

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 currently 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.

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### 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:** Cross-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.

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### 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](https://clinicaltrials.gov/ct2/show/study/NCT02388243) 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

obtaining written consent, they were randomized to no further intervention (NFI), or to receive a BI delivered by a nurse.

**Findings:** Of the 696 participants, 91% were male, the average age was 38yo, with the majority having completed only primary school. The average alcohol consumption at baseline was 400 gr in the BI group and 413gr in the NFI group, at one month it decreased respectively by 183gr, and 217 gr; T-test showed a statistically significant decrease in both groups overtime, while the difference between the groups was not significant.

**Interpretation:** CHW trained online to deliver feedback with the ASSIST can help those with moderate to high risk level of alcohol consumption to reduce their consumption as much as those who received a full brief intervention, and both groups decreased their consumption more than observed in the Cochrane Alcohol BI meta-analysis.

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### A Cost analysis of multiple triage strategies for early detection of cervical cancer screening programs

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**Background:** Although high-risk human papilloma virus (hrHPV) testing has been shown to be more sensitive than the conventional Pap smear (93.1% vs 59.4%, respectively) in preventing cervical cancer, the specificity of hrHPV testing is lower (91.8% vs. 98.3%, respectively). Due to the lower specificity of the hrHPV test more women who will ultimately not develop cervical cancer will undergo more invasive procedures such as colposcopy, which has a direct effect on patient anxiety levels, risk, and healthcare costs.

**Methods:** The Forwarding Research for Improved Detection and Access for Cervical Cancer Screening Project (FRIDA Study) in Tlaxcala, México is evaluating a variety of reflex testing—or triage—strategies to determine which option is the most efficient and effective in reducing the number of screening visits, number of follow-up procedures, and anxiety patients may feel due to additional screening. We determined the cost of the different screening and triage strategies that are being evaluated as part of the Forwarding Research for Improved Detection and Access for Cervical Cancer Screening Project (FRIDA Study) in Tlaxcala, México. We conducted a time and motion study to calculate personnel costs and identified the equipment, supply, capital, and overhead costs required to produce clinical results from bench to bedside.

**Findings:** We visited three types of clinics classified as small (n = 7), medium (n = 1), and large (n = 2), based on the volume of patients that are seen each day to determine if costs vary by clinic size. Personnel costs, physical area costs, and overhead costs per exam were \$3.01, \$1.91, and \$2.13 in small, medium, and large clinics, respectively. Personnel costs were lowest for the Papanicolaou liquid based cytology triage strategy (\$5.61 vs. 5.97 and \$6.06 for p16/Ki-67 and E6 oncoprotein detection, respectively). Supply and equipment costs have not been calculated.

**Interpretation:** Triage strategies using Liquid-Based Cytology Pap stain appear to be less expensive in personnel costs than triaging with the E6 oncoprotein assay or p16/ki-67 stain, but personnel costs for additional triage strategies are pending. This cost analysis will contribute to a cost-effectiveness analysis, which will determine the most cost-effective screening strategy to be implemented throughout Mexico.

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### The industrial Nakba: A study of industrial dumping in Palestinian cities

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**Background:** Al-Nakba (“the catastrophe” in Arabic), in which the Palestinian people lost their sovereignty, began in 1948 and has continued to devastate the lives of millions of Palestinians. It has impacted the Palestinian narrative, freedom of movement, education, healthcare, and even clean water. Toxic dumping by Israeli industrial zones into Palestinian waterways has been detrimental to physical and psychosocial health. As a result of adverse health effects in Israeli cities, seven industrial zones have been relocated to Palestinian cities throughout the West Bank. This study focuses on two Palestinian cities, Salfit and Tulkarm, which house the Ariel Industrial Zone and Geshuri Industries, respectively. Palestinian lands are often located at foothills of industrial zones, making them particularly vulnerable to runoff from these complexes. Organizations like Friends of the Earth Middle East have documented unregulated dumping of agrochemical pesticides, batteries, gasoline byproducts, and heavy metals into drinking and groundwater of various West Bank cities. Several studies have raised concerns about industrial runoff contaminating crops, farmland, drinking water and the air. However, there are no previous studies with qualitative or quantitative evidence of these toxins. The lack of awareness, advocacy, and policies implemented to protect citizens of West Bank cities have exacerbated this issue.

**Methods:** In this study, two water samples from each category (ground, drinking, and wastewater runoff) were taken from Salfit and Tulkarm. Samples were collected in 1L mason jars, covered with aluminum foil and placed on ice to prevent contamination and chemical degradation. The samples were analyzed using gas chromatography-mass spectrometry at the Environmental Health and Toxicology Unit at Birzeit University.