

MPH Field Experience Grants

2016 REPORT



JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH

MPH Field Experience Fund Award Recipients – 2016-2017
Johns Hopkins Bloomberg School of Public Health

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Danielle Boyda

Peek Vision Botswana: Preparing mobile eyecare for national scale (Service-Oriented)

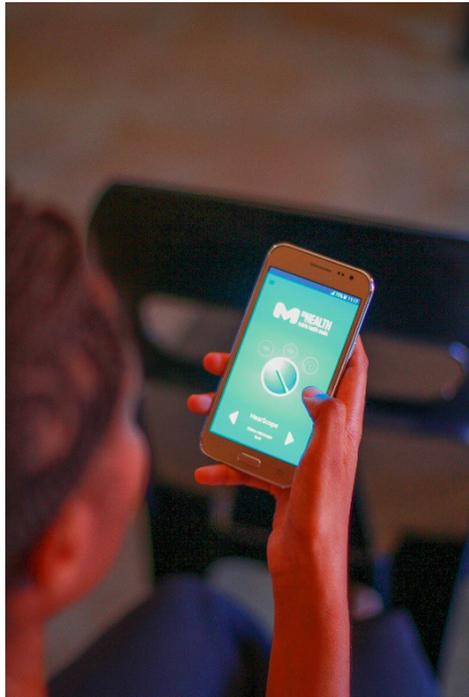
Academic Advisor: Andrea Ruff

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Field Counterpart: Ryan Littman-Quinn

Location: Botswana

For the past couple of decades, the biggest public health challenge in Botswana has been HIV/AIDS, with approximately 18% of the population currently infected. As the country has developed impressive capacity for HIV care, gaps in other health services are becoming apparent, such as regular screening for preventable or treatable vision problems. Peek Vision and the Botswana-UPenn Partnership (BUP) Health Informatics team have partnered to scale up a mobile-phone based vision screening program, particularly targeting remote and underserved areas of Botswana. Their aim is to provide annual eye screening exams to school-going youth across Botswana, targeting approximately aged 9-14, or 15% of the entire country population. I joined their early data from a scale-up.



My first results and project that and BUP region of to triage camps They are now needed them. experiences, I phone app from data, I gathered screened, purpose of the deliverables uses pilot data and information about the schools to predict the number of youth that can be reached per year given certain resource constraints.

goal upon arrival was to understand the process, lessons learned from the pilot vision screening began in August. Over the course of the fall, Peek screened approximately 13,000 youth in a sub-Botswana, then brought ophthalmic professionals to fully assess those who had screened positive. After quizzing the project managers about their asked for access to the data generated by the mobile the pilot screening and triage camps. With that information about the average time per student disaggregated by a variety of factors, for the predicting time and resource needs at scale. One of from my work with BUP is a planning tool that

I also analyzed outcomes and false positive rates by age: because younger children were reported to have more difficulty following instructions, I hypothesized that raising the minimum age for screening could reduce the number of children unnecessarily sent to triage camp. One of the most interesting moments of my time in Botswana came as I was presenting some of the observations I had made from the data to the government advisory board for the project. When I proposed raising the screening age, the ophthalmic specialist made a compelling argument for including young children, as she pointed out that catching certain conditions earlier improved the patient's outcome. In fact, she argued, it would be preferable to have all of the youngest children screened by ophthalmic clinicians who could dilate their pupils and conduct a more accurate examination. It occurred to me that our perspectives reflected the difference between a medical approach and a public health approach: where she was concerned with ensuring optimal care for each individual child, I had been thinking about maximizing resources to reach the greatest number of people. I was struck by how productive it was to have both perspectives at the table.

A major component of my work to facilitate planning at scale was the development of a comprehensive and user-friendly map of all schools and health facilities in the country. Thanks to my previous work in Botswana, I have a familiarity with the local context and a knack for discovering the locations of remote villages and settlements unknown to Google Maps. This knowledge was particularly helpful when I was brainstorming with the BUP team about logistics for reaching distant areas. Developing

a guide to ensure that others would be able to use my work reinforced the value that BUP and Peek place in local capacity building.

The highlight of my trip was undoubtedly the unexpected opportunity to join my colleagues in partnership meetings with another mHealth project. Peek Vision is teaming up with Hearscreen, a South African app developer building a remarkably compatible tool for hearing screening. I was fortunate to spend my final days in the region at their offices in Pretoria, South Africa. Our visit included an excursion to the township of Mamelodi, where we saw a demonstration from the Hearscreen field team of their screening protocols. Hearing about the challenges they face, some of which are unique to the South African context, shed light on some of the advantages of working in Botswana, such as the fact that the government does not require parental consent for the Peek screening project. Meeting with the Hearscreen technology team and an optometrist familiar with the South African policy landscape demonstrated the extent to which the two technology platforms benefit from collaboration. Because both products seek to achieve similar goals, it was remarkable the lessons that could be shared and ideas that could be generated, from setting up linkages to care to developing new diagnostic tools and from marketing strategies to systems for handling patient data.

Overall, I was gratified to be working in a context familiar enough to me that I could contribute meaningfully, but also excited to learn more about mobile technology in public health. In particular, I was impressed by the spirit of collaboration, meaningful stakeholder participation, and commitment to capacity development that the BUP team displayed. Witnessing the way in which these values formed the foundation for successful mHealth program implementation set an example that I hope to carry with me throughout my career.

Samyra Cox

Evaluating a Cash Incentives Program to Improve TB Treatment Adherence in Tajikistan (Field Research)

Academic Advisor: Gilbert Burnham

Johns Hopkins Faculty Affiliate: Gilbert Burnham

Field Counterpart: Jamilya Ismoilova

Location: Tajikistan

Tajikistan is among the world's 30 high burden countries for multi-drug resistant tuberculosis (MDR-TB). Despite stable global rates of MDR-TB in recent years, this preventable and difficult to treat disease is on the rise in Tajikistan. The WHO reported that in 2015, 14% of new TB cases were drug-resistant, compared to the global average of only 3.9%. Considering these staggering rates of drug-resistance, there is a clear need to support interventions that improve patient adherence and treatment outcomes.

In response to this public health crisis, the global health non-profit, Project HOPE, launched a cash incentive program in August 2016. Their aim is to help patients across Tajikistan adhere to their TB medications and successfully complete treatment. The project is supported by the Global Fund to Fight AIDS, TB, and Malaria

and is being implemented in close collaboration with the Tajik National TB Program. I travelled to Tajikistan for three-weeks to lead a cash incentives momentum in my evaluation is to improve and to implementation. I am



research methods to gain a comprehensive understanding of program performance.

The bulk of my trip was spent collecting qualitative data through semi-structured interviews with patients, doctors, nurses, and Project HOPE staff. The primary purpose of these interviews was to gain an understanding of how the program was perceived and experienced by various stakeholders, and to identify logistical issues with implementation. I interviewed a total of 38 people, including 17 patients, 17 clinic staff,

and 4 Project Hope staff. I conducted the interviews in Tajik and was able to record the majority of them with the participant's consent. I selected sample districts based on where rates of TB were highest, and considered the logistical feasibility of visiting each given time and weather constraints. In total, I visited eleven clinics across both urban and rural areas and spoke to the TB doctor or nurse in charge of cash incentives at each. On every field visit, I was accompanied by a Project HOPE staff person who introduced me to clinic staff and offered valuable insight into the cash incentives system.

To select patients to interview, I asked Project HOPE to generate a randomized list of patients from their cash incentives database. Upon arriving at each clinic, our point person for the project would go down the list and call each patient to check their availability and if they were interested in speaking with us. I offered to meet the patient wherever was most convenient for them. Some preferred to meet in their home and others preferred to meet at the local dispensary to avoid stigma from neighbors. The vast majority of patients were happy to speak with me and excited to welcome guests to their community, always offering me tea and sweets.

After the first few interviews, I realized that it was necessary to strike a balance between rigidly applying research methods and doing what was logistically feasible. While I am familiar with Tajikistan's geography and culture, I was grateful to have Project HOPE staff to help me determine what was safe and manageable in such a short time. For example, it was not possible to sample patients from all four of Tajikistan's regions. Reaching the semi-autonomous Oblast of Gorno-Badakhshan would entail a perilous 24+ hour ride through some of the world's highest mountain ranges in the dead of winter.

This trip allowed me to collect rich qualitative data that would not be possible to glean from existing databases if I were completing this evaluation remotely. As I pour through my notes and recordings to analyze the data, I am noticing interesting variations and trends among patient and provider experiences across different districts. This level of nuance might be missed if I were only assessing indicators using quantitative data. Additionally, hearing from patients themselves offered valuable insight into the program's hard-to-measure outputs—increased patient expenditures on food and transport to the clinic, and increased motivation to adhere to medication. I learned that many patients rely on the cash incentive to purchase ancillary drugs to manage side-effects from the difficult-to-tolerate TB regimens. Being able to purchase these medications may help patients stay on their TB treatment for the full duration of about 6 months for drug-susceptible TB or 24 months for drug-resistant TB.

It was an incredible experience returning to Tajikistan after over six years and being able to use the local language to learn about patient and provider experiences. I have been working with TB programs since 2013, but have not yet had the opportunity to spend meaningful time in the field. This experience allowed me to finally see TB control strategies that I have been studying and writing about come to life in the field. I am excited to finish analyzing the data that I collected and summarize findings that will hopefully contribute valuable evidence to the growing field of conditional cash transfers for TB control.

Nermin Diab and Kory Funk (Group Award)

Ethical challenges in humanitarian health in situations of extreme violence (Field Research)

Academic Advisor: Andrea Wirtz and Courtland Robinson

Johns Hopkins Faculty Affiliate: Courtland Robinson

Field Counterpart: Lara Ho

Location: Jordan

The Syrian civil war is one of the worst humanitarian crises of our generation, with hundreds of thousands having been killed and millions more displaced since the conflict began in 2011. One of the more alarming characteristics of the war has been the deliberate targeting of health facilities and humanitarian workers – in 2014 and 2015, WHO reported over 200 attacks on health facilities in Syria. Such attacks have crippled the nation’s health system and left millions without access to basic care.

Our field experience project was part of a larger parent study being conducted by Leonard Rubenstein of the Bermin Institute of Bioethics and Courtland Robinson of the Center for Humanitarian Health, and funded by Research for Health in Humanitarian Crises (R2HC). Drawing from the experiences of humanitarian health workers in ethical violent improve



Syria, the study seeks to better understand the challenges faced by health organizations in settings and to eventually produce a tool to decision-making in such circumstances.

Our role was identifying study’s interviews ethical collecting

to assist the study in its earliest stages by and contacting organizations that meet the selection criteria, conducting key informant with organization leaders to learn more about challenges at the organizational level, and organizational documents to gain a better

understanding of their operations. While the parent study is being conducted in both Turkey and Jordan, our participation focused only on those organizations with a presence in Jordan.

Our first task after arriving in Jordan was to meet our counterparts at the International Rescue Committee (IRC), whose Syria Regional Response (SRR) office would be supporting us. Khaldoun Al-Amire, IRC-SRR’s health technical advisor and our primary counterpart, was instrumental in helping us network with organizations relevant to our study. He arranged for us to introduce the study at a meeting of the Jordan cross-border Health Sector Working Group (HSWG) at the World Health Organization’s Jordan office. The HSWG brings together UN agencies, government agencies, and international and local non-government organizations (NGOs) to coordinate health service provision to southern Syria. HSWG members who met our selection criteria formed the basis for an early contact list. We identified other promising candidates through online resources and recommendations from interviewees.

Of the 22 organizations that we attempted to contact, 14 agreed to interviews during our field experience window. The interviews were terribly insightful, both personally and within the context of the study. We learned a great deal about the ethical challenges that humanitarian organizations face – questions like how to support a hospital facing an imminent attack; how to respond as an organization when colleagues are arrested, maimed, or killed; how the relationships between governments, donors, and NGOs may fuel injustice or render service provision inefficient; how “red tape” from authorities may exacerbate the physical and psychological risk that humanitarian health workers invariably face in violent settings; and so on.

When we were not conducting interviews, we were transcribing our interview notes onto a secure, shared server so that everyone involved in the project would have access. We also collected organizational documents – backgrounders, guidelines, and internal assessments – that will provide additional context about how humanitarian health organizations operate inside Syria. Finally, we had the pleasure of working

with Diana Rayes (MPH '16) of the Syrian American Medical Society to identify potential contacts for the study's Turkey component, which she is leading.

We are grateful to all who made this experience possible. We gained tremendous insight from both a personal and a professional perspective. With the support and advice of Dr. Robinson, who was present with us for much of the first week, we gained valuable experience in the collection and management of qualitative data. We had the opportunity to meet, formally and informally, with leaders in our field at every level and in a variety of organizational and individual roles. And we experienced the inimitable beauty of Jordan's geography, history, and culture (to say nothing of the falafel!) while taking part in something that we hope and believe will make a substantive contribution to the humanitarian field.

Kent Garber

Assessing Healthcare Needs in the Nagorno-Karabagh Frozen Conflict Zone (Field Research)

Academic Advisor: Gilbert Burnham

Johns Hopkins Faculty Affiliate: Adam Kushner

Field Counterpart: Shant Shekherdimian

Location: Nagorno-Karabagh

Thanks to the field award, I spent two weeks in Armenia in January, continuing my work on a health system assessment of Nagorno-Karabagh, the so-called frozen conflict zone between Armenia and Azerbaijan.

As I wrote in my field award application, Nagorno-Karabagh was the subject of an intense war between Armenia and Azerbaijan in the early 1990s, resulting in 20,000 deaths and more than a million displaced. The healthcare system, by all accounts, was decimated: many hospitals were destroyed, and supply chains completely disrupted. Although the war ended in 1994, sporadic fighting has continued; a four-day “clash” last April caused nearly 350 deaths near the line of contact.

Today Nagorno-Karabagh (NKR) is essentially as an autonomous state, with its own government, army, and ministry of health, although it remains closely aligned with Armenia. Yet for the past quarter-century, it has lived in “war mode,” and because the international community still recognizes it as part of Azerbaijan, it has been largely cut off from major sources of development aid.

On the health front, there’s been no formal assessment of the health system in at least fifteen years. Most low- and middle-income countries are part of the USAID-sponsored DHS survey program, which conducts household surveys to assess basic health indicators. NKR, because of its conflicted status, is not included. Hence the impetus for my work in the region.

In the fall, following approval from the ministry of health, we carried out surveys of the major health facilities in the country, using a mixed-methods approach consisting of both qualitative interviews with key informants and quantitative assessments. These assessments examined physical infrastructure, human resources, supplies and equipment, and health services.

The surveys (the first round is now complete) identified several areas of strength, including significant infrastructure rebuilding (including a state-of-the-art tertiary hospital in Stepanakert, the capital, built in 2014), a robust medication supply chain, and healthcare workforce and hospitalization rates well above middle-income country averages. However, several gaps were identified, including deficiencies in reliable heating, basic imaging, and surgical and anesthesia care at more than a third of the facilities, mostly in rural regions. Many hospitals, particularly those close to the Azerbaijan border, reported difficulty attracting physicians. And financing remains extremely tight, reflecting the country’s need to focus on defense.

On this most recent trip, we presented these initial findings to the ministry and discussed next steps, including the launch of a population-based survey to assess accessibility, utilization, and affordability of healthcare in the country. Although facility-based surveys are useful—they provide nice information on infrastructure and staffing, and give a sense of the basic “inputs” into the system—they cannot capture important information about how patients interact with the health system.

As we have discussed with the ministry, part of the motivation for doing these studies, besides informing policy work, is to help identify areas of potential contribution for the Armenian diaspora. Today, some 3 million people live in Armenia, but nearly 3 million Armenians live in other countries, most commonly Russia and the U.S., representing one of the largest and most active diasporas in the world. Since Armenia’s independence in 1991, and the end of the Nagorno-Karabagh war in 1994, the diaspora has made major contributions to both Armenia and NKR. Yet sometimes those contributions, though well-intended, do not accurately reflect the country’s needs, particularly when it comes to healthcare. Our hope, then, is that our assessment will help identify areas of greatest need—both to inform the ministry and to appeal to diaspora donors.

To carry out the population-survey, we are planning a cluster design with a probability proportional to size sampling. In lay language, this approach will consist of sampling 30 households in 30 clusters selected from all eight administrative regions.

Using money from a private grant from the USC Institute of Armenian Studies, we have hired three local nurses and trained them on administering the survey. The survey consists of about 60-70 questions, which have been translated into Armenian and are currently being approved by the ministry. The survey will be administered electronically using Magpi, a tablet-based app that will allow the responses to be uploaded in real-time and monitored remotely.

Once we have ministry approval, our hope is to have the surveys completed over the next two months, and for data analysis to be complete by April.

On a separate note, I also spent several days in Yerevan, the capital of Armenia, doing research on how Armenia is integrating Syrian refugees into the country.

As it turns out, before the outbreak of the Syrian civil war, in 2011, nearly 100,000 people of Armenian descent were living in Syria, mostly in Aleppo. Aleppo, in fact, had a bustling region known as the Armenian Quarter, and nearly 60,000 Syrian Armenians were living there before the war began.

Over the past several years, as fighting intensified, many Syrian Armenians were forced from their homes and fled to Armenia (usually by way of Lebanon). In fact, as of 2016, Armenia had taken in 20,000 displaced Syrians, making it home to the third highest number of Syrian refugees per capita in Europe, just behind Germany and Sweden.

I spoke with several NGOs, including Mission Armenia and Aleppo NGO; representatives from the UNHCR office in Armenia; as well as several displaced Syrian families. My hope was to learn more about how Armenia is integrating these refugees into day-to-day life: helping them find jobs and housing, access healthcare, and gain education.

In general, Armenia has been relatively welcoming to Syrian-Armenian families. There is a sense of shared cultural heritage; these families speak Armenian (although a slightly different dialect), and many of them have retained close cultural ties to the country. Yet Armenia is also a relatively poor country. The average salary is only about \$350 per month. The government has limited resources to help refugees find jobs, particularly because Armenians themselves are struggling, too. But it has tried, and continues to try. Syrian families do have access to some health benefits as Armenians, although those benefits are generally limited. Several NGOs have sprung up to help fill in the gaps. Programs exist to help families pay for rent or medications. But budgets are declining, raising questions about how families will fare in the coming year.

Tori Hicks

National Level Cancer Epidemiology Practice and Training in Brazil (Field Research)

Academic Advisor: Daniela Rodriguez

Johns Hopkins Faculty Affiliate: Moyses Szklo

Field Counterpart: Liz Maria de Almeida

Location: Brazil

Thanks to the generous support of the MPH Field Experience Fund Award, I recently completed my Master of Public Health (MPH) practicum through a field research experience in Rio de Janeiro, Brazil. My Field Experience was an exercise in experiential learning and applied, national-level epidemiology. My Practicum and Capstone advisor, Dr. Moyses Szklo, and I created a customized practicum for me to:

- 1) Apply and learn epidemiological, analytical, and quantitative skills
- 2) Learn about the current state of public health in Brazil, the national healthcare system, and my counterpart organizations
- 3) Interact with epidemiologists, develop competencies in professional communication, and increase my Portuguese language fluency

Through visits to my two counterpart organizations, I learned about the characteristics, risk factors, and distributions of two diseases in Brazil at national institutions.

I spent the first half of my Field Experience at the Universidade Federal do Rio de Janeiro/ Instituto de Estudos em Saúde Coletiva (UFRJ/IESC) (Federal University of Rio de Janeiro/Institute of Studies in Collective Health), where I worked on a study under the guidance of Dr. Katia Bloch. The Estudo do Risco Cardiovascular em Adolescentes (ERICA) is a nationally representative study that sampled adolescents from all the regions of Brazil to make inferences about all Brazilian adolescents. ERICA is one of the first studies in Brazil to analyze the prevalence of cardiovascular risk factors and dyslipidemia in a nationally and regionally representative sample. The UFRJ/IESC team first taught me about the makeup and characteristics of the five regions of Brazil because understanding the facets of Brazil is critically important for any analysis of data about Brazilians. They also taught me how to analyze prevalence and associations in a complex dataset with the STATA software package. In the years since I obtained my undergraduate degree, I have worked in international public health program management. So, participating in the research process to find something new about a population was an exciting experience. The findings and inferences from this analysis will contribute to a larger understanding of risk factors for cardiovascular disease in adolescents. And, ultimately, this knowledge will influence future interventions for Brazilian adolescents.

I spent the second half of my experience at the Instituto Nacional de Câncer José Alencar Gomes da Silva (INCA) (Brazilian National Cancer Institute), where I worked in the Epidemiology Department under the guidance of Dr. Liz Almeida. INCA plays a major role in cancer control and prevention in the entire population of Brazil. I had the privilege of meeting with representatives the Cancer Surveillance and Early Detection departments to discuss the functions, priorities, and challenges of each department. These meetings complemented the topics that were covered in my Public Health Surveillance class from last term. Also, a few of us from the team visited an INCA cancer hospital to see how a hospital-based cancer registry is created and maintained. Lastly, part of my role was to make a presentation from the literature on colorectal cancer in Brazil. The team at INCA taught me about Brazil's impressive amount of publically-available data on cancer and risk factors in the population. I explored these registries, created tables, generated maps, and compiled information into a presentation on colorectal cancer. This presentation will be available for the staff at INCA to use in the future.

My Field Experience duties were:

1. Interact with epidemiologists and researchers in Brazilian Portuguese at UFRJ and INCA
2. Shadow INCA staff who are working on the mortality, incidence, and population-based and hospital-based registries & learn how data are measured, aggregated and input into epidemiological systems
3. Learn about cancer surveillance systems in Brazil and learn how data are analyzed and interpreted
4. Participate in discussions and meetings within the Epidemiology branches of INCA and UFRJ
5. Conduct a literature review of colon cancer in Brazil
6. Conduct a literature review of dyslipidemia in Brazilian adolescents
7. Compile information on colorectal cancer risk factors, such as BMI, socioeconomic status, etc. using the scientific literature and INCA databases
8. Produce a presentation on colorectal cancer in Brazil using the scientific literature and INCA databases
9. Analyze associations of dyslipidemia risk factors, such as BMI, socioeconomic status, etc. using STATA
10. Work with other graduate students at UFRJ to exchange ideas and information about the ERICA study and quantitative data analysis

I have tried to incorporate the Field Experience into my MPH classes. This term, I will be writing three class assignments on public health issues in Brazil. Furthermore, my MPH Capstone will be an expansion of the analysis of dyslipidemia in Brazilian adolescents using the ERICA dataset.

I am humbled that the MPH Field Experience Fund Award Committee granted me a Field Experience Fund Award. I am thankful for the donation because it defrayed a large portion of my practicum costs. I am especially grateful for the support and coordination of Dr. Szklo, Dr. Bloch, and Dr. Almeida.

In closing, I will be building on this Field Experience as I continue to develop as a public health professional. And, I hope to continue to contribute to the field of public health in Brazil with the knowledge and skills that I gained through this Field Experience. The MPH Field Experience was a unique opportunity that enhanced my studies in global health and epidemiology.

Kojo Nimako

Assessing the Effectiveness of HIV Education and Support Program Conducted in Kids Clubs of the CARIS Foundation (Field Research)

Academic Advisor: Carlos Castillo-Salgado

Johns Hopkins Faculty Affiliate: Andradi Edward

Field Counterpart: Nathaniel Segaren

Location: Haiti

Background

The people of Haiti have suffered the brunt of man and nature for many decades. With a checkered political track-record and suffering some of the worst natural disasters in recent history, Haiti has come to occupy the unenviable position of being the poorest country in the Americas.¹ It plays home to the highest HIV prevalence rate in the Caribbean and accounts for over 55% of the case load of HIV in that region.² There are about 10,000 children under the age of 15 currently living with HIV in Haiti³, and with no proper support system, these children are unlikely to achieve their full potential.

Caris in Africa and adolescent children, with disease, their mental how to prevent After 5 years grown from 1 to now have departments (provinces) of Haiti.⁴



Foundation, an international NGO with presence the Americas, in the year 2011, thus started an HIV Education/Support program for these the aim of increasing their knowledge on the helping them adhere to management, improving health and coping skills and educating them on the transmission of the virus. of activities, the “Kids Clubs Program” has club in the Capital City with only a few children, 1154 kids, in 56 clubs, in 9 out of the 10

I, in collaboration with the Caris hierarchy and Johns Hopkins faculty mentors (Dr. Carlos Castillo-Salgado and Dr. Anbrasi Edward) decided this was an opportune time to take stock of the progress of the Clubs; to perform an independent evaluation of the program, to highlight the successes and identify opportunities for improvement. This evaluation was going to use a mixed methods design. The quantitative data was to be obtained from pre- and post-club questionnaires that are passed two years apart in the clubs. The first badge of Pre-Club questionnaires was passed in the year 2014, and thus the first badge of Post-Club questionnaires had just become available. In addition to analyzing these quantitative data, focus group discussions (FGDs) and key informant interviews (KIIs) were to be conducted to obtain qualitative data that would provide a thorough understanding of the factors that account for the successes and short-falls of the program.

Activities in Haiti

I was in Haiti for from January 9 to January 20, 2017. The purpose of this trip was to conduct the FGDs and KIIs that would provide the qualitative data to be used in the evaluation of the Kids Clubs program. I

performed 6 focus group discussions with older adolescents in the Kids Clubs, at 3 different club sites in the capital, Port Au Prince. At each club site, one discussion each with boys, and girls, was performed. Because I did not speak the national language, Creole, I performed the discussions with the aid of translators. As arduous as this sounds, the translators were competent and committed, and the kids were cooperative and engaging, making the process easy.

Additionally, I held 5 key informant interviews with coordinators of the Kids Clubs to obtain information about the kids’ progress and outlook and obtain their perspectives on opportunities for improvement of the Kids Clubs Program. I also held key informant interviews with 5 program managers of Caris Foundation to understand the factors that lead to operational successes and challenges.

Apart from the formal interviews and meetings, I had a lot of unofficial interactions with the staff of the organization who worked out of the head-office, where I resided during my stay.

This gave me a better understanding of the organizational culture and the prevailing political and economic climate in Haiti.

The team on the ground was very well-organized and made sure all logistics were in place to facilitate my movement and conduct of the interviews and discussions. There were virtually no hitches in the itinerary we had agreed on for the 2-week period I was in Haiti.

Lessons learnt

The discussions with the adolescents in the Kids Clubs showed one paramount thing: these adolescents consider the club a safe space where they can forget about their worries. It is a place they call home; with teachers/coordinators they trust. One participant made the following observation:

What I like about the club is that there is cordiality in the club and we share ideas. The club takes away sadness. (FGD participant)

Another had this to say:

If it wasn't for the club, we would be discouraged. The club makes us conscious of the need to take our medication. Our coordinator is like a father to us. When we are down, he encourages us. (FGD participant)

Popular talk suggested that there was a great lack of after-school activities for kids in Haiti in general, which makes the kids hold the Kids Clubs program in very high esteem.

I was touched by the stories shared by the kids. These were stories of despair turned to hope, of agony turned to joy, of stigma turned to strength. These kids epitomize the need for everyone to be given a chance. With the right support system, every child can achieve their full potential.

It was a pleasure to have been among such great minds, and a privilege to have collected data from them.

The organizational culture of Caris Foundation speaks to their success in the NGO space in Haiti. There is a cordial working relationship and camaraderie among the staff. Everyone is motivated and happy with the job they do, especially those in the field. They were all committed to the evaluation and everyone was forthcoming with information.

From a preliminary look at the data gathered, it seems the Kids Clubs program is one that the adolescents hold dear, the staff are dedicated to, and Caris Foundation is working to have reach every eligible child. I am hopeful the evaluation will help Caris strengthen the Kids Clubs program and serve as a rulebook of sorts to guide other organizations do a good job for the future leaders of this world.

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Joseph Pauly

Title: Establishing a Surveillance Platform by Conducting Baseline Assessment for Streptococcus Pneumoniae of Indian Serotypes in the Pediatric Population.

Faculty Mentor: Anita Shet, MD PhD

Location: Palwal, Haryana, India

Introduction Lower respiratory tract infections rank as the third leading cause of death in India. Currently, thirty-one percent of deaths occurring in young children are due to pneumonia with *S. Pneumoniae* being the leading cause of bacterial pneumonia in India and Worldwide. The childhood mortality of this bacterial infection can be significantly improved by the distribution of the Pneumococcal Conjugate Vaccine (PCV). Currently the PCV vaccine is used in the United States and covers specific serotypes endemic to the US. However, in-order to tailor a vaccine for India that will be efficacious, safe and cost effective, a better understanding of *S. Pneumoniae* serotype prevalence in India is needed to guide vaccination role-out.

Background The Baseline Assessment of Streptococcus Pneumoniae of India Serotypes (BASIS) is a project throughout India which aims to identify serotypes of *Streptococcus Pneumoniae* in children under the age of 5. Recruitment of colonized children ages 2-59 months presenting with signs of pneumonia and/or meningitis underwent nasopharyngeal swabs and subsequent specimen analysis. Many states in India have implemented BASIS protocol to collect samples from children in the hospital setting, however, I was involved in the first expansion of the BASIS protocol to include rural settings and villages in the state of Haryana. The primary objective of the practicum was to establish community based surveillance infrastructure and recruit patients for pneumococcal serotype analysis in the village of Banchari in Palwal, Haryana, India. By expanding collection and recruitment to rural areas, more accurate information of the serotypes in India can be understood to guide vaccine implementation and role-out.

Practicum Activities

Field Work in Banchari Village, Palwal, Haryana, India

Each morning I would meet the team at the International Clinical Epidemiology Network (INCLIN) office in Palwal, India. From there, we would travel to the village of Banchari and work in two rural clinics run by Registered Medical Practitioners (RMPs). I worked with a team of two local staff to launch a recruitment protocol in the village. We identified children who met the criteria for pneumonia including fever greater than 100.4F and tachypnea. Once a child was identified and met the study criteria, we obtained consent from and enrolled the patient in the study using case report forms (CRFs). Demographic data and family information was collected about the patient prior to swabbing the child's nasopharynx. Then we swabbed the nasopharynx of the child to collect the specimen using sterile. The specimen was then stored in media and transported to the laboratory for processing, culture, and serotype analysis. Additionally, patients were given free chest X rays as part of the study. During the duration of my time in the village, 25 samples were collected from the rural site. We then transported the samples to Christian Medical College (CMC) in Vellore for processing.

Laboratory Analysis at Christian Medical College-Vellore, Tamil Nadu, India

I traveled to CMC in southern India bacterial processing portion of the included a series of hands-on microbiology and health culturing and testing of *S. Pneumoniae*. 25 collected samples successfully using antibody tests and polymerase subtypes of the bacteria.



to assist with the *S. Pneumoniae* protocol. My time in the laboratory workshops at one of India's top institutions. I assisted with plating, *Pneumoniae* samples. 16 out of the grew *S. Pneumoniae* and serotyping chain reaction revealed specific

Student Impact

During my time on the project, I documented all stages of the protocol from the first stages of patient recruitment, to the nasopharyngeal swabs, sample storage and bacterial processing in the laboratory. Based on my observations I created an audit report to further standardize the protocol and improve study design and implementation. The observational report guided my recommendations to the team and has strengthened the reliability, logistic ease, and accuracy of the study.

Self-Reflection

The focus of my MPH experience at JHU has been on child health, epidemiology, and global health. This project perfectly weaved my interests and taught me fundamental skills which I will use in my career. From a public health standpoint, the project was a community based trial that integrated infectious diseases, vaccinations, and preventative medicine. However, from a personal lens, this experience taught me how to overcome unexpected barriers and how to think critically about the work we do as public health professionals. Throughout my time in India, I was welcomed and embraced by the community. I was challenged to think about ways to improve study design and impact the health of children. I reflected on my role as an outsider and appreciated the vibrant culture the country of India celebrates. And now, I am grateful to have been given the opportunity to learn and test my skills outside of the classroom. Ultimately this experience solidified my desires to pursue child and international health and make public health a focal pillar of my future career.

Carolina Salmeron

Title: Analysis and Evaluation of Migrant and Refugee Population and Health Care Need at Albergue “Hermanos en el Camino”

Advisor: Courtland Robinson

Location: Ixtepec, Mexico

After over 24 hrs of travel, I finally arrived at the refugee and migrant shelter *Albergue Hermanos en el Camino* (HEC), which translates to Shelter: Brothers along the Journey; I was greeted by security and promptly directed towards the administrative offices. The shelter, HEC is one of many widely known rest stops for Central American migrants, many of which arrive by way of freight trains. The journey is long and arduous and during this trip aboard the train, known as “La Bestia”, many are injured, assaulted, robbed, kidnapped, raped, and face extortion by police, as well as immigration officials. Having been a migrant myself my desire to work with this population was both of personal and professional interest.

After taking a short guided tour of the compounds and getting settled in, one of the lead volunteers pulled me aside and inquired if I had any medical experience and if I was willing to accompany him on one of his many attempts to get healthcare for one of the migrants, a man wearing a cast on his left arm, who like many there had been a victim of assault and robbery. My curiosity about the barriers and limitations to health care made me

glimpse of the collecting and morphed into shelter in and identifying have an and how to best consolidation was thrown for the shelter. medical familiar with



quickly jump at the proposal to get a realities. My practicum project of analyzing secondary data quickly so much more. My goal was to aid the characterizing the arriving population the health needs so that they would updated idea of who they were serving continue their efforts. Along with data and creating a consistent database, I into the role of lead medical coordinator While I did not have any formal training, I had the confidence and was the policies that allowed me to advocate for the migrants as they sought medical care from federal facilities. Mexico’s policy allows 90-days of access to federally funded health care facilities for migrants, but it is contingent on being in possession of the proper documents. Given the nature and reasons behind the journey of many of the asylum seekers, few had the proper documentation to request medical care, and many were turned away in dire conditions.

In the two weeks that I was in Oaxaca, I developed relationships with the hospital staff and bridged connections with the shelter so that they would encounter less barriers to healthcare. While I experienced first-hand the reluctance to provide health care, intimidation and mistreatment of Central American migrants, I also witnessed the genuine concern and hard work amongst the hospital staff. Oaxaca state has been in constant turmoil and recent hospital strikes, due to low funds, had halted health care almost completely. I had the privilege of meeting nurses and hospital staff that stayed during the strikes to provide emergency care with the little resources they had. I also met other amazing volunteers from all corners of the globe with a similar passion for helping others and making sustainable contributions. I listened to stories from the refugees and migrants of their harrowing journeys, I saw pictures of children left behind and I shed tears of happiness when families were reunited.

This experience further strengthened my resolve to continue working with vulnerable populations but now with a larger emphasis on advocacy. I have coordinated with the shelter to provide the analysis of their data and help develop strategies so that the information can be disseminated and used to influence policy, and thus the fight for access to health care can continue.

Marie Ward

Viral Load, Treatment, and Adherence Campaign (Service-Oriented)

Academic Advisor: Caitlin Kennedy

Johns Hopkins Faculty Affiliate: Caitlin Kennedy

Field Counterpart: Bronwyn Pearce

Location: South Africa

I completed my practicum with the Center for Communications Impact in Pretoria South Africa. My experience ended up being a completely different experience than anticipated. Originally I was slated to be working on a national communications campaign around ARV adherence and viral suppression among HIV positive South Africans. As frequently happens, the project ran into IRB delays and when I arrived they were not ready for work to be done on the campaign. Unsurprisingly though, there was plenty of other work to be done. I was immediately asked to help with a national HIV prevention weekly radio show that CCI is developing.

Each week the radio show would have two different components. The first is a 3-4 minute episode of the 13-part drama called 'The Blessers Curse' that was written for this campaign. This drama revolves around a man who is married and has two children but finds himself attracted to 2 younger women who he then enters into transactional relationships with. He later finds out that he is HIV positive and that he has infected his wife and the younger of the two girls (she's 16) who he has also impregnated. The drama follows him through this experience and addresses men's fears around HIV testing, ways to find support, drug adherence, relationships, and more.

The second part of each weekly episode is an in studio interview between the radio presenter and a local man from the community who is living with HIV. The participant is interviewed about their journey living with HIV and how they relate to what is happening the drama. During this time the phone lines are also opened for listeners to call in with questions. There is a medical professional there to help answer any medical questions.

South Africa has 11 official languages, with a different national radio station for each language. CCI has organized for this radio program to be done at each vernacular radio station. For each station there are 3-4 community men living with HIV who are each assigned a certain number of the episodes to be a guest on the show. As many of them have never been part of a radio campaign CCI conducted trainings for each radio station where the presenters, producers, and community participants were able to gain a clear understanding of what the key messages the show was designed to convey were. Participants especially were given the chance to become more comfortable with telling their story and answering interview questions in a radio format.

During my time with CCI I had 3 main responsibilities. My first was that I was responsible for developing comprehensive briefing packets and materials for the entire 13-week series. This included a section for each episode with a summary of the drama, important background information about the themes of that week's episode, a script for the presenters, that week's interview questions, and tips/guides for the guests on how to effectively convey their responses to interview questions. This briefing packet was developed and reviewed during my first week with CCI. My second role was to assist with conducting the trainings for the different radio stations. I assisted with the first 4 radio stations and helped to make edits/revisions to the briefing packets and training materials based on our experiences with these radio stations before I completed my practicum.

My final task during the last day of my practicum was to provide feedback and suggestions on how to revise CCI's voluntary medical male circumcision information pamphlets. These are provided by CCI to all USAID funded male circumcision partners as well as many of the department of health clinics that are providing voluntary medical male circumcision.

This experience with CCI was wonderful for me. I was able to gain more insight into what it is like to work in social and behavior change communications. I was also exposed to a new communications medium, radio, that I had never worked with before. CCI was very welcoming and had a level of confidence in my abilities that allowed me to push and challenge myself professionally.

Colby Wilkason

Field Evaluation, Spatial Analysis of Malaria Transmission in Macha, Zambia (Field Research)

Academic Advisor: Timothy Shields

Johns Hopkins Faculty Affiliate: Jennifer Stevenson

Field Counterpart: Jennifer Stevenson

Location: Zambia

Malaria transmission is often focal, or even sporadic, and therefore standard epidemiological sampling can provide misleading or uninformative data. In addition, confounding elements, due to human population movements and migrations or specific climatic features of the environment, can skew what is known about malaria transmission within a community. Since 1988, Macha, Zambia has been a research hub to better understand the transmission dynamics of malaria that is needed for the development of sustainable control strategies to further reduce malaria transmission in southern Africa.

I was able to join the Macha Research Trust team in Zambia in January 2017 to assist with their Hotspot project. “The identification of malaria hotspots using demographic and spatial characteristics of malaria confirmed cases at health center level and household level in a low transmission setting in Macha, Choma District, Zambia” is a study that is combining knowledge of the local malaria epidemiology, vector biology, and parasite population genetic structure to better understand malaria transmission. This study can help to highlight individual and spatial factors contributing to the difference in local transmission, and inform policy makers on appropriate ways to deploy interventions.

Leading up to my trip, I worked with Associate Scientist Tim Shields to determine, develop, and incorporate distinct ecological and meteorological data layers that influence malaria transmission, as well as any additional information that could be gained from the field for complete analysis. In Zambia, I collected ecological field data to validate and better understand our modeled geographical information systems (GIS) data layers used to generate ecological covariates. Every day, I worked with the field team and the GIS team to travel to malaria positive households, where we would take GPS coordinates and map out the ecology of the household and the surrounding area.

However, due to the rainy season, travel throughout southern Zambia was much more difficult than I expected. Many times, travel would require taking our four-wheel drive Toyota Landcruiser through flooded bridges and bumpy, muddy roads in order to reach the malaria positive households. But with the hard work of the MRT team, we were able to complete enough household analyses to be useful for the project. These experiences gave me insight into the logistical difficulties of implementing public health interventions in low and middle income countries such as Zambia, and an appreciation for simple things like asphalt roads, which make the implementation of projects so much easier.

In addition to these household visits, I was also able to learn more, and become more involved, in the other studies that are being conducted by MRT. Over pre-lunch tea, I would talk with the field director, Dr. Jennifer Stevenson, and the GIS team about the challenges and gaps of the data they have collected over the years. This led us to come up with some innovative and exciting ideas that will hopefully help the MRT come closer to their goal of malaria elimination.

After returning, for my capstone I will incorporate both the modeled and field-collected data, using spatial statistics and epidemiologic analysis, to determine trends and similarities between malaria positive and negative households. Once these data layers are analyzed and validated, they can also be utilized in modeling malaria transmission beyond our study area. I believe that a study that evaluates the key determinants of a disease, such as this one, can have significant impact on further evaluating vector control method

Seuhee Yoo

Global Report on Patient Safety and Health Care Quality (Service-Oriented)

Academic Advisor: Shannon Doocy

Johns Hopkins Faculty Affiliate: Shannon Doocy

Field Counterpart: Sun Mean Kim

Location: Geneva

“Why have we not made more advances in more areas?” The Global Report Project started with an effort to try to answer this question. We have achieved tremendous advances in health over the past decades - that is true. However, when we see our current situation – the on-going struggle against malaria, TB, HIV/AIDS and numerous other infectious diseases, the increased disease burden of NCDs all over the world and even the out breaking news of newly emerging diseases every year – we need to pause for a moment to think about what might be the barriers hindering better progress. Is there something we have missed? Is there any problem in our approach?

With the paradigm shift attention is being paid to are attempted to improve

The Global Report Project civil society with a safety, quality and their importance to achieve scope, issues and outline last year. As the next step, evaluation, and making the required. I participated in the support of the MPH

I worked in the Service primary responsibilities on:

- Researching and reviewing the existing international measurement and evaluation effort in OECD and developing countries
- Especially focusing on the indicators, but also including guidelines, frameworks, portals and country profile reports, etc.
- Summarizing the contents of M & E efforts
- Classifying them by theme and methodology

The work required a clear and deep understanding about the ‘quality’ of care and the systematic approach in different levels. It became an opportunity for me to further develop my knowledge about the quality, M & E and public health itself, but also a great chance to contribute myself to the Global Report Project with the knowledge and skillsets I learned from the MPH courses and in the field.

It was a time to better understand the structure of WHO and its working process. In addition, attending the seminars and presentations by the leading organizations or institutes invited to the WHO, directly asking them my questions and engaging in discussions was an additional benefit during my working there.

Lastly, I hope to end my brief report with expressing my special thanks to the MPH Field Experience Fund Award.



from MDGs to SDGs, greater the quality of care and various efforts the quality health care.

aims to provide governments and comprehensive description of the responsiveness of health services and broad public health goals. The entire of the Global Report were defined the data supplement, review, analysis, infographics for the report were this process during winter break with Field Experience Fund Award.

Delivery and Safety department with

