POSTER CONTEST FINALISTS

Impact of helping babies breathe training on the change in knowledge, attitude and practice among community health care workers in Jimma region, Ethiopia

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Background: While Ethiopia has shown a significant improvement in neonatal mortality, rates remain high at 29 per 1000 births. Most of these deaths can be prevented through cost-effective and quality-delivered interventions. This is phase I of a two-phase intervention aimed at reducing neonatal mortality in a health center in rural Ethiopia utilizing HBB. Phase II of this study will be to assess change in practice of those who attended HBB sessions. We believe that this gain in knowledge and change in practice will lead to a decrease in neonatal mortality over time.

Methods: Community health workers attended one of three HBB training sessions provided at a health center in Asendabo, Ethiopia. A multiple-choice survey was given before and after each session. The questions assessed knowledge gained, attitude toward applying the knowledge and confidence in using a bag-valve mask on a newborn. The percentage of correct answers was calculated for each pre and post-test (correct answer/total surveys x 100). These were compared for change (post % correct − pre % correct) to assess the impact of the training.

Findings: Overall, there was a 29% increase in knowledge, 6.95% increase in confidence with the techniques taught, and a 75.13% reported change in attitude after the session. Midwives showed the greatest change in knowledge (36.67%) and attitude (83%). Extension workers felt most comfortable with the bag-valve mask, showing a 38.10% increase in confidence. 100% of participants believed the session to be useful.

Interpretation: Our results indicate that midwives are more likely to implement the training into their daily practice. Nurses and nursing students had the least amount of confidence in using the mask (−17.65%), showing a need for more hands-on training. Significant confidence was gained by the extension workers, illustrating the importance of making this course available annually. To make these positive changes more sustainable, we have recruited a midwife at the Asendabo Health Center who will act as a local liaison to provide continuing support for future healthcare providers. We are also in contact with the clinic to continue tracking neonatal mortality rates and plan for future HBB sessions in subsequent summers.

Abstract #: 1.001_PCF

Global health in former soviet nations: investigating the determinants of cardiovascular health across Armenia

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Background: Since the dissolution of the USSR, the health of its former states' populous has experienced a decline in health due to the concomitant fragmentation of their economic and political structures. Perhaps the most salient example of this trend is the Republic of Armenia, which has experienced a decline in health largely attributable to noncommunicable disease (Rechel, 2014). As rates of overweight and obesity have reached 55.5% and 24%, respectively (WHO, 2010), associated cardiovascular disease has come to account for 54% of all deaths in Armenia today (WHO, 2014).

Methods: To elucidate the factors underlying these trends, collaborative cross-sectional research was conducted by the University of Utah's Global Health Armenia program in conjunction with Yerevan State Medical University in summer 2015. In accordance with CBPR methodology, five regional clinics spanning Armenia were identified by local collaborators, where 517 participants were selected by random-intercept sampling for surveying of demographic and healthy lifestyle information alongside BMI and blood pressure.

Findings: The mean age of respondents was 47.25 (SD=14.4), with 84% being female and 70% living in urban areas. Rates of overweight (BMI = 25-29.9) and obesity/extreme obesity (BMI = 30+) were 26.89% and 43.13%, respectively. Significant differences were revealed in BMI among gender (p = 0.029), rural and urban residence (p = 0.0223), education level (p =< 0.0001), knowledge of English and Russian languages (p = 0.0003), and financial status (p = 0.0064), whereas, surprisingly, none was found among BMI and self-reported frequency of exercise or leafy, green vegetable consumption. Additionally, recorded systolic blood pressures categorize 61% of participants as pre-hypertensive or hypertensive by WHO guidelines.

Interpretation: These data provide novel insight into an emerging non-communicable disease crisis in Armenia, a region largely ignored by existing literature. Indeed, former Soviet nations present themselves as a new frontier in global health owing to the comparative lack of knowledge existing or applied therein. Thus, the correlates to cardiovascular health identified by our research will allow the design of targeted, intervention-based programs aimed at ameliorating the region's cardiovascular disease epidemic.

Abstract #: 1.002_PCF

The implementation of an app-based dataset for injury data acquisition in Montevideo, Uruguay

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Background: 90% of injuries occur in low-and middle-income countries (LMIC). It has been demonstrated that trauma databases are one of the most effective ways of preventing, improving the treatment and reducing the mortality due to trauma. However, LMICs often lack such databases because of limited resources. This study focused on how to improve trauma data collection in

LMICs. We evaluated the functioning of iTrauma, an iPad-based trauma dataset adapted to LMICs one year after its implementation at Hospital Maciel in Montevideo, Uruguay.

Methods: The data collected during iTrauma's first year of operation at Hospital Maciel was analysed and a statistical report was generated. Assessment of the main strengths and weaknesses of the database and its functioning was conducted through distribution of questionnaires and meetings with the medical staff.

Findings: A total of 416 patient files were collected during the period of the study. The major cause of trauma mortality at Hospital Maciel is Motor Vehicle Crashes (MVCs) (54.9%), but a significant proportion is also due to gunshot wounds (13.0%). Only the minority of patients involved in MVCs was wearing a seatbelt or a helmet (31% and 9% respectively). An important barrier to independent database sustainability is a lack of human resources dedicated to data collection. One of the main limitations identified by the medical staff was difficulty to efficiently collect precise geographic information.

Interpretation: Analysis of the information collected demonstrates that Uruguay would benefit from injury prevention strategies (injury prevention programs on violence, seatbelt and helmet use). The data would also serve as a benchmark for evaluation of the effectiveness of these strategies. The integration of a more efficient method for geographic data collection would permit targeting the areas where these strategies would be most effective. Assessment of iTrauma's main strengths and weaknesses and the barriers that Hospital Maciel is current ly facing will provide a strong basis for the ongoing collaborative work with the Pan-American Trauma Society and the Global Alliance for Care of the Injured of the World Health Organization to develop a global dataset for LMICs in Latin America.

Abstract #: *1.003_PCF*

Investigating issues of rural water point sustainability: A field study

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Program/Project/Purpose: 65% of rural water points in the Zimbabwe are not functioning. Zimbabwe utilizes a Community Based Model framework for rural water point management. CBM aims to put the ownership of water points with the communities that use them while providing support from the government at the local and district level. Water Point Committees (WPCs) are established for each rural water point and are responsible for water point maintenance. Village Pump Mechanics (VPMs) are locally trained mechanics that rehabilitate broken down water points.

Structure/Method/Design: Across-sectional research study was designed and implemented during July and August of 2015 to learn what obstacles stakeholders in the rural water process in the Chipinge Area. Development Program were facing and what suggestions they had for process improvement. Key stakeholders included members of local WPCs, VPMs, local government officials and NGO staff. These stakeholders were interviewed in order to provide feedback to World Vision about the rural water process. WPCs were selected from communities involved in World Vision WASH projects and communities who were not involved in World Vision WASH projects. VPMs from were chosen by convenience sampling with the aim of maintaining a geographically representative sample.

Outcome & Evaluation: Results show that there are large gaps in what is taught to WPCs and what is practiced. Only a minimal amount of WPCs practiced all five of the behaviors considered to contribute to a functional WPC. It was found that the factor most extending water point breakdown time was community disagreement regarding fundraising for repairs. Other factors contributing to extended breakdown time included availability of spare parts, cost, and mechanic availability. Additionally, the effects of a water point breakdown had serious implications including financial strain and health risks. Participants suggested more skills based training, micro finance initiatives and improved water point monitoring systems as means to reduce breakdowns.

Going Forward: Recommendations were made to improve the rural water point management process. These recommendations are under currently under review by World Vision and local government.

Abstract #: *1.004_PCF*

Online learning improves substance use care in Kenya: Randomized control trial results and implications

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Background: Alcohol use is the 5th most important risk factor driving the global burden of diseases. WHO identifies a lack of health worker training as one of the main barriers to providing cost-effective brief interventions for alcohol use disorder. This study assesses the impact of online training, using the NextGenU.org model, on the delivery of the WHO Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) and its linked brief intervention (BI).

Methods: A randomized control trial (RCT) was performed in two Kenyan counties (ClinicalTrial.gov ID:NCT02388243, ethics from UBC and KEMRI) aiming to recruit 570 patients (sufficient for 80% power to detect a similar difference in alcohol consumption found in past trials, with 30% lost to follow-up). The primary outcome was decreases in alcohol consumption in the last 7 days at baseline, one, three, and six months' follow-up comparing the two trial arms (intention-to-treat analysis with multiple imputation for missing data). Adults presenting to the eight participating facilities were invited to take a lifestyle questionnaire including the ASSIST, and to receive verbal feedback plus written advice from a community health worker (CHW). Those consuming alcohol at moderate or high risk were offered to enroll in the RCT. After