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COST-EFFECTIVENESS ANALYSIS OF DIFFERENT THERAPEUTIC REGIMENS IN TREATMENT OF COMMUNITY-ACQUIRED PNEUMONIA IN CHINA
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OBJECTIVES: To assess the cost-effectiveness of commonly used antimicrobial regimens in treatment of Community-acquired Pneumonia (CAP) in China. METHODS: This was a retrospective study of CAP patients who received different antibiotic drugs during their hospitalization in a 1st Class, Grade A hospital in Shenyang. Liaoqing between January 2011 and June 2012. Cost-effectiveness analysis was performed for the common therapeutic regimens based on both clinical practice and the main recommended antibacterial treatment of CAP from the perspective of society as a whole. For the sensitivity analysis, we used a relative measurement method and an absolute measurement method to test the strength of the study’s conclusions over a range of assumptions. RESULTS: 203 clinical cases met study criteria. The model could be divided to six groups: the group of patients treated with cefmetazole and erythromycin (n=60), cefamandole (n=32), moxifloxacin hydrochloride (n=28), erythromycin (n=28), cefmetazole and erythromycin (n=29). The treatment success rate for the 6 groups were 42.31%, 51.67%, 6.25%, 25.06%, 60.71% and 65.52%, respectively, total direct medical cost $74/15.80, $501.21, $100.24, $1024.46, $440.15 and $955.84, respectively. Among them, the incremental cost-effectiveness ratio (ICER) of erythromycin group and a combination regimen (cefmetazole plus erythromycin) was 31.54, indicating that erythromycin and combination of cefmetazole and erythromycin had a positive effect on treatment success and a lower total cost. Sensitivity analysis supported the dominance of the 2 groups in nearly all scenarios but the variation of treatment among them, the incremental cost-effectiveness ratio (ICER) of erythromycin group was 0.1 and $35,520 per averted episode. CONCLUSIONS: Erythromycin monotherapy and a combination of cefmetazole and erythromycin were more effective and cost-saving than the other regimens in the treatment of Community-acquired Pneumonia. Nevertheless, since there was no cost-effective threshold in China to compare the cost-effectiveness of the 2 options, it remains to be further researched and discussed.

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COST-EFFECTIVENESS OF FIDAXOMICIN THERAPY FOR CLOSTRIDIUM DIFFICILE INFECTION IN HUNGARY
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OBJECTIVES: The leading cause of antibiotic associated nosocomial diarrhea. The two main treatments for these patients are fidaxomicin and vancomycin. In two phase III randomized controlled trials fidaxomicin was found to be non inferior to vancomycin in initial clinical cure of CDI and superior in preventing recurrences. The main goal of this economic analysis was to evaluate the cost-effectiveness of fidaxomicin versus vancomycin, for the treatment of C. difficile infection in Hungary. METHODS: A decision tree model was developed to capture the consequences of recurrent infection between fidaxomicin and vancomycin. The model reported two clinical outcomes: clinical cure and recurrent CDI episodes. Treatment efficacy was estimated through a meta-analysis in a Bayesian framework. The model took the third party payer perspective. The incremental cost-effectiveness ratio was calculated as the ratio between costs and number of avoided recurrent episodes. Uncertainty around model parameters was assessed through probabilistic sensitivity analysis. RESULTS: Total average costs for fidaxomicin were $1 654.17 and $1 627.70 per patient for recurrent and initial episodes respectively. Average number of recurrent episodes per patients was lower with fidaxomicin (0.13 recurrent episodes/patient) than with vancomycin (0.40 recurrent episodes/patient). Incremental cost-effectiveness ratio was $2 976.91 vs. vancomycin was $5 520 per averted recurrent episode. CONCLUSIONS: In conclusion, this study found that fidaxomicin has favourable cost-effectiveness ratio compared to vancomycin.

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COST-EFFECTIVENESS ANALYSIS OF RALTIGRAVIR IN HIV-INFECTED TREATMENT-NAIVE PATIENTS IN GREECE
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OBJECTIVES: Despite the success of current antiretroviral therapies for human immunodeficiency virus (HIV) infection, the development of drug resistance represents a critical issue. Raltegravir is an inhibitor of HIV-1 integrate approved for treatment experienced and naive patients. The present study aimed at conducting an economic evaluation of raltegravir vs protease inhibitor (PI) regimen in treatment-naive patients in Greece. METHODS: A three-stage continuous-time Markov model was developed using differential equations, for the cost-effectiveness analysis of initiating raltegravir-based therapy as first-line treatment vs initiating protease inhibitor (PI) -based therapy as first-line therapy, over a lifetime horizon. Stages of the model included progression through successive treatment therapies. Patients entered the model with a given CD4 cell count and HIV-1 viral load. After they failed or discontinued the current therapy, patients transitioned between eighteen health states (defined according to CD4-count and HIV-1 viral load), and progressed to the next stage. At any time they could develop acquired immunodeficiency syndrome (AIDS), suffer from a coronary heart disease (CHD) or die. Model inputs were collected and used to evaluate the model and adapted to the Greek health care system. Model outcomes included projected number of AIDS cases, number of CHD events, number of deaths, life expectancy and incremental cost-effectiveness ratios (ICER). The analysis was performed from the perspective of the Greek Social Insurer. RESULTS: Patients initiating on the raltegravir-based therapy presented longer undiscounted life expectancy compared to those initiating on a PI regimen (21.20 vs 18.85 years). The ICER for a raltegravir-initiated treatment strategy vs. a boosted PI initiated treatment strategy was $12,757/QLY gained (discounted at 3%). CONCLUSIONS: Results suggest that, over a lifetime horizon, raltegravir-based initiating therapy could be a cost-effective option compared to a PI based initiating therapy in the Greek health care setting.

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LONG-TERM OUTCOMES OF LEDIPASVIR/SOFOSBUVIR (LDS/ SOF) FOR THE TREATMENT OF CHRONIC HEPATITIS C INFECTED (HCV) GENOTYPE 1 PATIENTS IN THE UK
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OBJECTIVES: Sofosbuvir (SOF) is a uridine analogue polymerase inhibitor. Ledipasvir (LDV) is an inhibitor of the hepatitis C virus (HCV) NS5A protein. Efficacy and safety have been demonstrated in three phase III clinical trials of LDV/SOF administered with or without ribavirin. This analysis evaluated the long-term outcomes of LDV/ SOF in GT1 treatment-naive (TN) and treatment-experienced protease inhibitor failure patients (TE) HCV patients. METHODS: A Markov-model followed 10,000 patients over a lifetime horizon. Stages of the model were: compensated cirrhotic (CC) stage. In GT1 TN, LDV/SOF for 8 weeks for non-cirrhotic (NC) patients and 12 weeks for CC patients was compared against SOF with pegylated interferon 2a and ribavirin (SOF/PR), SOF with RBV (SOF/RBV) and simprevir with PR (SMV/PR). In GT1 TE, LDV/SOF was shown to save more than 10 lives compared with SMV/PR, SOF/PR and SOF/ RBV and avoid the death of 50 TE PI failure patients with no available treatment options. CONCLUSIONS: LDV/SOF was shown to be highly effective in preventing progression to ALD and reducing HCV-related mortality with a well-tolerated single tablet regimen. This is particular important for protease inhibitor failure patients since there are currently no alternative treatment options.

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COST-EFFECTIVENESS OF LEGATELLIN VS SOVALDI (SOFOBUVIR) FOR THE TREATMENT OF CHRONIC HEPATITIS C INFECTED (HCV) PATIENTS FROM A SWEDISH SOCIETAL PERSPECTIVE
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OBJECTIVES: Sovaldi (sofosbuvir) is the first nucleotide polymerase inhibitor with pan-genotypic activity and a high barrier to resistance. Efficacy of sofosbuvir-based regimens demonstrated >90% SVR across genotype (G) 1 -6 in five phase III clinical trials of sofosbuvir associated with treatment and advanced liver disease. SVR rates have been reported as 94% for GT1 TN NC and CC patients, 95% and 86% for GT1 TE NC and CC respectively. SOF/LDV was also well tolerated without any reported grade 3/4 adverse events. RESULTS: SOF/LDV was shown to be highly effective in preventing advanced liver disease (ALD) and mortality due to HCV in GT1 TN, LDV/SOF prevented more than 800, 200 and 1600 cases of ALD than SMV/ PR, SOF/PR and SOF/RBV. In GT1 TE over 5000 cases of ALD were avoided compared with treatment and over 1000 compared with SMV/FR, and SOF/PR. LDV/SOF was also shown to save more than 10 lives compared with SMV/PR, SOF/PR and SOF/ RBV and avoid the death of 50 TE PI failure patients with no available treatment options. CONCLUSIONS: LDV/SOF was shown to be highly effective in preventing progression to ALD and reducing HCV-related mortality with a well-tolerated single tablet regimen. This is particular important for protease inhibitor failure patients since there are currently no alternative treatment options.

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HOW DO DECISION MAKERS IN EUROPE VALUE OTHER ECONOMIC EVALUATION TOOLs THAN COST-EFFECTIVENESS ANALYSIS FOR VACCINES?
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OBJECTIVES: Other economic evaluation tools than the classical cost-effectiveness (CE) analysis exist but the acceptance of these by decision makers is unknown. We assessed the cost-effectiveness literature and adapted to the European context of second-line health economic evaluation methods for reimbursement decisions on vaccines. The five additional methods were: 1) Return on Investment (ROI); 2) Multi-Criteria Decision Analysis (MCA); 3) Quality of health care Budget Optimization (BOB); 4) Markov model with return of investment (ROI); 5) Multi-Criteria Analysis (MCA). Results: The long-term outcomes of experts were contacted with a 15% participation rate (25 experts participated). In countries where CE is formally used like Belgium, the Netherlands, the UK and the Nordic countries, the additional cost-utility and return on investment experts to value vaccines: Roy (61%), MCA (62%), QoC (54%), BOB (54%) and MCA (61%). They