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Background: Primary care settings and Community Health Workers (CHWs) have traditionally been used to address communicable diseases in low and middle income countries (LMICs). However, there is a paucity of evidence regarding the effects of childhood overweight/obesity treatment and prevention interventions delivered in primary care settings or by CHWs.

Objective: To conduct a systematic review of the effect of childhood overweight/obesity treatment and prevention interventions delivered in primary care settings or by CHWs on health and behavioral outcomes for children, parents, and caregivers.

Methods: The review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Major databases were searched (from inception to October 2015) to identify relevant randomized controlled trials (RCT) and cohort studies. Three reviewers independently assessed titles and abstracts to identify potentially relevant articles. Discrepancies were resolved by repeated review, discussion, and consensus.

Findings: Twenty studies involving over 7000 individuals were included; 16 were conducted in predominantly low-income and minority communities in the United States, and 2 in LMICs. Eleven were RCTs and 9 were cohort studies. Outcome measures included dietary/physical activity behaviors and Body Mass Index (BMI) z-scores, and duration of follow-up ranged from 6 months to 3 years. Pooled results revealed a moderate beneficial effect of interventions on participants' BMI and dietary/physical behaviors. The effect was most apparent in participants whose baseline BMI z-scores were in the normal BMI range (0.01 mean BMI z-score change, $P < 0.05$), compared to participants whose baseline BMI z-scores were in the overweight or at-risk for overweight range (-0.09 mean BMI z-score change, $P = 0.04$), and mean BMI z-scores decreased from 1.05 at baseline to 0.81 at follow-up ($P < 0.001$). There was also a significant reduction in intake of sugary drinks from 33% pre-intervention to 21% post-intervention ($P < 0.05$).

Interpretation: Interventions delivered in primary care settings or by CHWs have moderate beneficial effect on children's BMI, and dietary and physical activity behaviors. Interventions of longer duration, and which focus on hard evidence of biomedical indicators of overweight and obesity reduction are needed. Interventions conducted in LMIC contexts are particularly needed to inform policy and practice in these settings.

Funding: None.

Abstract #: 1.041_NEP

Development of a nurse-paramedic model for acute STEMI/SCA care in India

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Background: India has more cardiovascular disease (CVD) than any other country claiming 5 million lives annually. ST segment

elevation myocardial infarction (STEMI) and sudden cardiac arrest (SCA) are major contributors to disability and death with over half of patients dying prior to reaching hospitals. It is projected that by 2020, more than half of the world's CVD burden will be in India.

Methods: Development of a pre-hospital system of STEMI/SCA care in Bengaluru, India using nurse-paramedics on scooters followed by nurse-physician ambulance teams mobilized for acute CVD events. STEMI patients are rapidly identified, treated with fibrinolytic agents on the ambulance when indicated, and transferred to comprehensive cardiac centers of excellence or "hub" hospitals for percutaneous coronary intervention (PCI). Standardized data elements will be used for acute CVD care in the pre- and post-hospital setting for acute STEMI/SCA using web-portal data entry and quality metric reporting.

Findings: Five spoke hospitals and 2 hub hospitals within a surrounding population of 400,000 have been identified. The system includes 24/7 first responders on scooters trained to transmit ECGs to designated hub hospitals, ambulance nurse-physician teams trained in emergency care, all equipped with AED defibrillators for SCA. Community education programs identify at-risk individuals to increase use of these heart attack action plans. Data metrics include: time of call by chest pain patients, time to arrival by scooter and ambulance, time from ECG to thrombolytic administration at the spoke hospital, or cardiac catheterization at the hub hospital. Goals are to have chest pain patients call within 30 minutes from symptom onset, ECG diagnosis of STEMI within 15 minutes of initial call, and fibrinolytics or PCI administered within 90 minutes of STEMI diagnosis.

Interpretation: This innovative pre-hospital care system using nurse-paramedic and physician responders, when combined with community risk screening and education, will provide rapid STEMI/SCA identification and treatment. The goals are to increase the capacity of the paramedic response system, develop standard protocols for acute CVD management and improve patient survival. The project provides a scalable model that can be integrated into the current healthcare system and large urban centers throughout India.

Funding: Medtronic Philanthropy HeartRescue.

Abstract #: 1.042_NEP

Mapping disparities in access to surgical care: an application of geographic information systems to evaluate surgical infrastructure in Zambia

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Background: Global surgery has recently emerged as a high priority in developing countries, and access to surgical care is a significant limitation to safe and timely surgery in these settings. We hypothesize that timely access to safe surgical care is limited in Zambia. We used a geospatial visualization tool to analyze surgical infrastructure, capacity, and availability of surgical care in Zambia.

Methods: All Zambian hospitals providing surgical care in 2010 were identified in cooperation with the Ministry of Health. On-site data collection was completed between October 2010 and August 2011 using an adapted WHO Global Initiative for Emergency and Essential Surgical Care survey. Data were geocoded using ArcGIS 10.3 and analyzed in Redivis, an online visualization platform. We identified the proportion of the population covered within a 2-hour travel time to facilities, as recommended by the Lancet Commission on Global Surgery.

Findings: Data were collected from on-site assessments of all 103 surgical hospitals. Visits included 495 interviews with providers and tours of the facilities. Overall, 8% of the population (1.16 million people) lived more than a 2-hour drive from any surgical facility (Figure 1a). When minimum safety standards adapted from WHO criteria were included in the analysis, access declined markedly; only 17 (16.5%) hospitals met these minimum standards, defined as the availability of a pulse oximeter, adult bag mask, oxygen, suction, intravenous fluid, sterile gloves, skin preparation solution, and a functioning sterilizer. Geospatial analysis showed that 58% of the population (8.41 million people) lived more than a 2-hour drive from these facilities with the minimal complement of equipment and supplies to maintain an airway, resuscitation and sterility for surgical care (Figure 1b).

Interpretation: A significant proportion of the population in Zambia does not have access to safe and timely surgical care. Human resources, infrastructure and supplies within these facilities are limited and must be addressed to improve safe surgical access. Geospatial visualization tools provide a unique approach to identify key areas for improvement. This type of geospatial analysis can be used for health system planning across many countries and health services.

Funding: Stanford SPECTRUM Population Health Sciences Pilot Grant.

Abstract #: 1.043_NEP

Low rates of screening and treatment of chronic hepatitis B, C, D (HBV, HCV, HDV), and hepatocellular carcinoma (HCC), associated barriers, and proposed solutions: results of a survey of physicians from all major provinces of Mongolia

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Background: Mongolia has the highest reported HCC incidence (78.1/100,000) in the world, in addition to some of the highest

prevalence of HBV, HCV, and HDV infection. However, it is unclear whether there is sufficient screening and access to care for these diseases. We aim to estimate rates of screening, antiviral therapy, and barriers to care in Mongolia.

Methods: Anonymous surveys of 121 physicians from major provinces of Mongolia, who attended a two-day continuing medical education and training workshop for viral hepatitis, cirrhosis, and HCC in Ulaanbaatar, on 9/2015.

Findings: A total of 70-95 of 121 (58%-79%) physicians responded to our survey questions. Most participants were female (87%), age <50 (79%), and sub-specialists (76%). The majority practiced in urban areas (61% vs. 39% rural practices). Over 80% of respondents noted significant limitations to viral hepatitis or HCC screening, such as lack of financial resources, management guidelines, and patient awareness (Figure 1). More than 50% of patients were thought to not undergo necessary screening. Financial concerns were also the main barrier for viral hepatitis patients seeking care (40-46%). Hepatitis treatment rates were very low with 83% of respondents reporting treatment of <10 patients with HCV in the past year, and 86% reporting treatment of <10 HBV patients/month. Treatment barriers were multifactorial with medication cost as the principle barrier, followed by lack of both drug availability and management guidelines consensus, if financial barriers were not a concern (Figure 2). Top proposed solutions were universal screening policies (46%), removal of financial barriers (28%), and provider education (20%).

Interpretation: Mongolian physicians, representing all major provinces, noted low screening for viral hepatitis and even lower treatment rates. Also, most surveyed physicians noted the need to remove financial barriers and increase educational efforts in order to improve access to care.

Funding: Gilead Sciences, Inc. co-supported by Mongolia Ministry of Health, Ombol, LLC, Stanford University.

Abstract #: 1.044_NEP

Prevalence and correlates of intimate partner violence among women attending child health services, Enugu State, Nigeria- 2015

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Background: Intimate partner violence (IPV) is the major form of violence against women worldwide. It is estimated that one in every five women will experience some form of violence in their lifetime. The experience of violence during pregnancy has been linked to a number of negative health outcomes including preterm labour, ante partum haemorrhage, miscarriage and foetal death. This study determines the prevalence and correlates of intimate partner violence before and during pregnancy among women accessing child health services in Enugu State.

Methods: A cross-sectional survey of 702 women accessing child health services in secondary and primary health facilities in Enugu State, using a multi stage sampling technique was done. Quantitative and qualitative data collection methods were adopted to