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inadequate sanitation. Predominantly the burden of disease has been in South and South East Asia but is increasingly recognized in Sub-Saharan Africa, with increasing evidence showing it is both under-diagnosed and under-reported.

We report an epidemic of Typhoid fever in the south-western part of Neno, a district in southern Malawi with a total population of about 150,000 people. We present initial preliminary data and some real world challenges in responding to an outbreak in a setting of severely constrained health resources.

Structure/Method/Design: After the initial index case on 27 July 2016,the epidemic was confirmed by blood culture in 3 cases. All cases were treated based on case definition of fever of 38 degrees and above for atleast 3 days and positive typhoid antibody test. We instituted contact tracing using a rapid response team, developed clinical protocols, conducted community health education and distribution of chlorine in the affected villages.

Outcome & Evaluation: After a three week gap following the index case, more cases erupted with an average of 23 cases per week. By 10th week, 139 cases had been treated. The mean age of cases was 16 years (range 5 months-66 years), 56% of cases were below 14 years old, and 60% were females.

We faced several challenges in our response to this outbreak. Forming and training a rapid response team caused an inevitable delay. We did not have existing protocols on management of typhoid outbreak. Rapid antibody tests for diagnosis proved critical to monitoring the outbreak, but were in short supply, not validated locally and proved difficult to procure, as did ciprofloxacin and chlorine for water treatment. With no blood culture capability, we relied on the MOH Central lab to assist us but they were also critically short of essential supplies.

Going Forward: Although the epidemic is ongoing we are working towards reducing cases urgently, collaborating with multiple partners to obtain essential drugs and equipment while providing treatment and preventive measures in the affected villages.

Source of Funding: None.

Abstract #: *1.024_INF*

Unveiling Missed Opportunities for Providing Prevention of Mother to Child Transmission of HIV (PMTCT) Intervention at Immunization Clinics: A Case Study of a Large Primary Health Centre in Nigeria

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Background: HIV counselling and testing (HCT) is the critical initial step to provide Prevention of mother to child transmission of HIV (PMTCT) intervention. Though HCT for PMTCT intervention has been focused at antenatal and intra-natal periods, postnatal intervention is still needed to prevent the 5-15% risk of transmission during breastfeeding. With Baccilus-Calmette-Guerin(BCG) vaccine at immunization clinic in Nigeria showing 76.41% uptake in 2010, there is need to utilize the large immunization clinic attendance to increase access to HCT/PMTCT services among women of child bearing age. This study aims at evaluating the outcome of Provider initiated testing and counselling (PITC) for women at the immunization clinic.

Methods: PITC was introduced at the immunization clinic for women who never had HCT during antenatal or intra-natal period in Oferekpe Health centre Ebonyi Nigeria. Outcomes were evaluated over 13 months period (September 2014 to September 2015). Primary outcome measures were; Number tested; number of cases identified/enrolled; and exposed infant test results at >2months between immunization and antenatal clinics using facility registries. Data analysis was by percentages and odds ratio.

Findings: Out of the 813 women tested, 50% (405/813) were from immunization clinic while 50% (408/813) were from ANC. Out of 813 tested, 86% (6/7) of the positive cases identified/enrolled for PMTCT intervention were from immunization clinic. There was >1 higher odds of having more positive cases in immunization clinic than ANC clinic; (OR=7.9). All exposed infants from both clinics tested HIV negative to antigen test at >2months.

Interpretation: PITC in immunization clinic significantly increased HCT uptake among women of child bearing age, increasing chances of HIV identification, PMTCT intervention and good exposed infant outcome. Though PMTCT intervention at ANC is the ideal, PITC in immunization clinic undoubtedly provides mothers opportunity for HIV/PMTCT education/counselling, ARV intervention during breastfeeding and early intervention for future pregnancies. PITC in immunization clinic is recommended to increase chances for HIV/PMTCT intervention among women of child bearing age.

Source of Funding: PEPFAR.

Abstract #: *1.025_INF*

Extensive Antibiotic Prescription Rate among Hospitalized Patients in Uganda: But With Frequent Missed-dose Days

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Background: To describe the patterns of systemic antibiotic use and missed-dose days and detail the prescription, dispensing and administration of frequently used hospital-initiated antibiotics among Ugandan inpatients.

Methods: This was a prospective cohort of consented adult inpatients admitted on the medical and gynaecological wards of the 1790 bed Mulago National Referral Hospital.

Findings: Overall, 79% (603/762; 95% CI: 76%–82%) of inpatients received at least one antibiotic during hospitalization while 39% (300/762; 95% CI: 36%–43%) had used at least one antibiotic in the 4 weeks pre-admission; 1985 antibiotic defined daily doses, half administered parenterally, were consumed in 3741 inpatient-days. Two-fifths of inpatients who received at least one of the five frequently used hospital-initiated antibiotics (ceftriaxone, metronidazole, ciprofloxacin, amoxicillin and azithromycin) missed at least one antibiotic dose-day (44%, 243/558). The per-day risk of missed

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.

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Abstract #: *1.026_INF*

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

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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.

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Abstract #: *1.028_INF*

Evaluating Parental Knowledge of Bacterial Meningitis

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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.