patients seen since 2010 were included in this study. The burden of disease, measured as the ratio of unique diagnoses per total patient encounters, was determined. Prevalence of intestinal helminthiasis, representing the greatest burden to the total patient population, was compared between 25 communities using bivariate and multivariate analysis.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): FD patient records over the past 2 years indicate that intestinal helminthiasis represents the greatest perceived health burden in all 21 Ngobe communities visited, with 32% (95% CI, ±5.99) of patients seeking treatment for worms, while non-indigenous patients present with worms in only 10% (95% CI, ±4.53) of 421 consultations. Integrating the data from each community into geographic information systems (GIS) has allowed for meaningful graphic data presentation.

Summary/Conclusion: The overwhelming burden of helminthiasis is well known to FD clinicians and quantifying this burden in each community has provided both FD and the local Ministry of Health with an improved understanding of 1) geographic distribution of helminth burden, 2) the effectiveness of individual anthelmintic programs, and 3) regions that may require novel anthelmintic approaches.

As a consequence of this research and the partnership between Floating Doctors, US medical schools, and local Ministry of Health, a group of first-year medical students from Stony Brook University will be conducting a fecal sample study in the indigenous town of Norteno this summer. In addition to identifying the types of helminths burdening the community they will coordinate with the school's principal, teachers, and Peace Corps volunteer to implement a helminth education curriculum. This winter MD and MPH students will also be applying for a grant to install a Pan-American Health Organization (PAHO) chlorine filtration system for Norteno's largest aqueduct.

Risk and prevalence of vertebral fractures among breast cancer survivors in China

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Background: Osteoporotic fractures lead to significant morbidity and mortality worldwide. Women with breast cancer (BC) are at high risk for fracture due to the deleterious impact of BC therapies on bone density. In China, BC survival is improving as screening, diagnosis and treatment programs expand, however, the long-term impact of BC therapy on fracture risk among Chinese women remains unknown and no guidelines exist to prevent BC treatment-induced bone loss. We designed a pilot study to evaluate the scope of this problem among BC survivors at a large cancer referral hospital in Beijing.

Structure/Method/Design: BC survivors receiving care at the Cancer Institute and Hospital of the Chinese Academy of Medical Sciences between April and December 2013 were invited to participate. Women between 50 and 70 years of age were eligible if they had initiated treatment for BC at least 5 years prior to enrollment, and had no evidence of metastatic bone disease. Study procedures included a self-administered questionnaire regarding risk factors for and personal history of fracture and a thoracolumbar x-ray to assess for presence of vertebral fractures (VF).

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): 100 women were enrolled with a mean age of 57±5 years, and BMI of 26.6±4.8 kg/m^2. Mean years since BC diagnosis was 6.0±0.8. The majority of cases were stage I or II at diagnosis (79.2%) and estrogen and/or progesterone receptor positive (87%). In total, 12 VFs were identified via thoracolumbar x-ray. In terms of fracture risk, average reported lifetime height loss was 1.7±1.1 cm, 11% reported a parental history of fracture, 9% reported a personal history of fracture, and 22% of women reported falling within the past year. Forty-five percent of all participants reported taking calcium supplements, but only 4% reported taking vitamin D supplements. Only 25% of women reported having a bone density scan since being diagnosed with BC and 14.4% had been diagnosed by a physician with low bone density or osteoporosis.

Summary/Conclusion: Prevalence of VF among our cohort of Chinese BC survivors was 12%, much higher than recently reported rates among age-matched healthy Chinese women in Beijing of less than 5%. Chinese women undergoing BC therapy should be routinely evaluated for osteoporotic fracture risk. Larger studies are necessary to identify sub-groups at particularly high risk in order to inform screening and prevention guidelines.

Design of the Dhulikhel Heart Study (DHS): The epidemiology of emerging cardiovascular disease in Nepal

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Background: The burden of disease in developing countries is shifting from infectious to noncommunicable diseases with devastating consequences to public health. As in most of the developing countries Nepal is currently experiencing a rapid growth in cardiovascular disease (CVD) but there is little community-based data available to measure its impact and track trends. The Dhulikhel Heart Study (DHS), based out of Dhulikhel Hospital, Kathmandu University, was designed to address this need by providing comprehensive data using standardized protocols to evaluate CVD prevalence, incidence, and risk factors.

Structure/Method/Design: The DHS is a prospective, longitudinal cohort study targeting all adults age ≥18 years and residing in the town of Dhulikhel, in central Nepal, for a baseline examination and planned 20-year follow-up. The home visit includes collection of informed consent, demographic and socio-economic characteristics, medical history, health behaviours, physical and cognitive function,

anthropometry, and blood pressure measurement. A fasting blood sample will be collected for blood glucose, HbA1c, and lipid profile. Participants will be invited to Dhulikhel Hospital to undergo electrocardiography, echocardiography, carotid doppler and adipose tissue measurement. Outcome measures will focus on mortality and CVD-related morbidities. Cause of death will be ascertained using hospital records and verbal autopsy while CVD events will be identified from medical records and measured during regular surveillance. Logistic and linear regression along with mixed models and survival analysis will be used to estimate factors related to risk of specific outcomes. Collaborative writing groups will be convened to develop manuscripts and publish results.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): The baseline examination is currently underway with an expected sample of 9000 adults to be completed by summer 2014 with repeat visits to occur every 2 years.

Summary/Conclusion: Results of the DHS will provide important data on the epidemiology of hypertension, diabetes, coronary heart disease and stroke in Nepal to help develop evidence-based programs for their prevention and treatment. Methods may be used as a model for other low-income countries that are developing plans to address this emerging epidemic.

Noncompliance with medications among hypertensives in Ghana

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Background: Prevalence of hypertension in Ghana is estimated to be between 25.5% and 48% in urban areas. In spite of this growing burden of noncommunicable disease, there has been limited research into hypertension treatment patterns or noncompliance rates. This study aims to understand the factors that influence patient compliance and treatment outcomes in this region.

Structure/Method/Design: 120 patients were recruited between December 2012 and August 2013 at Korle-Bu Hospital in Accra. Questionnaires that collected information on age, sex, religion, occupation, socioeconomic status, monthly blood pressure medication expenditures and house ownership were administered to eligible patients who agreed to participate in the study. The eight-item Morisky scale was used to assess non-compliance; the Patient Health Questionnaire-9 was used to assess depression; the Beliefs about Medication Questionnaire was used to assess patient views about medication, and the 14-item hypertension knowledge scale was used to assess patients' knowledge about hypertension. The correlation coefficient was used to determine correlation between Morisky score and other patient variables.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): 27.73% of patients had controlled hypertension, with an average systolic BP of 151.57. The most commonly prescribed antihypertensive was a calcium channel blocker, comprising 75% of patients. Several risk factors were revealed in the aggregate data that may help explain the poor BP control. Weight is a known risk factor for hypertension, and in this patient population the average BMI was 29.95, which is borderline between the overweight and obese categories. Psychosocial stress is also a known risk factor for hypertension, and a significant number of patients in this population met criteria for depressive disorder. Based on the PHQ-9 screening, 10.83% of patients met criteria for major depressive disorder, and 14.17% of patients met criteria for common depressive disorder. This study revealed 30.25% of patients to be noncompliant with medications, and 42.02% of patients to be moderately compliant with medications, which is a lower rate than in previous studies in the region. When correlation coefficients were determined between Morisky score and various other variables, the strongest correlation was found between noncompliance and depression score.

Summary/Conclusion: This study suggests that, in spite of treatment, hypertension is not adequately controlled within this population. Factors that may influence blood pressure control in this cohort include high rates of obesity, underlying depression, and noncompliance with medications.

Impacting the global trauma burden—Training laypersons in basic resuscitation in Mozambique

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Background: The cost of trauma remains exorbitant, accounting for over 300 million years of healthy life, along with 11% of disability-adjusted life years (DALYs) worldwide. In fact, road accidents are the number 1 cause of death among under 40-year-olds and thus responsible for the greatest loss in terms of years of life. Reduction of DALYs and mortality are linked to adequate prehospital care and decreased transport times to definitive care. Given the financial and resource constraints in low-income countries, simple but systematic prehospital training programs for laypersons have been implemented in rural villages to stabilize patients. Most prehospital deaths are the result of airway compromise, respiratory failure or uncontrolled hemorrhage; all three of these conditions can be addressed by laypersons using basic first aid measures.

Structure/Method/Design: The hypothesis is that basic prehospital and primary hospital interventions made by layperson first responders and health care personnel will decrease trauma mortality and increase the number of capable first responders. In order to test this hypothesis, two communities of similar size, resources, and hospital capacities in Mozambique were selected. A trauma registry that included the patient's age, comorbidities, mechanism of injury, vitals on admission, interventions performed, and outcomes was established.

One community and hospital served as the intervention group that receives training on four basic resuscitative and stabilizing efforts in their native language. Community members received a 4-hour seminar that taught four basic resuscitative and stabilizing interventions prior to transport by ambulance or taxi/bus. These techniques include a modified ABCD (airway, breathing, circulation, disability) noted in developed nations. A is for airway opening that allows victims to receive oxygen by simply opening their mouths and removing any foreign objects if present. B is for bleeding and laypersons were taught how to apply compression or a tourniquet to control bleeding. C represents cervical spine immobilization with simple tools such as rice bags and newspapers. D is for disability which is reduced by transporting victims with a flat, immobile, safe method. Hospital personnel received the same ABCD training as the community with two additions—assessment that involves vital sign monitoring and IV fluid resuscitation as they are markers of shock and injury.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Pre- and post-tests were administered to participants in their native language. Results of the study suggest community members can be trained in basic resuscitative techniques.