PIN39
RECENT TRENDS IN COSTS, LENGTH OF STAY, AND MORTALITY ASSOCIATED WITH INFANT PERTUSSIS HOSPITALIZATIONS IN THE UNITED STATES
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OBJECTIVES: Pertussis incidence has resurged in the US after a nadir in the 1970s and is now one of the most prevalent vaccine-preventable infections. Infants are at greatest risk for severe pertussis-related morbidity and mortality (~50% of infant cases require hospitalization) and account for the majority of cases. We sought to quantify the cost and mortality burden of infant pertussis cases severe enough to prompt hospitalization. **METHODS:** Data on pertussis-related hospitalizations (ICD-9-CM discharge codes 033.0, 033.8, 033.9, 484.3) from the 2000-2010 Nationwide Inpatient Sample (NIS) were retrospectively analyzed. Charges were converted to costs using a 0.5 cost-to-charge ratio. Weighted, nationally representative estimates of costs per admission (in 2013 US dollars), length of stay (LOS), and case fatality rates (CFRs) were descriptively assessed for each year. **RESULTS:** Total numbers of infant pertussis hospitalizations in the US followed a cyclic pattern, starting at 2,282 in 2000 and peaking at 5,343 in 2005, then declining to 1,614 in 2007 before another peak of 3,220 in 2010. Mean [SD] LOS for these hospitalizations fluctuated minimally year-to-year, but an overall (albeit modest) increase was observed: from 3.3 [7.3] days in 2000 to 3.9 [9.5] days in 2010. Mean [SD] cost per admission increased at a greater rate than LOS, from $12,377 [$23,985] in 2000 to $16,339 [$37,224] in 2010. Both LOS and costs were more than double those observed for non-pertussis hospitalizations. CFRs were relatively stable during the period, fluctuating between ~1.5% and 3%, although a peak of 4.4% occurred in 2005 coinciding with the incidence peak. **CONCLUSIONS:** Infant pertussis hospitalizations typically exceed 3 days and are associated with high costs compared with hospitalizations for other causes. Observed CFRs were consistent with the ~2% fatality rate previously derived from CDC surveillance. These data may help inform economic and cost-effectiveness evaluations of future pertussis vaccination programs.

PIN40
COST OF ERYTHROPOIETIN USE IN THE EARLY ACCESS PROGRAM OF TELAPREVIR FOR THE TREATMENT OF METAVIR F3-F4 PATIENTS WITH GENOTYPE 1 HCV IN BRAZIL
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OBJECTIVES: To estimate the direct medical costs associated with the use of erythropoietin (EPO) in the treatment of anemia in patients with advanced fibrosis and cirrhosis (METAVIR F3-F4) receiving telaprevir in association with peg-interferon and ribavirin (TVR+PR) in the early access program in Brazil. **METHODS:** Anemia events and EPO use during TVR therapy were gathered from published results of 97 patients in the early access program (EAP) of TVR in Brazil. Anemia treatment was assumed to be one vial of erythropoietin (EPO) 40.000U per week. Medication unit costs were gathered from a public (SUS) and private payer perspective in Brazil. Sensitivity analysis was carried out for anemia treatment duration and patients with EPO use. A sub-analysis was performed to estimate the cost of anemia treatment with boceprevir (BOC+PR) based on data from the phase 3 clinical trials. **RESULTS:** The cost of EPO during TVR+PR treatment in the EAP /anemic patient was R$ 10.190,04 from a private payer perspective compared to R$ 3.545,06 from a SUS perspective. The average cost of EPO was R$ 4.727,34 /patient from a private payer perspective and R$ 1.644,87 /patient from the SUS perspective. Considering the sensitivity analysis, the total cost of EPO treatment ranged between R$ 382.126,50-R$ 601.212,36 from a private payer perspective compared to R$ 132.960,00-R$ 209.190,40 from a SUS perspective for all patients. Considering EPO use for BOC+PRr, the average anemia treatment cost was R$ 7.851,34 /patient from a private payer perspective and R$ 2.731,86 /patient from a SUS perspective. **CONCLUSIONS:** In a real life setting, TVR+PR was associated with EPO use although few patients discontinued treatment. Compared to EPO use in clinical trials, TVR+PR was associated with less EPO costs than BOC+PR in a real life setting such as the Brazilian EAP.

PIN41
COSTS OF ADVERSE EVENTS ASSOCIATED WITH TREATMENT OF HEPATITIS C VIRUS INFECTION: AN ANALYSIS USING THE QUEBEC PROVINCIAL DRUG REIMBURSEMENT PROGRAM DATABASE
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OBJECTIVES: The objective was to estimate, in a real-life setting, the health care resource utilization, more specifically resource utilization for management of the most common adverse events (AE) associated with current treatment of hepatitis C virus (HCV) infection. **METHODS:** A retrospective study of the Quebec provincial drug reimbursement program (RAMQ) was conducted using a random sample of patients who filed at least one script at the pharmacy for an HCV medication (pegylated interferon and ribavirin (peg-Riba) +/- boceprevir or telaprevir) from 2007 to 2013. Data on medical (excluding nurse visits) and pharmaceutical services were extracted from the RAMQ database. We report health care resources used during HCV treatment including outpatient physician's visits and procedures, emergency visits, hospitalization days and costs associated with adverse events, which included medical services and medications. **RESULTS:** A total of 962 patients who used at least one HCV medication were included in the study (mean age: 47.9 years (SD=10.7), 61.5% males). The proportion of patients who used Peg-Riba only, Peg-Riba + boceprevir and Peg-Riba + telaprevir was 90.5%, 8.2% and 3.4% and treatment duration was 31.5 weeks, 30.4 weeks and 21.6 weeks respectively. During HCV treatment, the average number of health care resources used per patient was 13.2 physician's visits and procedures, 0.8 hospitalization day and 0.8 emergency visit. While receiving HCV treatment, 20.8% of patients required erythropoietin, 33.3% received rash treatments and 48.8% were treated for depression. Estimated costs associated with management of these three AE were CDN$11,199, CDN$85 and CDN$282 per patient respectively, for a total of CDN$2,399,258 for this cohort. **CONCLUSIONS:** HCV treatment is associated with significant health care resource utilization. A high proportion of patients experienced AE for which management was associated with substantial additional costs, especially the anemia treatment. Thus, the cost of AE should be considered in future treatment options.

PIN42
DIRECT COST OF HEPATITIS C FROM THE PERSPECTIVE OF THE HEALTH CARE SYSTEM FOR THE FEDERAL GOVERNMENT EMPLOYEES IN MEXICO
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OBJECTIVES: Estimate the direct cost of hepatitis C in Mexico, from the perspective of the health care system for the government employees, and simulate the economic impact of new antivirals. **METHODS:** We reviewed one hundred clinical records of patients diagnosed with chronic hepatitis C, to know the pattern of resources use at two hospitals of the health care system for the government employees, taking into account the disease stages based on the Child-Pugh. The inclusion criterion was patients with chronic HVC unresponsive to treatment or without the double viral therapy. Unit prices and costs of medical inputs were obtained from official sources. Demographic and clinical variables were also recorded in order to do comparisons. Statistical analysis of data was made with the SPSS. Simulation of economic impact of treatment with antivirals was done based on natural history of disease over a ten years horizon. **RESULTS:** Annual mean costs of disease progression and complications were higher for Child-Pugh C (US$8,739) than B (US$6,319) and A (US$2,430). The estimated cost of one patient in Child-Pugh A stage not responding to peginterferon and ribavirin resulted in US$62,506 taking into account that this patient progress until Child-Pugh C. If the not responding patient could be treated with peginterferon, ribavirin and boceprevir the cost would be US$43,633, while a naive patient would cost US$34,302. **CONCLUSIONS:** Hepatitis C imposes a high economic burden to the health care system for the government employees. The access of this population of patients to new antivirals would result in savings for the institution as well as increasing health benefits for patients.

PIN43
A COST-EFFECTIVENESS ANALYSIS OF PRE-EXPOSURE PROPHYLAXIS (PREP) FOR THE PREVENTION OF HIV IN THE LOS ANGELES COUNTY MSM POPULATION
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OBJECTIVES: To assess the potential trade-offs between aggressive screening ("testing") of the human immunodeficiency virus (HIV), early initiation of treatment ("test-and-treat") with antiretroviral therapy (ART), and pre-exposure prophylaxis (PrEP) among men who have sex with men (MSM) in Los Angeles County (LAC). **METHODS:** A compartmental mathematical model is developed to simulate HIV incidence among 15-65 year old MSMs of LAC over a twenty-year period, and estimate the cost and effectiveness of various HIV interventions using a societal perspective and a lifetime horizon. Annual LAC MSM population data (2000-2010) are estimated from the LAC HIV Surveillance Reports and the RAND California Population and Demographics database. The model input parameter values are derived from the published clinical literature and the Federal Supply and IMS Fee Schedules. For each intervention, we estimate the number of new HIV infections averted, the discounted costs and quality-adjusted life years (QALYs), and the incremental cost per infection averted and cost-effectiveness ratios. Bootstrapping and probabilistic sensitivity analyses are conducted to assess the robustness of the estimates. **RESULTS:** Our preliminary results show that relative to the status quo policy, and at the current US willingness to pay threshold of $100,000/QALY saved, both the PrEP, "testing" and "test-and-treat" strategies are cost-effective ($86,194; $44,746 and $94,520 per QALY saved, respectively). These results are imputable to the preventive and survival benefits of PrEP, knowledge of infection status, and early treatment. The relative effectiveness of PrEP is sensitive to PrEP and ART adherence and coverage rates. All cost-effectiveness profiles improve with ART price reductions following patent expiration. **CONCLUSIONS:** PrEP, "testing" and "test-and-treat" offer cost-effective alternatives to the status-quo policy. The success of the PrEP and "test-and-treat" strategies remains particularly contingent on the uptake rate and adherence to treatment. The lack of evidence on adherence behaviors towards PrEP thus warrants further studies that mimic real-world adherence patterns.

PIN44
COST-EFFECTIVENESS OF SMALL INTESTINAL SUBMUCOSA EXTRACELLULAR MATRIX ON WOUND CLOSURE IN PATIENTS WITH DIFFICULT-TO-HEAL WOUND OF MIXED ARTERIAL/VENOUS AND VENOUS ETIOLOGY
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OBJECTIVES: Determine the cost-effectiveness of small intestinal submucosa extracellular matrix (SISEM) relative to standard of care (SC) on wound closure for the treatment of mixed arterial/venous (A/V) or venous (VLUs) leg ulcers. **METHODS:** A 2-stage Markov model was used to predict the expected costs and outcomes of wound closure for SISEM and SC. Outcome data used in the analysis were taken from an 8-week randomized clinical trial that directly compared SISEM and SC. Patients were followed for 6 months to assess wound closure. Forty-eight patients completed the study; 25 for SISEM and 23 for SC. SC was defined as a standard moist wound dressing. Transition probabilities for the Markov states were estimated from the clinical trial. The economic outcome of interest was direct cost per ulcer-free week. Resource utilization was based on the treatment regimen used in the clinical trial. Costs were derived from standard cost references. The payer's perspective was taken. **RESULTS:** SISEM-treated wounds healed, on average, after 5.4 weeks of treatment, compared to 8.3 weeks for SC wounds ($p=0.02$). Furthermore, complete wound closure was significantly higher for patients treated with SISEM ($p<0.05$), with 20 wounds closed in the SISEM group (80%) and 15 wounds closed in the SC