CONCLUSIONS: Recent updates on burden of disease estimates were used and utilities included but due to the absence of trial data still a number of assumptions were made. The outcomes of this modeling exercise show that a vaccine against HSV might be cost-effective, but trial data are warranted.

PIN79 COST-UTILITY ANALYSIS OF TENOFOVIR IN COMPARISON WITH OTHER NUCLEOSIDE ANALOGUES (AN) IN CHRONIC HEPATITIS B (CHB) TREATMENT

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OBJECTIVES: To compare cost-effectiveness of tenofovir and other AN in treatment of advanced CHB in Poland. METHODS: Analysis was performed from the public payer perspective. A lifetime Markov model (3-month cycle) was developed defining health states based on HBV DNA level. Following events were included: complications (liver cirrhosis, hepatocellular carcinoma), drug resistance and relapse after remission. Analysis was performed in total population (regardless of the HBV-AG status) and in subpopulation of HBeAg(-) patients. Analysis for HBeAg(-) patients is impossible to conduct due to lack of effectiveness data. Effectiveness parameters were based on MTC conducted in systematic review of randomized clinical trials. In the analysis following costs were included: antiviral drugs, monitoring, hospitalization and CHB complications treatment. The reliability of the estimates was examined by sensitivity analyses of model parameters. RESULTS: In total population the estimated lifetime QALY per patient was: 12.33 for tenofovir, 11.32 for entecavir and 11.64 for adefovir. The estimated differences in QALYs between tenofovir and comparators were: 1.00 in comparison to entecavir and 0.69 in comparison to adefovir. The differences were not statistically significant. Average lifetime costs per patient were: 223,519 PLN for tenofovir, 358,565 PLN for entecavir and 349,535 PLN for adefovir. The resulting difference in costs between tenofovir and comparators were: -135,045 PLN in comparison to entecavir and -126,260 PLN in comparison to adefovir. The results for HBeAg(-) subpopulation were close to results for total population. CONCLUSIONS: Both in total population, as well as in HBeAg(-) subpopulation, tenofovir dominates adefovir and entecavir, which means that it allows for greater health effects (QALY, LY) with lower costs of treatment. Results of probabilistic sensitivity analysis indicates that tenofovir therapy is cost-effective (for the assumed threshold of three GDP: 102,045 PLN) with a probability of ca 82% when compared with adefovir and ca 86% in comparison to entecavir.

PIN80 COST-EFFECTIVENESS OF VACCINATING CHILDREN AGED 2-17 YEARS WITH INTRANASAL LIVE ATTENUATED INFLUENZA VACCINE (LAIV) IN GERMANY

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OBJECTIVES: In light of the commercially administered live-attenuated influenza vaccine (LAIV) for prophylaxis of seasonal influenza was approved in the EU for children aged 2-17 years. Our objective was to estimate the potential epidemiological impact and cost-effectiveness of the current policy to vaccinate people over 60 years and people with underlying chronic conditions with trivalent inactivated vaccine (TIV) compared to the addition of routine childhood vaccination with LAIV in Germany. METHODS: A compartmental susceptible-exposed-infectious-recovered-susceptible (SEIRS) model populated with German specific data was developed to explore the impact of vaccination on the transmission dynamics of seasonal influenza. In addition, a decision tree was constructed to incorporate several consequences of influenza infections and to compare costs and outcomes of different vaccination strategies in the German health care setting. The time horizon was set to ten years after the introduction of LAIV, assuming childhood vaccination coverage of 70%. Input data were based on published literature or were derived by expert consulting using the Delphi technique. RESULTS: Under base-case assumptions, annual routine vaccination of children would prevent 8.8 million influenza illnesses, resulting in a reduction of 273,124 cases of acute otitis media and 68,102 cases of community-acquired pneumonia. The mean annual saving was 126,246,780. The discounted incremental cost-effectiveness ratio was €9601 per QALY gained from a third-party payer perspective, when compared to the current strategy of vaccinating only risk groups with TIV. Incidence of patient co-payments and indirect costs resulted in a discount on the cost-effectiveness of LAIV compared to the current vaccination strategy. The vaccination of children under 12 years with LAIV can be considered cost-effective from a third-party payer perspective.

PIN81 COST-EFFECTIVENESS ANALYSIS OF Peg-INTERFERON alpha-2A PLUS Ribavin Versus Conventional interferon alpha-2aPLUS Ribavirin for the Treatment of Chronic Hepatitis C in China

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OBJECTIVES: This study aims to evaluate the cost-effectiveness of peg-interferon alpha-2a plus ribavirin compared with conventional interferon alpha-2a plus ribavirin for the treatment of chronic hepatitis C (CHC) in China. METHODS: A Markov health-state model was designed to estimate the direct medical costs and outcomes (life year gained and quality adjusted life year, QALY) of treating CHC. The model consists of 7 health states: cured (sustained virological response), CHC, compensated cirrhosis, decompensated cirrhosis, hepatitis, liver transplant, and death. Based on literature research, a two-round expert panel survey was conducted among experienced clinicians nationally in China to identify medical costs and clinical efficacy data. The evaluation was conducted from a perspective of CHC patient’s health insurance system to compare combination therapy scenarios of peg-interferon alfa-2a (40KD) plus ribavirin with conventional interferon alfa-2a plus ribavirin. The evolution of a cohort of CHC patients was simulated along 40 years with yearly cycles. A discounting rate at 3% was used to discount utilities and medical costs based on different time points. Sensitivity analysis was performed to understand the key drivers and general sensitivity of the model. RESULTS: The model showed that peg-interferon alfa-2a scenario could prolong 2.25 (30.02 years vs. 27.77 years) total life years compared with conventional interferon alfa-2a scenario. The discounted QALYs generated by peg-interferon were 2.19 longer than that of conventional interferon (18.58 QALYs vs. 16.39 QALYs). The discounted mean total cost per patient treated with peg-interferon alfa-2a scenario was 114,751 CNY (US$17,930), and 130,047 CNY (US$20,320) for conventional interferon alfa-2a scenario. The incremental QALY gained in comparison to conventional interferon alfa-2a scenario was 0.31 life years and 0.55 QALY gained. The incremental cost-effectiveness ratio was €2.19 longer than that of conventional interferon (18.58 QALYs vs. 16.39 QALYs). The discounted mean total cost per patient treated with peg-interferon alfa-2a scenario was 114,751 CNY (US$17,930), and 130,047 CNY (US$20,320) for conventional interferon alfa-2a scenario. The incremental QALY gained in comparison to conventional interferon alfa-2a scenario was 0.31 life years and 0.55 QALY gained. The incremental cost-effectiveness ratio was 2.19 billion. CONCLUSIONS: The results of the model suggest that peg-interferon alfa-2a treatment is dominant in both health outcomes and long-term treatment costs compared with conventional interferon alfa-2a for the treatment of CHC, which means peg-interferon alfa-2a treatment can generate cost savings for the China’s health insurance system.