an average LOS of only 4.62 days. The total cost per hospitalization was also lowest for HCV at €11,797 and was significantly higher for HIV ($14,595, P < 0.0001). The total cost of non-HCV or HIV hospitalizations was nearly half ($8,859). The probability of death associated with HCV, HIV, and co-infected HCV and HIV was 3.5%, 5.1% and 5.6% respectively while the probability of death associated with non-HIV or HIV-related hospitalizations was only 2.1%. CONCLUSIONS: This is one of few studies to quantify differences in inpatient costs and outcomes associated with HCV, HIV, and HCV and HIV co-infection in a multi-payer US population. Hospitalizations related to HCV and HIV co-infections were longer and more expensive compared to those related to HCV only. Policy and other decision makers should be aware of this burden as strategies to allocate resources are developed.

MANAGEMENT AND COST ASSOCIATED WITH NON-PERMANENT CATHETER-RELATED BACTERIAEMIA CAUSED BY MICROORGANISMS GRAM-POSITIVES IN SPANISH HOSPITAL SETTINGS


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OBJECTIVES: Central venous catheter (CVC) is the main reason for intrahospitalal bacteraemia. The prevalence of nosocomial Catheter-related bacteraemia (CRB) hospitalwide is 6.5%. Gram-positive microorganisms are responsible for more than 50% of these bacteraemia. This study aimed to clear management of nonpermanent CRB caused by Gram-positives and resource use associated. METHODS: A multicenter, observational, transversal cost study was carried out, where every proven CRB was recorded. CRB was defined as a positive culture from the distal end of the catheter plus at least a positive peripheral blood culture involving isolations of the same microorganism. The study was performed from the hospital perspective; therefore only medical direct costs ($2007) were included: hospitalization cost, diagnosis test cost, and analytical cost. Costs were obtained from Spanish databases. Qualitative and quantitative descriptive analyses were made for all the variables. RESULTS: A total of 23 proven CRB and more than 400 suspected catheter infections, which did not meet criteria inclusion, were identified, in 5 Spanish hospitals. Average age was 60.17 (SD 13,799) years old, being 52.2% women. Coagulase-negative Staphylococcus was the micro-organism responsible for the 73.9% of CRB, mostly S. epidermidis (56.5%). S. aureus was isolated in 17.4% cases. Vancomycin was the most frequently prescribed antibiotic (47.8%), followed by teicoplanin (26.1%), with a mean duration of 8.48 (SD 4481) days. Nevertheless, 52% patients received new antibiotics as cloxacilin (20%), vancomycin (20%) and teicoplanin (20%), due to treatment failure, with a mean extra-cost for 14 days of vancomycin 1gm IV q12hr was $257; however, the total 4-week cost of treatment including clinical failures, complications, and OPAT ranged from $8,214–$13,133 (66–86% of cost inpatient, 14–33% outpatient). Important vancomycin cost drivers beyond the inpatient stay ($1219/day) included OPAT cost ($175/day), line placement and complications related to OPAT ($739/patient), physician visits ($192/patient), injection supply/admin costs ($183/patient), and lab work ($98/patient). Antibiotics with favorable dosing/administration profiles reduced OPAT costs and provided opportunity for early discharge. The most sensitive model variables for total cost were the MRSA efficacy rate, length of hospital stay, days of OPAT and line complications. CONCLUSIONS: The model framework and results suggest that the costs associated with generic vancomycin for treatment of cSSTIs may be substantial, with a significant portion of costs extending into the outpatient arena. The budget impact of newer antimicrobials should be evaluated in the context of total medical cost offsets from both inpatient and outpatient perspectives.

DEVELOPING AN ECONOMIC MODEL OF GRAM+ COMPLICATED SKIN AND SOFT TISSUE INFECTIONS (CSSTI) FOR INPATIENT AND OUTPATIENT TREATMENT SETTINGS

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OBJECTIVES: Previous economic analyses of gram + CSSTIs have not included costs related to outpatient parenteral antibiotic therapy (OPAT). The objective of this analysis was to develop a core model framework and appropriate inputs to estimate medical and drug costs within both inpatient and outpatient components of care for treating gram + CSSTIs and serve as a basis for comparing vancomycin with newer antibiotics. METHODS: A 4-week decision model was developed to estimate the direct total, inpatient, and outpatient costs of treating gram + CSSTIs from a payer perspective taking into account successes, failures, and adverse events. Published literature provided clinical inputs and resource use data, with validation by expert opinion. Cost data was derived from literature and standard CPT coding reimbursements. Sensitivity analyses tested efficacy, complication rates, length of stay, and other resource use parameters. Costs were reported in 2008US$. RESULTS: Drug acquisition cost for 14 days of vancomycin 1gm IV q12hr was $257; however, the total 4-week cost of treatment including clinical failures, complications, and OPAT ranged from $8,214–$13,133 (66–86% of cost inpatient, 14–33% outpatient). Important vancomycin cost drivers beyond the inpatient stay ($1219/day) included OPAT cost ($175/day), line placement and complications related to OPAT ($739/patient), physician visits ($192/patient), injection supply/admin costs ($183/patient), and lab work ($98/patient). Antibiotics with favorable dosing/administration profiles reduced OPAT costs and provided opportunity for early discharge. The most sensitive model variables for total cost were the MRSA efficacy rate, length of hospital stay, days of OPAT and line complications. CONCLUSIONS: The model framework and results suggest that the costs associated with generic vancomycin for treatment of cSSTIs may be substantial, with a significant portion of costs extending into the outpatient arena. The budget impact of newer antimicrobials should be evaluated in the context of total medical cost offsets from both inpatient and outpatient perspectives.

DIRECT MEDICAL COSTS AND PRODUCTIVITY LOSS ASSOCIATED WITH VENOUS LEG ULCER

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OBJECTIVES: To understand real-world impacts of venous leg ulcer (VLU) on direct medical costs and productivity in the US and the UK. METHODS: This prospective, observational, multicenter study enrolled 112 patients with VLU (US: 76 and UK: 36). Patients were followed for 12 weeks or until all their ulcers healed in 2007 and 2008. Data were gathered on health care resources used at the study site as well as outside the study site (using patient diaries). Standard national data sources were used to assign unit costs to the resources used. The mean direct medical cost was estimated from the US payer, US provider, and UK National Health Service (NHS) perspectives separately and
stratified by ulcer healing status. Work productivity loss was captured weekly by the Work Productivity and Activity Impairment (WPAI) Questionnaire [1] and professional services is the main cost driver in the treatment of VLU.

RESULTS: The mean direct medical cost of treating VLU during the study period was estimated to be €1772 per patient for US payers, €1294 for US providers, and £1502 in the UK. The largest direct medical cost component was for professional services, or labor (approximately 70%), followed by dressing, compression bandages, and medications. Patients who had at least one ulcer not healed at the end of the study had higher mean costs compared to those patients who had all ulcers healed ($2250 vs. $1012 from the US payer perspective, $1625 vs. $862 from the US provider perspective, and £1770 vs. £965 from the UK NHS perspective). Over the 12-week study duration, more reductions in work productivity loss and activity impairment were found in the healed group vs. the non-healed group. CONCLUSIONS: VLU imposes significant medical costs and work productivity losses. Since the cost of professional services is the main cost driver in the treatment of VLU, new technologies that reduce the professional labor time could significantly reduce the economic burden of venous leg ulcers. [1] Reilly MC, Zbrozek AS, Dukes EM. The validity and reproducibility of work productivity and activity impairment instrument. Pharmacoeconomics 1993;4:353–65.

DIFFERENCE IN HEALTH CARE UTILIZATION IN EUROPE BETWEEN TREATMENT-NAÏVE PATIENTS WITH CHRONIC HEPATITIS C AND PATIENTS WHO FAILED PRIOR THERAPY

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OBJECTIVES: This study aims to assess if hepatitis C patients who had previously failed to achieve sustained virologic response (SVR) following any hepatitis C treatment demonstrate different patterns of health care utilization versus treatment-naïve patients after peginterferon plus ribavirin (PR) therapy in the European Union. METHODS: A retrospective chart review of hepatitis C patients who received PR was conducted in the UK, Germany, France, Italy, and Spain. Descriptive analyses reported standardized annual rates of hospitalizations, emergency/accident visits (EA), family physician/general practitioner visits (GP), specialist visits (SP), and having ≥5 clinical tests (TESTS). Logistic regression models were applied to assess TF status impact on aforementioned outcomes. RESULTS: 165 physicians collected data for 615 patients (baseline data: mean age 43.7 years, 33% female, 90% Caucasian, 85% genotype-1, 26% viral load >1,000,000 IU/mL, 25% with prior treatment failure [TF]). PR was administered for a median of 9.1 months (interquartile range: 5.3–11.9); median post-treatment follow-up was 6.0 months (interquartile range: 2.0–10.0). Fewer TF patients achieved SVR than treatment-naïve patients (43.3% versus 58.3%). Compared with treatment-naïve patients, TF patients had significantly more annual hospitalizations (1.7 versus 0.3), EA (0.7 versus 0.2), GP (4.3 versus 2.0), SP (4.1 versus 2.3), and TESTS (75% versus 85%) (p < 0.05 for all). When controlling for confounding factors (age, weight, gender, genotype, time between diagnosis and treatment initiation, alcohol intake, past intravenous drug use, pre-treatment liver biopsy, steatosis, pre-viral RNA, and SVR status), TF remained an independent factor for significant risk of hospitalization (OR = 4.33, 95% CI = 2.38–7.87), EA (OR = 2.63, 95% CI = 1.49–4.76), GP (OR = 3.45, 95% CI = 2.04–5.65), SP (OR = 2.86, 95% CI = 1.72–4.76) and TESTS (OR = 2.04, 95% CI = 1.14–3.70). Similar results were found in the genotype-1 patients. CONCLUSIONS: Hepatitis C patients who failed prior treatment demonstrated higher health care resource use than treatment-naïve patients after PR therapy, regardless of SVR status.