuracy and consistency of our qualitative data.

To evaluate Maiti Nepal’s NAANI program, we adapted the USAID CHW Assessment and Improvement Matrix (CHW AIM): A Toolkit for Improving Community Health Worker Programs and Services. While the NAANI program has many similarities to a CHW program, there were some limitations to using the CHW AIM tool, so we changed a few questions to optimize its relevance.

In addition to conducting a formal evaluation, we provided recommendations for improving the NAANI program using the CHW AIM Action Planning Framework. This framework focuses on the 15 items listed in the Community Health Worker Assessment Improvement Matrix (CHW AIM) tool: recruitment, CHW role, initial training, continuous training, equipment and supplies, supervision, performance evaluation, incentives, community involvement, referral system, professional advancement, documentation/information management, program performance management, community health facility links, and country ownership. Within each of these sections, we pointed out strengths and weaknesses as well as specific interventions that could be implemented in working towards an improved model.

We have finished the program evaluation component but are continuing to refine our recommendations for the NAANI program. Over the next couple months, we will continue to have Skype meetings with staff members of Maiti Nepal to clearly articulate our suggestions as well as to answer any questions they might have regarding our evaluation.
NADA ALNAJI AND RUBA SAHAB: NCD Guidelines and mHealth Records for Refugees in Lebanon (Field Research)

Faculty Mentor: Shannon Doocy
Location: Lebanon

The project, in collaboration with IOM and MIT, seeks to improve care for hypertension and type II diabetes in five primary health centers in Lebanon via the implementation of guidelines and mHealth tool that will provide decision support to providers as well as a patient managed medical record. Our role was to facilitate the enrollment of patients and medical review processes which requires both Arabic and clinical backgrounds.

We worked in the initial phase of the study to train data collectors in conducting interviews with study subjects. After we conducted a one-day workshop to train the interviewee, we spent two days supervising the interviewees while they are conducting the interviews.

Another aspect of our experience in this project is that we have used our previous clinical background to provide critique and improve the survey and guidelines before release. Moreover, we conducted a need assessment for implementation of the NCD guidelines and produced a checklist for physicians to easily implement guidelines in their day-to-day practice. In order to implement the guideline we had to pilot test the checklist with primary care physicians, we also met with the heads of the primary care centers to discuss the implementation process.

Working in Lebanon with new organization was not a very challenging experience, but of course we faced some challenges, which we learned a lot from them. One of these challenges is finding reliable staff; it was difficult to find a committed and skilled staff to meet Hopkins high standards and expectations. This leads to an increased workload for us and for the Hopkins field coordinator.

Another unexpected challenge we faced were the weather conditions. In early January the snow storm “Zainah” hit the mountains of Lebanon and blocked roads to the South and to Beqaa where the IOM clinics were based. For that, we had to limit our field visits.

From Public Health prospective, our experience was very rich. We learned a lot about conducting surveys and interviews, project implementation, and challenges in the Middle East.

On the personal level, we did not face a huge cultural difference. Speaking the same language made it easier for us to adapt to the accent and to the traditions. We felt very welcomed by the locals. But having unreliable infrastructure such as intermittent electricity during the day was a challenge during work time and at the hotel.

In conclusion, this experience contributed to the growth of our interest in Refugee population especially in the Middle East and gave us a highlight on the challenges public health professionals might face.
MPH Field Experience Grants

2014 REPORT

JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH