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Structure/Method/Design: We implemented a prospective, ongoing trauma registry at Mbingo Baptist Hospital (MBH), a tertiary referral hospital located in the North-West region of rural Cameroon. In collaboration with Cameroonian surgeons, we developed a 56-item trauma form (Figure 1) that was then piloted and revised. Study personnel included one supervisor and twelve data collectors. They were English-speaking, paid a nominal fee, and trained before data collection and again one year into the study. Beginning in May 2013, information from trauma patients admitted to the surgical or orthopedic wards were recorded on paper trauma forms and later transferred to a secure electronic database. The previously validated Kampala Trauma Score II (KTSII) was calculated. Ethical approval was obtained from both home and local institutions.

Outcome & Evaluation: We successfully implemented a trauma registry and have collected important epidemiological data for >1,600 patients to date. Although analysis is ongoing, some key findings include: 1) motor vehicle collisions (primarily motorcycle accidents) account for the majority of traumas, 2) helmet and seatbelt use are extremely low, 3) there are significant pre-hospital delays, and 4) there are alarmingly high mortality rates among patients with mild or moderate KTSII scores. The on-site supervisor troubleshoots as needed, and the protocol director double-checks electronic records at random to ensure accurate data collection.

Going Forward: Moving forward, we plan to strengthen collaborations with the Cameroonian Ministry of Health to share our results and ensure sustainability of this registry. Given the overall success of this registry, a similar model of implementation can be adopted in other rural hospitals of low-resource countries after modifying for the specific circumstances of each facility.

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Abstract #: *2.010_NEP*

"They say once you get diabetes, that's the end of your life": a qualitative study with diabetes patients in Kolkata, India

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Background: In India, over 65 million people, 8.6% of the total population, live with diabetes.[1] In addition to robust quantitative public health and biomedical research, strong qualitative studies are needed to better understand the personal and cultural impact of diabetes in India. As a means of learning how healthcare systems might improve their response to the needs of diabetes patients, this qualitative study explores the question: "What is it like to be diabetic in West Bengal, India?"

Methods: The study took place in an outpatient clinic of a private hospital in Kolkata. Semi-structured key informant interviews were conducted with adult Type 2 Diabetes patients (n=17). Consenting patients were interviewed by a member of the research team in the language of their choice (Bengali, Hindi, or English). Recorded interviews were translated and transcribed into English, twice verified for accuracy, and thematically coded.

Findings: Patients spoke broadly about two themes, 1) the impact of diabetes on their lives and 2) barriers to care.

On impact, patients frequently discussed the mental impact of diabetes, recurrently using the word *tension* to describe both the cause *and* effect of the disease. They also discussed the reverberating effects of diabetes on familial and social lives, the disruption of food rituals, and their fear of other chronic conditions.

Regarding barriers to care, patients conveyed a blended sense of loyalty to their doctors and disappointment with their care, particularly the scarcity of clear communication and personalized guidance. Many patients expressed a lack of confidence in their ability to manage the disease, avoid complications, or access support services. Patients spoke often about financial strain related to medication, tests, and "healthy" food.

Interpretation: This study identifies multiple challenges experienced by diabetic patients in West Bengal, many of which can be addressed by healthcare organizations. Recommendations include: utilization of diabetes nurse educators, training medical providers to convey clear and evidence based guidance for diabetic care, creating support groups for vulnerable diabetic patients, developing a series of free classes for the newly diagnosed, and utilizing nursing students to conduct home visits.

Funding: Resources for the study provided by the hospital.

Abstract #: *2.011_NEP*

Early supplementary feeding in rural Malawi: Constraints and motivations

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Background: Malawi has high rates of infant mortality at 53 deaths per 1,000 live births. Breastfeeding has been found to alleviate the risks of health issues leading to mortality, and both the World Health Organization and the Malawi Ministry of Health recommend exclusive breastfeeding for newborns for at least 6 months. While most mothers believe in the health benefits of exclusive breastfeeding, early supplementary feeding in Malawi starts when the infant is around 3.7 months. Our study aimed to understand the motivations for early supplementary feeding in a cluster of villages in Ntcheu district, Malawi.

Methods: The research was conducted in a rural community of central Malawi. A 6-page survey was developed to assess women's breastfeeding practices. Study participants were selected based on convenience sampling in the study area, and basic demographic data were collected. De-identified data was compiled and analyzed through anthropological methods including coding and cross-coding to identify significant themes. Descriptive statistics were conducted to supplement emergent themes relating to infant nutrition, cultural norms around motherhood, and breastfeeding practices.

Findings: The study included 28 interviews from 21 households. The mean age of the sample was 43 years (SD 17.5). Women on average had 6 pregnancies (SD 2.7) and 4 children (SD 2.3); they fed their children an average of 4 supplementary food types (SD 3.5) from a list provided. The most common foods introduced include gripe water, medicinal herbs, formula, phala (rice porridge),

and water. Observed behavioral developments such as sitting up, reaching for and tracking food, as well as crying were strongly linked to early supplementary feeding.

Interpretation: Despite clear guidelines from the local mission hospital for exclusive breastfeeding until 6 months of age, many mothers continue to provide early supplementary foods to their children. Additionally, grandmothers have their own beliefs about early supplementation based on their personal experiences, which can be at odds with the hospital guidelines. Therefore, women are navigating multiple streams of knowledge as they make decisions regarding their breastfeeding practices.

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Abstract #: *2.012_NEP*

Developing the frameworks to establish model referral networks for emergency obstetric care in Haiti

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Program/Project Purpose: Timely care during obstetrical emergencies is critical and relies heavily on a functional referral system; however, in Haiti, major gaps exist in both the existence of a referral network and its operationalization, contributing to high maternal mortality in the country. To address this, USAID's Maternal and Child Survival Program (MCSP), led by Jhpiego, initiated the model referral network (MRN) initiative at three sites in Haiti in late 2014. This 3-year project aims to establish the guidelines and technical standards for the structure and operation of the MRNs as well as support initial implementation.

Structure/Method/Design: An in-depth analysis of the current referral patterns of patients was conducted in the Ouanaminthe region including a review of documents and interviews with key informants. GPS coordinates were obtained for all health facilities in the network to serve as the basis for a visual mapping tool, assisting in the operationalizing of referral networks, including other peripheral and referral facilities in the network. To support implementation of the mapping tools, communication and transportation protocols were developed in conjunction with Haiti's Ministry of Public Health and Population (MSPP). These protocols were integrated into the National Referral and Counter-Referral Manual to reflect current standards of referral.

Outcome & Evaluation: To date, the mapping tools for each health facility in the Ouanaminthe referral network have been developed. These include a visual representation of where the institution should refer routine, urgent and emergency obstetric cases, the services provided at the facilities and contact phone numbers for services and transportation. These tools are currently undergoing a process of validation by MSPP.

Going Forward: Upon validation by MSPP, the next step will be dissemination, to share the mapping tools and to train and pilot the new protocols with health facility staff. To enable monitoring and evaluation of the MRNs, M&E infrastructure had to be developed. New referral and counter-referral forms and registers are being validated and printed. Once M&E tools are in place, implementation of the MRNs will begin, with tracking of referral and counter-referral completion rates, time to complete referrals and obstetrical outcomes.

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Abstract #: *2.013_NEP*

The prevalence and correlates of hyperglycemia among rural Ghanaian adults

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Background: It has been estimated that as much as 80% of the global burden of non-communicable diseases (NCD) occurs in low- and middle- income countries, yet the true impact of these diseases is often poorly understood. This study sought to gain insight into the prevalence of diabetes mellitus and its associated risk factors in rural Ghana.

Methods: A cross-sectional study was conducted among six selected villages in the Barakese sub-district. All community members were invited to attend a health screening event, and 385 male and female adults aged 18≥ participated in this study. Socio-demographic characteristics, anthropometric measurements, and selected modifiable and non-modifiable risk factor data were obtained for each participant following written, informed consent. Capillary blood samples were collected via finger prick and blood glucose was measured using a standard blood glucometer. Samples were categorized according to fasting or random blood glucose status. A multiple linear regression analysis (p-value <0.05) was used in addition to prevalence calculations.

Findings: A total of 186 random and 199 fasting blood glucose samples were obtained. The mean ages were 47.38 years (IQR 29-62) and 51.03 (IQR 37-65) for the random and fasting blood glucose group, respectively. Among the fasting group, 5.03% of participants had a blood glucose ≥126 mg/L and 4.52% had an impaired fasting glucose range (≥100 mg/L and <126 mg/L). Regression analysis ($p<0.05$) found that education level, family history of diabetes, and BMI were positively correlated with increased fasting blood glucose for women, and physical activity was found to be positively correlated for men. Among the random blood glucose group, 1.61% of participants had a blood glucose value ≥200 mg/L. Age was positively correlated with increased random blood glucose for both men and women. Additionally, women had a positive correlation with smoking history and men with educational status.

Interpretation: Although relatively few individuals in this study were found to have hyperglycemia or diabetes, further research is needed to determine the true disease burden in this population. Accessibility to care and treatment availability for diabetes in rural Ghana likely play a role in the overall morbidity and premature mortality from this disease.

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