diagnosis and treatment of hospitalized patients with infections carries a significant cost and suggests potential benefits in reducing time to diagnosis.

PIN47 TREATMENT COSTS FOR UNCOMPLICATED MALARIA AT A SECONDARY HEALTH CARE FACILITY IN NIGERIA

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OBJECTIVES: Malaria treatment in health care facility represents a standard practice in malaria case management. The study estimated the costs of treatment for uncomplicated malaria cases treated within the period. Non-hospital costs were not collected. Total and average financial and economic costs were calculated based on the proportion of uncomplicated malaria cases treated within the period. Non-hospital costs were estimated for uncomplicated malaria. All costs were calculated in local currency, converted to the US Dollars at the 2013 exchange rate.

RESULTS: The hospital spent a total annual economic cost of US$1,612 million (US$1,352.30) for the treatment of uncomplicated malaria, at US$34.66 per case. This represents about 20% of the hospital total expenditure within the year. Personnel accounted for over 81% of the expenditure as the dominant cost driver, followed by antimalarial drugs, 7.8%. Over 40% of outpatient visits were treated for malaria in the facility, leading to increased utilization of hospital resources. Changes in personnel costs, drug prices and malaria prevalence significantly impacted on the study results, indicating the need for improved efficiency in the hospital resource utilization.

CONCLUSIONS: Malaria treatment at the medical center constitutes a considerable amount of hospital expenditure, arising mainly from the cost of personnel and high proportion of uncomplicated cases. For a more effective healthcare system, there is need for more efficient use of hospital resources to prevent wastage and reduce costs to the provider and consumer.

PIN48 ASSESSMENT OF THE COSTS AND OUTCOMES OF ANTIRETROVIRAL THERAPY IN ADULT OUTPATIENTS AT A TERTIARY HOSPITAL IN HARARE, ZIMBABWE

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OBJECTIVES: This study sought to estimate the average outpatient cost of providing adult ART (at an urban health facility) and the cost of ART initiation.

METHODS: A retrospective, ingredients-based costing approach was implemented, as previously described in literature. Medical records for a convenient sample of 120 patients were reviewed 1 year after ART initiation. Subjects were assigned to any one of the following outcome categories based on their status at the end of the study period: in care and responding (IC), in care but not responding (NR), or no longer in care at study site (NIC). Average cost per outcome category was estimated based on resource utilization, in 2013 US$.RESULTS: The overall annual retention in care was 93.3%. At the end of the first 12 months of ART care, 109 (90.8%) of the patients were IC, 7 (6.7%) patients were NIC and 3 (2.5%) patients were NR. The average outpatient cost per patient initiated was US$446. The average cost of a patient in care and responding to ART represented 49.2% of the country’s GDP per capita for the first year following ART initiation.

RESULTS: From private perspective, ART was associated with lower costs (by US$7,670 and R10,551), and greater overall provider revenue (by 2.7% and 13.5%) compared to VAN and TEL, respectively, resulting in LZD ‘dominating’ both treatments. From public perspective, LZD costs (by R1,211 and effectiveness by 2.7%) were greater compared to VAN, resulting in an ICER of R37,564 per successfully treated patients. But compared to TEL, LZD had lower costs (by R2,246) and greater effectiveness (by 13.3%), with LZD being the ‘dominating’ treatment. Majority of treatment costs were related to hospital stay, primarily ICU (73% in private and 50% in public scenario). Several scenarios were tested over long-term treatment (7014 days), and changes in personnel and micro-costing of switch/treatment of therapy (5 or 10 days). Results for all scenarios were similar to the base case from public and private perspectives. CONCLUSIONS: From public perspective, LZD was a cost-effective alternative to VAN and TEL for treatment of MBSA.-confirmed NP, owing primarily to its higher clinical response rate. From public perspective, LZD can be considered cost effective since its ICER vs. VAN is within 2-3 times Brazil’s GDP per capita.

PIN50 SYSTEMATIC LITERATURE REVIEW TO IDENTIFY COST ESTIMATES OF LIVER DISEASE IN THOSE WITH CHRONIC HEPATITIS C VIRUS (HCV) IN THE UNITED STATES

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OBJECTIVES: The objective of the review was to determine the most widely used estimates of United States (US) costs of different stages of liver disease in patients with hepatitis C virus (HCV) in cost-effectiveness analyses (CEA). METHODS: A systematic literature search using predetermined search terms was performed to identify English-language articles that report cost or CEA from 1995 to 2014. Full texts were obtained and reviewed to determine study eligibility on the basis of predefined inclusion and exclusion criteria. All costs were reported in 2014 US$.RESULTS: A total of 53 articles were eligible for review. In primary cost studies, two methods were generally used to derive the disease state costs: micro-costing (using treatment algorithms and unit costs) or statistical analyses of observational databases. The most widely used primary cost estimates in CEA completed before 2011 were those derived using treatment algorithms by Bennett and colleagues (2002) and by Gallant and colleagues (1997). A CEA published in 2012 by Gelber et al. presented updated resource use and costs for all the disease stages based on the Bennett study and added mild/moderate chronic HCV, compensated cirrhosis, and post-SVR health states. The most widely used primary cost estimates in CEA completed after 2011 are those obtained from a large database study by McAdam-Mark and colleagues (2011). This study provides estimates for all liver stages but does not include subcategories for decompensated disease. The estimates from the different sources were not comparable; for example, for cirrhosis and hepatocellular carcinoma Gelabat estimated US$47 and US$457,28 per year, respectively. CONCLUSIONS: There are many estimates of costs of HCV liver disease and these estimates can vary widely due to differences in methodology and cost estimates used in studies. Identifying the differences in these estimates can aid in the selection of the most appropriate inputs for use in economic models.

PIN51 COST-EFFECTIVENESS ANALYSIS OF SOFOSBUVIR BASED COMBINATION THERAPIES AMONG TREATMENT-NAIVE AND PRE-TREATED PATIENTS WITH HEPATITIS C INFECTION

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OBJECTIVES: AASLD/IDSA have recently updated their treatment guidelines to include sofosbuvir-based therapy as recommended regimen for treatment-naive and previously treated patients with hepatitis C (HCV) genotype 1 infection. The purpose of this study was to compare the cost-effectiveness of new therapies vs. peg-IFN and ribavirin (PEGIFN) among treatment-naive patients and compare new combination therapies with and without interferon among patients previously treated with PEGIFN. METHODS: Costs per sustained viral response (SVR) were performed using a decision tree. It was assumed that patients were equally likely to receive either treatment. The model contained clinical data from Phase III clinical trials for PEGIFN (T1), sofosbuvir triple therapy (T2) (NEUTRINO study), and sofosbuvir plus simeprevir and/or ribavirin (T3) (COSMOS study). drug and medical costs were obtained from the National Average Drug Acquisition Costs Database (Medicaid) and literature. Time horizon was 48 weeks for both analyses.

RESULTS: Average cost among the treatment-naive was US$8,796 (25% SVR), US$9,317 for T2 (91% SVR), and US$14,386 for T3 (94% SVR). Among the pre-treated, the average cost was US$14,862 for T2 (72% SVR) and US$18,644 for T3 (94% SVR). Among the treatment-naive, an ICER of US$535 and US$179 per 1%SVR gain was obtained for T2 vs. T1 and T3 vs. T1, respectively. Among the pre-treated, an ICER of US$306 per 1%SVR was obtained for T3 vs. T2. In sensitivity analysis, no other factor but %SVR impacted incremental costs per responder.

CONCLUSIONS: Although sofosbuvir-based combination without interferon was found to be the most expensive treatment it achieved the highest SVR health states. The most widely used primary cost estimates in CEA completed after 2011 are those obtained from a large database study by McAdam-Mark and colleagues (2011). This study provides estimates for all liver stages but does not include subcategories for decompensated disease. The estimates from the different sources were not comparable; for example, for cirrhosis and hepatocellular carcinoma Gelabat estimated US$47 and US$457,28 per year, respectively. CONCLUSIONS: There are many estimates of costs of HCV liver disease and these estimates can vary widely due to differences in methodology and cost estimates used in studies. Identifying the differences in these estimates can aid in the selection of the most appropriate inputs for use in economic models.