CONCLUSIONS: Quadrivalent seasonal influenza vaccines, at price parity with trivalent vaccines, appear to be highly cost-saving from the third-party payer and the societal perspectives.

PIN63

A COST-EFFECTIVENESS ANALYSIS OF TWO PATIENT-LEVEL REMINDER INTERVENTIONS TO INCREASE ADHERENCE AMONG HIV PATIENTS IN MEXICO

Azamar A[1], Bautista S[1], Sierra J[2], Sanchez G[1]
[1]*National Institute of Public Health, Cuernavaca, Mexico,* [2]*National Institute of Medical Sciencies and Nutrition, Mexico, Mexico*

OBJECTIVES: Clinical evidence shows that adherence levels ≥90% are required to maximize HAART effectiveness on HIV patients. In Mexico, universal access to HAART exists; however, average adherence level is 79.8% (95% CI: 77.8-81.8). The purpose of this study was to analyze two patient-level reminder interventions aimed to increase adherence levels. **METHODS:** The study design was a cost-effectiveness analysis from the governmental perspective. All the costs were expressed in 2010 constant USD. A natural history of disease dynamic model for HIV was used to estimate the following parameters: CD4 and CD8 cell replication and mortality rates, as well as infectivity rates of individuals simulated. Also, we analyzed data from a national representative survey of HIV patients on HAART (N=2289) and presenting at 50 governmental hospital/clinics to obtain adherence levels. With these parameters we used a Markov model to estimate life expectancy, total patients' care costs, and therefore cost-effectiveness ratios. Patients were classified as adherent (≥90%) and non-adherent (<90%). We evaluated two patient-level reminder interventions: (1) three reminder text messages (SMS) sent daily to the patient's cell phone, and (2) a pill reminder. Both were modeled throughout the patients' lives. We performed sensitivity analysis for both adherence levels and costs. **RESULTS:** Of the 2289 patients, 26% were adherent (≥90%) (mean adherence level: 79.8%). We did not find statistically significant differences between adherents and non-adherents in sociodemographic characteristics. Seventy percent reported that HAART daily intake omission is the main reason for non-adherence. Interventions increase life expectancy by 2.6 years (SMS) and 3.1 years (pill reminder) with an incremental cost of $4050 and $5552, respectively. Incremental cost-effectiveness ratios are $207 and $637 per year life gained (3% annual discount rate). **CONCLUSIONS:** Both interventions are below one GDP per capita; therefore, they are cost-effective and could be considered for implementation in our country.

PIN64

COST-EFFECTIVENESS ANALYSIS OF LINEZOLID VERSUS VANCOMYCIN IN THE TREATMENT OF NOSOCOMIAL PNEUMONIA CAUSED BY METHICILLIN RESISTANT *STAPHYLOCOCCUS AUREUS* (MRSA) BASED ON A PHASE 4 CLINICAL TRIAL

Li J[1], Li JZ[2], Gao X[1], Solem CT[1], Niederman MS[3], Chastre J[4], Myers DE[5], Wan Y[1], Stephens JM[1], Haider S[6]
[1]*Pharmerit International, Bethesda, MD, USA,* [2]*Pfizer, Inc., San Diego, CA, USA,* [3]*Winthrop-University Hospital, Mineola, NY, USA,* [4]*Institut de Cardiologie, Paris, France,* [5]*Pfizer, Inc., Collegeville, PA, USA,* [6]*Pfizer, Inc., Groton, CT, USA*

OBJECTIVES: To determine the incremental cost-effectiveness of linezolid versus vancomycin using data from a clinical trial assessing treatment of nosocomial pneumonia due to MRSA in hospitalized adults. **METHODS:** A cost-effectiveness analysis from the U.S. hospital-payer perspective was piggybacked onto a phase 4, randomized, double-blind, multicenter trial (Wunderink et al, Clin Infect Dis 2012) in nosocomial pneumonia patients with culture-proven MRSA [microbiologic confirmed intent-to-treat (mITT) cohort]. Efficacy was measured by treatment success (defined as Cure+Improvement) at the end of study (i.e., 7-30 days after the end of treatment). Direct medical costs (USD, 2011 values) were calculated from the health care resources used, including study medication, hospitalization, mechanical ventilation, and dialysis. Nonparametric bootstrapping was conducted to calculate confidence intervals (CI) for costs, efficacy, and incremental cost-effectiveness ratios (ICER). One-way sensitivity analyses were conducted to evaluate the uncertainty and cost drivers. **RESULTS:** Data from 391 patients (186 linezolid, 205 vancomycin) were analyzed. A greater proportion of linezolid patients achieved treatment success versus vancomycin patients [mean (95% CI)]: 55% (48.3%-61.9%) versus 45% (38%-52.3%). Total costs per linezolid patient were $48,929 ($45,375-$52,483) compared to $46,665 ($43,201-$50,128) per vancomycin patient. The point estimate for the ICER of linezolid versus vancomycin was $16,516. The median ICER from bootstrapping was $16,219 (95% percentile: $100,487). Of the 10,000 bootstrap simulations, 73% had greater efficacies and higher costs (positive ICERs) for linezolid, 24% had greater efficacies and lower costs for linezolid (linezolid dominated vancomycin), and <2% had greater efficacies and lower costs for vancomycin (vancomycin dominated linezolid). Key cost drivers included number of ICU and general ward days in each treatment group. Addition of empirical treatment had a relatively small impact on ICER. **CONCLUSIONS:** In this clinical trial population, linezolid appears to be cost-effective compared to vancomycin in treating patients with nosocomial pneumonia due to MRSA.

PIN65

COST-EFFECTIVENESS OF POSACONAZOLE VERSUS FLUCONAZOLE OR ITRACONAZOLE IN THE PREVENTION OF INVASIVE FUNGAL INFECTIONS AMONG NEUTROPENIC PATIENTS IN THE UNITED STATES

Xie Y[1], Pawar V[2]
[1]*Merck & Co., White house Station, NJ, USA,* [2]*Rutgers University, Piscataway, NJ, USA*

OBJECTIVES: Posaconazole has shown superior clinical efficacy than Fluconazole/Itraconazole (FLU/ITRA) in the prevention of invasive fungal infections (IFIs) among patients with neutropenia resulting from chemotherapy for acute myelogenous leukemia (AML) or the myelodysplastic syndrome (MDS). Previous study has shown that Posaconazole is cost-effective versus FLU/ITRA in the 2007 U.S. health care setting.To reflect the changes in health care cost and the changes in drug prices, the study aims to provide an update on the cost-effectiveness of Posaconazole in the current U.S. health care setting. **METHODS:** A previously published (O'Sullivan et.al., VIH 2009) cost effectiveness model was used to assess the cost-effectiveness of posaconazole versus FLU/ITRA in the prevention of IFIs among patients with neutropenia resulting from chemotherapy for AML or MDS. Drug efficacy, mortality related to IFIs and death from other causes, were all estimated using data from a randomized clinical trial (Cornely et.al., NEJM 2007). IFI treatment costs were inflation-adjusted over last 6 years (2007-2012) and drug costs were based on 2012 IMS data. **RESULTS:** Trial data estimates the probability of an IFI over 100 days of follow-up while on Posaconazole to be lower than FLU /ITRA (0.05 vs. 0.11).The duration of treatment on Posaconazole is 25 days compared to 29 days with FLU or ITRA. Total costs of prophylaxis with FLU /ITRA and posaconazole is $5,293 and $5,859 respectively. The incremental cost-effectiveness ratios (ICER) for Posaconazole versus FLU/ITRA are estimated to be $8,805 per IFI avoided and $8,439 per life-year saved. **CONCLUSIONS:** Posaconazole is cost-effective to FLU or ITRA in the prevention of IFIs among neutropenic patients with AML and MDS in the current U.S. health care setting.

PIN66

POTENTIAL EPIDEMIOLOGICAL AND ECONOMIC IMPACT OF DIFFERENT ROTAVIRUS VACCINES IN LOW AND MIDDLE INCOME COUNTRIES

Paternina-Caicedo A[1], De la Hoz-Restrepo F[2], Carrasquilla-Sotomayor M[1], Alvis-Zakzuk N[1], Alvis-Guzmán N[1]
[1]*Universidad de Cartagena, Cartagena de Indias, Colombia,* [2]*Universidad Nacional de Colombia, Bogota, Colombia*

OBJECTIVES: Several studies have shown rotavirus vaccine is cost effective in low and middle income countries. Despite this, competing choices of rotavirus vaccines make the selection of either vaccine difficult for health decision-makers in low resource settings. The objective of this study is to assess cost effectiveness of the monovalent (MNV) and pentavalent (PTV) rotavirus vaccines on children mortality in 116 low and middle income countries that represent ~99% of rotavirus mortality. **METHODS:** A decision economic model was built to estimate the effect of MNV or PTV vaccination. Inputs were gathered from international databases, previous research and a systematic review of MNV and PTV vaccine effectiveness. Outcomes were reported in terms of cost per disability-adjusted life-year (DALY) averted, comparing no vaccination being implemented on selected countries for the year 2010 with either MNV or PTV introduction. Costs were expressed in 2010 international dollars. **RESULTS:** Low and middle income countries would have had 601,511 deaths in 2010, if rotavirus vaccine would not have been used. Under no vaccine scenario, 139 DALYs per 1000 children, 1.57 million inpatient and 9.17 million outpatient cases would occur every year. MNV would avert 53.3% of rotavirus-related deaths, and PTV 57.9%. MNV and PTV were highly cost effective worldwide, according to WHO criteria (less than per capita gross domestic product). I$143 cost per DALY for MNV versus I$152 cost per DALY for PTV. Uncertainty was lower in low income countries. **CONCLUSIONS:** Rotavirus vaccine is cost-effective in all analyzed countries. Despite cost effectiveness analysis is a useful tool for decision making in middle income countries, for low income countries health-decision makers should also assess the impact of introducing either vaccine on local resources, and budget impact analysis of vaccination.

PIN67

COST-EFFECTIVENESS EVALUATION OF AMPHOTERICIN B, AMPHOTERICIN B LIPOSOMAL, CASPOFUNGIN AND VORICONAZOL IN TREATING ASPERGILLOSIS UNDER THE BRAZILIAN PRIVATE HEALTH CARE SYSTEM PERSPECTIVE

Fujii RK[1], Manfrin DF[1], Lanzara GDA[1], Hájek P[2], Mould J[3]
[1]*Pfizer, Inc., São Paulo, Brazil,* [2]*Pfizer, Praha, Czech Republic,* [3]*Pfizer, New York, NY, USA*

OBJECTIVES: Aspergillosis is the second cause of invasive fungal infections with high mortality rates. The objective of this research is to evaluate the cost-effectiveness of amphotericin B(AB) 1.5mg/kg/day, amphotericin B liposomal(AL) 3mg/kg/day, caspofungin(CA) 50mg/day, voriconazol 8mg/kg/day(VO) including maintenance oral Voriconazol 400mg/day scheme in the treatment of aspergillosis under the Brazilian private health care system perspective. **METHODS:** A decision tree model was built considering sequential treatments, from which patients could respond to one initial treatment and continue to a maintenance phase of the same medication, or do not respond due to either inefficacy or adverse events and switch treatments with assumed equal chance to use one of the other options. Effectiveness measures were mortality, clinical response and days of hospitalization, calculated by indirect comparison of a literature systematic review. Only direct costs were considered, and were obtained from CFM/CBHPM2010 for medical procedures, MOH/CMED December2012 price list for medications, and BRASINDICE for materials. Values were represented in 2012USD. A time horizon no longer than 4 weeks was considered, thus discounting was not applied. One-way sensitivity analysis considered de-hospitalization in maintenance phases while using oral voriconazol. **RESULTS:** Clinical response rates were 36.40%(AB), 34.60%(AL), 34.20%(CA), 56.67%(VO), mortality rates were 50.90%(AB), 48.70%(AL), 44.70%(CA), 34.10%(VO) and hospitalization days were 26.35(AB), 24.68(AL), 25.33(CA), 22.55(VO). Expected treatment costs were US$33,838.33(AB), US$71,186.24(AL), US$46,223.28(CA) and US$36,255.09(VO). Considering AB as the baseline for cost-effectiveness, VO presented an incremental cost-effectiveness ratio(ICER) of 26,723.07 while other options were dominated with higher costs and lower effectiveness. If de-hospitalization was considered, VO would sum 14.62 hospitalization days, treatment cost of US$32,755.71 and an ICER of US$9,459.23. **CONCLUSIONS:** Assuming a willingness to pay of US$32,621.93 (3 times the