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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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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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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