

and non-war related injuries. Mortality data was obtained for age and gender.

Findings: During the 6 month study period, a total of 1,396,545 patient visits were treated in surveyed hospitals. Of those, 917,485 (66%) presented to outpatient clinics and 479,060 (34%) to emergency departments. A total of 83,399 patients required admission; 61,660 to inpatient wards and 7,740 required ICU care. 53,360 surgical procedures were performed. Of those, 22,936 (43%) were categorized as war-related and 30,424 (57%) were non-war-related surgeries. War-related procedures were further categorized as general (7,598) (33%), orthopedic (9496) (41%), limb amputation: upper (total 413) (2%); lower (total 214) (1%), vascular surgery (1,136) (5%), urological (712) (3%), neurosurgical (479) (2%), ophthalmological (491) (2%), thoracic (356) (1.5%), maxillofacial (411) (2%), ENT (510) (2%), plastics (659) (3%), and OB-GYN (461) (2%). Of 26,938 total deliveries, 16,445 were normal vaginal (16,445) (61%) and (10,493) (39%) were delivered by C-section. A total of 2,804 fatalities were reported by the study hospitals (73% male; 27% female) with 386 (14%) reported in children under 5yrs of age.

Interpretation: Our data indicate a high rate of surgical procedures in our surveyed hospitals. Nearly half of surgical procedures were war-related and of those, the most common categories were general surgical and orthopedic procedures. The rate of non-trauma surgeries indicated a continued significant demand for routine surgical care for the general population.

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Abstract #: 1.029_NCD

Improving Anemia in Ecuador: The Journey to a Sustainable Intervention in a Global Health Nursing Course

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Program/Project Purpose: Collaborative efforts of a College of Nursing from a University in the western United States and a non-profit organization based in Guayaquil, Ecuador have helped to build healthier communities. Global Health experiences have been a part of the nursing program at this University for the past twelve years. Due to economic difficulties of the families in this area, many children were coming to school hungry. This prompted a local non-profit organization to seek assessments and interventions in order to better be able to understand the nutritional needs of these children. It was determined that working together, our College of Nursing and volunteers from the non-profit organization together could measure a large portion of children to determine a benchmark of health needs. The results were astonishing with a 48% anemia rate noted in these school aged children. During the next eight years of assessment and interventions, we have now come to realize a sustainable intervention that was implemented this school year. In this poster presentation we will share our journey of improving anemia in these school aged children.

Structure/Method/Design: In May 2016, four schools were selected as the target study groups. The interventions used were based on previous international research on treating anemia; increasing childhood nutrition, incorporating supplemental

nutrients, and treating underlying sickness, as well as a previous study we had completed utilizing interventional groups (a school snack of unfortified soy milk and a roll, a chewable vitamin with iron, and antiparasitic medication). In 2015 a graduate nutrition student at our university developed a supplement, with iron and vitamins, for the soy milk utilizing Ecuadorian resources, then trained those making the soy milk, how to add this supplement to the soy milk they were already giving to the children at the school.

Outcome & Evaluation: The fortified soy milk has been given to these children since May 2016. In November, 2016 we will return to measure these school aged children and are hopeful this intervention will have had positive effects. The results will be shared as well as the strengths and weakness of this study.

Going Forward: Strengths and weaknesses will be evaluated.

Source of Funding: Various anonymous donors help fund the supplies for measurement and interventions.

Abstract #: 1.031_NCD

Osteoporosis-related knowledge and health beliefs among female community leaders in Peru

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Background: Postmenopausal women are at high risk for osteoporosis, and early adoption of osteoporosis-preventative behaviours, such as physical activity and dietary calcium intake, can help mitigate this risk. Behavioural studies have shown that knowledge and health beliefs are key factors associated with adoption of healthy behaviours. There are few such studies regarding osteoporosis in South America. Our aim was to conduct an exploratory study evaluating osteoporosis-related knowledge and health beliefs among a group of female community leaders in Peru, who may potentially serve as promoters of bone health in future community-based osteoporosis interventions.

Methods: We conducted a cross-sectional study among female community leaders in a peri-urban setting. Participants completed a four-part questionnaire that included the internationally validated Osteoporosis Knowledge Test (OKT) and Osteoporosis Health Belief Scale (OHBS), questions regarding sociodemographic and clinical characteristics, and questions pertaining to osteoporosis and fracture risk.

Findings: A total of 60 women were interviewed (88% participation rate). Mean age of the participants was 43.7±8.3 years, mean BMI was 30.4±5.3 kg/m² and 58.3% had completed high school education or beyond. The majority of interviewed women had a relatively high knowledge regarding osteoporosis based upon the OKT, and reported high perceived benefits to exercise and calcium intake, and relatively high health motivation. The level of osteoporosis knowledge was highly associated with level of education (PR 1.94, 95% CI: 1.23 – 3.09; p=0.005). We also found a trend for association between level of knowledge and perceived benefits to exercise and calcium intake.

Interpretation: We found that Peruvian female community leaders were knowledgeable regarding osteoporosis and reported high health motivation. Due to their investment in their communities, this population should be a key component of future osteoporosis-related community-based studies and interventions. Finally, we were able to demonstrate that a larger study would be feasible and even desired within this population.

Source of Funding: This study was supported by GCC, CIEN-CIATIVA from the Peruvian Council of Science and Technology (CONCYTEC) and London School of Hygiene and Tropical Medicine.

Abstract #: 1.032_NCD

A Systematic Review of the Diseases Interaction between Helminthic Infections and Diabetic Mellitus

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Background: The hygiene hypothesis indicated that a lack of exposure to microorganisms or parasites during childhood increases the chances of having autoimmune diseases due to alteration of natural immune system development. The purpose of the review is to summarize the current knowledge and updates of any epidemiological association between helminthic infections and their interactions on diabetic metabolism.

Methods: We performed a systematic literature review from MEDLINE database to examine epidemiological relationship between the helminthes and the diabetic status. All articles were included without restriction on language, publication date, study settings, clinical signs, laboratory parameters and disease complications. The published articles were screened and validated by using PRISMA criteria.

Findings: We retrieved 11 articles (ten cross-sectional studies and one cohort study) which mentioned the frequency distribution of helminthic infections among diabetic and non-diabetic group or the prevalence of diabetes mellitus among helminth infected and non-infected ones. The prevalence rates and the intensities of diseases were compared between studied groups. Majority of studies revealed a protective effect of helminthes against both type 1 and type 2 diabetes mellitus while only a few studies identified a positive association that specific helminthes increasing the disease severity in diabetic patients.

Interpretation: Well-designed longitudinal studies are still needed to identify the causal link of these associations. The helminth related compound or ova of the helminthic species have been used for treatment of autoimmune diseases such as Crohn's disease and ulcerative colitis and if helminthes protective mechanism on blood sugar homeostasis is significant, a helminthic related substance can shortly be an alternative therapeutic regime in diabetic treatment. However, on the other hand, we should also be aware of the impact of deworming on blood sugar metabolism especially, in the tropical and subtropical countries which are currently undergoing a nationwide mass deworming program to reduce the morbidity of helminth related health problems.

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Funding Flows for the Global Initiative for Children's Surgery (GICS): Lessons Learned

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Background: Despite surgical conditions accounting for an estimated 30% of the global burden of disease, and children comprising up to 50% of the population in the lowest-resource settings, the funds available for global children's surgery delivery are limited and poorly defined. Further, the focus of prior global health efforts has traditionally been determined by funding, often discounting the experience and priorities of local providers. Thus, our goal was to describe the funding associated with a unique initiative dedicated to improve children's surgical care, the Global Initiative for Children's Surgery (GICS), which prioritizes the perspectives of providers from low-resource settings.

Methods: A retrospective review of funding mechanisms was performed over the first 6 months of the initiative, April 2016 to September 2016. Funding was grouped and analyzed according to donor. Charities, professional organizations, universities, and transnational organizations focused on children's surgery were invited to participate and contribute to costs associated with two meetings in May, 2016 (London) and October, 2016 (Washington DC). Organizations were encouraged to contribute either to a general fund or to directly support providers from these areas with which they had established contacts.

Findings: Professional organizations, non-governmental organizations and academic institutions each contributed almost equally (28.4%, 28.1%, 25.2%, respectively.) The remainder of funds (18.3%) came from private individual donors. Specialty organizations from anesthesia, neurosurgery and orthopedics contributed. Funds supported the travel costs for providers from low-resource environments to participate in two global meetings. Most organizations preferred to sponsor providers from resource-poor areas with whom they had a previous working relationship. Professional organizations donated administrative time, and the remainder of the organizational work was done on a pro-bono basis.