INFECTI0N – Clinical Outcomes Studies

Hepatitis C burden assessment in France from a Treatment Model: A.H.H. Mabrou D, Dielis B, Zhang H
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OBJECTIVES: A HCV transmission model has been previously developed to describe the dynamics of chronic hepatitis C (CHC) transmission and progression in the US. In this study, we adapted this model to assess the public health burden of HCV in France. METHODS: This mathematical model captures flows across population compartments based on status of injection drug use, CHC infection, diagnosis, genotypes, treatment status, SVR and disease progression. Input values of 2002-2006 from the calibrated model matched closely to published French data. The model was then applied to assess the potential benefits of a hypothetical new CHC regimen (NEW) compared to the current pegylated-interferon/ribavirin (P/R) treatment. Key assumptions in the model included: NEW becomes available in 2011 with 25% incremental SVR rate (70% vs. 45%) from P/R for genotype-1 treatment-naïve patients; 50% SVR rate could be achieved by NEW to re-treat P/R treatment failure patients (TFs); TFs from NEW are not re-treated with NEW; NEW is not used to treat genotype 2/3 patients; P/R durations are consistent with current treatment guidelines by genotypes; diagnosis and treatment rates remain unchanged.

RESULTS: Our model projects that, in contrast to P/R projections, the use of hypothetical NEW could cure 32,885 more patients (as defined by the achievement of SVR), and all of these new cases of CHC, 20,658 more cases of advanced liver diseases (ALD), and 11,100 more deaths. CHC prevalence in 2040 under NEW is also projected to be lower (29,747 fewer cases), mainly among TFs (16,782) and ALD patients (11,201).

CONCLUSIONS: Our model suggests that a novel CHC regimen with higher SVR than the current P/R treatment could potentially have a substantial public health impact in France, mainly due to the associated decrease in the incidence of CHC prevalence, CHC-associated deaths, ALD patients and number of treatment failure patients.

IMPACT OF SUSTAINED VIROLOGICAL RESPONSE (SVR) ON LIFE EXPECTANCY AND QUALITY-ADJUSTED LIFE-YEARS (QALYs) IN CHRONIC HEPATITIS C (CHC) PATIENTS

PINS

A budget impact analysis of three presurgical skin antisepsis protocols

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OBJECTIVES: Surgical site infections (SSIs) occur in up to 11.6% of surgeries, lengthening hospital stays and incurring additional costs. Presurgical antisepsis techniques vary in the rates of SSIs and their impact on a hospital or surgical center’s budget. The purpose of this study was to estimate the net budget impact of three antisepsis techniques. METHODS: A budget impact analysis using ISPOR guidelines was completed. Costs associated with DuraPrep, Chloraprep, and Povidone-Iodine scrub paint (PI) were obtained from current market sources. Rates of SSIs were derived from published clinical studies. Incremental costs to treat SSIs were derived from literature and adjusted to current U.S. dollars using the medical component of the Consumer Price Index. Presurgical skin preparation time estimates were obtained from product literature and costs calculated based on per minute surgical suite charges. Total cost per 100 surgeries was calculated: (antisepsis cost + costs of presurgical preparation + incremental costs to treat SSIs (SSIs cost)) X 100. A total of 100 surgeries per unit budget were prepared in an interactive spreadsheet to modify cost parameters and rates of SSIs.

RESULTS: PI had the lowest product cost but its skin preparation protocol took 5 times longer than DuraPrep or Chloraprep, resulting in large presurgical expenditures. More expensive but faster products (DuraPrep and Chloraprep) were similar in time to apply. DuraPrep provided total cost savings relative to Chloraprep and PI. The total costs per 100 surgeries using DuraPrep, Chloraprep, and PI were $166,920, $274,508, and $216,300 respectively. The cost savings differences were due to: 1) reduced preparation times for DuraPrep (3 mins), Chloraprep (3 mins), and PI (5 mins); 2) lower SSIs (DuraPrep 4.8%, Chloraprep 8.2%, PI 4.8%); and 3) per unit product cost difference (DuraPrep $4.27, Chloraprep $7.08, PI $0.07).

CONCLUSIONS: Based on 100 surgeries, DuraPrep provides both time and cost savings relative to PI and Chloraprep.