

Wisconsin-Madison Internal Review Board. Written consent was obtained before all participants were surveyed. If the age of the participant was less than 18 years, a guardian was required to provide assent.

**Findings:** 88% of children received age-appropriate, on-time immunizations. 93.5% of the women were able to state that childhood immunizations protect children from diseases. The women not able to point this out were significantly more likely to have an under-vaccinated child (PR 1.354: 95% CI 1.018–1.802). When asked why vaccination rates may be low in their community, the two most common responses were “fearful of side effects” and “ignorance/disinterest/laziness” (44% each).

**Interpretation:** The factors influencing caregivers’ demand for childhood immunizations vary widely between, and also within, developing countries. Research that elucidates local knowledge and attitudes, like this study, allows for decisions and policy pertaining to vaccination programs to be more effective at improving child vaccination rates.

**Funding:** Support from the Global Health Institute, Department of Pediatrics, and the Shapiro Summer Research Program at the University of Wisconsin-Madison School of Medicine and Public Health made this research possible.

**Abstract #:** 2.086\_NEP

### Assessing refugee trauma in the primary care setting

*Jacqueline Wagner; Washington University in St. Louis, St. Louis, MO, USA*

**Background:** Refugees entering the U.S. often come from countries where violent conflict permeates everyday life. Many have suffered, witnessed, or perpetrated violence themselves, which can lead to trauma, an emotional shock experienced as a result of a violent or otherwise distressing event and a risk factor for posttraumatic stress disorder (PTSD), depression, and anxiety. Unfortunately many refugees are never screened for trauma, and traditional trauma assessment tools are ill-suited for refugee populations, or are lengthy and impractical for primary care. Working in partnership with the International Institute of St. Louis, this project had two objectives:

1. To develop a trauma assessment tool for use by primary care physicians, and
2. To design an evaluation program assessing the tool’s effectiveness.

**Methods:** First, a systematic literature review was conducted concerning symptoms of trauma in refugee populations. Next, semi-structured interviews were conducted with the staff therapist, 1 social worker, and 2 caseworkers at the Institute; 2 primary care physicians working with refugees; and 2 mental health professionals at the Center for Survivors of Torture and War Trauma. The trauma assessment tool was developed through a qualitative assessment involving coding of themes from the literature review and interviews. Finally, I designed a validity study utilizing the Harvard Trauma Questionnaire as the gold standard to assess the effectiveness of the new tool.

**Findings:** The literature search produced 129 results, 17 of which met inclusion criteria for development of the tool. Interviewees had similar insight as to symptoms of past trauma in refugees. Most suggested that a tool for use in primary care should avoid asking sensitive questions. The final tool reflects the most important symptoms and issues from both sources, including sleep, pain, appetite, mood, anxiety, and general functioning, while also seeking to be succinct and establish rapport.

**Interpretation:** Limitations of this project include the small number of interviewees and the lack of time and funds to carry out the evaluation program. Primary care is an important setting where refugee trauma can and should be assessed. It is possible to assess trauma without asking sensitive questions and without taking up too much time.

**Funding:** None.

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### Career trajectories of global health MPH alumni from the University of Washington

*K. Wakefield<sup>1</sup>, C. O’Brien Carelli<sup>2</sup>, S. Gloyd<sup>3</sup>; <sup>1</sup>The University of Washington, Department of Global Health, Seattle, WA, USA, <sup>2</sup>The University of Washington, Department of Global Health, Seattle, WA, USA, <sup>3</sup>The University of Washington, Department of Global Health, Seattle, WA, USA*

**Program/Project Purpose:** We sought to better understand the nature of careers in the emerging field of global health by collecting qualitative and quantitative information on the types of employment held by graduates of a long standing global health graduate program. We solicited input from a diverse group of both domestic and foreign alumni on the course of their careers both before and after enrolling in The University of Washington’s Master in Public Health (MPH) in Global Health Program.

**Structure/Method/Design:** We used a combination of quantitative and qualitative methods to collect information on the careers of graduates of the University of Washington’s Department of Global Health. For the quantitative component, we developed a web-based survey that was e-mailed to graduates of The University of Washington MPH in Global Health program. The contacted group included graduates of the original International Health Program (1988 – 2007) and its continuation, The Department of Global Health, established in 2008. For the qualitative component, we randomly selected 40 MPH graduates from whom to solicit Curriculum Vitae (CVs). CVs were collected in order to gather information about graduates’ “career trajectories,” or the course of their careers in—and outside of—the field of global health. The graduates were selected using a systematic sampling method from the group of 274 people who graduated during a 25-year period (1989 – 2013). We then contacted the graduates via e-mail and requested copies of their CVs for review.

**Outcome & Evaluation:** At the time of the initial survey request, 415 people had graduated with a MPH from one of the aforementioned programs. We received 173 responses to the survey, or 52.8% of alumni whose updated contact information was available. We received a total of 30 CVs, or 75% of the sample. From the CV analysis of domestic students there were clear trends with our earliest graduates having settled into domestic public health after working in

global health previously; mid-career alumni were all working in global health and recent alumni were pursuing additional education and/or training. Our international students were working in global health in their respective countries with the exception of a few recent graduates who had stayed in the US.

**Going Forward:** The field of global health is growing rapidly, specifically among undergraduate and graduate students. It's imperative to follow alumni of our respective programs overtime and share trends of employment to ensure there is a need and capacity to take on the many students we are training.

**Funding:** None.

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### Pharmaceutical distribution networks in peri-urban India

*P. Makhijani, H. Reid, L. Vaclamani, M. Walsh; Stanford University, Stanford, CA, USA*

**Background:** The urban poor in India rely upon private general practitioners (GPs), who often have no formal training in modern medicine, in order to access allopathic medications. While prior studies have researched the practices of these GPs, no recent studies have investigated their pharmaceutical distribution networks. Our study fills this gap by documenting this pharmaceutical distribution network and its effects on medical practice in the peri-urban areas of India.

**Methods:** We conducted 132 in-depth qualitative interviews with households, GPs, chemists, distributors, medical representatives and manufacturers in Mumbai and its surrounding areas. We solicited interviewees through in-person visits and phone calls.

**Findings:** The market for drugs in Mumbai is primarily physician-driven, with very little distinction drawn between allopathic and non-allopathic providers. Most poor households do not use generic drugs even though they are far cheaper. A majority of providers also stock loose drugs dispensed directly to patients, because of patient demand.

Through these interviews, we gained information about regulations, pharmaceutical marketing and supply chain practices. We found heterogeneous enforcement of medical regulation. While the Food and Drug Administration (FDA) recently increased enforcement of regulation on chemists' practices, provider practices remain relatively unencumbered by existing legislation. Medical representatives from pharmaceutical companies provide gifts, invitations to conferences and other special privileges to encourage prescriptions of their medications. Fierce competition among the distributors and wholesalers in the supply chain facilitates lower prices and wide access to medications.

**Interpretation:** While we must consider selection bias, our analysis indicates a shifting medical landscape toward a general practitioner-driven market. The relatively strict medical practice enforcement of chemist compared to GPs has increased the role of GPs in primary care. At the same time, an abundance of wholesalers and distributors has created easily accessible and relatively cheap medications for these GPs to dispense from their clinic. Finally, pharmaceutical company incentives shape the knowledge and practice of these GPs without necessitating regard for consumer welfare.

**Funding:** We were funded through the Policy Implementation Lab, a division of the Freeman Spogli Institute, at Stanford University.

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### Investigating the knowledge and impact of dengue and chikungunya in a rural population in Yoro, Honduras

*Nathaniel Warner<sup>1</sup>, Daniel Olson<sup>2</sup>, Nadia Nasroo<sup>3</sup>, Bako Sanogo<sup>4</sup>, Gonzalo Bearman<sup>3</sup>, Michael Stevens<sup>3</sup>; <sup>1</sup>Internal Medicine, Virginia Commonwealth University, Richmond, VA, <sup>2</sup>School of Medicine, Virginia Commonwealth University, Richmond, VA, <sup>3</sup>Infectious Diseases, Virginia Commonwealth University, Richmond, VA, <sup>4</sup>Virginia Commonwealth University Medical Center, Richmond, VA*

**Background:** Dengue and Chikungunya cause significant morbidity in Latin America. While Dengue has been endemic in Honduras for many years, Chikungunya was only recently introduced and has spread rapidly throughout the country with over 50,000 endemic cases thus far in 2015 alone. There is no data on the impact of these diseases in the local populations surrounding La Hicaca, a rural, mountainous region in Yoro, Honduras.

**Methods:** In June of 2015, a fifty-question survey was given to the villagers of La Hicaca and seventeen surrounding villages to investigate the impact and local awareness of Dengue and Chikungunya. Survey was IRB approved and written informed consent was obtained prior to participation. Fifty-eight surveys were completed. Respondents were grouped by relative poverty level and descriptive and comparative analysis was performed.

**Findings:** 62% of respondents reported at least daily mosquito bites and 33% reported having had Dengue in the past. One patient reported having Chikungunya but this was self-diagnosed. 79% of respondents knew Dengue was transmitted by mosquitoes versus only 33% who knew this about Chikungunya ( $p < 0.0001$ ). The poorest respondent group was less likely to know that Dengue is transmitted by mosquitoes (60.0% vs 93.9%,  $p = 0.00168$ ), and less likely to know that mosquitoes lay their eggs in standing water (36.0% vs 81.8%,  $p = 0.0004$ ). There was very little knowledge about Chikungunya and the largest knowledge deficits were seen in the poorest respondents. 58% of respondents emptied standing water around their homes to prevent mosquito bites. Respondents listed poor access to resources and lack of funds as the main barriers to mosquito prevention.

**Interpretation:** Despite Dengue and Chikungunya being endemic in the region, knowledge about these diseases in and around La Hicaca is incomplete and partially related to poverty status. These data will help inform educational and preventive efforts in the region.

**Funding:** None.

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### Peer mentorship and early exposure: A novel approach to the global health elective

*S. Wheat<sup>1</sup>, R. Mendez<sup>1</sup>, R. Musselman<sup>2</sup>, P. Wetherill<sup>2</sup>, C. Ndhlov<sup>3</sup>, S. Winter<sup>2</sup>, M. Sadigh<sup>2</sup>; <sup>1</sup>University of Vermont College of Medicine, Burlington VT, USA, <sup>2</sup>Western Connecticut Health Network, CT, USA, <sup>3</sup>University of Zimbabwe College of Health Sciences, Harare, Zimbabwe*