

histologic fibrosis. Advances in therapy with direct acting antivirals have led to improvements in treatment success. The objective of this study was to assess if it is now cost-effective to treat all CH-C genotype 1 patients regardless of histologic fibrosis stage. **METHODS:** A decision analytic Markov model simulating patients until death was used to compare two strategies for treating CH-C genotype 1: Triple therapy with biopsy (TT) or treat all (TTA). For TT, patients with moderate or advanced fibrosis were treated; others were biopsied every 5 years until age 70. Triple therapy consisted of telaprevir for 12 weeks, along with double-therapy (pegylated-interferon and ribavirin) for 24 or 48 weeks depending on response. The reference case was a treatment-naïve 50-year-old. Parameters were taken from the literature, Medicare fee schedule and drug acquisition cost. Effectiveness was measured in quality-adjusted life years (QALYs), and disease progression. Strategies were compared on the basis of cost, effectiveness and the incremental cost-effectiveness ratio (ICER, in \$/QALY). Cost and effectiveness were discounted at 3% annually. **RESULTS:** For TT, 58% were treated initially and 25% were treated later. TTA led to less disease progression: Decompensated cirrhosis (11.8% vs. 13.4%), liver cancer (10.5% vs. 12.0%), and liver transplant (4.6% vs. 5.2%). TTA was more expensive, \$103,135 vs. \$90,904, but more effective, 17.195 vs. 16.383 QALYs. TTA was very cost-effective with an incremental cost-effectiveness ratio of just \$15,063/QALY. **CONCLUSIONS:** The recommendation to treat CH-C genotype 1 patients with moderate and advanced fibrosis, and monitor those with mild fibrosis, must be reassessed with increasingly more effective anti-HCV therapy. Treating everyone may be even more cost-effective for newer, more effective treatments with less side effects and shorter regimens (e.g. oral agents only).

## PIN79

## UNIVERSAL MASS VACCINATION WITH QUADRIVALENT INFLUENZA VACCINE (QIV) IN THE UNITED STATES

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**OBJECTIVES:** Current influenza vaccination practice using trivalent inactivated vaccine (TIV) and trivalent live attenuated influenza vaccine (LAIV) covers only one of two commonly circulating influenza B lineages; mismatch and co-circulation are frequent and unpredictable. We evaluated the health outcomes and cost-effectiveness of universal vaccination with QIV compared with current vaccination practice. **METHODS:** We used a 1-year decision-tree from a societal perspective, including influenza-associated productivity losses and death. US Population was stratified to model age-specific (< 5, 5-17, 18-49, 50-64, and 65+) vaccination coverage, vaccine efficacy and risks of influenza complications. Rates of influenza, health care utilization, disease-related costs, and survival were estimated from published data where possible. Annual cases, lifetime costs (2011 USD) and quality adjusted life years (QALYs) lost were calculated and discounted (3% per annum) appropriately. We conducted one-way and probabilistic sensitivity analyses. **RESULTS:** Results suggest that vaccination with QIV instead of TIV/LAIV is expected to yield 77,817 fewer medically-attended influenza cases, approximately 4,360 fewer related hospitalizations and 868 fewer deaths per year. QIV vaccination is expected to result in approximately 4,342 fewer QALYs lost compared with TIV/LAIV. The model projects QIV to be cost-effective at \$50,000/QALY, excluding death-related productivity losses, avoiding double counting as death-related QALYs are included, at a price increment of 35% over the average weighted TIV price. The increase in vaccination costs (\$385 million) is offset by a \$411 million reduction in influenza-related treatment costs, comprising \$142 million in direct medical costs (physician visits, antivirals, and outpatient and inpatient care) and \$269 million in direct non-medical cost savings. Results were robust in sensitivity analyses. **CONCLUSIONS:** Under the model assumptions, a strategy of vaccination with a quadrivalent influenza vaccine is expected to be a cost-effective alternative to current practice, by reducing the costs as well as cases, hospitalizations and deaths associated with vaccine-mismatched influenza B disease.

## PIN80

## ECONOMIC MODELING IN HIV FOR MARAVIROC IN TREATMENT-NAIVE PATIENTS IN THE UNITED STATES – RESULTS FROM THE ARAMIS-MVC 2012 MODEL

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**OBJECTIVES:** To adapt an existing and previously published economic (micro-simulation model) in HIV (ARAMIS) to evaluate the cost-effectiveness of maraviroc (MVC) in the US in treatment naïve HIV-patients based on the MERIT (Maraviroc versus Efavirenz in Treatment-Naïve Patients) study. **METHODS:** MVC was compared to efavirenz (EFV) in treatment naïve patients with CCR5-tropic HIV. Efficacy and safety data were based on the post hoc analysis in the MERIT study in patients rescreened with an Enhanced Sensitivity Profile Assay (ESTA). ARAMIS-MVC is a microsimulation Markov model, has a lifetime analytic time horizon with a monthly cycle length. Health states are defined in terms of chronic and acute HIV/AIDS. Treatment algorithms were updated based on guidelines and expert opinion. Long-term non-AIDS diseases (Cardiovascular, hepatic and renal diseases and non-AIDS defining cancer) were included in the model to reflect the higher prevalence of these illnesses in the HIV population and depended on age, CD4-cell count and hepatic status. Costs included antiretroviral treatment costs, HIV care, testing, adverse event (gastrointestinal events, rash, neuropsychiatric adverse events) and non-AIDS disease costs, at the 2012 level. The cohort of the model used the population included in the

MERIT study and 1,000,000 simulations were used for the model. **RESULTS:** The ARAMIS-MVC model indicates that MVC compared to EFV over a life time is associated with some additional quality-adjusted life years (QALY) (0.092 difference) but with some additional total costs (\$8,900 additional costs for MVC). The incremental cost effectiveness ratio for MVC compared to EFV is \$96,000 per QALY gained. Life expectancy with MVC was slightly higher than EFV (2.7 months difference). **CONCLUSIONS:** MVC is a cost-effective treatment option for CCR5 tropic treatment-naïve patients in the US considering a threshold of \$100,000/QALY.

## PIN81

## CARE PATHWAY AND COST FOR ABSSSI SUBJECTS WITH ANTIBIOTIC TREATMENT IN THE UNITED STATES: AN ANALYSIS OF A REAL WORLD DATABASE

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**OBJECTIVES:** Current guidelines for the treatment of acute bacterial skin and skin structure infections (ABSSSI) recommend treatment pathways based on the infection types and severity. However, few studies have attempted to establish the health care resource utilization and costs overall and in various treatment settings, e.g., ED visits, in-patient, outpatient visit and/or treatment (e.g. infusion center), and outpatient pharmacy, using real world data. **METHODS:** The medical and pharmacy administrative claims of adult ABSSSI subjects with continuous commercial or Medicare Advantage enrollment with Part D prescription drug coverage (MAPD) between 01 January 2009 and 31 December 2011 were extracted from a large national health plan affiliated with OptumInsight. Subjects were grouped based on their initiation of five MRSA-active antibiotics: linezolid, vancomycin, daptomycin, clindamycin, or tigecycline. Health care resource utilization and costs were assessed for each treatment group. **RESULTS:** After applying inclusion and exclusion criteria, 8,332 commercial and 4,218 MAPD were included in the study. The average age was 50 years for commercial enrollees and 69 years for MAPD enrollees. The Quan-Charlson comorbidity index varied among treatment groups and, a majority of the clindamycin treatment subjects had few or no comorbidities. The average ABSSSI-related total health care cost, per patient per month, was \$18,290 including \$7,261(39.7%) for inpatient cost, \$825(4.5%) for ED visits, \$2,447 (13.4%) for outpatient treatment/visits, \$1233(6.7%) for pharmacy claims, \$971(5.3%) for office visits, and \$553 (30.4%) for other medical cost. The costs overall and in various treatment settings varied by initial antibiotic choices and insurance plans. **CONCLUSIONS:** Inpatient treatment remains the largest component of total ABSSSI treatment cost. To minimize the burden on the health care system, there is an urgent need to develop new antibiotics that prevent or decrease the number of hospitalizations and reduce the length of inpatient stays.

## PIN82

## COST-EFFECTIVENESS OF BOCEPREVIR THERAPY IN ADULT PATIENTS WITH CHRONIC HEPATITIS C (HCV) GENOTYPE 1

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**OBJECTIVES:** Boceprevir is indicated for the treatment of chronic hepatitis C virus (HCV) genotype 1 in combination with peginterferon-alpha and ribavirin (PEGATRON). Boceprevir plus PEGATRON has been shown to significantly increase sustained virologic response (SVR) rates in naïve and previously treated adults with chronic hepatitis C (CHC) genotype 1, compared to PEGATRON alone. This analysis is to determine the cost-effectiveness of PEGATRON with boceprevir compared to PEGATRON alone in treatment-naïve and treatment-experienced patients in Australia. **METHODS:** A semi-Markov model was constructed to capture the early stages of CHC and the possibility of SVR, as well as important downstream health states which impact on quality of life, survival and resource utilisation. Early stages of liver disease were defined by levels F0 to F3 of METAVIR scoring system. Advanced stages were defined as compensated cirrhosis, decompensated cirrhosis, and primary hepatocellular carcinoma. Patients who moved from a baseline fibrosis score of F0-F3 to SVR were assumed to be free of any further disease progression, remaining in a viral-negative state until death. Patients who moved from a baseline fibrosis score of F4 to SVR were assumed to retain some risk of liver complications due to pre-existing liver damage. Subjects who failed to achieve SVR were assumed to be at risk of disease progression until death. Costs and preference-based utility values varied by health state, and were aggregated over the patients' lifetimes to calculate an incremental cost-utility ratio. **RESULTS:** The base case incremental cost-utility ratio was AU\$38,712 per additional QALY in the treatment-naïve population, and AU\$33,750 in the treatment-experienced population. The model was robust to variations in the SVR rate and model duration. **CONCLUSIONS:** The use of boceprevir for untreated chronic genotype 1 HCV is a cost-effective option for adult patients with CHC genotype 1.

## INFECTIOIN – Patient-Reported Outcomes &amp; Patient Preference Studies

## PIN83

## ANTIRETROVIRAL ADHERENCE AMONG MEDICAID-INSURED HIV PATIENTS INITIATING CURRENT GUIDELINE-PREFERRED ANTIRETROVIRAL THERAPY REGIMENS

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