OBJECTIVES: Azithromycin has an attractive safety profile in treating or preventing certain infections. However, there is growing evidence that it may be associated with increased cardiovascular risk and lead to cardiovascular death in high-risk patients. We therefore conducted a meta-analysis of randomized Controlled trials to describe the cardiovascular risk profile of those patients receiving Azithromycin or placebo and have reported cardiovascular outcomes. Abstracts from major scientific meetings were also reviewed in the analysis. Methods: Based on odds ratios (ORs) was used. OR was calculated using a random-effects model (because we assume that the treatment effect is not the same for all studies). Sensitivity analyses were conducted on five key input parameters.

RESULTS: 12 trials randomized a total of 15,588 patients into two groups; treatment and placebo. Treatment effect on any cardiovascular outcome was not significantly different in any of the nine trials. For all trials combined, the pooled odds ratio was 1.02 (95% CI 0.78–1.34), p = 0.010. No heterogeneity was observed (I² = 0). Similarly, there was no difference in the pooled odds ratio for hospitalization and coronary intervention [OR, 1.021; 95% CI, 0.883–1.125]; p = 0.980, I² = 0%, respectively. CONCLUSIONS: The findings of this systematic review suggest that no significant relationships exist between Azithromycin and risk of cardiovascular events in high-risk patients.

PIN23 ANTIMICROBIALS: A MAJOR CLASS OF DRUGS CAUSING ADVERSE DRUG REACTIONS IN THE ENGLISH LANGUAGE FORMulary A n d PHARMACOTHERAPY RESEARCH HOSPITAL, Kandikudi P., Tiwari P., Combma S., Druce S., Sachdev A.

OBJECTIVES: Patients in the intensive care unit (ICU) have multiorgan dysfunction as well as altered pharmacokinetic parameters. Hence, they are more susceptible to drug-related adverse events. Their impact was calculated for the whole HIV population and separately for each population of delayed and support AI at CD4 < 350 normalized by eight years (p < 0.001).

RESULTS: Objectives: Among HIV Outpatient Study patients seen between 1996-2012 for three or more years after ART initiation, CD4 trajectories and mortality rates per 100 persons-years (MR) by AI-CD4, and the association of AI-CD4 with achieving CD4 > 750 (“normalization”) using Kaplan-Meier methods and Cox proportional hazards models. Patients included those who were eligible patients followed a median of 7.9 years, > 85% received HAART ≥ 75% of follow-up time, and 64 died. Higher AI-CD4 was associated with increased median peak CD4 (p < 0.001). Maximal CD4 response and benefit was achieved CD4 normalization while less than half with AI-CD4 < 50 and 50-199 died. AI-CD4 > 500 normalized by eight years of CD4 normalization confirming the hazard of delayed and support AI at CD4 ≥ 500.

INFECTION – Cost Studies

PIN25 PUBLIC AND PRIVATE PAYER PERSPECTIVES ON THE NET COST OF IMPLEMENTATION OF 13-VALENT PNEUMOCOCCAL CONJUGATE VACCINE (PCV13) COMPARED WITH 7-VALENT PNEUMOCOCCAL CONJUGATE VACCINE (PCV7) TO THE UNITED STATES Kohli M., Maschio M., Farkash A., McCarty L., Strutton DB., Weinsten MC.

OBJECTIVES: In 2010, the US Advisory Committee on Immunization Practices recommended 13-valent pneumococcal conjugate vaccine (PCV13) be replaced by 13-valent vaccine (PCV13) in use in a two-dose series at 2, 4, and 12-15 months of age. Published analyses estimated that PCV13 implementation would be cost-saving in aggregate, but the net economic impact on particular payers is unknown. We discuss the changes in payer coverage and savings to public and private payers over a 10-year horizon. METHODS: A Markov model was used to simulate vaccination and pneumococcal disease events and their related costs with PCV13 from 2013 to 2019. The PCV13 strategy included projected savings to the budget over a three-year period may range between $12,751,492 and $19,127,238.

RESULTS: In the simulation, 40.3 million children participated in routine vaccination while 2.8 million received a catch-up dose in the PCV13 strategy. The PCV13 strategy prevented an additional 121,300 cases of invasive pneumococcal disease, 3.3M of pneumonia and 17.6M of acute otitis media compared to PCV7 over 10 years. Public and private payer savings were respectively $5 billion (8%) and $1 billion (2%), respectively, for the vaccine but accrue $6.1B and $4.2 B in overall savings. While the magnitude of savings varied in sensitivity analyses, implementation of PCV13 remained cost-saving for all populations. Objectives: To evaluate diagnostic efficiency of add-on dolutegravir to the Ontario Drug Formulary (ODF), the ODF is expected to lower the cost of HIV infection in adults and children ≥12 years of age. METHODS: Three discrete populations were considered: treatment-naive (TN) patients staying on their first line, TN switchers (assumed switches within the first 6 months of antiretroviral therapy (ART) initiation) and treatment-experienced (TE) patients. Epidemiology data were obtained from published sources. Ontario-specific data and analysis from the IMS Brogan Database were used to estimate the proportion of patients who were treated and covered by the ODB, proportions of patients remaining on their first regimen after ART initiation over time, comparators and historical market share data.

RESULTS: CD4 increases were generally maintained at < 350 during the three years following the listing date of $2,717,585, $5,181,704, and $8,040,076 for the ODB. The budget impact was calculated for the whole HIV population and separately for each population. Sensitivity analyses were conducted on five key input parameters. RESULTS: Of 1327 eligible patients followed a median of 7.9 years, 64 died. Higher AI-CD4 was associated with increased median peak CD4 (p < 0.001). Maximal CD4 response and benefit was achieved CD4 normalization while less than half with AI-CD4 < 50 and 50-199 died. AI-CD4 > 500 normalized by eight years (p < 0.001).

CONCLUSIONS: In this pilot study, Antimicrobials was found to be the most common class of drugs causing ADRs. We studied small number of patients; it is suggested that future large scale studies should be done to further gain insight into the ADRs.
and 38/100,000 population/year, respectively. In both countries, the most common isolates were C. albicans, C. parapsilosis and C. glabrata. In patients with fluconazole-resistant isolates, de-escalation resulted in higher cure and survival rates than escalation, with cost savings of €6,880/patient treated in France and €2,007/patient treated in Germany. Regardless of fluconazole sensitivity, de-escalation resulted in higher cure rates and survival than escalation, these benefits were associated with a higher cost of €687 and €1,257 per patient treated in France and Germany, respectively. **CONCLUSIONS:** Across all patient groups, de-escalation from micafungin improved clinical outcome and survival. This was particularly marked in patients with fluconazole-resistant C. Scl in whom de-escalation from micafungin was cost-saving. Increased costs with de-escalation in the overall population are limited and offset by improvement in survival using this strategy.

**PIN28**

**BUDGETARY IMPACT TO A UNITED STATES HEALTH PLAN ADOPTING SOFOSBUVIR (SMV) PLUS A 12 WEEK REGIMEN OF BOCEPREVIR (PR) FOR THE TREATMENT OF GENOTYPE 1 (G1) CHRONIC HEPATITIS C (CHC) INFECTION**

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**OBJECTIVES:** Economic evaluations of CHC therapies may be important from health plan’s perspectives. METHODS: A budget impact model compared actual CHC therapy costs before and after SMV+PR addition for a hypothetical 1,000,000 member plan. The proportion treated for CHC was derived from various publications. Base case scenario was current state market share (MS) within treatment-naïve and -experienced populations was equally allocated between telaprevir+PR and boceprevir+PR while SMV+PR MS was 0%; Future MS was 45%, 45%, and 10%, respectively. CHC therapy costs were estimated based on dosing and administration data from US prescribing information and 2013-wholesale acquisition costs (assumed 82 kg person). Population allocation by prior response, disease severity, and treatment outcome in teratologically. Drug-only treatment cost was -$0.001 and -$0.002, respectively. RESULTS: The annual budget impact of fidaxomicin compared with vancomycin in the treatment of Clostridium difficile infection (CDI) showed fidaxomicin to be non-inferior to vancomycin in terms of clinical cure (65.7% vs. 56.7%) and CDI-attributed hospital stay for patients infected with carbapenem-resistant bacteria and compare it with productivity loss, death, and one fewer death. The ROI will be in patients with renal impairment.

**PIN30**

**ECONOMIC IMPACT OF VACCINATION WITH 10-VALENT versus 13-VALENT PNEUMOCOCCAL CONJUGATED VACCINE (PCV) IN COLOMBIA**

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**OBJECTIVE:** Infections produced by Streptococcus pneumoniae has an important impact on worldwide health due the high burden of disease they generate; these diseases are a public health priority in Colombia. The aim of this study was to estimate the difference of cases and costs from serotype coverage of pneumococcal conjugated vaccines of 10 and 13 serotypes (PCV10 and PCV13, respectively) in population under 5 years old in Colombia. **METHODS:** A deterministic model was built for a cohort of children born in 2011. The probabilities of incidence, mortality and sequelae of meningitis, pneumonia, and acute otitis media were estimated based on data and literature review. **RESULTS:** The incidence of pneumococcal infections was estimated at $5.8 million, also a relative increase of 0.6% ($0.005 per member per month (PMPM)). Annual total costs were $93,311 PTM in Current state market share (MS) within treatment-naïve and -experienced populations was equally allocated between telaprevir+PR and boceprevir+PR while SMV+PR MS was 0%; Future MS was 45%, 45%, and 10%, respectively. CHC therapy costs were estimated based on dosing and administration data from US prescribing information and 2013-wholesale acquisition costs (assumed 82 kg person). Population allocation by prior response, disease severity, and treatment outcome in teratologically. Drug-only treatment cost was -$0.001 and -$0.002, respectively. RESULTS: The annual budget impact of fidaxomicin compared with vancomycin in the treatment of Clostridium difficile infection (CDI) showed fidaxomicin to be non-inferior to vancomycin in terms of clinical cure (65.7% vs. 56.7%) and CDI-attributed hospital stay for patients infected with carbapenem-resistant bacteria and compare it with productivity loss, death, and one fewer death. The ROI will be in patients with renal impairment.

**PIN31**

**ECONOMIC EVALUATION OF FIDAXOMICIN COMPARED WITH VANCOYMICIN IN THE TREATMENT OF CLOSTRIDIUM DIFFICILE INFECTION**

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**OBJECTIVES:** Two Phase 3 clinical trials in patients with Clostridium difficileicilefection (CDI) showed fidaxomicin to be non-inferior to vancomycin in terms of clinical cure (65.7% vs. 56.7%) and CDI-attributed hospital stay for patients infected with carbapenem-resistant bacteria and compare it with productivity loss, death, and one fewer death. The ROI will be in patients with renal impairment.

**PIN32**

**FINANCIAL ANALYSIS OF A VACCINATION CAMPAIGN USING 13 VALENT PNEUMOCOCCAL CONJUGATED VACCINE (PCV13) WITH EMPLOYERS**

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**OBJECTIVES:** This study evaluated the ROI (return on investment) for a PCV13 vaccination campaign with employers by reduction in events and absenteeism and one fewer death. The ROI will be in patients with renal impairment.

**PIN33**

**TOTAL HOSPITALIZATION COST AND LENGTH OF HOSPITAL STAY FOR PATIENTS WITH CARBAPENEM-RESISTANT VERSUS CARBAPENEM-SENSITIVE INFECTIONS IN A TERTIARY CARE HOSPITAL**

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**OBJECTIVES:** To find out the average cost of hospitalization and length of hospital stay for patients infected with carbapenem-resistant bacteria and compare it with