Madagascar, through innovative partnerships that include the Madagascar Ministry of Health, Centre ValBio, Partners In Health, Brigham and Women's Hospital, and academic institutions. PIVOT aims to create a model health district in Madagascar by advancing an adaptive, bottom-up approach that recognizes that human health is the product of systems of healthcare delivery and systems of disease, including socioeconomic and environmental determinants. In a biodiversity hotspot that ranks among the world's poorest countries, this effort offers a unique opportunity to evaluate the next phase of development targets, as the MDGs shift to the more expansive Sustainable Development Goals.

Structure/Method/Design: The effort aims to create a novel platform for integrating healthcare delivery with research at all levels of the health system within a government district. Based on a logical framework, a large set of performance indicators were derived from program objectives, and structured according to the WHO building blocks of health system strengthening (HSS). The programs are developed on a foundation of data including: 1) a baseline survey of 1520 households (modified Demographic and Health Survey), and 2) a dashboard of real-time M&E performance indicators.

Outcome & Evaluation: PIVOT has been strengthening the HSS building blocks through the implementation of key programs at four government health centers and the district hospital. These programs include implementation of maternal/child health protocols (IMCI, SONU), elimination of point-of-service payments, infection control, and emergency care. Baseline data found particularly high rates of under-five mortality (140/1000) and a lifetime maternal morality rate of 1/14. Time-series analysis of health center utilization data indicates that the pharmacy reimbursement system, which eliminated most point-of-service payments, has quadrupled health center utilization.

Going Forward: A longitudinal cohort study will begin in 2016 to revisit households from the baseline, and measure changes in many health indicators, such as under-five mortality rate, by 2021. These data will allow for mathematical models to be constructed that estimate the effectiveness of the healthcare system in breaking cycles of poverty and disease.

Abstract #: *1.009_MDG*

Fostering an understanding of global nursing through international exchange

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Program Project/Purpose: With over 13 million nurses worldwide in all aspects of health services, they make up the largest part of the healthcare workers around the world. Furthermore, nurses tend to be the routine provider of primary care in rural and urban settings within low-income countries as well as filling in primary care gaps where there are shortages in more developed nations (DeCola et al., 2012). As their scope within the global healthcare system is prolific, they have the potential to lead the world towards the Sustainable Development Goals and health and wellness for all. Global connections must be made within nursing in order to foster understanding, development, and increase the nursing standard of practice worldwide.

Structure/Method/Design: Student exchange programs are one way to develop connections and understanding in global nursing. The Johns Hopkins University School of Nursing offers several opportunities throughout the year for visiting students as well as its own students working abroad. These programs strive to expand the perspective of nursing students in order for them to view nursing within a global context as well as foster innovative ideas for problem solving.

Outcome/ Evaluation: This project serves as a way to analyze such exchanges for common themes, such as leadership, cultural competency, and application to practice among the nursing students who were able to participate in the exchange experience.

Going Forward: Analyzing these interactions helps us understand the benefits of global nursing experiences, how the experience changes the students' practice, as well as sheds light on how to structure future exchanges to maximize the understanding of nursing within a global context.

Abstract #: *1.010_MDG*

The most powerful tool can be the simplest technology: ten years later, utilizing the physical exam in the Indian Himalayan Mountains

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Program/Project Purpose: Spiti Valley, located in the rural, high-altitude mountains of northern India, is inaccessible for approximately seven months of the year. Medically underserviced, in 2006, the project commenced through an exciting partnership with Munsel-ling Boarding School. Starting in 2007, annual physical exams and permanent health records were initiated, and ultimately aided in: identifying important health concerns, planning future interventions, and providing a baseline from which the success of these interventions could be assessed.

Structure/Method/Design: Amid advancements in medical technology, the power of the physical exam can easily be overlooked. Time spent with each student not only enabled identification of common health concerns, but provided a unique opportunity to foster a warm and trusting relationship, fundamental to the success of any global health project. Over subsequent years, numerous interventions were executed, guided by the results of the exams and focused on the social determinants of health. High prevalence of infectious diseases prompted projects directed towards improving

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

Outcome & Evaluation: Between 2007-2015, the prevalence of malnutrition and growth stunting declined (height: 30.9% $<3^{rd}$ percentile to 17.0% $\leq 5^{th}$ percentile, weight: 10.3% $<3^{rd}$ percentile to 7.6% $\leq 5^{th}$ percentile). Similarly, scabies dropped from 35.2% to 7.2%. 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 sanitation systems and the sustainable implementation of the health curriculum.

Abstract #: *1.011_MDG*

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

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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 questions 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 contraception, 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

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Background: In the Dominican Republic (DR), where neonatal mortality is 21 per 1000 live births, women breastfeed for a mean duration 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 interventional studies report decreases in infant morbidity and hospital readmission rates. A hospital-based pilot lactation educational intervention 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 analysis, 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 intervention, 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.