*Angeles, CA/US, [3]David Geffen School of Medicine at UCLA, Newton, MA/US*

**Program/Project Purpose:** Worldwide, one in ten neonates suffers from birth asphyxia, a condition characterized by the inability to breathe due to a shortage of oxygen before, during or just after birth. Nearly all of deaths related to birth asphyxia occur in resource-poor settings, where neonatal resuscitation (NR) training may be inadequate. Since 2010, pediatric residents from UCLA working with Ghana Health and Education Initiative have provided annual NR training to midwives, nurses and other medical providers in the Bibiani-Anhwiaso-Bekwai (BAB) District in Ghana. The program aims to provide regular NR training to at least 85% of medical providers who assist in vaginal and/or cesarean section births in the BAB district.
**Structure/Method/Design:** In order to evaluate this program, during June 2014, we administered a private, in-person, anonymous oral survey to 64 medical providers at 14 sites in the Western Region of Ghana. All available providers from every site in the BAB District that offers delivery services participated, as well as providers from two sites in the neighboring Sefwi-Wiawso District, which also serve the BAB population. Staff reported the length of time since last NR training and NR knowledge. Results were compared to parallel survey data collected in June 2011. Chi-squared and logistic regression were performed to determine statistical significance.
**Outcomes & Evaluation:** A total of 31 midwives, 20 nurses and 13 other medical providers were surveyed, and these provider types had assisted in an average of 20, 1.8 and 4.9 deliveries in the past month, respectively. 65% of interviewed providers had received training within the past 6 months. From 2011 to 2014, the status of having received NR training since leaving school had increased by 40% percent for nurses ($p = 0.032$) but there was no significant change for midwives and other providers. The percentage of providers who had received any NR training in the prior six months increased by 29% ($p = 0.016$) and the proportion of trainings conducted by UCLA pediatric residents increased by 46% ($p < 0.01$). Providers trained by UCLA residents demonstrated increased knowledge of NR relative to those who had not been trained since school (OR=4.8, p=0.032).
**Going Forward:** This program has successfully increased the proportion of medical providers who have received recent NR training. Ghanaian providers who received NR training by UCLA residents displayed higher levels of NR knowledge. However, the program falls short of ensuring that 85% of medical providers who assist in deliveries have been trained in the last year. Furthermore, trainings have only taken place at 7 of the 12 sites that provide delivery services in the BAB district, and therefore more health facilities in the BAB district should be visited on an annual basis in order to achieve the program's goals.
**Funding:** None.
**Abstract #:** *01ETC039*

## Nexus between global and local health

*M. Haider[1], C. Holt[2]; [1]Scholl of Public Health (Global Health) University of Maryland, College Park, MD/US, [2]School of Public Health University of Maryland, College Park, MD/US*

**Program/Project Purpose:** Economic globalization has brought about a 'globalization' of health and diseases and the boundaries between health and disease are rapidly shrinking. Thus, health advocates need to broaden their health and research models to include community and cross cultural variables. The US is an established leader in the field of evidence based testing for intervention efficacy as well as implementing various health interventions in underserved and minority US communities. Currently, evidence based research and interventions are a key issue in global health. US based health research and interventions can contribute greatly to establishing norms for evidence-based practices globally. In addition, increasingly, the benefits of a community-based approach in increasing awareness have become apparent and interventions across the US are using this approach to increase preventing health behaviors while empowering underserved communities. However, many times, such interventions are tested in randomized trials, become evidence-based, and then fail to reach further use in the broader communities. Project HEAL (Health through Early Awareness and Learning) is an implementation trial that aims to compare two strategies of implementing evidence-based cancer communication interventions in African American faith-based organizations.
**Structure/Method/Design:** HEAL uses a community-engaged process of transforming three evidence-based cancer communication interventions into a coherent, branded strategy for training community health advisors with two delivery mechanisms. Peer community health advisors receive training through either a traditional classroom approach (with high technical assistance/support) or a web-based training portal (with low technical assistance/support).
**Outcomes & Evaluation:** Though the pilot phase showed feasibility, it resulted in modifications to data collection protocols and team and community member roles and expectations. Project HEAL offers a promising strategy to implement evidence-based interventions in community settings through the use of technology, and there may wider implications for chronic disease prevention and control.
**Going Forward:** In more recent years, the global dialogue around policies for health has placed much importance on the need for cross cultural understanding and translational research to reduce the burden of chronic and acute diseases worldwide. The exchange program, such as Project HEAL, based on research findings, sharing lessons learned and making sure that local programs and Global Health approach issues jointly and find out ideas/research to enhance their outcomes. Also, developing forums and institutional support services of research finding and implementation could be another approach which is seldom happening.
**Funding:** National Cancer Institute R01 CA147313
**Abstract #:** *01ETC040*

## A nurse fellowship in global health

*E. Hall, E. Scarr, S. Rose; University of California San Francisco, San Francisco, CA/US*

**Program/Project Purpose:** Nurses provide the vast majority of patient care globally. In high-income countries, post-graduate training for new nurse practitioners (NPs) is becoming increasingly popular as an effective model for transitioning to the advanced practice role. In most low- and middle-income countries (LMICs), where nurses often take on advanced roles due to physician scarcity, nurse practitioner programs do not exist, nor does the infrastructure for comprehensive clinical education and leadership training. Despite the great potential to improve healthcare delivery in LMICs by strengthening the nursing role, to date there have been no international fellowship programs that offer mentorship in global health to US-trained advanced practice nurses (APNs), while establishing local partnerships to build nursing capacity. To this end, nursing faculty at the University of California, San Francisco have developed an NP Fellowship in Global Health, conjointly with Partners In Health, offering focused global health training to APNs that prepares them to provide nursing mentorship to their colleagues abroad and become leaders in global health nursing.

**Structure/Method/Design:** This fellowship addresses two interrelated, unmet needs in nursing education: post-graduate global health training for US-based APNs; and clinical, didactic and leadership support for nursing staff in low-resource settings. The one-year fellowship is based at Hinche Hospital in Haiti. Two NP fellows are selected annually from an applicant pool of NP graduates. Medical and nursing leadership in Haiti are engaged through our partner, Partners In Health. The NP Fellowship was invited by and designed in collaboration with Partners In Health. We are positioned to work as a true interprofessional partnership, as the model is based on the UCSF Global Health Hospitalist Fellowship program, which has been in place at Partners In Health's Hinche Hospital for two years and has shown successful outcomes.
**Outcomes & Evaluation:** The desired outcomes for this project are: a) an improvement in the NP fellows' efficacy in global health competencies; and b) an increase in clinical and leadership skills and job satisfaction by Haitian nurses. Collaborating with UCSF and Haitian physician colleagues, the NP fellows will contribute to interprofessional capacity building through clinical and management training with nursing leadership and staff in Hinche. Ongoing monitoring and quarterly evaluation criteria include qualitative data from Fellow and Haitian nurse interviews, surveys and clinical observation, as well as quantitative data from supplemental charting of clinical activities.
**Going Forward:** As of the submission of this Abstract, the fellowship program has just been launched (September 2014). At conference time, we will share our successes, challenges and program modifications.
**Funding:** The project is funded for three years by a private donor. Using a robust monitoring and evaluation strategy, we will be prepared to apply for further funding when the initial grant period is complete.
**Abstract #:** *01ETC041*

## Evidence-based scale-up of mSakhi community health worker mHealth system in Uttar Pradesh, India

*M. Hamilton[1], G. Bora[2]; [1]IntraHealth International, Chapel Hill, NC/US, [2]IntraHealth International, New Delhi, IN*

**Background:** India's accredited social health activists (ASHAs) receive 33 days of classroom training on maternal, newborn, and child health (MNCH) and have access to paper-based job aids. However, many ASHAs' knowledge, counseling skills, and ability to diagnose sick newborns are inadequate, and use of job aids for counseling and newborn danger sign assessment is ineffective. In one study, ASHAs misclassified 7 out of 8 infants as normal although investigators detected signs requiring home-based care. The Uttar Pradesh (UP) government expressed interest in using mHealth technology to improve ASHA performance. In 2012–2013, the IntraHealth International-led Manthan project assessed the feasibility and effectiveness of mSakhi, an mHealth application, to improve ASHAs' capacity in counseling, assessment, and identification of care or referral needs.
**Methods:** The Manthan project conducted two studies evaluating mSakhi functionalities. IntraHealth's institutional research review committee reviewed protocols and determined that the research adhered to human subjects protection requirements. The first study (Bahraich District) tested mSakhi feasibility and effectiveness as a self-learning and counseling tool with 86 ASHAs (46 experimental, 40 comparison). The second study (Jhansi District) evaluated mSakhi effectiveness for postnatal newborn care assessment and referral with 57 ASHAs (29 experimental, 28 comparison). ASHAs in experimental arms used mobile phones preinstalled with mSakhi and received usage training; comparison ASHAs received training on paper-based tools. All ASHAs received routine monitoring and feedback. At baseline/endline, the studies assessed MNCH knowledge and observed counseling and assessment skills. Differences-in-differences were tested for significance using Z-scores.
**Findings:** ASHAs were more likely to use mSakhi (55%) than flipbooks (22%) during home visits. Knowledge of key MNCH topics improved significantly ($p < 0.001$) among ASHAs using mSakhi, who also demonstrated greater recall of at least six critical newborn conditions warranting referral. Counseling quality, measured as completeness of messages delivered (i.e., message given AND told about message importance AND tool used for reinforcement/illustration), improved significantly in the mSakhi group. ASHAs using mSakhi showed significantly better newborn assessment skills (weighing*, measuring temperature*, identifying breastfeeding difficulties***, examining pustules**, examining pus in umbilicus*) (*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$), and identified 10% of births as needing referral (versus 2.4% in the comparison arm).
**Interpretation:** The results indicate that the mSakhi mHealth application is more user-friendly and effective than paper-based job aids for ASHA activities including self-learning, counseling, assessment, and diagnosis. The design of the two studies did not permit measurement of community-level effects, but the findings make a case for implementing and evaluating mSakhi at scale. Given the evidence of mSakhi effectiveness in improving ASHA performance, the UP government is scaling up mSakhi in five of 75 districts (12,000 ASHAs) to inform statewide scale-up.
**Funding:** The Bill & Melinda Gates Foundation.
**Abstract #:** *01ETC042*

## Outcomes of the NIH fogarty international clinical research program: Early alumni publications

*D.C. Heimburger[1], M. Blevins[1], C. Lem Carothers[1], T. Warner[2], S. Vermund[1]; [1]Vanderbilt Institute for Global Health, Nashville, TN/US, [2]University of Georgia, Athens, GA/US*

**Program/Project Purpose:** In order to train global health researchers, between 2004 and 2012, the NIH Fogarty International Clinical Research Scholars and Fellows (FICRS-F) Program offered one-year mentored clinical research training experiences in low- and middle-income countries (LMICs) for competitively selected doctoral Scholars (n=413) and postdoctoral Fellows (n=105) in health-related professions from the US (n=256) and LMICs (n=280). Some trainees (n=18) were supported as both Scholars and Fellows (thus, total n=536).
**Structure/Method/Design:** We evaluated publications data from Fogarty International Center's CareerTrac database (a minimum estimate of the true number), entered through 15 October 2013 from alumni self-reports and CVs, and Internet and PubMed searches. We used linear regression to explore factors associated with numbers of publications.
**Outcomes & Evaluation:** Trainee research topics were 68% in infectious (47% HIV/AIDS), 18% in non-communicable, and 15% in infection-related non-communicable diseases ("combined"). Non-communicable and combined disease topics increased from 17% in 2004-2007 to 40% in 2008-2011. At least 10% of projects focused on each of these: basic science, health behavior, health care systems, pulmonary diseases, parasitology, sexually transmitted infections, tuberculosis, maternal and/or child health, and cancer. Of 1617 papers in PubMed, FICRS-F alumni were first author of 501 (31%).