

ated with TVR/PR relative to PR alone, resulting in an ICER of £14,230 for treatment-naïve patients and £9,440 across the overall treatment-experienced patients. The ICER of the prior relapse, prior partial responder and prior null-responder sub-populations, were £5,363, £10,558 and £27,725, respectively. **CONCLUSIONS:** The introduction of telaprevir to current standard of care for HCV genotype 1 patients is clinically more efficacious than PR alone and cost-effective for both treatment naïve and experienced patients at the £20,000 and £30,000 willingness-to-pay thresholds.

## PIN28

## COST EFFECTIVENESS ANALYSIS OF VACCINATION WITH 13-VALENT (PCV13) AND 23-VALENT (PPSV23) PNEUMOCOCCAL VACCINES FOR ADULTS IN COLOMBIA

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**OBJECTIVES:** Streptococcus pneumoniae causes significant morbidity and mortality worldwide in both children and adults. The aim of this analysis is to evaluate the cost-effectiveness of vaccinating the Colombia population over 50 years with 13-valent pneumococcal conjugated vaccine (PCV 13) vs. 23-valent pneumococcal polysaccharide vaccine (PPSV23) to estimate the clinical benefits and associated costs from the third-party payer perspective in Colombia. **METHODS:** A Markov model simulating vaccination and outcomes was adapted to Colombian settings, using a time horizon of 5 years (5% annual discount rate). Comparators were PCV13, PPSV23 (70% coverage) and no vaccination; revaccination with PPSV23 after 5 years in adults at high risk according to CDC criteria was considered. Probabilities and costs were extracted from a literature review, the incidence of diseases was retrieved from local database and costs are presented in 2011 US\$. Effectiveness measures were the number of pneumococcal diseases and deaths prevented, as well as life years (LY) saved. Probabilistic sensitivity analyses were developed. **RESULTS:** Over a 5 year period, vaccinating with PCV13 compared to PPSV23 and no vaccination prevents 3,277 and 15,930 cases of invasive pneumococcal disease; 156,722 and 157,893 cases of hospitalized pneumonia; 11,383 and 12,358 non-complicated pneumonia and 6,613 and 7,691 deaths respectively, PCV13 saves 13,347 LY's compared to PPSV23 and 18,321 LY's compared to no vaccination. Total expected savings (considering vaccination costs + medical costs and expressed in US\$ millions) for PCV13 was US\$ 113.7M compared to PPSV23 and US\$ 74.9M compared to no vaccination (total expected costs: US\$ 1,462.5M; US\$ 1,576.2M and US\$ 1,537.4M respectively). **CONCLUSIONS:** Vaccinating adults over 50 years with PCV13 in Colombia is a cost-saving alternative in comparison to PPSV23 and to no vaccination (US\$ 13 and US\$9 per patient, respectively). These savings could positive impact the burden of disease and study findings could support the decision-making process in favor of PCV13.

## PIN29

## COST EFFECTIVENESS ANALYSIS OF ADDITION OF TELAPREVIR OR BOCEPREVIR TO STANDARD THERAPY VERSUS STANDARD THERAPY ALONE FOR THE TREATMENT OF PREVIOUSLY UNTREATED CHRONIC HEPATITIS-C VIRUS GENOTYPE 1 INFECTION

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**OBJECTIVES:** Telaprevir and Boceprevir were approved in May 2011 for the treatment of chronic hepatitis C in combination with the standard therapy of peginterferon-ribavirin. The objective of this study was to compare the cost-effectiveness of the addition of Telaprevir or Boceprevir to the standard therapy versus the standard therapy alone for the treatment of previously untreated chronic hepatitis C genotype 1 virus infection. **METHODS:** A Markov model was constructed using TreeAge Pro version 2011. Six Markov states were identified based on the clinical progression of chronic hepatitis C. The model was run over a 28 year time horizon with 1 year cycle lengths. Clinical inputs (treatment response rates and probabilities of adverse drug reactions) were obtained from two published phase III clinical trials comparing the combination of Telaprevir or Boceprevir with the standard therapy versus treating patients with standard therapy alone. Treatment costs, transition probabilities, and health state utilities were obtained from the Medical Expenditure Panel Survey data and other published literature. The primary outcome measure used was quality adjusted life years (QALYs). Future costs and outcomes were discounted at 5%. The analysis was conducted from the payer's perspective. Multiple one-way sensitivity analyses were conducted by varying drug costs, treatment response rates and the discount rate. **RESULTS:** The incremental cost effectiveness ratio (ICER) for adding Telaprevir to the standard therapy versus the standard therapy alone was \$17,974.93/QALY gained while the ICER for adding Boceprevir to the standard therapy versus the standard therapy alone was \$9,476.61/QALY gained. **CONCLUSIONS:** Based on the results, adding Boceprevir or Telaprevir to the standard therapy was found to be cost-effective as compared to treating patients with standard therapy alone. Furthermore, adding Boceprevir to the standard therapy was found to be more cost-effective as compared to adding Telaprevir.

## PIN30

## ECONOMIC EVALUATION OF A CLUSTER RANDOMIZED CONTROLLED TRIAL OF AN INFLUENZA IMMUNIZATION PROGRAM DIRECTED AT HEALTHY CHILDREN

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**OBJECTIVES:** Influenza can cause significant mortality, morbidity and economic burden in a population, with vulnerable groups being disproportionately affected. Vaccinating healthy children to produce herd effect has been proposed as a strategy to protect vulnerable groups. This strategy was investigated in the Hutterite

Influenza Prevention Study, a clustered RCT comparing communities with or without childhood influenza immunization programs. There will be costs associated with vaccinating all healthy children in a community; therefore there may be a trade-off between these costs and the benefits of avoiding influenza cases. The study objective is to evaluate the cost-effectiveness of immunizing healthy children to create herd immunity within entire communities. **METHODS:** Data from the trial were used for effect inputs. Resource utilization was recorded during the trial and cost data were collected from third party payer, literature and internet sources. A two-stage bootstrap (TSB) with shrinkage correction was used to estimate costs and effects (influenza cases avoided). The base case incremental cost effectiveness ratio (ICER) and sample uncertainty around this estimate were calculated from the TSB results. **RESULTS:** Mean costs per patient for the treatment and control arms were \$51.32 and \$33.26 respectively (difference \$18.06). The mean number of influenza cases was estimated to be 0.05 for the treatment arm and 0.28 for the control arm (difference 0.23). ICER was \$80.36 (dominates, \$2,263.82) per case of influenza averted. The probability of the treatment arm being cost-effective was 90% at a willingness-to-pay of \$1000 per case of influenza prevented. One way sensitivity analysis showed results to be robust. **CONCLUSIONS:** Immunizing healthy children for influenza is more costly, yet more effective than no influenza immunization in preventing cases of influenza in the entire sample. At a cost of \$80.36 to prevent a case of influenza, immunizing healthy children to protect all community members may be considered cost-effective.

## PIN31

## COST-EFFECTIVENESS ANALYSIS OF ANTIFUNGAL TREATMENTS AVAILABLE IN COLOMBIA FOR THE TREATMENT OF INVASIVE CANDIDIASIS

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**OBJECTIVES:** Candidemia accounts for 50 to 70% of the manifestations of invasive candidiasis (IC) and in Colombia *Candida albicans* is the most frequently isolated specie in IC (43.6%). The emergence of new antifungal agents such as echinocandins family therapy provides great opportunities to manage candidemia, with favorable safety profile and broad spectrum fungicide. The purpose of this study was to evaluate the cost-effectiveness of multiple treatments for non-neutropenic critically ill patients hospitalized in an intensive care unit (ICU) with highly suspected or confirmed IC comparing amphotericin B, anidulafungin, and caspofungin from the third-party payer perspective in Colombia. **METHODS:** A decision-tree model was developed to assess the cost-effectiveness of empiric treatments for IC, using a time horizon of 14 weeks. Comparators were: amphotericin B (0,6mg/kg/day), anidulafungin (100mg/day), and caspofungin (50mg/day). Effectiveness data and adverse event rates for comparators were obtained through a Colombian meta-analysis using the results from a systematic review. Direct medical costs were gathered from the Colombian Tariff Manual (SOAT) and acquisition costs were retrieved from the 2011 SISMED report from Colombia. All data were validated through a Colombian Delphi Panel who estimated schemes for IC treatment (drugs, hospitalization, and medical manage associated with adverse events: such as nephrotoxicity and hypokalemia). Effectiveness was expressed through life years gained (LYG). Incremental cost per life year gained (ICER) and sensitivity analyses were performed to test model robustness. **RESULTS:** Anidulafungin showed to be cost-saving vs. caspofungin reducing overall costs (2011 US\$) by US\$924.80 and gaining additional 0.47 LYG. Likewise, anidulafungin was highly cost-effective compared to amphotericin B (ICER \$1153.67/LYG); due to rates reduction of side effect events: anidulafungin 24.4%, caspofungin 42.1% and amphotericin B 75.2% and its associated costs. **CONCLUSIONS:** In Colombia, anidulafungin is the most cost effective option for the treatment of IC in critically ill patients hospitalized at ICU.

## PIN32

## COST-EFFECTIVENESS ANALYSIS OF TIGECICLINE IN THE TREATMENT OF COMPLICATED INTRA-ABDOMINAL INFECTION IN MEXICO

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**OBJECTIVES:** Complicated intra-abdominal infections are a public health problem in terms of burden of illness. The purpose of this study was to develop an economic model based in Mexican Institute of Social Security (IMSS) resource payments in order to evaluate the cost-effectiveness of tigecicline /Im-Cl and tigecicline/Pi-Tz vs Cef-Met/Im-Cl; Cef-Met/Pi-Tz; ertapenem/Im-Cl and ertapenem/Pi-Tz in the treatment of adults with complicated intra-abdominal infections acquired in the community. **METHODS:** In a decision-tree model all patients receive first-line treatment in hospital floor, if they fail then receive second-line treatment in ICU. The combinations were of tigecicline (100mg/day), ceftriaxone/metronidazole (2g/1.5g/day) and ertapenem (2g/day) with imipenem/cilastatin or piperacillin/tazobactam to evaluate the cost-effectiveness of tigecicline in the treatment of complicated intra-abdominal infections. The analysis time horizon was 30 days and the currency used was US dollars. The effectiveness measure was the percentage of clinical success that was obtained from clinical trials published in the literature and adjusted for bacterial resistance by conditional probabilities method. Resource use and costs were obtained from an expert panel survey and IMSS published data, respectively. The model estimated cost per patient and incremental cost-effectiveness ratios (ICER). Costs (USD 2011) and effectiveness do not were discounted. Probabilistic sensitivity analysis was performed using Monte Carlo simulation sec-