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*

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*

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

W. Cherniak[1,2,3], R. Ehrenkranz[1,2], M. Davidson[1,2], A. Pradhan[1,2], T. Lee[1,4], P. Krass[1,4], N. Fisher[1,5], C. Meaney[3], P. Krueger[3], M. Silverman[1,6], G. Anguyo[7,8]; [1]Bridge to Health Medical and Dental, Toronto, Canada, [2]Johns Hopkins University, Baltimore, USA, [3]University of Toronto, Toronto, Canada, [4]New York University, New York, USA, [5]University of Calgary, Calgary, Canada, [6]University of Western Ontario, London, Canada, [7]Kigezi Healthcare Foundation, Kabale, Uganda, [8]Mbarara 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.

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Abstract #: *1.016_MDG*

Integration of health education into a school curriculum in rural India: an evaluation of challenges faced

B. Cheung, S. Browne, K. Shih, B. Smith, M. Smith, D. Raff, V. Kapoor; The University of British Columbia, Vancouver, BC, Canada

Program/Project Purpose: In 2008, the Global Health Initiative Spiti Valley Project collaborated with Munsel-ling School in India's Spiti Valley to develop a health education curriculum. Spiti Valley is restricted by geographic and environmental conditions and is inaccessible for most of the year. The region is highly underserviced with limited access to healthcare and education. The curriculum was first delivered in 2009 with revisions in 2010 and 2015. After 7 years, this resource has yet to be integrated into the government-mandated curriculum at Munsel-ling. This has been acknowledged and the Spiti Valley Project began to evaluate the challenges hindering curriculum implementation and proposed potential solutions.

Structure/Method/Design: The curriculum was delivered in 2009. In 2010, it was discovered that teachers were unable to accommodate the material into the course load. The Students' Health Council (SHC) was developed to address the need for pedagogical sustainability. The SHC consisted of senior students who would be taught the curriculum to teach to younger students. In 2013, a narrative voice project determined the relevance of the curriculum in the community's health priorities. In 2015, Munsel-ling requested a more comprehensive curriculum detailing learning objectives, lesson plans, competency goals, and assessment activities. Despite these changes and revisions, the curriculum has not been implemented.

Outcome & Evaluation: The narrative voice project revealed that the community valued the curricular content. Interviews with the school director, principal, and teachers revealed operational challenges to implementing the curriculum. Issues affecting curriculum integration include: lack of infrastructure in leaders' roles resulting in the disbandment of the SHC, miscommunication regarding program leadership, inability to incorporate the curriculum into a packed curriculum, inconsistent schedules, student and teacher absenteeism, overworked or disinterested staff, and concurrent projects that were considered higher priorities: water purification and sanitation.

Going Forward: We will endeavor to better understand the challenges and continue to make suggestions. Structurally, solutions include developing well-described roles and setting dates for teaching. However, solutions go beyond leadership responsibilities: the location of Munsel-ling results in a constant shortage and quick turnover of teachers. Ultimately, the curriculum needs to be integrated by the school itself and its success requires further buy-in by teaching staff into the curriculum.

Abstract #: *1.017_MDG*

Affordable technology for saving maternal and infant lives: moving on with solutions

R. Cyan[1], H. Hussain[2], I. Shehki[3], Z. Ishaq[3], T. Khan[3], R. Rothenberg[1]; [1]Georgia State University, Atlanta, GA, [2]Khyber Medical University, Peshawar, Pakistan, [3]Affordable Technology for Saving Maternal and Infant Lives Project Team, Lahore, Pakistan

Background: Pakistan loses mothers and neonates because of low utilization of skilled birth attendants (SBA) and is among the six countries that contribute half of the global maternal-infant mortality. Lady Health Workers (LHWs), placed in most villages to foster behavior change, have struggled to increase utilization of SBAs. We employ an affordable tool to focus their services and to achieve rapid, effective adoption of lifesaving healthcare with an anticipated increase of SBA from 60% to 80%.

Methods: We recorded health messages linked to progression through pregnancy and 6 months postpartum that are delivered in female voices directly to the pregnant woman by cellphone, costing $6.98 per annum. By providing health information across low literacy and social barriers, we seek to optimize the services of LHWs and achieve rapid, effective behavior change. The intervention is being implemented in a cluster randomized controlled trial with 1,556 women enrolled during the first trimester of pregnancy by household visits in 411 villages in two districts of Pakistan. The trial has five arms to test the effectiveness of higher versus lower frequency of messages, messages timed with progression of pregnancy and messages linked with small financial incentives. A concurrent intervention provides health literacy support to LHWs. The primary outcome is adoption of intrapartum care with SBAs; the secondary outcomes are health literacy scores, and the health outcomes of mother and infant.

Findings: The baseline health literacy assessment showed low recognition of complications requiring emergency obstetric care (<30%) for both pregnant women and LHWs. The use of antenatal care was 72%. Twenty-five percent had suffered serious complications in previous pregnancies and only 61% delivered under care of SBA.

Interpretation: We will present early results from the ongoing trial and a discussion of health literacy as a mediator for maternal and infant health outcomes, enabling navigation through complex health systems. We will also present results of the effect of health literacy on women's empowerment within the traditional households for seeking appropriate and adequate healthcare. This approach, designed for adoption "on the ground," is replicable and scalable in different social and cultural environments.

Funding: National Academy of Sciences.

Abstract #: *1.018_MDG*

Preconception risk factors and attitudes about reproductive planning in women of reproductive age in the Dominican Republic

Aparna Dandekar[1], Wendy Gomez[2], Junil Rodriguez[2], Suzanne Bentley[3]; [1]Department of Family Medicine, Arnhold Global Health Institute, Icahn School of Medicine at Mount Sinai, New York,