data to calculate direct, indirect and intangible costs in patients receiving ART.

METHODS: Multicenter prospective observational study in eight German special-
ized centers for infectious diseases: four private practices/outpatient centers and four hospitals offering inpatient- and outpatient facilities. CORSAR started recruit-
ment during 2009 and ended in July 2012, when the last patient reached week 96. After signing informed consent, patients were included and stratified by treatment line.

RESULTS: A total of 1,154 pa-
tients with a median age of 47.5 years receiving ART were included. Time since HIV diagno-
sis was 10.6 years, 10.2% had viral load >50 cp/ml; 10.6% female, employment ratio 60.8%. Direct costs of treatment were mainly driven by antiretroviral drugs, ac-
counting for 83.3%. Due to use of less complex ART-regimens and more frequent use of NNRTI-based regimens, earlier treatment lines total costs were highest in in-
creased treatment-lines (>3rd) with 26,243 €/year compared to 22,718 €/year for init-
tial therapy. The labour market participation rate also decreases with advance-
ment in treatment lines (65% in first treatment line vs. 46.4% in >3rd treatment lines).

Indirect cost due to productivity losses account for 7% of total costs.

CONCLUSIONS: Total costs were higher in later lines of therapy due to more com-
plex, less NNRTI-based regimens. In comparison to earlier studies the impact of
Non-ART-costs decreased. Expenses to be borne by the patient increased but are still less than 1%, indicating an increasing financial burden of people living with
HIV in their disease within the German health system.

PIN34 DEVELOPMENT OF TREATMENT COSTS OF PATIENTS UNDERGOING REMISSION INDUCTION CHEMOTHERAPY: A HISTORICAL COMPARISON BEFORE AND AFTER INTRODUCTION OF POSACONAZOLE PROPHYLAXIS


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OBJECTIVES: Prior trials have demonstrated efficacy and effectiveness of pos-
aconazole in the treatment of invasive fungal diseases (IFD) in high-risk pa-
tients. Controversy exists about the cost-effectiveness of posaconazole prophylaxis
in neutropenic patients with a high risk of IFD. We performed an analysis com-
paring the direct costs of posaconazole prophylaxis against topical polyene (thrush) prophylaxis in patients with acute myelogenous leukaemia (AML) and me-
yelodysplastic syndrome (MDS).

METHODS: Data of AML/MDS patients receiving remission-induction chemotherapy were analysed to compare hospital costs of patients before (2003-05) and after (2006-08) introduction of posaconazole prophyl-
Phaxis. All cases were part of an earlier analysis demonstrating effectiveness of
posaconazole over topical prophylaxis. Duration on general ward, intensive care
unit, mechanical ventilation, diagnostic procedures and all anti-infective drugs
were included into the cost analysis.

RESULTS: Patient groups were well matched according to age, gender, underlying disease, and duration of neutropenia. The average costs per patient in the posaconazole group (n=76) and the topical polyene group (n=81) were 21,040 € (95% CI: 18,204-23,876 €) and 23,169 € (95% CI: 19,420-26,937 €) per patient, respectively. Antifungal treatment costs were nominally
counting for 83.3%. Due to use of less complex ART-regimens and more frequent
use of NNRTI-based regimens, earlier treatment lines total costs were highest in in-
creased treatment-lines (>3rd) with 26,243 €/year compared to 22,718 €/year for init-
tial therapy. The labour market participation rate also decreases with advance-
ment in treatment lines (65% in first treatment line vs. 46.4% in >3rd treatment lines).

Indirect cost due to productivity losses account for 7% of total costs.

CONCLUSIONS: Total costs were higher in later lines of therapy due to more com-
plex, less NNRTI-based regimens. In comparison to earlier studies the impact of
Non-ART-costs decreased. Expenses to be borne by the patient increased but are still less than 1%, indicating an increasing financial burden of people living with
HIV in their disease within the German health system.

There was a clear peak in prescribing during the winter months (May to August). The single most often prescribed trade name product was a generic combination product of levofloxacin and amoxicillin. On average, the most expensive trade
name product was Valacyclovir 450R tablets (valganciclovir) at R12 217.76.

CONCLUSIONS: This study provided a general overview of antimicrobial prescrib-
ing cost in a South African primary care patient population. Costs varied hugely
generally due to antimicrobial prescribing influencing costs.

PIN36

SIX YEARS OBSERVATIONAL STUDY OF THE COST OF HIGHLY ACTIVE ANTIRETROVIRAL TREATMENT AND HIV/AIDS CONTROL

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OBJECTIVES: To analyze the changes in the highly active antiretroviral therapy during the period 2006-2011 and its impact on cost and disease control of HIV/AIDS patients in Bulgaria.

METHODS: It is a combined prospective and pro-

pective observational real life study on cost and therapeutic results of AIDS pa-
tient’s therapy. Information was gathered for 2/3 of the treated patients for
the antiretroviral combinations therapy and its cost, CD4 count and viral load.

The changes in the dosage regimes, cost of therapy and its influence on CD4 count and viral load were evaluated. Descriptive statistic, Willcoxon tests, and Spearman
correlation analysis were applied.

RESULTS: On total 162 patients were included and out of them 48 identified with the changes in their therapy. Nearly 40 different dosage regimes were found prescribed as combinations of 3 or 4 medicines. During the period were introduces 3 new antiretroviral medicines (tenofovir, emtricit-
abine, darunavir). The average yearly cost of pharmaceuticaly is increasing from
155 837.64 euro to 319 571.76 during 2006 - 2011. In Bulgaria the pa-
tients were prescribed the newly authorized medicines that lead to sustained
pression of viral load to <20 in 45.6%. Introduction of the new medicines led to the increase in total pharmacotherapy cost with 291 89.64 euro, but also to better therapeutic results. Statistically significant were the changes in the mean cost of ther-
apy in 2007 vs 2006 (p=0.002) and in 2010 vs 2009 (p< 0.0001). We found the statistically significant changes among the mean cost of therapy and viral load (p<0.022), as well as among the mean cost of therapy and CD4 count (p<0.05). The correlation among the therapeutic results and the therapeutic combinations were found in 2011 (r=0.0004).

CONCLUSIONS: AIDS remain costly disease for the health insurance budget but new medicines led to better control on its progression.

PIN37

THE ECONOMIC BURDEN OF INITIAL EMPIRRIC ANTIBIOTIC FAILURE ON HEALTH CARE RESOURCE UTILIZATION FOR HOSPITALIZED PATIENTS WITH COMPLICATED INTRA-ABDOMINAL INFECTIONS (CIAIS) IN GREECE

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OBJECTIVES: To estimate impact of initial empiric antibiotic treatment failure on pharmaceutical and total health care costs in hospitalized patients with CIAIS.

METHODS: The economic impact associated with initial empiric antibiotic treat-
matic failure was based on the results of an observational epidemiological study
involving 201 adults with CIAIS in Greece (NCT00592643). An average per-patient-price per prescription was estimated using the first discharge and DRG mapping.

Daily cost was then extrapolated to the additional length of stay (LOS), associated
with initial antibiotic failure. Costs included expenditure for additional ICU and
surgical interventions. DRG matching was validated by a specialist medical advi-
sor. Mean per patient DRGs were weighed against subject percentage in each diag-
nostic group. Mean per patient LOS for unsuccessful failures were calcu-
lated using the latest formulary prices and the mean number of days on each antibiotic agent, as recorded in the observational study.

RESULTS: The most fre-
quent reported diagnoses (201 subjects) were perforation of the intestine (15.9%),
acute appendicitis with peritoneal abscess (13.4%) and post-operative perforations
(13.4%). Patients most commonly received metronidazole (59.2%), followed by
b-lactamase inhibitors (38.3%) and second generation cephalosporines (30.3%) as
empiric antibiotic treatment (as part of monotherapy, double therapy or triple
therapy schemes). 78 patients exhibited failure of the initial treatment, whereas
initial treatment was successful in 111 subjects with respective hospitalization of
21.9:16.4 and 8.9 : 4.5 days. Total additional per patient resource cost was esti-
matethat to €3,761.56 inclusive of unsuccessful mean empiric antibiotic expendi-
ture per patient per year. The cost estimated to be €320.06 per patient. A retrospective
data collected for a 2-year period showed that a significant percentage (42.9%) of
patients exhibited failure of their initial antibiotic treatment. These patients had a
greater chance of requiring prolongation of hospitalization and more extensive use
of health care expenditure during times where resources are scarce.

PIN38

REAL LIFE STUDY OF ANTIFUNGAL TREATMENT IN GREEK ICU: THERAPEUTIC STRATEGY AND HOSPITAL RESOURCE UTILIZATION – ESTIMATOR STUDY

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The MenACWY-TT vaccine were estimated at C$8.4 (no booster), C$31.9 (IMD cases and 296 deaths with a booster at 12 years and 4,077 months was estimated to prevent an additional 862 IMD cases and 76 deaths, 3,362 hepatocellular carcinoma, liver-transplant, and liver-related death. All hepatitis European Medicines Agency) and treatment with peginterferon/ribavirin. The sec- strategies - treatment with boceprevir/peginterferon/ribavirin (as defined by the German life tables and baseline patient demographics from the trials - mean age, gender, and fibrosis stage distribution. The first part of the model simulated two part of the model projected lifetime incidences of decompensated cirrhosis, hepatocellular carcinoma, liver-transplant, and liver-related death. All hepatitis-C-related state transition probabilities were obtained from previously published study. Pharmacy retail prices minus rebates (node book v. § 130 (1) and § 130a (1) were used. The model was validated with previously published studies and probabilistic sensitivity analysis was performed. RESULTS: Liver-related morbidity and mortality were projected to be reduced by 43% to 53% for a quality adjusted life year (QALY) gain of 0.8 in treatment naïve patients, and 1.4 in treat- ment-experienced patients compared with SOC. The cost per QALY gained on boceprevir-based regimes compared to PR alone was 17,511€ for treatment naïve patients and 16,645€ for treatment experienced patients in comparison with SOC. CONCLUSIONS: In German SHI, the addition of boceprevir to PR in patients with chronic HCV infection reduces liver-related morbidity and mortality in a quantifiable and cost-effective fashion, irrespective of whether patients have been previously treated.

PIN41

COST-EFFECTIVENESS OF PERTUSSIS ADOLESCENT BOOSTER IN ENGLAND AND WALES: A DYNAMIC MODEL BASED ANALYSIS

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OBJECTIVES: Epidemiology of pertussis shows that despite effective vaccination in childhood, naturally acquired and vaccine induced immunity is waning over time leading to higher incidence in adolescents and adults. Literature estimates the annual incidence of pertussis in the UK reaches 330/100,000 compared with an incidence of 4/100,000 based on statutory notifications, highlighting the degree of under-reporting. This analysis examines the cost-effectiveness of the addition of an adolescent routine booster vaccination against pertussis to the schedule in England and Wales from a payer perspective. METHODS: An age stratified, compartmental dynamic model was developed and calibrated on HPA data corrected for symptomatic and asymptomatic cases and empirical contact rates. Two sce- narios were compared: current pertussis vaccination schedule (SOC) and with adolescent routine pertussis booster vaccination. RESULTS: Compared to the treatment strategy and the class of drug used. The mean total cost per patient treated was estimated at 22,012 Euros. Average LOICUS accounts for the 80.8% of total direct costs, while antifungal treatment, tests and investigations account for the remaining 19.2%. Limited efficacy of first line antifungal agent is associated with a cost increase of 6% in economic outcomes. Treating patients for fungal infections imposes a high economic burden to hospitals. Significant cost drivers are prolonged LOICUS and treatment failure. Treatment options that result in LOICUS reduction and increased first line efficacy have the potential to reduce hospital cost.

PIN29

A COST CONSEQUENCE ANALYSIS OF A QUADRIVALENT Meningococcal VACCINE (MenACWY-TT) IN CANADA

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OBJECTIVES: Neisseria meningitidis in a leading cause of life-threatening invasive meningococcal diseases (IMD). In most populated Canadian provinces; vaccination with the monovalent vaccine (MenC, against serogroup C) is recommended at one year of age. This study aimed to assess various quadrivalent vaccination strategies (MenACWY-TT covering serogroups A, C, W135 and Y) schedule (12 months with and without booster at 12 or 15 years) in Canada compared to the current strategy.

METHODS: IMD incidence under the different scenarios was estimated using a dynamic model. The cost associated with IMM treatment, IMD sequelae and IMD mortality were estimated. Input data (mortality, rates of sequelae and costs) were retrieved from Canadian statistics and published studies. The time horizon was 50 years. A discount rate of 5% was applied on costs. Costs were estimated from the third party payer (TPP) perspective, and the societal perspective lost. Deterministic and probabilistic sensitivity analyses were conducted. RESULTS: Compared with MenC at 12 months, MenACWY-TT at 12 months was estimated to prevent an additional 862 IMD cases and 76 deaths, 3,362 IMD cases and 353 deaths with a booster at 12 months and 4,077 months was estimated to prevent an additional 862 IMD cases and 76 deaths, 3,362 hepatocellular carcinoma, liver-transplant, and liver-related death. All hepatitis-C-related state transition probabilities were obtained from previously published study. Pharmacy retail prices minus rebates (Social code book V, § 130a (1) and § 130a (1) were used. The model was validated with previously published studies and probabilistic sensitivity analysis was performed. RESULTS: Liver-related morbidity and mortality were projected to be reduced by 43% to 53% for a quality adjusted life year (QALY) gain of 0.8 in treatment naïve patients, and 1.4 in treat-ment-experienced patients compared with SOC. The cost per QALY gained on boceprevir-based regimes compared to PR alone was 17,511€ for treatment naïve patients and 16,645€ for treatment experienced patients in comparison with SOC. CONCLUSIONS: In German SHI, the addition of boceprevir to PR in patients with chronic HCV infection reduces liver-related morbidity and mortality in a quantifiable and cost-effective fashion, irrespective of whether patients have been previously treated.

PIN42

COST-EFFECTIVENESS ANALYSIS OF THE COMBINATION-THERAPY TELAPREVIR, Peg-INFNa2a AND Ribavirin in Patients with Chronic Hepatitis-C in Austria

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OBJECTIVES: Due to the fact that an infection with the Hepatitis-C-Virus usually runs chronic, this disease represents a major public health challenge. Hence, the aim of this study is to evaluate the cost-effectiveness of a new combination-standard-therapy Peg-INFNa2a in combination with Ribavirin vs. the combination-therapy Peg-INFNa2a, Ribavirin and Telaprevir. METHODS: For the decision tree analysis model, an extended cost-per-cure-analysis was performed. The data used were derived from a randomized, double-blind, randomized multicenter clinical phase-II/III-Studies by Jacobson et al. (2011) and Zeuzem et al. (2011). The modeling was performed for the time horizons of 24 weeks, 48 weeks, respectively, which correspond to the duration of therapy. Examined patients were adults who were either treatment-experienced or treatment-naive patients. RESULTS: The costs per responder in the group of previous relaper with the Telaprevir-combination-therapy amount to €47,097.89. In the control-group, the standard-care of treatment caused costs per responder to €80,563.05. For the combination-therapy with Telaprevir this results in a cost-advantage of €3,465.16 (42%) per responder: Costs per responder in the previous partial responders amount to €78,541.24 for the Telaprevir-containing regimen. In the control-group, the standard-therapy caused €128,900.89 (cost advantage of €50,559.65 (39%) for the combination-therapy). The costs per responder in the group of previous non-responders amount to €159,790.80 for the triple-therapy, compared to the standard-therapy with €386,702.66, resulting in a cost-advantage per responder of €226,911.86 (59%) for the combination-therapy. Total costs of the Telaprevir-containing therapy with naive-patients were amount to €544,410.52 per responder, compared to the control-group with €643,943.48, causing a cost disadvantage of €104,467.05 per responders (24%) for the combination-therapy with Telaprevir. Across all patient groups, a cost advantage per responder of €50,298.68 (42%) incurred (standard-therapy Peg-INFNa2a and Ribavirin vs. combination-therapy with Telaprevir). CONCLUSIONS: The results of the analysis show that the combination-therapy with Telaprevir is the dominant strategy in the treatment of chronic Hepatitis-C Genotype-1 in Austria.

PIN43

THE USE OF FUTILITY RULES IN ECONOMIC EVALUATIONS WITH DIRECT ACTING AGENTS (DAAs) IN THE TREATMENT OF GENOTYPE 1 HEPATITIS C VIRUS (HCV) FROM A SPANISH HEALTH CARE PERSPECTIVE

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OBJECTIVES: The ESTIMATOR study aims to provide information on clinical and economic outcomes associated with the management of fungal infections across intensive care units (ICUs) in Greece. METHODS: ESTIMATOR was a non-interventional, observational study conducted in 14 ICUs in Greece. Adult patients initiating therapy with a systemic antifungal agent between July 2011 and February 2012 were included. Information on predisposing factors, management and therapeu- tic strategies, clinical outcomes and length of ICU stay (LOICUS) were recorded until end of therapy or death. RESULTS: A total of 155 eligible patients were re- cruited, and a total of 153 ICU courses, with 9,961 patients amount to €7,176,312.67 (cost advantage of €2,167,060.84).
Antimicrobial-resistant infections currently claim at least 50,000 lives each year across Europe and the US alone, with many hundreds of thousands more dying in other areas of the world. Any use of antimicrobials, however appropriate and conservative, contributes to the development of resistance, but widespread unnecessary and excessive use makes it worse. It is worth noting that the three bacteria were selected from a larger group of seven that the World Health Organization (WHO) has highlighted as being key AMR concerns. In addition, if malaria and HIV drug resistance is not tackled, Africa as a continent will suffer greatly, and the debilitating impacts of HIV and TB co-morbidity already seen in many of the poorest parts of the world will likely get worse. And this, is a large part, was driving more and more use of carbapenems in many hospitals in South Africa, including in Cape Town. Although around about 2010, 2011, we weren’t yet seeing carbapenem-resistant Klebsiella and E. coli as problems, we had been seeing carbapenem resistance in Pseudomonas and Acinetobacter, and they were causing major problems on the clinical side. We’d also know from some studies that antimicrobial prescribing was suboptimal, to put it mildly. But even with the increasing laboratory cost, there was a total cost saving of the antimicrobial costs of in South African rands, nearly a quarter of a million grand, which was substantial for one programme in two wards over one year. Antimicrobial prescribing in South Africa using a large pharmacy database: A drug utilisation study Ilse Truter. Article. Full-text available. Jul 2015. Ilse Truter. The primary aim was to determine the general prescribing trends of antimicrobial drugs to patients whose prescriptions were dispensed by community pharmacies. Background: Tetracyclines are used as acne treatment in adolescents worldwide. A large increase in the consumption of antimicrobial agents in Danish primary health care was recently linked to high levels of tetracycline use in adolescents. Methods: Here we closely examine how demographic factors influenced tetracycline use from 2005 to 2014 using consumption data from primary health care use of South Africa. Antimicrobial stewardship programmes in South published the Antimicrobial Resistance (AMR) National Strategy Africa as well as other countries have shown to be successful in response to the preceding WHO global promoting rational antibiotic use, improve patient outcomes strategy for containment of AMR and advocacy by SAASP.13,21 and reduce adverse consequ