View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Elsevier - Publisher Connector

caspofungin group were 74.9%,68.3%,70.2%, respectively; total costs were $8650.1, $10146.3, $9744.6, respectively. Thus, the cost-effectiveness ratio were 115.5, 148.6, 138.8, respectively. **CONCLUSIONS:** Micafungin 100 mg/d group is the most cost-effective option in the treatment of invasive Candida infection in China, followed by caspofungin group.

PIN62

ECONOMIC VALUE OF USING ANTIMICROBIAL COATED SUTURES FOR ABDOMINAL INCISIONS TO PREVENT SURGICAL SITE INFECTIONS

Singh A[1], Bartsch SM[2], Muder RR[3], Lee BY[2]
[1]*University of Pittsburgh, Pittsburgh, PA,* [2]*Johns Hopkins Bloomberg School of Public Health, Baltimore, PA,* [3]*Veterans Affairs Medical Center, Pittsburgh, PA, USA*

OBJECTIVES: Since surgical site infections (SSI) continue to impose a substantial burden to hospital and society, there is a need to evaluate newer SSI-prevention interventions such as antimicrobial (e.g., triclosan) coated sutures. **METHODS:** We developed a decision analytic model using TreeAge Pro to determine the cost-effectiveness of antimicrobial sutures in abdominal incisions from the hospital, third party payer, and societal perspectives. Sensitivity analyses systematically varied the risk of developing an SSI (range: 5% - 20%), cost of triclosan-coated sutures (range: $5 - $25 per inch), and efficacy of triclosan-coated sutures to prevent infection (range: 5% - 50%). **RESULTS:** Depending on their efficacy, triclosan-coated sutures saved $4,109 – 13,975 (from the hospital perspective), $4,133 – 14,297 (third party payer), and $40,127 – 53,244 (societal) per SSI prevented, when a surgery had a 15% SSI risk. However, if the SSI risk after surgery was ≤5% and the efficacy in preventing SSIs was ≤10%, triclosan-coated sutures resulted in extra expenditure for hospitals and third party payers; resulting in extra costs of $1,626 and $1,071 per SSI prevented for hospitals and third party payers respectively, if SSI risk was 5% and efficacy was 10%. **CONCLUSIONS:** Our results show that switching to triclosan-coated sutures from the uncoated sutures can prevent SSIs and save substantial costs to hospitals, third party payers, and society over a wide range of SSI prevention efficacy, cost, and risk values.

PIN63

COST-EFFECTIVENESS OF QUADRIVALENT INFLUENZA VACCINATION PROGRAM FOR THE ELDERLY AGED 65 YEARS OR OLDER IN TAIWAN

Yang MC, Tan CH
National Taiwan University, Taipei, Taiwan

OBJECTIVES: Vaccines have been the main global means to minimize the impact of influenza and are recommended by WHO for individuals aged 65 years or older. The primary goal of influenza vaccination in the elderly is to reduce the risk of complications. Since 1998, a public-funded trivalent influenza vaccine (TIV) vaccination program has been implemented by the Taiwan government targeting people aged over 65 years. Another proposed alternative for preventing seasonal influenza is quadrivalent influenza vaccine (QIV) which contains two influenza A-lineages and two influenza B-lineages. The aim of the study is to assess, from the governmental perspective, the cost-effectiveness of adopting QIV versus TIV for the elderly aged 65 years or older. **METHODS:** A Markov model was used to estimate the cost and effectiveness of QIV and TIV in the elderly. Direct cost data was obtained from the Taiwan National Health Insurance claims data. Vaccine efficacy and coverage rate were based on government statistical reports. Outcomes of lifetime included cases, utilizations, and deaths avoided and QALYs gained. The corresponding incremental cost-effectiveness ratios (ICERs) were also estimated. The discount rate of cost and effectiveness was set at 3.5%. **RESULTS:** Compared to TIV, adopting QIV would yield the influenza-related outcomes as follows: 26,319 influenza cases avoided, 26,021 cases of outpatient visit avoided, 2,771 cases of influenza complication avoided, and 330 deaths avoided. Using QIV instead of TIV would bring an additional 19,310,320 QALYs at an extra cost of US$223.39 billion, yielding an ICER of US$35,851.3 per QALY gained. When herd protection of vaccination is considered, the ICER would reduce to US$32,660.1 per QALY gained. **CONCLUSIONS:** To use QIV as an alternative of first-line strategy to prevent seasonal influenza for the elderly in Taiwan would be cost-effectiveness from the governmental perspective.

PIN64

COST-EFFECTIVENESS ANALYSIS OF TENOFOVIR/EMTRICITABINE AND ABACAVIR/LAMIVUDINE IN COMBINATION WITH EFAVIRENZ OR ATAZANAVIR/RITONAVIR FOR TREATMENT-NAIVE ADULTS WITH HIV-1 INFECTION IN THE UNITED KINGDOM

Wilkins E[1], Fisher M[2], Brogan A[3], Talbird SE[3]
[1]*North Manchester General Hospital, Manchester, UK,* [2]*Brighton and Sussex University Hospitals, National Health Service Trust, Brighton, UK,* [3]*RTI Health Solutions, Research Triangle Park, NC, USA*

OBJECTIVES: To assess the cost-effectiveness of the four comparators examined in the ACTG 5202 clinical trial, tenofovir/emtricitabine (TDF/FTC) or abacavir/lamivudine (ABC/3TC) in combination with efavirenz (EFV) or atazanavir/ritonavir (ATV/r), for treatment-naïve adults with HIV-1 infection in the United Kingdom (UK). **METHODS:** A Markov model with six health states based on CD4$^+$ cell-count ranges was developed to estimate costs and health outcomes for individuals on first-line therapy. Head-to-head efficacy data (lack of regimen failure and mean CD4$^+$ cell-count changes) up to 192 weeks for TDF/FTC+EFV, TDF/FTC+ATV/r, ABC/3TC+EFV, and ABC/3TC+ATV/r were obtained from the ACTG 5202 clinical trial. Antiretroviral drug costs were based on current list prices. Utility values, mortality, and other direct medical costs (2012 UK pounds) were stratified by CD4$^+$ cell-count range and obtained from published sources. All outcomes were discounted at 3.5% per year. Sensitivity and subgroup analyses were conducted, including analysis of low (<100,000 copies/mL) and high (≥100,000 copies/mL) baseline viral load. **RESULTS:** Individuals using TDF/FTC-based regimens were predicted to remain on first-line therapy longer and accrue more QALYs than individuals using ABC/3TC-based regimens (QALYs: 6.30 for TDF/FTC+EFV, 6.45 for TDF/FTC+ATV/r, 5.02 for ABC/3TC+EFV, and 5.26 for ABC/3TC+ATV/r). Costs were £111,882 for TDF/FTC+EFV, £124,302 for TDF/FTC+ATV/r, £85,477 for ABC/3TC+EFV, and £99,609 for ABC/3TC+ATV/r. At a willingness-to-pay threshold of £30,000 per QALY gained, TDF/FTC-based regimens were predicted to be cost-effective compared with ABC/3TC-based regimens, with incremental cost-effectiveness ratios of £20,545 for TDF/FTC+EFV versus ABC/3TC+EFV and £20,652 for TDF/FTC+ATV/r versus ABC/3TC+ATV/r. In subgroup analyses, TDF/FTC-based regimens were predicted to yield more QALYs and to remain cost-effective compared with ABC/3TC-based regimens. **CONCLUSIONS:** In an analysis of the regimens examined in the ACTG 5202 clinical trial for treatment-naïve adults with HIV-1 infection, regimens containing TDF/FTC yielded more favorable health outcomes and were predicted to be cost-effective compared with regimens containing ABC/3TC.

PIN65

COST-EFFECTIVENESS OF PROTEASE INHIBITORS FOR THE TREATMENT OF CHRONIC HEPATITIS C INFECTION: A SYSTEMATIC REVIEW

Silva N[1], Espinoza MA[2]
[1]*Universidad de Chile, Santiago, Chile,* [2]*Pontificia Universidad Católica de Chile, Santiago, Chile*

OBJECTIVES: The current recommendations for hepatitis C infection genotype 1 include one protease inhibitor (IP), boceprevir or telaprevir, in addition to the previous standard dual therapy (DT) (peginterferon plus ribavirin). However, the cost of these new drugs imposes high financial burden in the health care systems. The aim of this study is to undertake a systematic review of the cost-effectiveness of boceprevir compared to telaprevir and DT. **METHODS:** A systematic search was conducted in MEDLINE, EMBASE, Econlit and NHS-EED. Only full-text published manuscripts were considered and no further restriction were included. Relevant studies were selected by two independent researchers. Disagreements were resolved by discussion. A checklist was applied based on the CHEERS guideline to assess the quality of the studies. **RESULTS:** Nine studies were found. Three compared Boceprevir versus DT whereas 6 compared both IP with DT. Six analyses were presented for naïve (no previously treated) patients and 5 analyses for patients previously treated. Comparators vary in terms of the schemes used and stopping rules applied. All studies modeled the disease properly. However, important differences in assumptions and parameters were found. Most studies adopted a national health system perspective. Only two studies used information from mixed treatment comparisons to be incorporated into the model. 8 out of 9 studies concluded that the IP is cost-effective for their corresponding jurisdiction. In naïve patients, two studies reported Telaprevir being cost-effective against Boceprevir and no study favored Boceprevir. In patients previously treated one study favors Boceprevir and two studies favors Telaprevir. **CONCLUSIONS:** The treatment with IP compared with DT is cost-effective in most jurisdictions where it has been evaluated. However, important variations were found in terms of patient´s subgroups and schemes of treatment. It cannot be concluded that one drug is more cost-effective than the other due to important structural uncertainty.

PIN66

COST-MINIMIZATION STUDY OF SEQUENTIAL THERAPY OF LINEZOLID IN A BRAZILIAN PUBLIC HOSPITAL: WHICH IS THE PHARMACOECONOMIC IMPACT?

Taguti E, Silva EAA, Steimbach LM, Sanches ACC
State University of West Paraná, Cascavel, Brazil

OBJECTIVES: Conduct a pharmacoeconomic analysis, cost-minimization type of therapy with linezolid in patients hospitalized between August, 2009 and December, 2010 in a public hospital in Brazil. **METHODS:** We conducted a retrospective cohort study at a Brazilian public hospital from August 1, 2009 through December 31, 2010. A cost-minimization analysis was undertaken for which patients used linezolid during the internment in this period, from the perspective of the Brazilian public health system. **RESULTS:** The medical records of 61 patients were evaluated. Of all patients, 67.2% were male and mean age was 43.2 ± 17.8 years. The therapy with linezolid lasted 10.6 ± 4.7 days. The antibiogram was present in 65.6% of the records. In 50.8% of cases, the bacteria were sensitive to linezolid. The main reason for the use of antibiotics was sepsis and nosocomial pneumonia (34.4% each). Sixteen (26.2%) patients met the criteria for changing the route of administration of the antimicrobial. Altogether, the cost of treatment with linezolid for these 16 patients was US$ 39.755,05. If it were adopted sequential therapy, the treatment would cost US$ 31.744,28, which represents a saving of US$ 8.010,77 to the hospital. **CONCLUSIONS:** The results demonstrated the importance of pharmacoeconomic analysis of linezolid to the hospital, because in 17 months of cost analysis, these could have been reduced by 20,2% only with the switch antibiotic therapy. It is expected that results of studies such as this may contribute to the rational use of antimicrobials and resources for hospitals.

PIN67

EXPECTED COST-UTILITY OF QUADRIVALENT INFLUENZA VACCINE UNDER A UNIVERSAL INFLUENZA IMMUNIZATION PROGRAM IN ONTARIO, CANADA

Roïz J[1], Chit A[2]
[1]*Creativ-Ceutical, London, UK,* [2]*Sanofi Pasteur, Toronto, ON, Canada*

OBJECTIVES: Ontario, Canada, immunizes against influenza using a trivalent inactivated influenza vaccine (IIV3) under a Universal Influenza Immunization Program (UIIP). The UIIP offers IIV3 free of charge to all Ontarians over 6 months of age. A newly approved quadrivalent inactivated influenza vaccine (IIV4) offers wider protection against influenza B disease. In this study, we explore the expected cost-utility and budget impact of replacing IIV3 with IIV4 within the context of Ontario's UIIP. **METHODS:** We developed a model based on Ontario outcomes data published by Kwong and colleagues. We used Ontario based health care costs and Canadian based labor costs. Efficacy of IIV3 and IIV4 were estimated in a similar manner to a previous publication by Reed and colleagues. However, we improved by including emerging data from new meta-analyses on the efficacy of IIV3. These include new estimates of cross protection against mismatched B influenza offered by IIV3, as well as, new estimates of the vaccine efficacy in seniors. Conservatively, herd protection was not considered. **RESULTS:** Over an average influenza season,