

etiological research has been done in CMB or HRL Emergency Medicine (EM) departments, which both contributed to the initiation of a new EM residency program in 2010. Aim: To determine the type and frequency of illnesses presenting to the EM department from 2009-2013 in POP, Dominican Republic.

**Structure/Method/Design:** Project Goals, Desired Outcomes: The desired outcome was to quantify the most frequent illnesses in the ER from 2009 to 2013 to determine where the EM departments should allocate their resources and training. Participants and Stakeholders: How were they selected, recruited? Data were collected through General Administrative Information System (GAIS), Informix, and the HDRL database at CMB and HRL in POP from 2009-2013. The top forty causes of EM visits were found in the HRL database, and these illnesses were searched for in the CMB database. Capacity Building / Sustainability: No patient identifiers were used on the data obtained from the different hospital databases. This project was affiliated with UTMB global health tract.

**Outcomes & Evaluation:** To date, what are the successes and outcomes achieved? We determined the etiologies of HRL 2011-2013 and CMB 2009-2013 EM departments. Monitoring & Evaluation Results: In CMB, the top 3 etiologies were headache, bronchospasm crisis, and trauma in 2009-2011 and 2013. In 2012, trauma was replaced by Asthmatic Crisis. Data for HRL was not available from 2009-2010. From 2011-2013 at HRL, the top 2 causes were fever and headache. In 2011, the third cause was bronchospasm crisis. In 2012 and 2013, the third cause was tonsillitis and lumbar pain respectively.

**Going Forward:** What are the ongoing challenges? The CMB and HRL EM departments should take this information and integrate it into their EM residency curriculum. Are there any unmet goals? The etiologies could not be determined in 2009 and 2010 in HRL due to a change in database and hospital staff. How are/may future program activities change as a result? The EM Residency program directors should focus their resources and training heavily on headache, bronchospasm crisis, trauma, asthmatic crisis, tonsillitis, and lumbar pain in order to best care for the most frequent causes of emergencies.

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### Mentoring for sustainable in-country academic leadership in resource-limited settings

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**Background:** With increasing diversity of training opportunities in Africa, there is an ever-increasing number of individuals that obtain initial training (bachelors and masters-level) locally, and more advance training (doctoral and post-doctoral) at international academic institutions. Re-entry and retention of the internationally-trained experts is faced with variable challenges that affect trainees' productivity and impact on health care outcomes. In the quest to maximize the return on investment, by both local and international partners in training, we set out to evaluate in-country factors that influence academic careers at Makerere University College of Health Sciences (MaKCHS), and generate locally appropriate interventions.

**Methods:** A series of focus group discussion (FGD) were held with four departments, in the school of medicine, that have at least nine teaching faculty (Medicine, obstetrics and Gynecology, pediatrics and anesthesia). Using a FGD guide, we conducted 60-minute-long FGDs, that comprised of at least 8 faculty per FGD, including junior

and senior faculty (male and female). Qualitative data was recorded by a note-taker, audio-recorded and analyzed manually under themes that were pre-determined by a career development interest group.

**Findings:** Overall, 5 FGD were conducted, and a total of 72 staff participated, of whom 57 were junior faculty [19(33%) female] and 15 were senior faculty [7(47%) female]. Highlighted in-country challenges to advancement of an academic career included: a) Lack of effective in-country mentoring to navigate through common challenges. 'It has been difficult for me to find a local mentor. I need to travel abroad to work with my mentor, which is expensive' said one junior faculty. b) Lack of protected time for academic activities due to overriding clinical and administrative demands. 'When faculty leave the ward to pursue academic activities, there is not enough left to take care of the patients', said one senior faculty. 'I need to travel abroad, away from the heavy clinical schedules, to complete my manuscripts', said one mid-level faculty. c) Socio-economic factors and family responsibilities. 'Everyone needs to strike a balance between academic activities and family responsibilities, which can be quite engaging socially and financially', said one senior faculty. d) Limited use of personal development plan. 'What is the average period a faculty should stay at one academic position before promotion?' one mid-level faculty asked. e) Need for collaborative research teams. 'How do I get involved in collaborative research at an international level?' said one mid-level faculty?

**Interpretation:** Strategic investment in strengthening of in-country mentoring and networking activities was recommended to develop locally-relevant academic career opportunities to absorb post-training scientists and utilize acquired expertise to improve training, research and clinical care. An institutional career development structure was proposed to spearhead regular mentoring and personal development planning activities for junior and mid-career faculty.

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### 'Essential clinical global health': A multi-national collaboration develops a pioneering new 2015 textbook for global health trainees and clinicians working in resource-limited settings

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**Program/Project Purpose:** As participation in global health continues to grow among students, trainees, and clinicians, the need continues for a clinical global health textbook to prepare individuals for their experiences abroad. In 2010, the Global Health Education Consortium (GHEC) reviewed existing global health textbooks, finding several excellent books but with a dearth of clinical emphasis. We, therefore, set out to develop a clinically focused textbook that includes contributions from renowned global health experts from across the globe and that provides the essential information required by clinicians and clinicians-in-training for effective and rewarding international experiences. The resulting Essential Clinical Global Health, we believe, fills this need.

**Structure/Method/Design:** The development of the textbook began with the editor recruiting an editorial board of diverse experts, who then assisted in determining textbook content and identifying pertinent clinicians as chapter authors. Leadership from the Consortium of Universities for Global Health and the former GHEC provided critical input on selecting editorial board members, chapter contributors, and textbook content. Chapter content was developed through an intense and iterative process between chapter authors and the editorial board, including several stages of drafting, reviewing, editing, and revising. We also partnered closely with illustrators from Wiley-Blackwell to produce a text rich in illustrations and photographs.

**Outcomes & Evaluation:** Essential Clinical Global Health includes contributions from nearly 100 global health experts, with content organized into 37 chapters and 6 sections: Introduction; Newborn and Child Health; Adolescent, Reproductive, and Maternal Health; Infectious Diseases; Non-Communicable Diseases; and Other Global Health Topics. Chapters cover the clinical diagnosis, management, and prevention of the leading causes of morbidity and mortality in low- and middle-income countries, along with special chapters on resource-limited health systems and other contextual topics, for example, “Working clinically in resource-limited settings,” “Preparing for travel and staying safe abroad,” “Neglected tropical diseases,” “Laboratory skills,” “Nursing care,” “Pharmacy,” “Global health technologies,” “Illness in returning travelers,” and “Developing a career in global health.” Each chapter features key learning objectives, evidence-based clinical guidelines, practical clinical skills, real-world experiences from trainees and clinicians in the field, and core readings. The textbook’s accompanying electronic supplement contains additional resources, videos, and self-assessment questions and answers as well as an electronic version of the complete textbook – valuable for reference abroad on a laptop, tablet, or mobile device.

**Going Forward:** As this collaborative textbook is published the beginning of 2015, our goal is to make it widely accessible to individual global health students, trainees, and clinicians, as well as to all institutions with global health programs. We welcome feedback from the global health community on how to improve future editions of Essential Clinical Global Health. We are also working with Wiley-Blackwell to develop online CME offerings based upon the textbook.

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### **Strengthening the health system capacity to monitor demographic and population health metrics through surveillance nested on existing government community health structures: A pilot from a rural area of Kenya**

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**Background:** The community health strategy (CHS) is a response of the Kenyan government to reversal in gains for population health indicators in the 1990s. CHS’s main aim is to improve health outcomes by bridging the gap between households and the health system. The key innovation of CHS is the development of capacity to monitor the population and deliver primary health services at the community level by well-trained community health workers (CHWs). We aimed to evaluate the feasibility of generating reliable demographic and household level health information using CHWs in a rural area in Kenya.

**Methods:** We trained and supported 100 CHWs to conduct a registration, enumeration and household health information data

collection. They used the standard CHS household registration tool with items covering demographic, maternal and child health, and social determinants of disease aspects of the household. The data were entered into a relational database and analyzed in Stata v13 (Statacorp, College Station, Houston TX, USA). We used Whipple’s index to assess for age heaping and compared the distribution of demographic parameter with those of other surveys in the area (e.g. DHS) and an adjacent HDSS. Overall and category specific denominators were used to evaluate the collected household health information.

**Findings:** The population of the area was 16,005 individuals living in 2,722 households. The median (IQR) number of individuals per household was 6 (4-7). Females comprised of 51% of the population and 99% provided a date of birth. The median (IQR) age was 17 (8-32) years. There was no age heaping (Whipple’s index was 97), reflecting reasonably accurate age reporting. Children Parents/guardians of 93% of children aged

**Interpretation:** This project demonstrated that it is feasible to identify and register populations under the existing government CHS structures as well as generate relatively accurate demographic data which can be used as denominators in monitoring and evaluation of population health programmes. Reporting of maternal health information was poor and more training is needed to enable CHWs to collect this information.

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### **Cultural relevancy in capacity building: Community education to address the malnutrition spectrum**

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**Program/Project Purpose:** Addressing under-five mortality, morbidity, and associated influence of nutrition is a public health priority world-wide. The Children’s Hospital of Philadelphia (CHOP) has a long-standing partnership with a local clinic in Consuelo, Dominican Republic. Their Niños Primeros en Salud (NPS) programming, engages local medical staff, residents, and health promoters (HPs) as a medical home for the community’s children. In 2009, they initiated a nutrition supplementation program, for undernourished children; however, children did not significantly or consistently improve. Through efforts of CHOP and local NPS staff, a needs/assets assessment was conducted and a nutrition curriculum designed. Globally and locally a “Nutrition Transition” is occurring where all forms of malnutrition exist, including traditional “undernutrition”, micronutrient deficiencies, and the risk for obesity and noncommunicable diseases. Contributors to these forms include food insecurity, access to nutrient-poor processed foods, and misunderstandings around nutrition’s importance to health. Subsequently, the curriculum focused on how to make healthy choices in nutrition, physical activity, and hygiene with available resources. The training and curriculum implemented resulted in improved clinical data. In 2014, Vanderbilt Peabody College performed an external evaluation of the curriculum.

**Structure/Method/Design:** To evaluate the effectiveness and use of the nutrition curriculum, an assessment was conducted via individual interviews of the clinic staff and HPs, and a collective HP focus group. These were conducted in Spanish and the audiotape then transcribed into English for analysis. This existing sustainable structure of staff and HPs will now be used in the program revision based on findings.