extrapolated for the years 2012-2016 by applying population forecasts from the official Finnish statistics. Health care resource use and Finnish unit costs (€2011, societal perspective) were obtained from published national sources. **RESULTS:** Approximately 35% of the 2.2 million Finns of over 50 years of age can be considered to be at moderate or high risk for PDs due to the underlying chronic medical conditions. The vaccination of these people with PCV13 could provide an estimated net budget savings of about €218 million compared to the current no-vaccination situation during the five years. Among the risk groups considered, the largest net savings (€66.2 million) could be expected to be obtained by vaccinating people with heart disease due to its high prevalence in the target population. **CONCLUSIONS:** The immunization of adults (>50 years) at higher PD-risk with PCV13 vaccine will potentially lead to substantial cost savings during the forthcoming years in Finland.

PIN23

ECONOMIC ANALYSIS OF ATAZANAVIR AS 1ST LINE TREATMENT FOR VIH PATIENTS, ON STABLE AND SEVER HEALTH STATE

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OBJECTIVES: To estimate the budget impact associated with use of Atazanavir as 1st line treatment in Spanish market of antiretroviral drugs for VIH patients, on stable and sever health state. **METHODS:** An economic Model was developed to evaluate the Budget Impact of using Atazanavir (ATV), as 1st line treatment, for VIH patients in the Spanish National Health System perspective, over a 10-year period. Therapies included in the analysis were Darunavir (DRV), Lopinavir (LPV) and Efavirenz (EFV). Patient data were obtained through microsimulation model, with a patient cohort simulated, statistically significant and representative (N= 40,000). The costs were obtained from local databases and were considered pharmaceutical and direct health care costs. An annual discount rate assumed was of 3%.The discontinuation rates after AEs assumed for all treatments were: 71.3% from diarrhea, 61.3% from nausea, 28.8% from jaundice, 82.5% from rash and 55% from CNS events. The results of BIM per patient were presented at annual and cumulative level. **RESULTS:** Atazanavir use led to differential annual costs per patient after 10 years of treatment of 595€, 209€ and 76€, with respect to DRV, LPV and EFV. The highest savings generated by ATV derived from durable health of 1st line treatment (807€ DRV, 909€ LPV and 1045€ EFV), followed by return to health and durable viral suppression. This savings offset ATV drug cost versus other antiretroviral drugs. **CONCLUSIONS:** This analysis showed that treatment with Atazanavir for VIH patients, on stable and sever health state, generates net savings for Spanish National Health System: 595€, 209€ and 76€, with respect to DRV, LPV and EFV, in terms of differential annual costs per patient after 10 years treatment.

PIN24

CLINICAL AND ECONOMIC EVALUATION OF AN ADULT PNEUMOCOCCAL VACCINATION PROGRAMME AIMED AT THE SPANISH HIV POPULATION

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OBJECTIVES: Recently, 13-valent Pneumococcal Conjugate Vaccine (PCV13) has been approved for adults 50 years of age and older for the prevention of invasive pneumococcal disease (IPD) caused by the vaccine serotypes. This study was aimed to assess the clinical and economic impact of PCV13 use in adults with immuno-compromising conditions based on HIV published data. **METHODS:** A budget impact model for the whole HIV population was designed under the Spanish National Health System with a 4-year time horizon. Calculations of cases were based on the published IPD incidence (0.74%) and recurrent IPD ratio in this population. From total IPD cases, 92% were considered bacteraemia originating from pneumonia, 5.5% bacteraemia without apparent focus and endocarditis and 2.5% meningitis. PCV13 efficacy, serotype coverage, IPD mortality and disease related costs were based on published data. Model was built up assuming full vaccination coverage and no indirect effect. All costs were expressed in €2012. **RESULTS:** There would be 2,392 IPD cases in Spanish HIV patients over 4-year time horizon (598 annual cases). The model predicts that the implementation of a PCV13 vaccination program for HIV population would be a cost saving measure due to IPD cases averted. Over the study period, PCV13 would prevent 646 IPD cases and 162 related deaths. **CONCLUSIONS:** Based on this health economic evaluation, the inclusion of a PCV13 vaccination program for HIV population would be an efficient measure. PCV13 vaccination would have a high impact on pneumococcal disease prevention, avoiding deaths and saving costs.

PIN25

HEALTH AND ECONOMIC BENEFITS OF AVOIDING HOSPITAL PEN MOVES FOR DAIRY CATTLE IN THE UNITED STATES

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OBJECTIVES: Separation of sick dairy cows to hospital pens, isolated from healthy cows, is frequently used to manage risks of inadvertently mixed meat and milk residue violations associated with use of certain antimicrobials. However, drawbacks of hospital pen moves are frequently overlooked.Our objective was to develop a model 1) to quantify health and economic burden associated with hospital pen moves, and 2) to compare the economic impact associated with choice of antimicrobials requiring a hospital pen move because of milk withholding (standard: ampicillin, penicillin, oxytetracycline) to those not requiring milk withholding

(comparator: three ceftiofurs) and therefore avoiding hospital pen moves. **METHODS:** A decision tree was developed in MS Excel to 1) estimate the impact of hospital pen moves by considering extra labor, stress-induced reduction in milk yield and immunity, risk of secondary diseases and associated treatment/culling/replacement costs, and 2) compare standard and comparator treatments by considering treatment duration, milk withholding-associated revenue losses (based on product labels) and impact of hospital pen moves. Costs and prices ($US, 2010: producer's perspective), risk data, and labor data were derived from published sources. **RESULTS:** The economic burden of a hospital pen stay of 5 days was estimated at $111.85/cow, mainly attributable to risk and costs of secondary diseases. Ceftiofur prices ($29.33 to $107.99/cow) were generally higher than standard antibiotics ($2.00 to $30.95/cow). However, incremental net income with ceftiofurs compared to standard antibiotics ranged from $85.81 to $208.21/cow, the result of withholding-associated reduced saleable milk ($51.00 to $71.40/cow) and additional costs of hospital pen moves ($111.85 to $156.34/cow) with standard treatment. **CONCLUSIONS:** Compared to therapeutic treatments requiring milk withholding and a hospital pen move, ceftiofurs' higher prices were more than offset by higher returns resulting from increased saleable milk and no additional costs associated with hospital pen moves, and overall resulted in higher net income for producers.

PIN26

REAL LIFE EFFECTIVENESS OF ANTIBIOTICS

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OBJECTIVES: Antimicrobial resistance is a growing problem associated with many bacterial infections. The problem of resistance is related to the use of antibiotics. There is a causal relationship between antibiotic use and resistance which results in decreased antibiotic effectiveness. Antimicrobial resistance varies among hospitals significantly and results in a different financial burden due to cost-drivers related to treatment failure including all medication costs, increased length of hospital stay and additional medical resource consumption. Our objective was to estimate the real life effectiveness of using different antibiotics in a certain hospital by analyzing the total cost of therapy during hospitalization. **METHODS:** A cost-offset model was developed to support the individual therapeutic decisions of hospitals. We analyzed a 6 months time period and a number of 59 complicated intra-abdominal infection (IAI) episodes in a Hungarian county hospital retrospectively. Based on the first antibiotic choice we defined different treatment pathways to compare the length of stay and the total cost of the hospitalization in each treatment arm. **RESULTS:** The average length of stay (LOS) with complicated IAI was 5 days and increased to 8.6 days due to any adverse events. If the first antibiotic treatment was not effective - means that the patient had to switched to another antibiotic drug - the average LOS increased to 9.5 days. The cost difference of the different antibiotic drugs ranged from 121% to 391% compared to the cheapest treatment. The total hospitalization cost in case of the most expensive antibiotic treatment was higher by an average of 8% compared to the total cost of the cheapest antibiotic drug treatment. **CONCLUSIONS:** In long term the impact of resistance, the choice of adequate antibiotic therapy, the infection-control and the need for real-life effectiveness analysis because of budgetary reasons are increasingly important for hospitals.

PIN27

COST ANALYSIS OF VORICONAZOLE VERSUS LIPOSOMAL AMPHOTERICIN B FOR PRIMARY THERAPY OF INVASIVE ASPERGILLOSIS AMONG HEMATOLOGIC PATIENTS IN GERMANY

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OBJECTIVES: We performed an economic evaluation of voriconazole vs liposomal amphotericin B as first-line antifungals for invasive aspergillosis (IA) among patients with prolonged neutropenia or undergoing bone marrow or hematopoietic stem-cell transplantation from a German hospital perspective. **METHODS:** A decision analytic model was constructed to estimate potential treatment costs of voriconazole vs liposomal amphotericin B. Each pathway was defined by probabilities of an event and costs of clinical outcomes. Probabilities and costs were derived from literature, clinical trials, and expert panels. In the base case, patients who failed first-line therapy were assumed to experience a single switch between comparator drugs or add on the other drug as second-line treatment. Base-case evaluation included drug management costs and additional hospitalization costs due to severe adverse events. Sensitivity analyses were conducted to assess robustness of results. All costs were inflated to 2011 Euros. **RESULTS:** Based on clinical trial success rates of 52.8% (voriconazole) and 50% (liposomal amphotericin B), and length of treatment (LOT) = 10-day intravenous (IV) + 5-day oral for voriconazole and 15-day IV for liposomal amphotericin B, voriconazole had a lower total treatment cost than liposomal amphotericin B (€12,256 vs €18,133). Assuming the same efficacy (50%) in first-line therapy, voriconazole still had a lower total treatment cost than liposomal amphotericin B (€12,837 vs €18,133). Assuming the same LOT (10 or 15 days) in both arms, voriconazole maintained a lower cost. Cost savings were primarily due to lower drug costs and shorter IV LOT associated with voriconazole. The model was sensitive to drug prices and hospital per day costs. **CONCLUSIONS:** This study suggests that voriconazole is likely to be cost-saving compared to liposomal amphotericin B in the treatment of IA from the German hospital perspective.