Abstracts

placebo group (difference in cost €2427,36 USD). Incremental CER was 19 360,90 USD for one patient with viral load <50 copies/ml (16 462,65–41 640,81 USD in sensitivity analysis). Cost of one patient with achieved viral load <50 copies/ml was lower for ETR group. CONCLUSIONS: According to the model CER seems to be much more effective than placebo with affordable CER incremental ratio. Evaluation of ETR treatment cost-effectiveness in common practice in Russian health care is needed.

PIN22

COST-EFFECTIVENESS ANALYSIS OF VACCINATION AGAINST ROTAVIRUS WITH RIX4414 IN FRANCE

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OBJECTIVES: It is estimated that annually 300,000 cases of rotavirus-induced gastroenteritis (RVGE) occur in children aged up to 5 years in France. RIX4414 (Rotarix™ GlaxoSmithKline), a two-dose oral vaccine against rotavirus infection, has been shown to be highly effective against severe RVGE. A recent study (Melliez et al, Vaccine 2008) concluded that rotavirus vaccination was not cost-effective according to French Public Health context. We evaluated the cost-effectiveness of general vaccination against rotavirus using Rotarix™ in France using an updated model. We investigated the differences in modelling approaches and resultant cost-effectiveness conclusions. METHODS: A Markov model simulated RVGE events and the associated outcomes and costs in a birth cohort of children in France (n = 750,000), adjusting for age distribution and seasonality of infection. Costs and outcomes were estimated from a limited societal perspective (without indirect costs). The primary outcome measure was the incremental cost per quality-adjusted life year (QALY). RESULTS: Vaccination with Rotarix™ incurred an incremental cost of €44,583/QALY at a public price of €57 per vaccine dose. Univariate sensitivity analyses showed that the results were largely influenced by the discount rate for benefits, nosocomial rotavirus infection burden, hospital costs, and vaccine efficacy and cost. The acceptability curve indicated that 60% of the results were under the threshold of €50,000/QALY. Comparing these results with those of Melliez et al, the apparent discrepancy can be largely explained by differences in model structure and data input values including: different at-risk period and time horizon; different vaccine efficacy; different unit cost data; different disease duration and disutility values. CONCLUSIONS: These results demonstrate that a generalized vaccination strategy with Rotarix™ would be cost-effective in France from a societal perspective without including indirect costs; however there is a need for agreed standards to improve comparability of results from different studies.

PIN23

COST-EFFECTIVENESS ANALYSIS OF 7-VALENT PNEUMOCOCCAL CONJUGATE VACCINE IN TAIWAN: TRANSMISSION DYNAMIC MODEL-BASED EVALUATIONS

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OBJECTIVES: The aim of this study is to evaluate the longterm economic cost-effectiveness and clinical impact of universal infant vaccination of 7-valent pneumococcal conjugate vaccine (PCV7) in Taiwan by using a dynamic SIR model. METHODS: Recently, there are lot of interests surrounding the cost-effectiveness of PCV7 against pneumococcal diseases. Particularly, the quantification of the herd-immunity effects caused by this vaccine has been widely discussed. A cohort model in our previous study indicated that the universal PCV7 vaccination in Taiwan is a cost-effective intervention with an incremental cost per life year gained of NT344,928 (US$11,227), preventing thousands of IPD cases over a 10-year horizon. However, this model cannot dynamically capture age-dependent force of infection associated with the effects of different contact patterns on pre- and post-vaccination. Hence, the herd-immunity externalities cannot be correctly estimated, which would bias our findings. To reassess the cost-effectiveness of this vaccine, we incorporated a dynamic realistic age-structured Susceptible-Infected-Recovered (SIR) model that can account for both the direct and indirect (i.e. herd-immunity effects) benefits of vaccination. All pre-vaccination parameters such as age-specific disease incidence, mortality, seroprevalence data, and cost associated with the treatment of pneumococcal diseases were obtained from the National Health Insurance (NHI) Database and published literature where available. A societal perspective and a health care payer’s perspective were adopted. Various vaccine strategies including hypothetical scenarios were investigated. One-way and multi-way sensitivity analyses were also performed to evaluate model robustness. RESULTS: Our model suggests that universal PCV7 vaccination has a considerable impact on the reductions of the morbidity and incidence related to pneumococcal diseases where the herd-immunity effects are more precisely quantified using dynamic SIR model. CONCLUSIONS: A universal infant vaccination with PCV7 is a cost-effective intervention from a dynamic perspective and its continuous vaccination in Taiwan is greatly encouraged.

PIN55

COST-EFFECTIVENESS OF DARUNAVIR/ RITONAVIR 600/100MG BID IN TREATMENT-EXPERIENCED, LPV/R-NAIVE, PI-RESISTANT, HIV-INFECTED ADULTS IN THE UNITED KINGDOM, BELGIUM, ITALY AND SWEDEN

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OBJECTIVES: The Phase III TITAN trial (TMC114-C214) evaluated darunavir/ritonavir (DRV/r) 600/100 mg bid versus lopinavir/ritonavir (LPV/r) 400/100 mg bid in treatment-experienced, LPV/r-naive, HIV-infected adults. We determined the cost-effectiveness of DRV/r versus LPV/r from the perspective of British, Swedish, Italian and Belgian payers in the TITAN trial subgroup with at least one IAS-USA primary protease inhibitor (PI) mutation at baseline. These patients had less advanced HIV disease and a broader degree of prior PI use/failure (0 = 2) than those in the DRV Phase IIb POWER trials (≤ 2). METHODS: An existing Markov model containing 6 CD4 count–defined health states and a “death” state was adapted to the abovementioned countries. Baseline demographics and CD4 count distribution, antiretroviral drug usage, virologic and immunologic response rates and matching transition probabilities were based on TITAN trial data collected in the modelled subgroup during the first 48 weeks of therapy and from published literature. Patients were assumed to switch to a follow-up combination therapy after failure. For each model state, utility