

2015 Global Health Symposium



Center for Global Health
WHO Collaborating Center
Colorado School of Public Health
<http://globalhealth.ucdenver.edu>



Schedule

9:00 am- Welcome

Community-Based Participatory Research

9:05 am – “Acceptability of Community-Based Mentor Mothers Among HIV-Positive Pregnant Women and Partners in the Context of Option B+ in Kenya”

Lisa Abougi, MD, Assistant Professor of Pediatrics, School of Medicine and Senior Investigator, Center for Global Health, Colorado School of Public Health both at the University of Colorado Anschutz Medical Campus

9:20 am – “Community-based Census and Mapping in El Trifinio Guatemala”

Saskia Bunge-Montes, MD, MPH Candidate, Celgene Fellow, Center for Global Health, Colorado School of Public Health, University of Colorado Anschutz Medical Campus

9:35 am – “Sharing Circles: Learning from a Community Based Psychosocial Intervention Model Implemented with Vulnerable Populations in Myanmar”

Gwen Vogel Mitchell, PsyD, Assistant Professor in International Disaster Psychology, University of Denver and Director of International & Clinical Programs for SalusWorld

9:50 am – Break

Systems and Accountability

10:05 am – “Health Facility Challenges to the Provision of Option B+ in Kenya”

Lisa Abougi, MD, Assistant Professor of Pediatrics, School of Medicine and Senior Investigator, Center for Global Health, Colorado School of Public Health both at the University of Colorado Anschutz Medical Campus

November 20, 2015

9:00 am - 3:00 pm

University of Colorado
Anschutz Medical Campus

Research 1 North Building
Hensel Phelps Auditorium West
(Room 1006)

12800 East 19th Avenue
Aurora, CO 80045

10:20 am – “Tobacco Industry Documents Research in Africa (tidocafrika.org): Creating a Community of Practice Among Public Health and Corporate Accountability Advocates”

Marty Otañez, PhD, Associate Professor in Anthropology, College of Liberal Arts and Sciences, University of Colorado Denver

Lily Sahaguian, Undergraduate Student Researcher, Public Health, University of Colorado, Denver

Nutrition

10:35 am – “Mode of Breastfeeding Influences Early Maturation of the Infant Gastrointestinal Microbiome and Mucosal Immunity in HIV-exposed but Uninfected Infants in Uganda”

Daniel Frank, PhD, Assistant Professor of Infectious Diseases, School of Medicine, University of Colorado Anschutz Medical Campus, Microbiome Research Consortium (MiRC) and Mucosal and Vaccine Research Program Colorado (MAVRC)

10:50 am – Presentation of the 2015 Excellence in Global Health Awards

12:00 pm – Lunch Break

Environmental Health/Epidemiology

1:00 pm – “Neurobehavioral effects associated with low-level exposure to pesticides in The Gambia”

Jaime Butler-Dawson, MPH, PhD Candidate, Department of Occupational and Environmental Health, University of Iowa, College of Public Health

1:15 pm – “Soil-Transmitted Helminths Prevalence in Refugees Arriving to Colorado in 2009-2012”

Tuan Dung Khac Nguyen, MD Candidate, School of Medicine, University of Colorado Anschutz Medical Campus

Tuong Phan, MD Candidate, School of Medicine, University of Colorado Anschutz Medical Campus

Adolescent Health

1:30 pm – “Discovering Adolescent Health Issues in Rural Guatemala”

Randi K Johnson, MPH, PhD Candidate, Graduate Research Assistant, Department of Epidemiology, Colorado School of Public Health



1:45 pm – “The Role of Menstruation in Education Access in Rural Ethiopia”

Meseret Hailu, MS, Graduate Research Assistant, Morgridge College of Education, University of Denver

2:00 pm – Break

Education

2:15 pm – “Exclusive Breastfeeding Education and Support for Community Nurses in Trifinio, Southwest Guatemala”

Maya Bunik, MD, MSPH, FABM, FAAP, Associate Professor of Pediatrics, School of Medicine, University of Colorado Anschutz Medical Campus, and Medical Director, Child Health Clinic - Primary Care, Children's Hospital Colorado

Maureen Lensen, MSN, CPNP, IBCLC, Senior Instructor with Distinction of Pediatrics, School of Medicine, University of Colorado Anschutz Medical Campus and Child Health Clinic, Children’s Hospital Colorado

2:30 pm – “Rapid Immersion Model for Resident Education in a Subspecialty Challenged Environment”

Mark Duster, MD, Clinical Professor of Pediatrics, Section of Cardiology, School of Medicine, University of Colorado Anschutz Medical Campus

2:45 pm – “Resident Elective in Rural Guatemala: Developing a Global Health Curriculum”

Kelly McConnell, MD, MPH Candidate, Pediatric Global Health Fellow, Center for Global Health, Colorado School of Public Health, University of Colorado Anschutz Medical Campus

3:00 pm - Conclusion



Abstracts

Acceptability of community-based mentor mothers among HIV-positive pregnant women and partners in the context of Option B plus in Kenya

Iris Wanga¹, Lisa Abuogi^{1,2}, Eluid Akama¹, Elizabeth A. Bukusi¹, Anna Helova³, Pamela Musoke³, Wafula Nalwa⁴, Thomas Odeny¹, Janet M. Turan³, and Maricianah Onono¹

¹KEMRI/RCTP, Center for Microbiology Research, Kisumu, Kenya,

²University of Colorado, Denver, Pediatrics, Denver, United States,

³KEMRI/RCTP, Family AIDS Care and Education Services (FACES),

⁴University of Alabama, Birmingham, Birmingham, United States, ⁵Ministry of Health, Migori, Kenya



Introduction: Universal, lifelong ART for HIV-infected pregnant and breastfeeding women (Option B+) holds promise for improving maternal and child health but key challenges remain in achieving long-term ART adherence and retention in HIV care. Mentor mothers (HIV-infected women who have been through PMTCT and who are tasked with providing peer education and psychosocial support) have been shown to increase uptake of services, but have generally been facility-based in Kenya. In order to optimize adherence and retention in the context of Option B+, we explored the acceptability of community mentor mothers (cMMs).

Methods: A total of forty gender-matched in-depth interviews were conducted separately with HIV-positive pregnant/postpartum women and their male partners at four health facilities in Western Kenya between September-November 2014. Transcripts were transcribed verbatim, translated and then coded using Dedoose software based on the literature, themes from the interview guides and the transcripts. Excerpts from broad codes were then fine-coded using an inductive approach.

Results: Major themes in the data indicated an overall acceptability of cMMs, ideal characteristics of a cMM and potential risks. The cMMs were thought to be beneficial for stigma reduction, as well as improving women's clinic attendance and medication adherence. Participants' ideal characteristics of a cMM included age over 30 years and they preferred someone they could see as both a confidant and a role model. The cMM should preferably wear unmarked clothing that would not identify her as an HIV-related worker. There were, however, mixed responses as to whether the cMM should work in the same community where she lives, with some respondents raising concerns about inadvertent disclosure. Risks of the cMM approach included potential breaches of confidentiality and inadvertent disclosure of HIV status.

Conclusions: The cMM approach was perceived as a potentially beneficial and acceptable strategy for supporting adherence and retention of pregnant and postpartum women on ART for life. However the design for cMM interventions should minimize risks of unwanted disclosure and stigma.

Community-based Census and Mapping in El Trifinio Guatemala

Saskia Bunge-Montes MD, MPHc, Maureen Cunningham MD, MPH, Edwin Asturias, MD

Background: The Center for Human Development (CDH) provides healthcare services in El Trifinio, a rural impoverished region in southwest Guatemala. To effectively respond to the populations needs it is necessary to know their size and distribution. The last population census in Guatemala was completed in 2002 and no community mapping using Geographic Information Systems (GIS) has been previously documented in the area. Community-based mapping and surveying has been successful and widely used in public health, it plays an important role in needs assessments and health service planning.

Objective: Determine the size and distribution of the population in 14 communities in the catchment area of CDH in El Trifinio, Guatemala.

Design: This is a cross-sectional community-based census and mapping project in which community members and leaders participate in collecting demographic and need-based data from their communities. A group of four local surveyors and a coordinator were trained in data collection and participated in community outreach to introduce the mapping and census project to leaders and community members. Local guides were then recruited to accompany each surveyor through their community during the data collection process. The project included all households located in 15 rural impoverished communities in southwest Guatemala, included in the catchment area of CDH.

Results (preliminary): Data from nine of the fifteen communities indicate that on average surveyors are able to collect information on 20 homes per day. Variability in the number of homes surveyed per day is primarily due to the distance between homes in each community. Data collection has so far been successful with over 85% participation rate in 6 of the completed communities.

Conclusions: This project provides further evidence on the importance of community-based interventions in rural settings in Guatemala. Involvement of community members was the key for accurate geographic data collection and successful community participation. Information and maps from this project will help community leaders coordinate resources and plan for their communities in the future. The results from this updated census and mapping will also help guide future research, inform grant applications, target clinic operations and inform the design of community programs for the Center for Human Development.

Abstracts continued

Sharing Circles: learning from a community based psychosocial intervention model implemented with vulnerable populations in Myanmar

Gwen Vogel Mitchell, PsyD, University of Denver, International Disaster Psychology

In response to the systematic and ongoing human rights violations in Myanmar, SalusWorld, a US based NGO, integrated several psychological theories (e.g., intersubjective relational theory, narrative theory and trauma-informed-psycho-education theory) in the development and implementation of the Sharing Circles intervention. This study investigated an eight session psychotherapy group called Sharing Circles. Trained local staff implemented a group intervention in Yangon, Myanmar with 57 Burmese participants from Yangon identified as belonging to one of three vulnerable groups (people living with HIV/AIDS (PLWHA), former political prisoners (PPs), and individuals identified with the collective lesbian, gay, bisexual, transgendered and queer (LGBTQ) community).

The intervention demonstrated several promising outcomes that provided preliminary support for the efficacy and value of the Sharing Circles intervention. An analysis of symptoms pre and post intervention revealed a statistically significant difference in reported psychosocial stressors (including concerns about health, future relationships, social support, sex, family and finances) post intervention.

Further, findings indicated a statistically significant difference in reported depressive symptoms (including difficulty with energy levels, sleeping, concentration and restlessness) post intervention. Participants also reported less concern about future symptoms and endorsed fewer physical and psychological symptoms related to work, home and relational stress. Future research will serve to augment the understanding of contextual complexities in providing group psychotherapy as a form of MHPSS to people inside Myanmar. In turn, this will allow for further improvements to the Sharing Circles intervention and the promotion of greater advocacy and stigma reduction for issues related to mental health, trauma and psychosocial stress.

Health facility challenges to the provision of Option B+ in Kenya

Anna Helova¹, Eliud Akama², Elizabeth Bukusi², Pamela Musoke¹, Wafula Nalwa², Thomas Odeny², Maricianah Onono², Janet M Turan¹, Iris Wanga², and Lisa Abuogi³

¹Department of Health Care Policy and Organization, School of Public Health, University of Alabama at Birmingham; ²Kenya Medical Research Institute, ³Department of Pediatrics, University of Colorado Denver

Background: Current World Health Organization guidance recommends lifelong antiretroviral therapy (ART) for all pregnant and breastfeeding women (Option B+) in settings with generalized HIV epidemics. We explored provider perspectives on potential barriers and facilitators in the provision of Option B+ in Kenya.

Methods: We conducted four focus groups with 30 health care providers between September and November 2014 to explore challenges that health facilities are facing in implementation of Option B+, which has recently been rolled out in western Kenya. Transcripts were coded using the Dedoose software; based on the literature, topics from interview guides, and emerging themes from transcripts. Excerpts from broad codes were then fine-coded using an inductive approach.

Results: Major themes that emerged included a preference for Option B+ over prophylactic regimens, with the major advantage cited being elimination of CD4 count testing as requirement for treatment initiation. Shortage of drugs and staff, and the practice of same-day initiation into treatment were challenges raised. Providers expressed concern that pregnant women have little time to accept and disclose their HIV status when they are immediately initiated on treatment; which could potentially lead to stigma, conflict, or violence in the home. An additional challenge noted was the possibility of women disengaging from care if their child tests HIV-negative at 18 months and they no longer feel the need to adhere to treatment to protect their child. Suggested facilitators for long-term retention and adherence included strategies for individual clients (continuous adherence counseling, tracing of clients who are lost-to-follow-up, and text messages), couple/group strategies (couple testing, assisted disclosure, treatment buddies, and support groups), community strategies (reducing stigma, community mentor mothers), and changes in service provision (integration of ART with other services and longer clinic hours of operation).

Conclusions: This study highlights important challenges at the health facility level related to Option B+ roll-out in western Kenya. Adaptation of identified facilitators may increase linkage, retention and adherence to life-long treatment for pregnant women in Kenya, contribute towards elimination of mother-to-child HIV transmission, and improve maternal and child outcomes.



Abstracts continued

Tobacco Industry Documents Research in Africa (tidocafrika.org):

Creating a Community of Practice Among Public Health and Corporate Accountability Advocates

Marty Otañez, Associate Professor, Anthropology Department, University of Colorado Denver

Lily Sahaguan, Undergraduate Student, Public Health, University of Colorado Denver

Hadii Mamudu, Associate Professor, Department of Health Services Management and Policy, East Tennessee State University

Cigarette makers and tobacco leaf companies increasingly look to countries in Africa to recruit new smokers and amass profits. Local public health and tobacco control advocates seek to pass stringent regulations to reduce tobacco-related death and disease. The tobacco industry lobbies politicians and circulates mistruths in media to obstruct the passage of tobacco control laws in Uganda, Kenya, Nigeria and other countries.

The World Health Organization (WHO) Framework Convention on Tobacco Control, the first global health treaty, includes provisions (e.g. 5.3) to monitor and reduce the interference of tobacco companies in health policy making. A global tobacco control epistemic community designed to promote evidence-based research and influence health policymaking recognizes the need for scholars and advocates in Africa.

Our project examines a partnership in development among researchers, educators and health practitioners to create a culture of scholar advocates to use formerly secret tobacco industry documents to counter tobacco industry interference in policymaking in Africa. The project Tobacco Industry Document Research in Africa (TIDRA) involves Uganda-based Tobacco Control Center in Africa and global tobacco control and corporate accountability advocates.

Through a series of industry documents research trainings and teams of African scholars and advocates with expertise in industry monitoring, TIDRA is expanding the global tobacco control epistemic community and contributing to the successful implementation of the WHO Framework Convention on Tobacco Control in Africa.

How do members of the global tobacco control epistemic community with a focus on tobacco industry documents research contribute to evidence-based approaches in ways that are culturally sensitive and policy relevant?

Mode of Breastfeeding Influences Early Maturation of the Infant Gastrointestinal Microbiome and Mucosal Immunity in

HIV-exposed but Uninfected Infants in Uganda

Daniel N. Frank^{1,4,5}, Carolyne Onyango-Makumbi⁶, Diana Ir^{1,4,5}, Leah M. Feazel^{1,4,5}, Charles E. Robertson^{1,4,5}, Carlo Morales⁷, Stephanie Santorico⁷, Jamie Westcott³, Nancy F. Krebs³, Mary Glenn Fowler⁸, Tina Powell², Paul Harding², Elisabeth McFarland², Edward N. Janoff^{1,4,5,9}

¹Division of Adult and ²Pediatric Infectious Diseases, ³Section of Nutrition Nutrition, ⁴Mucosal and Vaccine Research Program Colorado (MAVRC); ⁵Microbiome Research Consortium (MiRC); University of Colorado School of Medicine, Aurora, CO USA 80045. ⁶ Makerere University – Johns Hopkins University Research Collaboration/MU-JHU CARE LTD, Kampala, Uganda; ⁷Department of Biostatistics and Informatics, Colorado School of Public Health, University of Colorado Denver, CO USA; ⁸Johns Hopkins Medical Institutions, Baltimore, MD, USA; ⁹Department of Veterans Affairs Medical Center, Denver, CO USA.

Background/Objective: The primary goal of this study was to determine how breastfeeding practices among HIV infected mothers affected development of the gut microbiome over the first year of life.

Methods: We conducted an observational cohort study of 100 mother-infant dyads within a population of HIV infected mothers in Uganda. Despite counseling to promote exclusive breastfeeding, 19 infants received solid foods (Mixed Feeding, MX) or formula (Replacement feeding, RF) during the first 24 weeks of life. The gut microbiomes of these infants, along with 38 exclusively breastfed (EX) infants were profiled by high-throughput 16S rRNA sequencing. Differences in microbiome composition were assessed by PERMANOVA, while differences in individual taxa were assessed by Mann-Whitney tests.

Results: Initiation of non-exclusive breastfeeding was followed by rapid changes in the gut microbiota resulting in significant differences between EX and RF infants at 18 wks ($P < 0.001$) and 24 wks ($P < 0.001$). Compared with RF infants, EX infants exhibited significantly increased abundances of Acintobacteria ($P < 0.001$ at 18 wks and 24 wks) and decreased abundances Firmicutes ($P = 0.003$ at 18 wks, $P = 0.001$ at 24 wks). At 48 wks, when most infants had weaned, the gut microbiomes of EX infants were indistinguishable from those of MX and RF infants ($P = 0.89$).

Conclusions: Exclusive breastfeeding promotes colonization by potentially probiotic bifidobacteria in the infant gut microbiome, whereas replacement-feeding accelerates development of a more adult-like microbiome dominated by Firmicutes and Bacteroidetes. These differences do not persist upon weaning.



Abstracts continued

Neurobehavioral effects associated with low-level exposure to pesticides in The Gambia

Jaime Butler-Dawson¹, Rex Kuye², Edrisa Sanyang^{1,2}, Diane S. Rohlman^{1,3}, and Peter S. Thorne¹

¹Department of Occupational and Environmental Health, College of Public Health, University of Iowa, Iowa City, Iowa, ²

Department of Public & Environmental Health, School of Medicine & Allied Health Sciences, University of The Gambia, Brikama, The Gambia, ³ Oregon Institute for Occupational Health Sciences, Oregon Health & Science University, Portland OR

Background: Farmers in low-income countries are at increased health risks due to their use of pesticides that are banned in other countries and their practices and behaviors that increase exposure.

Objective: To investigate the relationship between pesticide exposure and neurological symptoms and neurobehavioral performance among farmers in rural villages in The Gambia.

Methods: We recruited 158 adults, aged 18-40 years, from 15 villages. A questionnaire was used to collect the frequency of neurological symptoms. A neurobehavioral test battery was used to assess a broad range of cognitive functions. Pesticide exposure was assessed with an exposure score derived from questionnaire data on duration and frequency of pesticide use and practice and behaviors that could affect exposure during and after pesticide handling.

Results: Farmers with high exposure were four times more likely to experience ≥ 3 symptoms in the past year compared to farmers with low exposure (OR= 4.80, CI 95% 1.17-19.71). When participants who reported ever having a pesticide incident were excluded in this model, this association was no longer significant. Participants with higher exposure performed worse on several of the neurobehavioral tests compared to participants with low exposure, which included tests measuring motor function and dexterity.

Conclusions: Results show that adverse health impacts are occurring due to pesticide exposure among farmers. Measures should be taken to reduce potential exposure in The Gambia by training farmers to safely handle pesticides.

Soil-Transmitted Helminths Prevalence in Refugees Arriving to Colorado in 2009-2012

Tuan Dung Nguyen; Tuong Phan; Paul Gillenwater, MPH; Lori Kennedy, MSPH; Jamaluddin Moloo, MD, MPH,

CU-UNITE, University of Colorado School of Medicine, Aurora, Colorado, Disease Control and Environmental Epidemiology Division, Colorado Department of Public Health and Environment

Background: Refugees are at high risk for contracting Soil-Transmitted Helminths (STH) infections. The CDC advises presumptive pre-departure albendazole treatment to reduce STH infection rate.

Objective: To determine the rate and prevalence of STH infections among refugees arriving from countries providing presumptive pre-departure albendazole treatment.

Methods: We retrospectively examined CDPHE data, which included results of stool O&P studies on 3,870 newly arrived refugees to Colorado (2009-2012). We examined the rate of STH infection by country and pre-departure albendazole treatment status. We excluded children under the age of 1 for whom albendazole treatment is generally contraindicated.

Results: A total of 3,870 refugees underwent screening with stool O&P; 1,668 received treatment with albendazole while 2,202 did not. 478 of 3,870 (12.33%) were positive for pathogenic parasites. Of these, a minority were pathogenic STH (55, 11.51%). Thailand and Malaysia had the highest prevalence of stool samples positive for pathogenic STH (2.12% and 2.59%, respectively) and Ethiopia had the lowest prevalence (0.39%). A lower proportion of overall albendazole treated patients was positive for pathogenic STH infection relative to overall untreated individuals (0.78% vs. 1.91%, $p < 0.05$).

Conclusion: Among newly arriving refugees to Colorado, more than 1 in 10 was positive for a pathogenic parasite; a smaller proportion was positive for a pathogenic STH infection. Although albendazole pretreatment appears to lower the rate of pathogenic STH positivity on stool O&P, the rate among untreated individuals was lower than prior estimates.

Discovering and addressing adolescent health issues in rural Guatemala

Randi K. Johnson¹, Hillary Anderson¹, Michelle Pieters², Bradley Anderson³, Molly Lamb¹, Edwin J Asturias^{1,3,1} *Department of Epidemiology, Colorado School of Public Health,* ² *University of North Carolina, Wilmington,* ³ *Department of Pediatrics, University of Colorado School of Medicine*

Background: Unplanned pregnancies, mental health issues, and food insecurity are important public health problems in low and middle-income countries. The Center for Global Health in partnership with the Foundation for Integral Health of Guatemalans has established a community outreach for impoverished communities in southwest Guatemala that has found a rate of teen pregnancy of 17-20%. Community leaders have identified this as one of their priority problems.

Design: We undertook a cross-sectional survey utilizing the World Health Organization's (WHO) Global School-Based Student Health Survey (GSHS) in July 2015. Seven of 10 schools in the area were approached for participation. The study was considered no-human subjects research. Parents were informed and given the option of opting-out their children.

Results: The student response rate was 90%. Of the 554 respondents age 12-18 years, 304 (55%) were males and 301 (54%) were mestizo. Sixty-four males (25%) reported ever having sex compared to 15 (6%) females ($p < 0.001$); 17 (27%) boys compared to 3 (23%) girls began sexual intercourse before age 14. More males than females reported using a condom during their first sexual encounter, and males were more likely to buy condoms at a local pharmacy ($p < 0.01$). Overall, 61 (11%) students reported considering suicide in the past 12 months, and forty-four (8%) students reported going hungry most of the time or always in the past 30 days, with no differences by gender.

Conclusion: This study demonstrates that risky sexual behaviors, mental health issues, and hunger are prevalent in the adolescents of these communities requiring multidisciplinary intervention.

Abstracts continued

The Role of Menstruation in Educational Access in Rural Ethiopia

Meseret Hailu, University of Denver, Morgridge College of Education

Background: In rural Ethiopia, a variety of cultural and structural barriers—including perceptions of menstruation—impede secondary education access for women.

Objective: To determine how menstruation influences the behavior of young women and girls in rural Ethiopian schools.

Methods/Design: This qualitative study utilized a case study approach, which allowed for detailed description and analysis of multiple cases (Creswell, 2013). The participants were 30 employees of 18 separate organizations (available upon request). Interviews were conducted in English; and took place in Addis Ababa, Ethiopia in December 2014.

Results: The beginning of a girl's menses is oftentimes perceived as a major impediment to education access, particularly at the secondary level. One interviewee went as far as stating that "[t]he onset of menstruation is considered a crisis in girl's life" (Interviewee #1, Girl Hub). Oftentimes, this is because women and girls do not have sufficient funds to purchase sanitation products (Interviewee #2, USAID). In addition, there is a cultural stigma associated with this phenomenon; thus, girls do not always receive the proper information about self-care and hygiene (Interviewee #3, UNICEF). As a result, these same students often stay home during their periods instead of attending classes (Interviewee #4, Addis Ababa University; Interviewee #5, Institute for Security Studies).

Conclusions: The findings of this study underscore the need for increased structural support for young women and girls in Ethiopian schools. Specifically, health and sexuality education should be introduced earlier in the primary/secondary school curriculum.



Exclusive Breastfeeding Education and Support for Community Nurses in Trifinio, Southwest Guatemala

Maya Bunik, MD, MSPH Associate Professor, Pediatrics, School of Medicine University of Colorado and Maureen Lenssen, PNP, IBCLC, Senior Instructor, Pediatrics, School of Medicine at the University of Colorado

Exclusive breastfeeding provides optimal infant nutrition and health benefit for both the mother and baby dyad. The Trifinio area is an impoverished region in the coastal lowlands of southwestern Guatemala with a population of approximately 25,000 inhabitants. Children there are at high risk for malnutrition, parasites and diarrhea that are often linked to the lack of potable water, unsanitary living conditions and food insecurity.

As part of the community home visitation program with nurses and comadronas of Trifinio, formalized teaching was implemented with on-site classes as well as remote weekly Vidyo sessions. Curriculum includes content from World Health Organization, Breastfeeding Telephone Triage and Advice Book (author MB) translated into Spanish and the Wellstart International Lactation Self-study Modules.

Topics addressed are exclusivity (no need for water), 10 screening questions to assess for concerns, true insufficient milk supply, hand expression when dyad is separated, poor weight gain, sore nipples, engorgement, correct latch, unusual nipple and breast shape/size, mastitis, complementary foods at age 6 months and in older infants caution with grazing and more solids besides *caldito (soup)*.

Close follow-up when nursing is not going well is key to success because failure to address lactation issues has significant financial and nutritional implications in this population. Moreover we emphasize the importance of observation of breastfeeding session during home visit with clinic referral if problems noted. Teaching tools used include Vidyo, DVD in Spanish, photos of common problems, case presentations and interactive discussion.

Rapid Immersion Model for Resident Education in a Subspecialty Challenged Environment

¹Mark Duster MD, ²Tashi Tshering MBBS and ²Dinesh Pradhan MBBS

¹Clinical Professor of Pediatrics, Section of Cardiology, University of Colorado School of Medicine, Aurora, CO, ²Pediatric Resident, Jigme Dorji Wangchuck National Referral Hospital, Thimphu, Bhutan

Background: Health Volunteers Overseas (HVO) has been asked to assist in training pediatric residents at the National Referral Hospital in Thimphu, Bhutan. Unstructured volunteer experiences have an unpredictable impact on meeting learning objectives. Based on feedback, a new model for volunteer assisted training in a pediatric subspecialty was implemented.

Objective: To introduce the American Board of Pediatrics Content Outline in Cardiovascular Disorders (AAP COCD) to content naïve first year residents during a three-week period. The HVO volunteer prepared lectures based on the AAP COCD. Lectures and review articles were copied to thumb drives for distribution to the residents and faculty. Two first year residents were assigned to spend 3 weeks with the volunteer. The residents and the volunteer utilized a cardiac registry to contact patients who were subsequently evaluated. They observed echocardiograms performed on referred patients and rounded daily on cardiac in patients. They made contact with over 200 cardiac patients. Didactic lectures were given 3-5 times per week to the entire department.

Results: Using a combination of didactic and clinical exposure, 5 of the 6 AAP COCD topics were discussed in depth during the 3 weeks. A lecture and references on the remaining topic were given to a resident for presentation after the volunteer's departure.

Conclusion: volunteer faculty, utilizing a structured, immersion approach, guided by the AAP COCD, can successfully expose pediatric residents to subspecialty education over a limited period of time.

Abstracts continued

Resident Elective in the Rural Guatemala: Developing Global Health Curriculum

Kelly McConnell, MD^{1,2}, Julia Boster, MD², Andrew Krack, MD², Robin Ortenberg, MD², Edwin Asturias, MD^{1,2}

1: Center for Global Health, Colorado School of Public Health, Aurora, CO, 2: Department of Pediatrics, University of Colorado School of Medicine, Aurora, CO

Background: Medical residents are demanding global health themed and international electives. The American Academy of Pediatrics provides competencies to guide residency programs in this education. The Center for Global Health and the Children's Hospital Colorado developed a formal global health track and elective in 2012. The clinic, in southwest Guatemala, provides experiential learning, by illnesses and issues that are seldom learned systematically during pediatric training. Preliminary evaluation by rotating residents reported unique experiences and growth in diagnostic skills, treatment options and interpersonal communication; but also revealed a lack of preparedness and resources for these unique clinical situations. Current research supports pre-rotation education, competency-focused goals and debriefing as important factors to successful global health electives.

Design: This is a group effort to develop a full elective curriculum, designed to address the competencies using five entrustable professional activities. The curriculum will address the major morbidities of children in low-middle income countries and include an evaluation based on milestones.

Results: We are developing an online, downloadable, platform with text and video material, assigned reflections, as well as teaching presentations for the pediatric residency program and the clinic nurses. The educational platform will complement the clinical experience. Post elective debrief and surveys alongside formal evaluations facilitate assessment and improvement of the curriculum.

Conclusions: We expect gains of pediatric residents' knowledge, skills, inter-professional capacity and cultural-sensitivity post-elective after structured preparedness and positive cycle of feedback. The curriculum will provide an enriched educational experience, translating to skills in global health as well as general practice.

Excellence in Global Health Award - 2015 Recipients



Blair Gifford, PhD

Dr. Gifford is a Professor of International Health Management in the Business School and the Colorado School of Public Health

Dr. Gifford founded the Center for Global Health and Global Health Connections, a not-for-profit that provides global health opportunities for middle and high school students. Also, he is co-founder of a new organization, Professors Beyond Borders (Fulbright), and was a Fulbright/New Century Scholar for 2009-10.

Dr. Gifford is currently involved in research on the effects of health care privatization in India, Brazil and Mexico health market changes in China and, he is completing a book on sustainable business practices for small and medium-size businesses. He is also involved in a large-scale health and vocational training development project in Haiti and teaches for Yale University's Global Health Initiative in their China and Ethiopia programs. Gifford has also been a visiting professor at Yale and Northwestern Universities.



Excellence in Global Health Award - 2015 Recipients



P K Vedanthan, MD

Founder, International Asthma Services (IAS)

Dr. Vedanthan is a Clinical Professor of Medicine, School of Medicine at the University of Colorado Anschutz Medical Campus

After his medical education in India, Dr. Vedanthan had additional training in Medicine, Pediatrics and Allergy/Immunology. During the

early years of his professional life, Dr. Vedanthan was involved in providing care in respiratory medicine during his visit to his home country of India. This experience grew into establishing International Asthma Services (IAS), a non-profit 501 c-3 organization registered in Colorado. IAS has been active in several countries: India, Kenya, Mauritius, Myanmar, Philippines, USA, Fiji, and Argentina. The main aims are: 1) improve the care of patients with asthma and COPD around the globe, 2) transfer of technology, 3) train physicians and paramedical personnel, and 4) conduct research and provide free medications to the needy. IAS has evaluated more than 36,000 patients free of charge, and conducted more than 50 CMEs for physicians, nurses, and technicians.

Since 2006, IAS, in partnership with Christian Medical College, Vellore TN, India, established the first formal Diploma in Allergy and Asthma training program. This Diploma program has attracted national and international recognition, and has students from all regions of India, as well as neighboring countries. IAS has also partnered with Colorado Health Education and Promotion (CAHEP), Denver, Colorado, in promoting health education and providing medical care guided by the principle of a 'medical home' for more than 25 ethnic communities. IAS has also partnered with the Center of Global Health at the Colorado School of Public Health, University of Colorado, Aurora Colorado since 2014 to expand the global outreach.

Dr. Vedanthan during his career has also established the Northern Colorado Allergy & Asthma clinic, Wyoming Chest & Allergy clinic, Allergy & Skin clinic, Denver. Since year 2000, he has been in part time private practice in Lakewood, Colorado, as well as volunteering in a refugee clinic in Denver, and teaching at the University of Colorado.

Peter Durst, the creator of this years *Excellence in Global Health Award* is a longtime Colorado ceramist and sculptor. his work has been exhibited nationally for the past 35 years in galleries, art centers, museums, private collections, and public spaces. he received a BA from Allegheny College and a JD from NYU School of Law, as well as ceramic training at Anderson Ranch Arts Center in Snowmass, Colorado. He was instrumental in establishing the Ceramics Program at the Art Students League-Denver, and serves on the faculty there.

Peter Durst is also one of the contributors to the endowed student scholarship, the Robinson Durst International Student Scholarship (the other contributor is William Robinson, MD). This Scholarship is given to students on an annual basis to help support their travel for work in underserved areas of the world.

PETER DURST STUDIO GALLERY and SCULPTURE GARDEN

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<http://peterdurstart.com/index.html>



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~Nelson Mandela

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Want to learn more? Contact Megan Cooke at the CU Foundation: megan.cooke@ucdenver.edu



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