were calculated. Type and class of prescribed antibiotics and adherence to the generic name prescribing and National list of essential medicines of India (NLEMI) were analyzed.

Results: Overall, 20303 patients were admitted in the medicine departments of two hospitals, of which 66% were prescribed antibiotics. Malaria or viral fever was diagnosed in 693 patients in the TH and 1177 in the NTH. Of these, 82% patients at the TH and 71% at the NTH (71%, p<0.001) were prescribed antibiotics. Prescriptions made at the TH show more adherence both towards the use of generic names and the NLEMI, compared with the NTH (p<0.001). Most commonly prescribed antibiotic classes at the TH were fluoroquinolones (48%) and third generation cephalosporins (21%) and at the NTH were third generation cephalosporins (47%), and fixed dose combinations (19%). The most prescribed antibiotic substances at the TH was ciprofloxacin (1940 DDD/1000 patients), and at the NTH was ceftriaxone (1052 DDD/1000 patients).

Conclusion: Frequent and unnecessary antibiotic prescribing practices at both hospitals were observed. Significantly high percentage of patients in non-bacterial infection groups i.e. malaria and viral fever, were prescribed antibiotics which is a point of concern. An urgent need is felt to develop and implement relevant antibiotic stewardship program to rationalize the antibiotic prescribing in the settings.

Type: Poster Presentation

Adherence to antiretroviral drug treatment ARV among people living with HIV/AIDS: A study from Eastern Nepal

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Background: **Background:** HIV/AIDS has threatened an enormous worldwide challenge on the survival of mankind. Antiretroviral therapy (ART) for HIV is increasingly being introduced and utilized in diverse areas of the world. However, little research exists on adherence to ART in different cultural settings, particularly in developing countries such as Nepal. This study aimed to determine adherence to ART and identify associated factors with adherence among people with HIV/AIDS and receiving ART/ARV therapy.

Methods & Materials: **Methods and materials:** In this cross sectional study total of 300 HIV positive subjects were interviewed using semi-structured questionnaire. Study subjects were randomly selected from different HIV clinics of three districts; Sunsari, Morang and Jhapa of Eastern Nepal. Informed & understood written consent was taken and cofidenciality was mentaned throughout of the study.

treatment regimen (98%). Mean 4-day adherence was 92%. Adherence was lower over longer periods of recall; Twenty percent reported missed does over the past 7 days; 33% reported ever missing a full day's medications and 16% had a treatment interruption of more than 7-days at least once. On univariate analysis less than university education, being unemployed, obtaining free treatment, severe depression, hospitalization >2 times, having moderate to severe side-effects and taking 4 or more medicines were associated with lower adherence (<90%). However, only obtaining free treatment (adjusted OR, 4.05, 95% CI 1.42-11.54, P=0.009) and severe depression (adjusted OR 4.48, 95% CI 1.64-12.27, P=0.003) were associated with lower adherence in multivariate analysis.

Conclusion: **Conclusion:** Although the overall adherence was high, lower levels of adherence were documented among poor patients receiving free ARV/ART. Provision of free treatment of ART and side effect management should make available up to unreached poor people of community.

Type: Poster Presentation

The antimicrobial and phytochemical analysis of the leaves of aspilia africana on clinical isolates

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Background: The uses of medicinal plants for treatment of various infections in traditional communities have been an age-long practice. This provides the rationale to study medicinal plant extracts as a possible source of alternative therapy against infections.

Methods & Materials: The current study was undertaken to evaluate the phytochemical and antimicrobial properties of *Aspilia africana*. The antimicrobial activity and minimum inhibitory concentration (MIC) of the extracts of *Aspilia Africana* were evaluated against eight organisms-*Staphylococcus aureus, Escherichia coli, Pseudomonas aureginosa, Salmonella typhi, Candida albicans, Aspergillus niger, Penicillum* spp *and Fusarium* spp. The ethanolic and aqueous extracts were obtained by standard methods. Antimicrobial activity was conducted using a modified agar well diffusion method.

Results: The phytochemical screening and analysis carried out in this study showed that the plant extracts contains alkaloids (6.35%), saponins (3.26%), flavonoids (2.01%), tannins(0.88%) and phenols (0.11%). The result showed that ethanolic extract of *Aspilia africana* exerted antimicrobial effect on the test organisms at 25mg/ml, 50mg/ml and 100mg/ml concentrations, while the hot aqueous extract exerted antimicrobial effect at 100mg/ml only on *Staphylococcus aureus* and *Pseudomonas aureginosa*. The ethanolic extract of *Aspilia Africana* showed the highest antimicrobial activity with diameter of zone of inhibition of 3.35mm to 17.9mm at 100mg/concentration. The minimum inhibitory concentration (MIC) of the ethanolic extracts was at a concentration of 25mg/ml.

Conclusion: *The antimicrobial activity of the extract could be enhanced if the components are purified. This plant therefore holds a promising potential source of new drug for treating infections caused by these clinical pathogens.*

Type: Poster Presentation

Randomized equivalence trial of amoxicillin versus placebo for fast breathing pneumonia (RETAPP)

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Background: Fast breathing pneumonia or isolated tachypnea in children, is presumed to be mostly viral in origin. WHO guidelines recommend 3 days of amoxicillin therapy for all children with fast breathing pneumonia in resource limited settings. The recommendations have arisen largely out of hospital studies where the spectrum of disease is more severe. High quality clinical trial evidence to challenge or support the continued use of antibiotics, in low-resource community settings is lacking.

Methods & Materials: A community based randomized double blinded placebo-controlled non-inferiority trial is being conducted at primary healthcare centres located in two low income squatter settlements of Karachi, Pakistan. Children aged 2-59 months with WHO defined fast breathing pneumonia are included if they have no danger signs, $SaO2 \geq 90\%$ on pulse oximetry, absence of use of antibiotics in last 48 hours, no bulging fontanels, pedal edema, asthma, tuberculosis or congenital heart disease. Children are being randomized to receive either 3 days of oral Amoxicillin (standard) or matching placebo (intervention), with 1215 children to be enrolled in each arm. Primary outcome is the difference in treatment failure rates between the two groups, defined as a new clinical sign based on preset definitions indicating illness progression or mortality on day 0, 1, 2 or 3 of therapy.

Results: From September 2014 till August 2015, a total of 19,363 children were triaged. Among these, 11,161 (58%) presented with cough or difficulty in breathing. 2,216 (20%) met the inclusion criteria i.e. have history of cough for less than two weeks and have tachypnea. About 40% of all fast breathing under 5 years occurs in babies 2-11 months of age. Of these children with fast breathing, 1056 children have been enrolled so far. The overall treatment failure is 3% and no mortality.

Conclusion: The overall rates of treatment failure and relapse in fast breathing pneumonia are low. The trial results will strengthen the evidence to support or refute the use of antibiotics in WHO-IMCI management of pneumonia. Findings will be generalizable to resource limited settings with low HIV and malaria prevalence and Hib and Pneumococcal vaccines in their national immunization plan.

Type: Poster Presentation

Colistin PK-PD (pharmacokinetic-pharmacodynamics) in Indian patients

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Background: A renewed interest in the usage of polymyxins has been observed, as they are the only treatment option left for multidrug resistant (MDR) and pan-drug resistant (PDR) pathogens like *Acinetobacter baumannii*. However, knowledge of the pharmacokinetics (PK) and pharmacodynamics (PD) of polymyxins is limited, resulting in inappropriate dosing, potential toxicity and development of resistance. We planned to conduct this prospective PK-PD study of intravenously administered colistin in Indian patients with MDR Gram-negative infections to estimate the levels of both total and free colistin.

Methods & Materials: This was a prospective PK-PD study of intravenously administered colistin in ten patients with MDR Gram-negative infections. The recommended systemic dose of prodrug, colistin methanesulfonate (CMS) was given as 4–6 mg/kg per day as a short-term infusion (for 1 hour) or 1–2 million IU/day in three divided doses (12,500 IU/1mg of CMS). Highly sensitive UHPLC-MS/SRM method was developed and validated to quantify free and total colistin from human sera. Correlation between the predictor variables like AUC/MIC ratio was performed using GraphPadInstat ver. 6 for Mac version 10.10.1 (GraphPad Software, San Diego CA: www.graphpad.com).

Results: The area under the plasma concentration-versus-time curve over 8 hrs (AUC_{0-8}) for free and total colistin ranged after 5th dose from 28.2 to 126 mg*Ÿh/liter and 25.8 to 404.9 mg*Ÿh/l respectively. All the follow up blood cultures were sterile and majority of the patients survived.
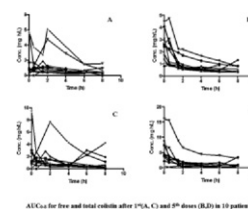
AUC (0-8) for free and total colistin after 1st(A, C) and 5th doses (B,D) in 10 patients

Conclusion: This is the first Indian study where free colistin levels were also estimated. The desired colistin levels to be effective without giving the loading dose were achieved in these Indian