access to clean water and sanitation. High prevalence of malnutri-
tion, anemia and growth stunting resulted in several nutritional
interventions. Finally, a sustained prevalence of disease despite
improved infrastructure highlighted the need for behavioural inter-
ventions and a health curriculum.

**Outcome & Evaluation:** Between 2007-2015, the prevalence of
malnutrition and growth stunting declined (height: 30.9% < 3rd
percentile to 17.0% ≤ 5th percentile, weight: 10.3% < 3rd percentile
to 7.6% ≤ 5th percentile). The prevalence of intestinal helminths slightly increased to
7.2% from 6.6%. In 2015, fifty-nine of the 517 students required
further treatment and were referred to local physicians in a nearby
village, sustainably engaging the population with the medical system.

**Going Forward:** Physical exams proved to be an invaluable tool.
They will continue to guide and evaluate interventions, and screen
for students requiring urgent treatment until permanent local
medical staff is employed. The unique bond between volunteers
and students has been essential to the continued success of
the project. Eager to return, all 2015 volunteers have become
leaders for 2016, and will focus on the completion of water and sani-
tation systems and the sustainable implementation of the health
curriculum.

**Abstract #: 1.011_MDG**

### Barriers to long-acting reversible contraception use in Kisoro, Uganda

**E. Bryce**, S. Budongo, M. Baganizi, G. Paccione, C. Kahn; 1Stanford University, Palo Alto, CA, USA, 2Kisoro District Hospital, Kisoro, Uganda, 3Albert Einstein College of Medicine, Bronx, NY, USA, 4University of Michigan, Ann Arbor, MI, USA

**Background:** Despite its effectiveness and low cost, long-acting
reversible contraception (LARC) is underutilized in many countries
in sub-Saharan Africa. We aimed to identify obstacles to LARC use
in rural Uganda.

**Methods:** We conducted a cross-sectional survey of reproductive
age women presenting to seven different clinical sites for family
planning services in Kisoro, Uganda. Semi-structured exit interviews
with women were performed. Questions about contraceptive history,
desired contraceptive method, concerns about contraceptive side
effects, and satisfaction with overall care were asked. Survey ques-
tions were administered verbally, and answers were transcribed.
In addition to descriptive statistics, Fisher’s exact test was used to
compare two categorical variables and independent sample t-tests
were used to compare continuous variables with binary predictors.

**Findings:** Ninety-two women between the ages of 18 and 45
completed the survey. Of those participants who received contracep-
tion, 91% received depo-provera, and only 2% of women received
LARC. Sixteen percent of women responded that they did not
receive their contraceptive method of choice, primarily because the
method was out of stock. However, 21% of these women reported
that they were told by providers to use depo-provera instead of
LARC. Women who were told to use depo-provera by providers
were significantly younger (mean age of 25 vs. 32, p=0.01) and
had significantly fewer children (2 vs. 4, p=0.02). Additionally,
although the majority of depo-provera users reported choosing
this method because of few side effects, 16% of these women believed
they should try depo-provera first before using other contraceptive
methods.

**Interpretation:** Lack of consistent supply of methods was the
most common reason for nonuse of LARC in Kisoro, Uganda.
However, there also appeared to be significant provider bias towards
depo-provera as a first-line contraceptive method, particularly when
clients were younger and had fewer children, even when LARC was
available. Additionally, many participants believed that depo-
provera was a superior form of contraception. Research is needed
to better understand bias towards depo-provera use and how to
encourage LARC uptake.

**Funding:** None

**Abstract #: 1.012_MDG**

### Effects of a hospital-based pilot education program on breastfeeding knowledge in Santiago, Dominican Republic

**M.S. Carrasco Arias**, A. Lockwood, M. Ali, K. Veras, J. Olivoares, S. Bentley, A. Dandekar, 1Icahn School of Medicine at Mount Sinai, New York, NY, USA, 2Department of Family Medicine, Hospital Especializado de Salud Juan XXIII, Santiago, Dominican Republic, 3Department of Emergency Medicine, Elmhurst Hospital, Icahn School of Medicine at Mount Sinai, New York, NY, USA, 4Department of Family Medicine, Mount Sinai Hospital, Arnhold Global Health Institute, Icahn School of Medicine at Mount Sinai, New York, NY, USA

**Background:** In the Dominican Republic (DR), where neonatal
mortality is 21 per 1000 live births, women breastfeed for a mean dura-
tion of 7.1 months and only 7.7% of women breastfeed exclusively. The
literature suggests educational interventions can improve rates of
breastfeeding initiation, duration, and exclusivity. Breastfeeding inter-
ventional studies report decreases in infant morbidity and hospital
readmission rates. A hospital-based pilot lactation educational inter-
vention was implemented in a low-resource public healthcare facility
in Santiago, DR, with the objective to assess changes in breastfeeding
knowledge among women receiving the educational intervention.

**Methods:** In this pre—post intervention study conducted in June-July
2015 at Hospital Especializado de Salud Juan XXIII, 17 knowledge-
based questions regarding breastfeeding practices and skills were
administered before and after a twenty-minute educational session
delivered to women who presented to the hospital. For statistical anal-
ysis, a paired t-test was used to compare mean differences in composite
scores and the McNemar test for four individual key questions.

**Findings:** A total of 53 women participated, most of whom were
either pregnant (38/52; 73%) or postpartum (12/52; 23%), with
a median age of 23 (IQR: 20-30) years. After the educational inter-
vention, on average, each woman answered 4.2 more questions correctly
(95% CI, 3.4—4.9; p<0.0001), as compared to before the intervention.
The educational intervention was also associated with an increased proportion of women who correctly answered four key questions after the intervention, specifically 15% (95% CI, 2–28%; p = 0.02) regarding duration of exclusive breastfeeding, 51% (35–67%; p < 0.0001) regarding ideal time to initiate lactation, 40% (25–55%; p < 0.0001) regarding indications for pacifier or bottle use, and 51% (34–68%; p < 0.0001) for caesarian effects on breastfeeding.

**Interpretation:** This pilot breastfeeding educational intervention significantly increased knowledge in women about breastfeeding practices in one urban, low-resource health care facility in Santiago, DR. With lower breastfeeding rates in the DR compared to other Latin American countries, this intervention provides a promising foundation for scalable educational initiatives.

**Funding:** Arnhold Global Health Institute at Icahn School of Medicine.

**Abstract #:** 1.013_MDG

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**Midwifery around the World: A study in the role of midwives in local communities and healthcare systems**

*A. Carson; Arizona State University, Tempe, AZ*

**Background:** 2015 marks the deadline for the UN Millennium Development Goal 5 to reduce global maternal mortality rate (MMR) by 75%. As of 2013, according to the WHO, MMR has only been reduced by 45%. Many international organizations claim that more medically trained midwives can meet global maternal health care needs. This study investigates two major questions. What is the role of midwives in diverse international maternal healthcare contexts? How do midwives in these different contexts define their roles and the barriers to providing the best care for women?

**Methods:** From May-August 2015 I conducted 56 in-person interviews with midwives in Netherlands, Sweden, Rwanda, Bangladesh, Australia and Guatemala, including 6-10 midwives from each country. The participants included midwives identified according to the local definition of the profession who were selected from both rural and urban settings. Each midwife participated in a two-stage card pile sort activity of 17 midwifery competencies obtained from the International Confederation of Midwives. Participants were first asked to sort cards into services in their scope of practice and outside their scope of practice. They were then prompted to sort the “within scope” cards into core and peripheral services. I analyzed the data for consensus on a model scope of practice by creating a participant agreement matrix. I evaluated this matrix by conducting a Principal Components Analysis in the program UCINET. Institutional Review Board approval was obtained from Arizona State University as well as country-specific ethics committees.

**Findings:** Midwives across countries agree on core elements of midwifery practice. Greater differences arose between high and low income countries for services such as “educate on human rights,” “counsel in family planning,” and “diagnose community health concerns.”

**Interpretation:** Midwives, as defined in each country, care for healthy women through pregnancy and childbirth, and they understand when to refer care if complications arise. Midwives in low-income countries serve a greater role in local healthcare systems. Furthermore, strong collaboration with other medical providers is necessary to provide the best comprehensive care to women.

**Funding:** Circumnavigators Club Travel-Study Grant for undergraduate researchers.

**Abstract #:** 1.014_MDG

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**The impact of parental obesity on pediatric malnutrition in rural Uganda—a household survey**

*W. Cherniak1,2,3, R. Ehrenkranz1,2, M. Davidson1,2, A. Pradhan1,2, T. Lee1,2, P. Kraaij1,2, N. Fisher1,2, C. Meaney1, P. Krugor1, M. Silverman1,2, G. Anguyo2,3, 1Bridge to Health Medical and Dental, Toronto, Canada, 2Johns Hopkins University, Baltimore, USA, 3University of Toronto, Toronto, Canada, 4New York University, New York, USA, 5University of Calgary, Calgary, Canada, 6University of Western Ontario, London, Canada, 7Kigezi Healthare Foundation, Kabale, Uganda, 8Mbarara University of Science and Technology, Mbarara, Uganda*

**Background:** Chronic pediatric malnutrition is a serious problem affecting low and middle income countries across the world. Within sub-Saharan Africa, Uganda in particular has an estimated prevalence of 33% of children under five years of age stunted, six percent wasted, and 14% underweight. Moreover, the nutrition transition, a shift from an active lifestyle with the consumption of fewer processed foods to a sedentary lifestyle with the consumption of high-calorie foods, is occurring in Uganda. We hypothesize that parental obesity, in correlation with education around nutrition, is further contributing to pediatric malnutrition, even in previously undescribed rural regions of Uganda.

**Methods:** A cluster-sampling method will be utilized to conduct a household survey across randomly selected sub-counties in the Kabale Region of rural Uganda. The sub-counties selected for sampling will have households in a particular cluster identified, and thirty randomly selected for survey. It is expected that approximately 60% of homes will contain children under five years of age, these children will have anthropometric data obtained. Parents will also be assessed for body mass index, and asked a consensus approved survey based on Ugandan national guidelines. All household members will be offered deworming treatment, and all children will be offered micronutrient supplementation and/or inpatient management based on Ugandan clinical guidelines. The primary outcome of parental obesity and pediatric malnutrition will be assessed. Secondary outcomes of parental education around nutrition and medical comorbidities of children will be assessed.

**Findings:** This study will be conducted in February of 2016, results are pending but will be available for the CUGH conference.

**Interpretation:** As above, this study will not have results until February of 2016.