

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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### 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

RhD-Ig, while 9 (8,3%) prior cases of fetal death were reported. Seventy-one randomly selected plasma samples were analyzed of which 7 (9,9%; anti-RhD N=6) had antibodies, all from African women. Of these women one had a stillbirth and another a newborn that required exchange blood transfusion. On the first day of life mean levels for hemoglobin were lower and bilirubin were higher (both not significantly) in neonates with antibodies versus in those without. We expect about 300 inclusions in April 2016.

**Interpretation:** These preliminary data indicate ethnic diversity in prevalence of RhD negativity and hemolytic antibody formation during pregnancy. The anti-RhD frequency is comparable with

frequencies in pre-RhD-Ig time in Western countries. These findings are a first step to identify children at risk for HDFN. Additionally, HDFN may be a significant cause of morbidity and mortality in Suriname, and in similar settings.

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