

effective. Limitations in the included studies were low response rate and the inability to generalize findings to other school communities.

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Abstract #: 01CD010

Prevalence and clinical predictors of tuberculosis in severely malnourished Ugandan children

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Background: TB contributes to increased morbidity and mortality in children with vulnerable immune systems such as the severely malnourished, HIV infected or the infants. Clinical features might be poor predictors of active TB infection especially in children with severe malnutrition. This study determined the prevalence; estimated additional yield of TB cases on routine screening compared to targeted screening approach and studied the clinical predictors of tuberculosis disease in children between 2 months and 5 years with severe acute malnutrition.

Methods: A cross sectional study of newly admitted children with severe malnutrition aged between 2 months and 5 years was conducted between March and September 2014 at Mbarara Regional Referral Hospital. Written informed consent was obtained from guardians. A detailed history, general physical examination, and investigations which included specimen collection by gastric, nasopharyngeal and or lymph node aspirate methods, as well as TST and CXR were done. Children were classified according to level of certainty of TB diagnosis as “confirmed”, “probable”, “possible” or “TB unlikely”. The proportional yield by routine screening and subgroup of targeted screening was determined. Logistic regression was done to determine independent predictors of TB.

Findings: A total of 172 children had complete TB evaluation. The prevalence of confirmed/probable TB (TB cases) was 6.4% (11/172); Of the 11 TB cases, 4 were confirmed; 3 of whom had a positive smear, Xpert/MTB/RIF and culture results while 1 had a smear positive result only. Although, there was no statistical difference in TB yield between targeted and routine screening of TB in this population (p -value>0.05), there were 4 more TB cases identified through routine screening. Severe wasting, cervical lymphadenopathy and age group below 1 year had a statistically significant association with tuberculosis ($p=0.0002$).

Interpretation: We found a high prevalence of TB cases using NIH criteria, but low rates of Xpert/culture-confirmed TB among severely malnourished hospitalized children. Due to very unspecific presentation of TB in this population, evidenced by lack of statistical associations with documented predictors of TB, routine screening of all severely malnourished children for TB may offer clinical benefits

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Abstract #: 01CD011

Acceptability of latent tuberculosis testing among migrant farmworkers along the US-Mexico border

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Background: One-third of the world's population is infected with latent tuberculosis (TB). The overall lifetime risk of latent tuberculosis

infection (LTBI) progression to active TB is estimated at approximately 5-10%, with risk increased by underlying immunosuppression, including HIV, diabetes and heavy steroid use. Completing treatment for LTBI reduces the risk of infection by 90%. The migratory agriculture industry in particular is considered to pose one of the most hazardous working environments for adults and children alike. Farmworkers account for more than 5% of all employed TB cases in the United States with an estimated risk six times greater than the general population. LTBI is routinely diagnosed with the tuberculin skin test (TST) along the Arizona-Mexico border. New methods of detection more specific than TST have been developed, such as Quantiferon TB gold In-Tube (QFT-GIT). Our objective was to demonstrate the acceptability of QFT-GIT testing to detect LTBI among farmworker populations.

Methods: A cross-sectional design was used to study migrant farmworkers 18 year and above working on the Arizona-Mexico border. Participants' blood samples were taken for QFT-GIT and TST was administered through a mobile van clinic. We assessed knowledge, attitude and practices concerning LTBI as well as acceptability of the two screening tests through questionnaires administered by trained personnel. Fifty-four participants have been recruited to date. Fisher's exact test was used in bivariate comparison of categorical outcomes.

Findings: Among 54 participants interviewed, 40 (74.1%) saw TB as a very serious disease that results in death and 42 (77.8%) considered TB a health concern in their community. Forty participants (74.1%) stated they would believe QFT-GIT rather than TST results. Fifteen individuals (27.8%) would seek treatment based on a positive QFT-GIT test compared to 3 (5.6%) who would seek treatment based on a positive TST (P -value: 0.004).

Interpretation: Farmworkers considered themselves at risk for TB and saw TB as a health concern although a low proportion would seek treatment for LTBI. The majority of respondents believed QFT-GIT over TST results and a greater proportion would seek treatment based on the QFT-GIT. The small sample size may be a limitation to being adequately powered to assess significance, but we will be continuing the project this winter.

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Abstract #: 01CD012

Ebola outbreak in Nigeria: Volunteer health advisors as information disseminators

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Background: As the first confirmed case of Ebola reached Nigeria in July 2014, a mechanism was required to disseminate reliable health information and prevent the spread of misinformation especially in rural, hard-to-reach areas. The aim of this project was to assess the baseline knowledge of trained lay Volunteer Health Advisors (VHA) participating in the Healthy Beginnings Initiative (HBI), a community-based program designed to promote maternal-child health, and to determine the feasibility of utilizing them to disseminate information on Ebola.

Methods: A cross-sectional survey of 60 VHA aged 18 years and above who attended a 2-day training in September 2014, prior to implementing HBI in 40 churches in southeast Nigeria. Participants completed a 10-item single-answer questionnaire that assessed knowledge of Ebola epidemiology, symptoms, transmission, prevention practices, treatment and survival. Answers to the core questions were analyzed and reviewed with participants who subsequently scheduled presentations to their congregation.

Findings: 59 of the 60 VHA in attendance during the 2-day training completed the survey (Response Rate=98%). Participants mean age was 41.21 years. A majority of participants were females (76%), resided in rural areas (56%), were college-educated (61%), employed (73%) and married (80%). Average score for participants was 7 out of 10. Scores varied from less than 50% (6/59) to above 80% (23/59). Only 44% of participants knew the correct duration before symptoms can be seen in infected patients. A majority of participants correctly identified hand washing as the best way to prevent Ebola (92%); however, 47% believed there is an Ebola vaccine.

Interpretation: This study shows that VHAs from rural and hard to reach areas of Nigeria can be brought together to assess infectious disease knowledge and identify gaps in knowledge. By reviewing answers to the questions with the VHAs, they were quickly prepared for rapid dissemination of infectious disease information to their communities.

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Abstract #: 01CD013

The positive living with HIV (POLH) study: A project for the longitudinal assessment of risk behaviors and health outcomes among HIV-positive individuals in Nepal

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Program/Project Purpose: Scaling up of antiretroviral therapy has dramatically improved the life-span of people living with HIV/AIDS (PLWHA) globally. However, for a complex array of reasons, the prevalence of risk behaviors such as unsafe sex, drug use, smoking, alcohol drinking, and poor dietary intake remains high, along with the heavy burden of mental health problems and co-infections. Such factors may influence health outcomes among PLWHA in syndemic ways. We thus initiated the Positive Living with HIV (POLH) Study in 2010, with the aim of improving the health status of PLWHA by addressing multiple risk behaviors and co-morbidities in Nepal, a resource-limited country in South Asia.

Structure/Method/Design: The POLH project goals are to: 1) measure the prevalence of risk behaviors and co-infections and examine their associations with mental health, disease progression, and mortality; and 2) design and test culturally appropriate behavior change interventions among PLWHA. To these ends, we have been collaborating with five non-governmental organizations (NGOs) working with PLWHA in the Kathmandu Valley, Nepal. Using their networks, we recruited 322 PLWHA. NGO staff were trained to recruit, collecting data, and follow up with participants. With future grant support, we plan to expand the cohort and translate our research findings into practice.

Outcomes & Evaluation: We conducted baseline and 6- and 18-month follow-up surveys, with data on socio-demographics, anthropometrics,

lifestyle factors, 24-hour dietary behaviors, depression, illness history, and sexual behaviors. From collected blood samples, lipid, vitamin D, selenium, zinc, and C-reactive protein (CRP) levels were assessed, in addition to testing for hepatitis C virus (HCV), sexually transmitted infections (STIs), and liver functioning at baseline and 18-month follow-up. Additionally, we tested the effectiveness of a theory-based sexual risk reduction intervention. Monitoring of disease progression is ongoing. At baseline, we found high rates of unsafe sex (51.3%); STIs (chlamydia, gonorrhea, or syphilis: 5.3%, herpes simplex virus-2: 39.8%); HCV co-infection (43.3%); smoking (47.0%); depression (25.5%); anemia (55.8%); and 25-hydroxy vitamin D serum levels

Going Forward: Project continuation or expansion will depend on the availability of funding. Lack of funds will result in the measurement of limited outcome variables and missed opportunities to translate the research findings into practice.

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Abstract #: 01CD014

Utilizing industry assets and proactive partnering to stimulate neglected disease product development

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Program/Project Purpose: Neglected tropical diseases (NTDs), malaria, and tuberculosis have a devastating effect on the >1.6 billion people living in poverty worldwide. However, these diseases lack safe, affordable, and effective products needed for prevention, diagnosis, and treatment. To address this, in October 2011 the World Intellectual Property Organization (WIPO), BIO Ventures for Global Health (BVGH), and eight biopharmaceutical companies established WIPO Re:Search.

Structure/Method/Design: This global Consortium accelerates the development of new drugs, vaccines, and diagnostics for NTDs, malaria, and tuberculosis by connecting the resources of biopharmaceutical companies to academic researchers with novel product discovery or development ideas. WIPO Re:Search is a voluntary endeavor open to any qualified entity, provided that they agree to abide by the Consortium's Guiding Principles. Over 90 institutions have joined WIPO Re:Search including 10 private industry, 36 academic, and 46 nonprofit or government research institutions from across the globe. As the WIPO Re:Search Partnership Hub Administrator, BVGH proactively examines Member scientists' current neglected disease research and proposes novel collaboration opportunities with other Members. BVGH also fields requests from researchers, identifies Member organizations able to fulfill these requests, and helps forge mutually beneficial collaborations with clearly-defined responsibilities and expectations.

Outcomes & Evaluation: BVGH has facilitated 79 research partnerships between Members, including 33 compound/compound library requests, three agreements for assistance with computational chemistry or structure-activity relationship assays, and three projects to improve the formulation of promising compounds. Members have also agreed to share confidential data and expertise through 14 separate agreements. These partnerships have resulted in candidate products advancing along the product development pipeline. Screens have identified compound hits for malaria, schistosomiasis, Chagas disease, soil-transmitted helminthiasis, and Buruli ulcer. Several of these hits have advanced to dose response assays. Other partnerships are stimulating diagnostic development for diseases including dengue, tuberculosis, and malaria.