

with notable resource utilization, including inpatient admissions. Average total per patient costs associated with potential AEs constituted over 10% of total costs.

#### PIN48

##### EVALUATION OF THE CLINICAL CHARACTERISTICS AND ECONOMIC BURDEN OF VETERAN PATIENTS DIAGNOSED WITH THE HEPATITIS C VIRUS IN THE UNITED STATES

Wang L<sup>1</sup>, Huang A<sup>1</sup>, Li L<sup>1</sup>, Baser O<sup>2</sup>

<sup>1</sup>STATinMED Research, Dallas, TX, USA, <sup>2</sup>STATinMED Research/The University of Michigan, Ann Arbor, MI, USA

**OBJECTIVES:** To assess the clinical characteristics and economic burden of patients diagnosed with the hepatitis C virus (HCV) in the U.S. veteran population. **METHODS:** A retrospective database analysis was performed using the Veterans Health Administration (VHA) Medical SAS Datasets from October 1, 2005 to May 31, 2012. All U.S. veteran beneficiaries diagnosed with HCV were identified using International Classification of Disease 9th Revision Clinical Modification (ICD-9-CM) diagnosis codes 070.41, 070.44, 070.51, 070.54, and V02.62. Comorbidities and other clinical conditions were assessed for the 12-month baseline period. Health care resource utilization and costs were assessed for the 12-month follow-up period. Descriptive statistics were calculated as means  $\pm$  standard deviation (SD) and percentages to measure cost, and utilization distribution in the sample. **RESULTS:** A total of 146,161 veterans were diagnosed with HCV during the study period. Among the 10 most common baseline comorbidities, hypertension was the only condition comprising of more than 20% of patients. Patients were also diagnosed with comorbid lumbago (8.26%), presbyopia (3.93%) and backache (3.80%), which are common in the elderly population. During the baseline period, 4172 patients (or approximately 3% of the patient population) had Albumin test results of  $<3.0$  mg/dl. 15.03% of patients had Prolonged Prothrombin Time Test results of  $>3.0$  seconds. Omeprazole (16.06%), lisinopril (15.86%) and hydrochlorothiazide (10.88%) were the most commonly prescribed medications within 60 days of initial disease identification. Inpatient (26.84%), emergency room (ER) (30.06%), office (99.78%), outpatient (99.81%) and pharmacy visits (93.65%) were calculated. Health care utilizations translated to the following health care expenses: inpatient (\$9,841, SD \$38,442), ER (\$393, SD \$1,042), office visit (\$9,587, SD \$13,035), outpatient (\$10,169, SD \$13,599), and pharmacy costs (\$1,771, SD \$4,703). **CONCLUSIONS:** HCV treatment is complicated by the presence of comorbidities such as hypertension. Further analysis of complicated comorbid conditions is required to improve the overall burden of illness of HCV patients.

#### PIN49

##### PUBLIC HEALTH IMPACT AND COST EFFECTIVENESS OF HEPATITIS A VACCINATION IN THE UNITED STATES: A POPULATION-BASED DYNAMIC MODEL

Dhankhar P<sup>1</sup>, Nwankwo C<sup>1</sup>, Pillsbury M<sup>1</sup>, Lauschke A<sup>2</sup>, Goveia M<sup>1</sup>, Acosta CJ<sup>1</sup>, Elbasha EH<sup>1</sup>

<sup>1</sup>Merck Sharp & Dohme Corp., Whitehouse Station, NJ, USA, <sup>2</sup>Lauschke Consulting, Rahway, NJ, USA

**OBJECTIVES:** To assess the population-level impact and cost-effectiveness of universal Hepatitis A vaccination of children in United States as recommended by Advisory Committee on Immunization Practices (ACIP) in 2006 compared with the prior ACIP regional policy of routine vaccination of children living in states with high hepatitis rates. **METHODS:** We developed a population-dynamic model of Hepatitis A to evaluate the public health- and economic- impacts of two-dose Hepatitis A vaccination of children 12 and 18 months of age. The dynamic model was fitted to Hepatitis A seroprevalence from the National Health and Nutrition Examination Survey (NHANES II and III) and reported incidence from the National Notifiable Diseases Surveillance System (1980–1995). We used a societal perspective and projected outcomes over the period 2006–2106 (a 100-year time horizon). Both costs and quality-adjusted life years (QALYs) were discounted at 3% per year. **RESULTS:** Universal Hepatitis A vaccination prevented 144,375 infections, 63,153 outpatient visits, 2,727 hospitalizations, and 96 deaths incrementally on an average annual basis when compared to the regional vaccination policy. Herd protection played an important role in reducing infections as it accounted for prevention of nearly 76% of deaths and 50% of outpatient visits and hospitalizations. Ignoring herd protection, vaccination prevented 90,845 infections, 34,353 outpatient visits, 1,438 hospitalizations, and 23 deaths annually. Taking herd protection into account, universal vaccination was cost saving, whereas without it the ICER was \$41,712/QALY. **CONCLUSIONS:** Universal two-dose vaccination of children led to significant reductions in Hepatitis A mortality and morbidity. Consequently, universal vaccination was cost saving compared with a regional vaccination policy. Herd protection effects of vaccination programs had a significant impact on hepatitis A mortality, morbidity, and cost-effectiveness ratios. Because of their ability to capture the natural phenomenon of herd protection, dynamic models have significant utility for economic evaluation of Hepatitis A vaccination programs.

#### PIN50

##### ECONOMIC ASSESSMENT OF HIGH-RISK VERSUS UNIVERSAL PEDIATRIC PCV13 VACCINATION PROGRAMS IN COSTA RICA

Roberts CS<sup>1</sup>, McGarry L<sup>2</sup>, Gilmore K<sup>2</sup>, Lutz MA<sup>3</sup>, Stratton DR<sup>4</sup>

<sup>1</sup>Pfizer, New York, NY, USA, <sup>2</sup>OptumInsight, Cambridge, MA, USA, <sup>3</sup>Pfizer Central America and the Caribbean, San Jose, Costa Rica, <sup>4</sup>Pfizer, Inc., Collegeville, PA, USA

**OBJECTIVES:** In 2011 PCV13 replaced PCV7 in Costa Rica's National Immunization Program, however, continuation of the program is being evaluated based on considerations of cost-effectiveness. We evaluated the cost-effectiveness of continuing universal PCV13 infant vaccination versus limiting vaccination to high-risk children. **METHODS:** We used a decision-analytic

Markov model to assess the impact of alternative pediatric PCV13 vaccination strategies: universal versus targeted to high-risk children only. For the universal strategy, outcomes are assessed for the entire Costa Rican population to capture indirect (herd) effects that accrue in the unvaccinated individuals. The model was populated using Costa Rican epidemiologic data and estimates from other published sources. Estimates of PCV13 effectiveness were extrapolated from observed PCV7 data, using assumptions regarding serotype prevalence and PCV13 protection against 6 additional serotypes. Coverage was assumed to be the same for high-risk and the general population vaccination strategies. Outcome measures were incidence of invasive pneumococcal disease (IPD), pneumonia and acute otitis media (AOM); mortality, and net medical-care costs over 10 years from the societal perspective. **RESULTS:** Compared to no vaccination, the high-risk program would prevent 100 cases of IPD, 420 cases of hospitalized pneumonia (HP), 330 cases of non-hospitalized pneumonia (NHP), and 26,300 cases of AOM, and provide net savings of \$460,000 over 10 years. Universal vaccination would prevent 2,200 cases of IPD, 14,800 cases of HP, 24,500 cases of NHP, and 367,000 cases of AOM for net savings of \$34.8 million. Compared to the high-risk program, universal vaccination would provide net savings of \$34.3 million. Excluding indirect effects, universal vaccination results in ICERs of \$4,400 and \$5,600 per QALY gained compared with no vaccination and high-risk vaccination, respectively. **CONCLUSIONS:** Both high-risk and universal infant vaccination with PCV13 are cost-effective in Costa Rica; universal vaccination dominates both no vaccination and high risk vaccination due to indirect effects.

#### PIN51

##### COST-EFFECTIVENESS OF LINEZOLID IN THE TREATMENT OF COMPLICATED SKIN AND SOFT TISSUE INFECTIONS (CSSTI) IN CHILE – PRIVATE SCENARIO

Mouli-Quevedo JF<sup>1</sup>, Vargas Zea N<sup>2</sup>, Diaz-Sotelo OD<sup>3</sup>, Villamil Munevar V<sup>4</sup>, Vecino Ortiz A<sup>5</sup>

<sup>1</sup>Pfizer, Inc., New York, NY, USA, <sup>2</sup>Pfizer S.A.S., Bogota, Colombia, <sup>3</sup>RANDOM Foundation, Bogota, DC, Colombia, <sup>4</sup>RANDOM Foundation, Bogota, Colombia, <sup>5</sup>Johns Hopkins University, Baltimore, MD, MD, USA

**OBJECTIVES:** Complicated skin and soft tissue infections (cSSTI) are commonly encountered in the community and nosocomial settings. Methicillin-resistant *S. aureus* (MRSA) has become the predominant pathogen in cSSTI raising health care costs and reducing positive health outcomes. The aim of this analysis is to estimate the cost-effectiveness of linezolid in the treatment of cSSTI in Chile from the private payer's perspective. **METHODS:** A decision tree was built to estimate the incremental cost-effectiveness ratio (ICER) of linezolid (1200 mg/day) compared with vancomycin (2 mg/day), daptomycin (350 mg/day) and tigecycline (100 mg/day). Within a time horizon of 28 days, the model simulates health outcomes and costs for all alternatives at the Provisional Health Institutions – ISAPRE. Only direct medical costs were considered. Effectiveness measures were: quality-adjusted life-year gained (QALY's) and percentage of patients cured. Efficacy, safety and utility values were collected from literature review. Resource use and medical costs (drug acquisition, inpatient stay, health care professional visits, and lab tests) were taken from Chilean private institutions. Costs are expressed in 2012 US\$. **RESULTS:** The total expected costs for per patient were: linezolid US\$12,905.1, vancomycin US\$13,039.9, daptomycin US\$16,067.3 and tigecycline US\$17,038.5. Treatment with linezolid was associated with a shorter length of stay at the intensive care unit (7 days on average) which reduced significant treatment costs due the likelihood of switching from intravenous to oral administration (5 days savings on average). Results for each alternative in terms of QALY's were: linezolid 0.063, vancomycin 0.060, daptomycin 0.061 and tigecycline 0.059. The percentage of patients cured for each alternative was: linezolid 84.4%; vancomycin 74.7%; daptomycin 78.1% and tigecycline 70.4%. Model result suggests that linezolid would be dominant compared to vancomycin, daptomycin and tigecycline. **CONCLUSIONS:** Despite its higher acquisition cost, linezolid would be a cost-saving alternative in the treatment of cSSTI in the Chilean Provisional Health Institutions (ISAPRE).

#### PIN52

##### LINEZOLID FOR THE TREATMENT OF COMPLICATED SKIN AND SOFT TISSUE INFECTIONS (CSSTI) – A COST-EFFECTIVENESS ANALYSIS FOR THE CHILEAN NATIONAL FUND OF HEALTH

Mouli-Quevedo JF<sup>1</sup>, Vargas Zea N<sup>2</sup>, Diaz-Sotelo OD<sup>3</sup>, Villamil Munevar V<sup>4</sup>, Vecino Ortiz A<sup>5</sup>

<sup>1</sup>Pfizer, Inc., New York, NY, USA, <sup>2</sup>Pfizer S.A.S., Bogota, Colombia, <sup>3</sup>RANDOM Foundation, Bogota, DC, Colombia, <sup>4</sup>RANDOM Foundation, Bogota, Colombia, <sup>5</sup>Johns Hopkins University, Baltimore, MD, MD, USA

**OBJECTIVES:** Complicated skin and skin structure infections (cSSSIs) are primarily caused by gram-positive bacteria, including *Staphylococcus aureus* and  $\beta$ -hemolytic streptococci. The impact of cSSSIs caused by Methicillin-resistant *S. aureus* (MRSA) has been associated with an increase in length of hospital stay and resource use. The aim of this analysis is to estimate the cost-effectiveness of linezolid in the treatment of cSSTI at the Chilean public setting. **METHODS:** A decision tree was built to estimate the incremental cost-effectiveness ratio of linezolid (1200 mg/day) compared to vancomycin (2 mg/day), daptomycin (350 mg/day) and tigecycline (100 mg/day). The payer's perspective (National Fund of Health – FONASA) was used, including inpatient medical costs only. The time horizon was 28 days. Effectiveness was measured with quality-adjusted life-year (QALY's) and the percentage of patients cured. Efficacy, safety and utility values were retrieved from literature. Resource use and costs (drug acquisition, inpatient stay, health care professional visits, and lab tests) were taken from Chilean public health care institutions. Costs are expressed in 2012 USD. **RESULTS:** The total expected costs per patient were: linezolid US\$3489.0,