

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.