

**Structure/Method/Design:** Utilizing the Global Community Health Collaborative model, ATH builds partnerships, seeks opportunities to address community-identified needs, and utilizes diverse professional and strategic approaches to implement projects founded on ideals without illusions. ATH identifies local community strengths and assets, and pairs them with the resources of a large university. This generates targeted, adaptable outcomes based on evidence and best practices. In Mali—with input and contribution from graduate students and faculty—a community advisory board participated in selecting projects that a local organization implements and community-based advocates monitor. Mali interventions have increased access to health education across illiterate and poor areas while reducing access to FGC.

**Outcome & Evaluation:** ATH and partners developed a health education album in the local language, wrote/produced performances on health harms of FGC, and assist traditional cutters to abandon FGC through substitute livelihoods. M&E includes community surveys and regular evaluation of community and FGC practitioner engagement. A March 2016 forum in Bamako for anti-FGC advocates will inform future progress.

**Going Forward:** Challenges include identifying strong community and organizational partners and resource scarcity when poor and insecure communities invest in long-term projects. Future programs build on feedback from partnerships and multi-prong, multi-sector solution-based interventions.

**Funding:** Title VI Grant, U.S. Department of Education; Near East Foundation; Northwestern University.

**Abstract #:** 1.043\_MDG

### Small investment, big returns: examining the effects of having a 'Yellow Card' on immunization and growth monitoring of young children in Lao PDR

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**Background:** Infectious diseases and malnutrition continue to pose significant threats to healthy growth and development of children in Lao PDR, and with only 6.1% of the country's total government expenditures spent on health, it remains especially important for organizations to implement effective and evidence-based programs that maximize 'bang for their buck' against these health risks. The aim of the current investigation is to characterize the relative importance of various predictors on rates of immunization coverage and growth monitoring in Lao children.

**Methods:** In collaboration with the Swiss Red Cross, we conducted a survey of over 400 households living in rural districts of the Luang Prabang province. Families were enrolled via door-to-door recruitment. In addition to demographic information, we collected data on over 100 health-related indicators across multiple domains, including mothers' knowledge about health prevention and treatment, incidence of contact with healthcare facilities or professionals, as well as current and historical measures of children's health and nutrition. In addition, families reported whether they owned a medical record-keeping booklet often referred to as a 'yellow

card.' Hierarchical regression models were used to analyze the effects of these factors on outcome measures of children's total immunization coverage and growth monitoring.

**Findings:** After excluding 15 families for missing or erroneous birthdate information, the final sample consists of 405 children ranging from 6 to 34-months-old ( $M = 1.46$  months;  $SD = .31$ ). Regression models indicated that immunization and growth monitoring were significantly predicted by distance to nearest health center or hospital, mothers' contact with health facilities and health professionals (both antenatal and during childbirth), and ethnic group membership. Interestingly, the strongest individual predictor was related to whether the family was in possession of a 'yellow card,' explaining an additional 5.4% and 1.6% of the variability in immunization coverage and growth monitoring outcomes, respectively, above and beyond predictions of reduced models.

**Interpretation:** Results suggest that distribution and families' retention of 'yellow cards' represent relatively inexpensive, yet effective means of reducing the threats of infectious diseases and malnutrition in children of Lao PDR.

**Funding:** Friends Without a Border & Swiss Red Cross.

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### Delayed initiation and non-exclusive breastfeeding needs attention in Tribal Gujarat, India

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**Background:** Economic and social changes may adversely influence local cultures and feeding practices in tribal/ingenious populations. Poor feeding practices in early life, could lead to poor developmental outcomes. We assessed newborn feeding practices and its impact on exclusive breastfeeding in tribal populations.

**Methods:** We surveyed 1113 mothers across 3 tribal regions — Limkheda, Dahod, and Jhalod— of Dahod district, Gujarat. Data was collected in 35 randomly selected villages. Participants were asked about newborn feeding practices during the first 3 days of life and 24-hour dietary recall. Descriptive statistics and chi-square were used to analyze data.

**Findings:** Initiation of breastfeeding started in half 531(47.75%) of the newborns within 1 hour of birth. Of these newborns, 454(85.82%) also received colostrum. Cases where early initiation was absent, in 89(8%) and 493(44.3%) breastfeeding was initiated within 1 day and beyond 1 day, respectively. Among 380(66%) the reason for delay beyond 1 hour was attributed to the common belief that lactation begins 2 days after delivery. 744(67.15%) newborns received liquids other than breast milk, most commonly 613(82.4%) goat milk, at some point within the first 3 days of life. Mothers who could read properly (55% vs 44.5%,  $p=0.001$ )

and mothers who received counseling (60.4% vs 34.9%,  $p < 0.001$ ) were more likely to initiate breastfeeding within 1 hour. There was no difference between poor and non-poor mothers in initiating breastfeeding within 1 hour (47.2% vs 48.3%,  $p = 0.88$ ). Mothers who initiated breastfeeding within 1 hour (60.1% vs 7.3%,  $p < 0.001$ ) and received counseling (39.4% vs 26.1%,  $p < 0.001$ ) were more likely to avoid supplementing with other liquids in the first 3 days. Subgroup analysis of 558 infants (0–6 months) revealed that 106 (19%) were exclusively breastfed. 170 (30.5%) of these infants received some liquid in first 3 days, but received only breast milk after that.

**Interpretations:** Improved counseling to pregnant and post-partum mothers that stresses avoiding liquids in the first 3 days of life can increase early initiation of breastfeeding as well as exclusive breastfeeding rates immensely. Qualitative studies need to be performed to identify culturally acceptable ways to deliver interventions.

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### Toronto Addis Ababa Academic Collaboration in Family Medicine: an overview of the dawn of family medicine in Ethiopia through an inter-institutional model

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**Program Purpose:** The WHO 2008 Report “Primary Health Care: Now more than ever” and increasing evidence support the development of robust primary care as a central pillar of health systems. The transition from Millennium Development Goals into the Sustainable Development Goals beyond 2015 presents an opportunity for innovation in effective health service models, with significant contribution from family medicine. In 2013, Addis Ababa University (AAU), with an inter-institutional model of collaboration, launched the first family medicine residency program in Ethiopia.

**Structure:** AAU’s family medicine residency program was inaugurated in collaboration with the Department of Family and Community Medicine, University of Toronto and the Department of Family Medicine at University of Wisconsin through the Medical Education Project Initiative (MEPI). The program has benefited from the generous contributions and participation of many expatriate faculty over the past three years. The launch of the program followed a series of strategic discussions, needs assessments, international collaborations, and faculty development events held between 2008 and 2013. The program aims to train family physicians for Ethiopia and to cultivate future faculty and program offerings encouraging sustainability through capacity building.

**Outcomes:** The program has achieved significant milestones, highlighted by the upcoming graduation in 2016 of the first seven family physicians in Ethiopia from their AAU residency. Ethiopia’s

Federal Ministry of Health (FMOH) has embraced family medicine as a key element of its health system and recently announced the upcoming establishment of two additional training programs in Gondar and Jimma in 2016.

**Going Forward:** Ongoing challenges exist, including undefined roles and career opportunities for this new cadre of family physicians in the health care system, a shortage of Ethiopian faculty, and the need to expand the number of training programs to produce enough family physicians for the population. The program’s sustainability will be contingent on the ongoing support of Ethiopian leaders, local champions, reduced reliance on expatriate faculty, commitment from long-term partners, and support for expansion sites.

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**Abstract #:** 1.046\_MDG

### Evaluation of the presence of clinically significant hemolytic disease of the fetus and newborn due to RhD antibodies in multi-ethnic Suriname

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**Background:** Hemolytic Disease of the Fetus and Newborn (HDFN) is a major cause of fetal and neonatal morbidity and mortality. Maternal Rhesus D (RhD) negativity and the formation of RhD antibodies during pregnancy is the primary cause of HDFN. In western countries RhD immunoglobulin (RhD-Ig) prophylaxis has reduced incidence of HDFN to 0,2%. In low resource countries RhD-Ig is rarely applied and data on impact of HDFN is scarce. In these countries, HDFN may still be a common cause of death. In a pilot study a 4,3% overall RhD negativity amongst 8686 multi-ethnic Surinamese pregnant women was found, ranging from 0,0% in Amerindian, 3,4% in Hindustani to 7,2% in African women. The current study further investigates multi-ethnic RhD negativity and antibodies in pregnant women and presence and severity of HDFN in their offspring.

**Methods:** In May 2015 a detailed prospective study was initiated in 4 Surinamese hospitals to follow RhD negative pregnant women during their pregnancy and their offspring for development of HDFN. After informed consent, obstetric history and current pregnancy was documented, and maternal and neonatal blood samples for antibody identification and RhD phenotyping and genotyping obtained.

**Findings:** So far 108 (85 (78,7%) multiparae) mothers and their offspring were included. Only 16 (14,8%) mothers ever received