antibiotic administration was greatest on day 1: ceftriaxone (36%, 143/398), metronidazole (27%, 67/245), ciprofloxacin (34%, 39/114) and all inpatients who missed at least one dose-day of prescribed amoxicillin and azithromycin. Most patients received fewer doses than were prescribed: ceftriaxone (74%, 273/371), ciprofloxacin (90%, 94/105) and metronidazole (97%, 222/230). Of prescribed doses, only 62% of ceftriaxone doses (1178/1895), 35% of ciprofloxacin doses (396/1130) and 27% of metronidazole doses (1043/3862) were administered. Seven percent (13/188) of patients on intravenous metronidazole and 6% (5/87) on intravenous ciprofloxacin switched to oral route.

Interpretation: High rates of antibiotic use both pre-admission and during hospitalization were observed, with low parenteral/oral switch of hospital-initiated antibiotics. Under-administration of prescribed antibiotics was common, especially on the day of prescription, risking loss of efficacy and antibiotic resistance.

Abstract #: *1.026_INF*

Predictors of Tuberculosis Treatment Outcomes in Rural, Central India, 2003 − 2015

T. Laux[1], S. Patil[2], B. Ghali[1], Y. Jain[2], R. Kataria[2]; [1]HEAL Initiative, University of California San Francisco, San Francisco, California, USA, [2]Jan Swasthya Sahyog, Ganiyari, India

Background: Individual patient characteristics are known to influence tuberculosis (TB) treatment outcomes. We designed a retrospective study which measured how demographic, temporal and geographic characteristics affected TB treatment outcomes in our population.

Methods: Jan Swasthya Sahyog (JSS) has maintained a database of all treated TB patients from 2003 to the present, excepting 2004 (n = 5,213). This database includes patient demographic, temporal and geographic characteristics. Outcomes were categorized as follows: ongoing treatment, positive (cured or completed treatment), and negative (died, defaulted or transferred care). Predictors included age, initial body mass index, previous treatment status, disease site, sex, and treatment site.

Characteristics statistically significant in univariate analyses were used for multinomial regressions. Proportion of treatment outcomes by proximity to treatment site were graphed with calculation of associated r^2 values.

Findings: In multinomial regressions, only women (RR 1.52, 1.23 − 1.87) and individuals treated at subcenters achieved more positive outcomes (RR 2.82, 2.00 − 3.96).

Positive treatment outcomes improved over time (2005: ∼40%; 2014: ∼70%), but varied by the month of treatment start and were 10% higher from September to February (∼55%) compared to March to August (∼45%). This trend persisted across year of treatment start, sex, and location of treatment (center versus subcenter).

We observed an inverse ratio between proximity to treatment in kilometers ($r^2 = 0.195$) or travel time in hours ($r^2 = 0.367$) and positive treatment proportions. This relationship was attenuated from September to February ($r^2 = 0.132$) and increased from March to August ($r^2 = 0.200$) for distance.

Interpretation: Being female and local treatment improved outcomes. Variability in treatment outcome by month exists and may be linked to local occupation patterns or seasonal transportation barriers. March to June correlates with patient travel for work while June to August with planting at monsoon start. It is unclear whether the improved outcomes in subcenter patients are related to proximity or other factors like community health worker access. This retrospective study cannot answer these hypotheses, which warrant further investigation.

Abstract #: *1.028_INF*

Evaluating Parental Knowledge of Bacterial Meningitis

Z.C. Levine[1], I. Agyeman[2], D. Ansong[2]; [1]University of Chicago, Chicago, IL, USA, [2]Komfo Anokye Teaching Hospital, Kumasi, Ghana

Background: Bacterial meningitis is a major cause of under-five mortality, especially in developing countries, with 9% of under-five deaths in 2016 caused by either meningitis or sepsis. Parental knowledge of disease affects ability to take health actions on behalf of their children. This study aimed to assess prior knowledge of bacterial meningitis in parents of children admitted to KATH with suspected meningitis or suspected sepsis.

Methods: Parents at Komfo Anokye during the study period (July/August 2016) who met the inclusion criteria were interviewed in person and included in the prospective cohort. Parents of children who had been admitted previously (2014-July 2016) were included in the retrospective cohort. All parents were asked to identify 20 statements about bacterial meningitis as true or false. The total number of correct answers given constituted a participant's knowledge score.

Findings: Overall average scores were similar between the prospective and the retrospective cohorts. The level of education a participant had completed did not have a significant affect on the knowledge score.

68% of participants reported they had never heard of bacterial meningitis. Parents seemed to possess some general knowledge of infectious disease, but little specific understanding of meningitis. 46.51% of participants, both prospective and retrospective, reported that the doctor had not told them anything about what was wrong with their child.

Retrospective participants were asked to identify any long-term neurological sequelae present in their children. Although only 5 patients had a confirmed clinical discharge diagnosis of meningitis, 31.25% of parents reported residual neurological sequelae in their child at the time of the interview. Parents who reported sequelae were asked if they felt their children would suffer any long-term social consequences. 73.33% of parents who reported sequelae felt that their child would need a permanent caregiver and 6.67% felt the deficit might prevent the child from completing their education.

Interpretation: Preliminary results suggest that there is a lack of communication between doctors and parents in the Pediatric Emergency Unit. This study also demonstrated incomplete parental knowledge of bacterial meningitis, which could in turn affect parent's ability to identify appropriate prevention and treatment methods for their children.

Abstract #: *1.029_INF*

Immunological Impact of HTLV-1 on Latent Tuberculosis

M. Lobaina[1], W. Hertzing[1], N. Vasquez[2], M. Montes[2]; [1]University of Texas Medical Branch, Galveston, USA, [2]Instituto de medicina Tropical Alexander von Humboldt, Lima, Peru

Background: Human T cell leukemia virus type I (HTLV-1) is associated with increased susceptibility to *Mycobacterium tuberculosis* infection (TB) [1]. Patients with active tuberculosis have a higher prevalence of HTLV-1 infection, compared with general population. HTLV-1 and TB coinfection increases the mortality rate of TB [1]. The control of latent TB is highly dependent on the Th1 response [2]. HTLV-1 infection causes proliferation of CD4+ T cells and an increased spontaneous production of IFN-γ [3]. The underlying mechanism by which HTLV-1 increases severity and susceptibility of tuberculosis is poorly understood. We hypothesize that HTLV-1/LTBi co-infected subjects will show higher spontaneous and antigen-specific IFN-γ, IL-2, and TNF-α responses than those with latent TB subjects without HTLV-1.

Methods: We analyzed plasma of 20 asymptomatic HTLV-1 subjects, 17 of which were also LTBi, and 9 HTLV-1 negative subjects. Latent TB was established by Tuberculin Skin Test (positive if > 10mm) and Interferon Gamma Release Assay (IGRA). Whole blood was cultured with and without *Mycobacterium Tuberculosis* antigen and assayed with IGRA and Th1/Th2/Th17 Cytokine Bead Assay. Data analysis was performed with STATA.

Findings: Spontaneous IFN-γ production was higher in HTLV-1 positive subjects than in HTLV-1 negative subjects (p=0.003). This result was the same when controlling for those patients with positive quantiferon test (p= 0.002). We found no significant difference in specific TB antigen IFN-γ production between HTLV-1 positive and negative subjects (p=0.919). IL-6 production in HTLV-1 positive subjects in response to TB Ag was decreased (p=0.011), however the remaining cytokines remained unchanged between HTLV-1 and controls in both nil and TB Ag environments ($0.114 < p < 0.919$).

Interpretation: Our findings suggested that the asymptomatic HTLV-1 infection may not affect the body's immunological response during LTBi. Similar studies should be performed during active tuberculosis.

Abstract #: *1.030_INF*

Social Media Based Prevention Approach: A Content Analysis of YouTube Videos Related to HIV/AIDS Awareness and Prevention

M.A. Mamun[1], H. Omer[1], K. Pervin[2], T. Turin[3]; [1]General Directorate of Health Affairs in Tabuk Region, Ministry of Health, Kingdom of Saudi Arabia, Tabuk, Saudi Arabia, [2]School of Health & Life Sciences, North South University, Dhaka, Bangladesh, [3]University of Calgary, Calgary, Canada

Background: As a consequence of rapid digitalization and increased internet access, YouTube is now an adjunct to the traditional information dissemination tools for disease prevention. We performed a content analysis of YouTube videos related to HIV/AIDS awareness and prevention to identify the characteristics and usefulness of these videos.

Methods: YouTube (www.youtube.com) was searched using the terms 'HIV/AIDS awareness', 'HIV/AIDS prevention, and 'HIV/AIDS education'. Video clips with more than 5000 viewership were included in the study. Using content analysis method, a coding scheme for categorical variables was developed, and two of the researchers independently coded each video as per content. We used the kappa statistic to evaluate inter-coder reliability. Differences in continuous variables across different categories were assessed using the non-parametric Kruskal-Wallis test for skewed distributions.

Findings: A total of 143 video clips with a cumulative length of 13.73 hours were analyzed. Median video length was 3.5 (IQR 1.5–6.95) minutes. Regarding the content type, majority of the videos were based on awareness and prevention messages (69.2%), followed by personal experiences or stories from people living with HIV/AIDS [PLWHAs] (14%), educational information for health care professionals (8.4%), patient education for PLWHAs (5.6%), and advertisements for HIV/AIDS related products (2.8%). Video appeals were identified as: encouragement (31.5%), presence of a VIP, celebrity, or health care professional (25.2%), threat or fear (16.1%), music and/or dance (8.4%), humorous cartoon or animation (7%), dramatic scene (7%), and sexual scene (4.9%). Of the 13 themes categorized, top five video themes were HIV/AIDS awareness and prevention in general (16.8%), promoting condom use (15.4%), knowing status and getting tested for HIV/AIDS (10.5%), consequences caused by HIV/AIDS (10.5%), and inspiration to PLWHAs (9.8%). Most (97.9%) of the videos were useful, and the majority (31.5%) were categorized under 'nonprofits and activism' on the YouTube. Statistically significant differences were found in video length across different video appeals (p=0.025), video themes (p=0.037), and YouTube-categories (p=0.017).

Interpretation: YouTube video clips showed a variety of useful content related to HIV/AIDS awareness and prevention for general population and specific target groups indicating that YouTube could be utilized as a potential social medium for HIV/AIDS prevention and care.

Abstract #: *1.031_INF*