Methods: A budget impact model was developed to compare the total direct costs of utilizing vancomycin, linezolid, daptomycin, and “other antibiotics” as a single category. A decision tree was constructed on the basis of clinical guidelines and validated by clinicians. Clinical data and laboratory utilization and cost data were derived from a comprehensive review of over 40 publications. Antibiotic utilization and net drug costs were derived using syndicated data from Arlington Medical Practices (AMPS). RESULTS: On average, the total cost for vancomycin was $229,131 (€235,926), linezolid $234,951 (€235,926), and daptomycin $2,135 (€7,710). Extrapolating these costs to an average German hospital with 300 BSI and 3000 cSSSI patients and increasing daptomycin use from 3% to 1% and 6% to 3% in 2010, respectively, the cost was $601,351 and $3,051,351 per year, respectively. CONCLUSIONS: Using daptomycin for treating cSSSI is budget neutral and using it for bacteremia patients is associated with favorable economic outcomes when compared with other antibiotics.

PIN10  
THE ECONOMIC IMPACT OF ADDING CETAROLINE FOSAMISL TO A US HOSPITAL FORMULARY FOR ACUTE BACTERIAL SKIN AND SKIN STRUCTURE INFECTIONS  
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OBJECTIVES: The aim was to estimate the economic impact of adding ceftaroline fosamil to a hospital formulary in the United States. Methods: A three-year hospital budget impact model was constructed with three initial treatment options, CPT, vancomycin + aztreonam, and other vancomycin-containing regimens. The target population was hospitalized adult, ABSSSI patients. Clinical cure rates with initial treatment were assumed to be similar to those from CPT trials. Patients failing initial treatment were assumed to be treated successfully with a second-line antibiotic therapy. Length of stay (LOS), inpatient drug costs (by success or failure with initial treatment), and AE-related costs were estimated based on a large database from over 100 US hospitals. Other model inputs included: annual number of ABSSSI admissions; projected annual case growth rate; proportion of ABSSSI target population receiving ceftaroline-con-taining regimen; expected proportion of ABSSSI target population to be treated with CPT; drug acquisition cost; cost of antibiotic administration; cost of vancomycin-monitoring. A sensitivity analysis using 95% confidence limits of clinical cure rates provided varying estimates. RESULTS: Estimated total cost for treating an ABSSSI patient with CPT was $13,875 vs. $14,117 ($13,804 vs. $14,117) for vancomycin + aztreonam (sensitivity analysis range; $235 to $833) and $71 lower ($13,804 vs. $13,875) than other vancomycin-containing regimens (sensitivity analysis range; ±$74 to $1430). CONCLUSIONS: A sensitivity analysis indicates adding ceftaroline to the formulary does not negatively impact a hospital ABSSSI budget.

PIN11  
COSTS OF ADVERSE EVENTS AMONG PATIENTS WITH HUMAN IMMUNODEFICIENCY VIRUS TREATED WITH NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS  
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OBJECTIVES: Assess economic costs of adverse events (AEs) among patients with human immunodeficiency virus (HIV) treated with non-nucleoside reverse transcriptase inhibitors (NNRTIs) including delavirdine, efavirenz, etravirine, and nevirapine. METHODS: Retrospective cohort study using medical and pharmacy claims from US commercial or Medicare supplemental insurance patients between January 1, 2004 to September 30, 2009. Adult HIV-patients initiating NNRTI (no other NNRTIs: $34,993). Annual mean AE associated costs were $609 per patient (88 days) for lipid disorders, $975 (33 days) for depression, $1810 (116 days) for nausea/vomiting, and $27,751 (63 days) for hepatitis. AEs included rash, nausea/vomiting, diarrhea, dizziness, headache, sleep-related symptoms, hepatotoxicity, lipid disorders, depression, anxiety, and self-injury. AE episode-related care during the year post-initialization was identified by claims association and AE management strategies. AEs were selected by propensity of having an AE. “Associated costs” included plan payments and patient copayments directly related to managing AEs. “Incremental costs” of experiencing an AE were calculated as the difference in total costs between patients with AE during the period of each AE episode and non-AE controls (no AE episode selected). RESULTS: The study included 2548 NNRTI users (mean age 43 years; 84% male; 87% efavirenz; 29% experienced an AE). During 1-year post-index period, annual total healthcare cost per patient in this study population was $27,751 (efavirenz; $26,704, other NNRTIs: $34,993). Annual mean AE associated costs were $609 per patient (88 days) for lipid disorders, $975 (33 days) for depression.
CDAD diagnosis based on: age cases within each sub-population were matched to hospitalized controls without (cardiovascular, pulmonary, haematopoietic, and musculoskeletal) and use of RESOURCE UTILIZATION AND COSTS OF TREATING COMPLICATED SKIN AND PIN14 hospital LOS and corresponding hospital costs relative to matched controls. CONCLUSIONS: Treatment-associated AEs are now essential considerations with increased HIV patient longevity. In addition to clinical implications, economic costs should be considered in NNRTI-containing treatment regimen decisions and for estimating cost-effectiveness of therapy.

COST ANALYSIS OF RILPIVIRINE VS EFAVIRENZ FOR TREATMENT OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) Parretti J1, Dikun J2, Datar M2, Yang Y1

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OBJECTIVES: Drugs used in the treatment of Human Immunodeficiency Virus (HIV), which form part of Highly Active Anti-retroviral Therapy (HAART) are usually expensive and may have serious side effects. The objective of this study was to compare the treatment of cho- 

COST OF TREATMENT FAILURE AMONG ADULT OUTPATIENTS WITH MODERATE OR COMPLICATED COMMUNITY-ACQUIRED METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS INFECTIONS TIN J1, SINGH S2

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OBJECTIVES: To determine the incremental economic burden associated with Clotted-duct disease of the breast infection had 2.1 per 100 admissions (95% CI, 0.85-0.94). Aspiration was used to compare the direct medical costs of using Rifampin versus Efavirenz in HAART from the societal perspective. Drug costs were obtained from an online database and the cost associated with Rifampin was higher than $11,610 or if the cost of Rifampin was lower than $6,387, Efavirenz would be the treatment of choice. CONCLUSIONS: From a societal standpoint, Rifampin as part of HAART costs less as compared to Efavirenz. Future studies should aim at comparing Rifampin with other established drugs used in the treatment of VI.

THE INCREMENTAL ECONOMIC BURDEN OF CLOSTRIDIUM-DIFFICILE ASSOCIATED DIARRHEA AMONG HOSPITALIZED PATIENTS AT HIGH RISK OF RECURRENT INFECTION Quimbo RA1, Palli SR1, Singer J2, Strauss M2

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OBJECTIVES: To determine the incremental economic burden associated with Clotstridium-difficile associated diarrhea (CDAD) among patient sub-populations at elevated risk for recurrent CDAD: immunocompromised (IC), prior CDAD, concurrent antibiotic use (cABx), renal impaired (RI), inflammatory bowel disease (IBD), and age ≤ 65 years (elderly) patients. METHODS: CDAD cases hospitalized with a diagnosis of CDAD (ICD-9 CM: 008.45) having > 12 months of prior health plan eligibility and ≥ 18 years of age between January 1, 2005 and October 31, 2010 were identified from the HealthCore Integrated Research Database (HCIRD). CDAD cases were matched to control patients hospitalized without CDAD diagnosis based on: age ≥ 18 years, gender, preceding/in-hospital comorbidities (cardiovascular, pulmonary, haematopoetic, and musculoskeletal) and use of antibiotics. Incremental hospital length of stay (LOS) and hospital costs were calculated for all patients in each arm and the cost was multiplied by the average number of patients using a Gamma distribution. Covariates were determined from post-match univariate analysis of baseline characteristics for each sub-population. RESULTS: Post-match case-to-control ratios ranged from 1.1 to 1.3 for each sub-population (IC: n=3,586 cases, prior CDAD: n=933 cases, cABx: n=4,429 cases, RI: n=5,533 cases, IBD: n=1,206 cases, elderly: n=10,933 cases). Post-match comparisons of baseline characteristics indicated no significant difference (P<0.05) observed in selected characteristics. Compared to controls in all sub-populations, CDAD cases had significantly greater (P<0.001) hospital LOS (mean incremental days [95% CI]: IBD: 8.4 [7.9-9.0], prior CDAD: 2.9 [2.6-3.2], cABx: 7.8 [7.4-8.3], RI: 17.3 [16.6-18.0], IBD: 3.3 [2.9-3.7]; elderly: 7.85 [7.5-8.1]) and hospital costs (mean incremental USD [95% CI]: IC: $31,818 [28.5-35.5]; prior CDAD: 28.8K [19.7-40.0]; cABx: 36.3K [33.3-36.9]; RI: $115.6K [105.2-127.1]; IBD: $11.2K [9.3-13.4]; elderly: $43.2K [40.9-45.7]).

RICHARD D1, DICKINSON H2, HORN D2

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OBJECTIVES: Complicated skin and skin structure infection (cSSSI) is a common and costly condition. Telavancin, a bactericidal lipoglycopeptide antibiotic, was approved in September 2009 as a once-daily therapy for cSSSI. A retrospective analysis was conducted using the Premier database to compare hospital resource utilization and costs of cSSSI patients treated with telavancin or daptomycin.

METHODS: Adults with a hospital admission diagnosis of cSSSI receiving telavancin or daptomycin during 2010 were selected. cSSSI was defined by 2011 IDSA guideline using ICD-9-CM codes. Logistic regression predicting treatment choice and survival was used to adjust for the matched variables: age, gender, race, primary diagnosis of cSSSI, prior MRSA infection, APRI SOI score, hospital location of drug initiation, and obesity. Eighty telavancin admissions were matched to 80 daptomycin admissions. Length of stay (LOS) in the hospital and ICU, and post- drug LOS were analyzed. Costs were calculated using unstudied regression models with gamma distribution and a log link were utilized.

RESULTS: The mean age was 54 years and 64% were male in both groups. Major underlying conditions included MRSA infection (35 vs. 23%), sepsis (26 vs. 28%), diabetes (31 vs. 36%), and/or obesity (46 vs. 50%). Eleven (20±) telavancin vs. daptomycin, respectively. Patients receiving telavancin had less LOS (11.9 ± 14.8 vs. 12.9 ± 8.8 days), ICU-LOS (3.2 ± 4.0 days), total hospital costs ($29,791 vs. $39,054), and pharmacy costs ($4,918 vs. $8,366). Due to large variance in the data, however, none were statistically significant. Total dosing of study drugs was higher 14,450 mg vs. 3,061 mg and daily cost was lower ($283 vs. $367) for telavancin patients. CONCLUSIONS: For all categories, consistently lower resource utilization and costs in the group compared to the daptomycin group, although differences were not statistically significant.


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