obtained from Ministry of Health Drug Price List, Price List of Social Security Institution Health Implementation Guideline Appendix 2/D and 8, respectively. Clinical and economic outcomes: The clinical outcome measure is the proportion of patients responding. The model takes into consideration all of direct costs associated with the treatment, i.e. antifungal medications, treatment of side effects and tests. Because the time horizon of the model is shorter than 1-year, costs are not discounted. **RESULTS:** Total costs and response rates are €2,560/0.40, €8.900/0.47 and €3.790/0.32 for itraconazole, voriconazole and amphotericin-B, respectively. When compared with amphotericin-B, additional response rate that is gained with itraconazole is 0.08. This gain is obtained with €1230 less cost. Incremental response rate that is gained with voriconazole is 0.07. This gain is obtained with €6,350 extra cost, i.e. incremental cost-effectiveness ratio (ICER) is €91,000/response. One-way sensitivity analyses prove that results of the study are strong. **CONCLUSIONS:** In the treatment of aspersillosis, itraconazole is the dominant therapy in comparison to amphotericine-B. Compared to voriconazole, itraconazole is the cost-effective therapy option with the ICER of €82,800/response for voriconazole.

PIN19

PHARMACOECONOMIC EVALUATION OF PARENTERAL ITRACONAZOLE USE IN THE PROPHYLAXIS OF INVASIVE FUNGAL INFECTIONS IN TURKISH SETTING

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OBJECTIVES: Since mortality rate due to invasive fungal infections (IFI) associated with febrile neutropenia (FN) is very high, empirical antifungal treatment is the mainstay of treatment in patients with FN. The aim of the study is to compare the cost-effectiveness of parenteral itraconazole with amphotericin-B in empirical treatment of IFIs in cancer patients with FN. **METHODS:** Model: Decision tree modeling is used in the calculation of cost-effectiveness of options. The time horizon considered in the model is 20 days. The study has been performed from the health care payer perspective. Patient group: Cancer patients older than 18 years, with persistent fever despite anti-infective treatment. Data sources: The clinical data are acquired from published clinical studies. Resource use data are based on expert panel. Prices of medications, institutional discount rates and other costs related to the treatment obtained from Ministry of Health Drug Price List, Price List of Social Security Institution Health Implementation Guideline Appendix 2/D and 8. Clinical and economic outcomes: Clinical outcome is response to the treatment. Direct medical costs that are considered are the costs related with antifungal treatment and side effects. Because the time horizon of the model is shorter than 1 year, costs are not discounted. The results are presented as additional cost per additional response (ICER). Number-needed-to-treat (NNT) values are also calculated. **RESULTS:** Response rates are 0.59 and 0.61, and total costs are €2460 and €2773for itraconazole and amphotericin-B, respectively. ICER is calculated as €14.898/response rate for amphotericin-B. NNT values are 1.69 and 1.64 for itraconazole and amphotericin-B, respectively. A total of €390 will be saved for equal clinical outcome, if itraconazole is used instead of amphotericin-B. One-way sensitivity analyses prove that the results of the study are strong. **CONCLUSIONS:** Itraconazole is a cost-effective treatment modality in the empirical treatment of IFIs in FN patients in Turkey.

PIN20

COST-EFFECTIVENESS OF SURGICAL INTERVENTION FOR THERAPY-INDUCED FACIAL LIPOATROPHY IN HIV-INFECTED PATIENTS

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OBJECTIVES: Facial lipoatrophy is a significant problem related to antiretroviral therapy for people living with HIV. The only intervention currently available is the surgical correction with facial fillers. Objective of this study was to evaluate efficacy and efficiency of injection of various fillers: 1) poly-L-lactid acid; 2) polyacrylamide hydrogel; and 3) hyaluronic acid + tricalcium phosphate. **METHODS:** Cost-effectiveness analysis (CEA) was performed on the results of a randomized controlled clinical trial comparing a surgical correction of lipoatrophy *versus* the usual clinical care without intervention, over six-month follow-up. Clinical information was collected with the facial lipoatrophy scale (possible score 0 = normal, to 3 = severe lipodystrophy). Direct costs (costs of surgeon, fillers, chirurgical instruments) were evaluated from the service supplier's perspective in Italy and analysed according to prices and tariffs applied in 2008. Data from 67 patients per arm were collected at baseline and at 0–6 time points. **RESULTS:** Lipofilling intervention resulted in a lipoatrophy improvement, with a mean ± SD change in facial lipoatrophy scale of –3.0 ± 0.9. To implement this surgical procedure, service supplier should sustain an overall cost mean cost of €2126.42 per patient, corresponding to an incremental cost-effectiveness ratio of €708.66 per unit of improved facial lipoatrophy. **CONCLUSIONS:** According to preliminary results, lipofilling intervention for lipoatrophy in HIV patients is cost-effective: to obtain a decrease of one grade of lipoatrophy, a cost of €708.66 is expected to be sustained. Information obtained with this study, can be helpful to make appropriate decisions for the provision of optimal health care for these patients.

PIN21

ECONOMICAL EVALUATION OF ETRAVIRINE IN TREATMENT-EXPERIENCED HIV-1-INFECTED PATIENTS BASED ON DUET TRIALS

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OBJECTIVES: To perform economical evaluation of etravirine (ETR) in treatment-experienced HIV-1-infected patients in Russian health care system. **METHODS:** The modeled study was performed. Multicenter randomized studies DUET 1 and 2 were used as a basis for the model. Cost-effectiveness of ETR compared to placebo, both given with a background regimen (BR) of nucleoside reverse transcriptase inhibitors, darunavir/ritonavir and optional enfuvirtide, was assessed. Costs of antiretroviral therapy for 24 weeks were calculated from the point of Russian health care system view. Proportion of patients receiving different drugs and dosing regimen were extracted from DUET 1 and 2 trials. Effect was measured in proportion of patients with viral load less than 50 copies/ml. Limitation of the model was that emtricitabine and tenofovir used in BR in both groups have no market authorization in Russia and were excluded from the model. Similar proportion of patients in both groups received these drugs, thus this limitation did not influence the incremental cost-effectiveness ratio (ICER). One-way sensitivity analysis was performed. **RESULTS:** According to DUET studies ETR was much more effective than placebo (59 vs 41% patients achieved viral load <50 copies/ml, $p < 0{,}001$), while cost of treatment (without emtricitabine and tenofovir) was more for ETR than

placebo group (difference in cost 4247,36 USD). Incremental CER was 20 360,90 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 ETR 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*™ GlaxoSmith-Kline), 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 long-term 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 lots 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-NAÏVE, 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-naïve, 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+ T-cell count (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