parison to non-PEG. The incremental cost per QALY gained is €4289. The weighted average incremental cost-effectiveness ratio, using population-based HCV genotype distribution estimates, for all genotypes was €9473 per QALY. CONCLUSION: Peginterferon alfa-2a (40KD)/ribavirin is a cost-effective therapy for treatment of naïve adults with CHC compared with standard interferon alfa-2b/ribavirin, regardless of HCV genotype.

**PIN32**

COST-EFFECTIVENESS ANALYSIS OF ANTI-VIRAL THERAPIES FOR CHRONIC HEPATITIS B IN TAIWAN

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OBJECTIVES: Due to the high prevalence of hepatitis B infection in some Asian countries and the associated morbidity and mortality, widespread treatment of chronic hepatitis B treatment would have major public health implications in these countries. We evaluated the cost-effectiveness of 3 treatment regimens for chronic hepatitis B (interferon-alpha for 16 weeks, lamivudine for 1 year, and lamivudine for 3 years) vs. no treatment in Taiwan, where government-sponsored universal health insurance have been implemented since 1995.

METHODS: We followed international guidelines on cost-effectiveness analysis and constructed a Markov model to project disease progression and health care expenditure among hypothetical cohorts of 30-year-old chronic hepatitis B patients. We adopted the societal perspective and a 70-year time frame since treatment initiation. Taiwan-specific disease, quality-of-life, and costs information was used for virtually all model parameters. Outcome of interest was the Incremental Cost-Effectiveness Ratio (ICER) in Taiwan Dollar (TWD, US$1 = 34.41TWD on January 13, 2003) per QALY.

RESULTS: For a 30-year-old chronic hepatitis B patient under base-case assumption, projected increase in life expectancy was 1.84 years, 2.01 years, and 3.9 years if s/he was treated with interferon, lamivudine for one year, and lamivudine for three years, respectively. ICERs (TWD/QALY) with 3% annual discount rate were 34,700 for interferon, 17,400 for 1 year of lamivudine, and 46,200 for 3 years of lamivudine. Monte Carlo simulation showed robust results with respect to a wide range of parameter assumptions and each of the three treatment regimens could result in costs-savings. In multi-way sensitivity analysis, the upper range of 95% of the ICERs (with 3% annual discount rate) were 204,100 for interferon, 127,800 for 1 year of lamivudine, and 197,900 for 3 years of lamivudine. CONCLUSIONS: Using lamivudine to treat of chronic hepatitis B among young adults in Taiwan would result in substantial gain in life expectancy.

**PIN33**

MEDICAL RESOURCE USE AND DIRECT MEDICAL COST OF CHRONIC HEPATITIS B VIRUS (HBV) INFECTION IN BRAZIL

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OBJECTIVES: Approximately 350 million patients have Chronic HBV infection worldwide. In Brazil there are more than 3 million chronically infected with HBV. HBV infection leads to chronic liver disease states such as cirrhosis, hepatocarcinoma and the need for transplantation. There is little published data on the cost of HBV in Brazil. The aim of this study is to investigate treatments patterns, medical resource use and treatment costs for each state of HBV infection. METHODS: A questionnaire was developed and a physician survey conducted to obtain information about the treatment patterns for Chronic HBV in Brazil. Data were collected from physicians in seven hospitals, across three different regions of Brazil. Cost information was derived predominantly from the government pay schedule; private hospital services and pharmacy cost tables for medical care in Brazil.

RESULTS: Patients were separated into those managed with and without antiviral medications. Lamivudine and Interferon alfa 2-B were the most common used antiviral agents, with a cost of R$921.17 (year patient) and R$15,424 (year/patient) respectively. The expected annual costs per patient were: R$7,561 (R$1,030, R$17,374) for chronic hepatitis B with antiviral medication, R$326 (R$212, R$512) for chronic hepatitis B without antiviral medication, R$6,279 (R$1,030, R$17,377) for compensated cirrhosis with antiviral medication, R$384 (R$212, R$535) for compensated cirrhosis without antiviral medication, R$16,522 (R$3,392, R$44,336) for decompensated cirrhosis, R$39,895 (R$38,678, R$41,112) for liver transplantation, R$29,858 (R$26,513, R$33,202) for transplant care after the first year and R$2,382 (R$1,731, R$3,032) for hepatocellular carcinoma. CONCLUSIONS: These cost data can be used to model disease burden in Brazil. Cost of antiviral medications influence disease costs in chronic HBV and compensated cirrhosis states. Costs increase dramatically in the more advanced health states, and indicate that slowing progression to these states may be cost savings. One USD = 3 R$ at the moment of the survey.

**PIN34**

DIRECT MEDICAL COSTS ASSOCIATED WITH HEPATITIS B VIRUS (HBV) INFECTION IN THE UNITED STATES

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OBJECTIVES: Nearly 350 million people worldwide are chronically infected with hepatitis B virus (HBV). In the United States (US), the incidence of infection was estimated at 240,000 new infections annually between 1988 and 1994. Complications of HBV infection, such as cirrhosis, liver failure and hepatocellular carcinoma, are the cause of significant morbidity and mortality and may have important economic implications. As part of a multinational effort to examine the burden of HBV infection, our objective was to estimate direct medical costs in the US of six health states associated with HBV infection.

METHODS: We used administrative claims data (including medical and pharmacy utilization) from a national database (PharMetrics) to estimate costs for: 1) chronic HBV; 2) compensated cirrhosis; 3) decompensated cirrhosis; 4) liver transplantation; 5) transplant care >12 months following transplant; and 6) hepatocellular carcinoma. Patients with HBV were identified in each health state using diagnostic and procedure codes specific to the health state, and their utilization was tracked during their time in that health state. To estimate costs, we used reimbursed (paid) amounts and adjusted to 2000 US dollars.

RESULTS: Average annual costs for patients in each health state were: chronic HBV = $873; compensated cirrhosis = $305; decompensated cirrhosis = $15,102; liver transplant = $126,278; transplant care >12 months following transplant = $15,660; and hepatocellular carcinoma = $9478. Medications contributed the largest proportion of costs in chronic HBV and compensated cirrhosis, while hospitalizations were the largest cost component in the other health states. CONCLUSIONS: Our analysis provides estimates of the annual costs of complications of HBV infection in the US and suggests the costs of certain HBV sequelae are significant. The cost estimates can be used in modeling studies, which estimate the burden of illness of HBV and evaluate the cost-effectiveness of interventions targeted at HBV.

A Markov model with eight health states (seroconversion; chronic HBV; compensated cirrhosis; decompensated cirrhosis; HCC; transplant year 1; transplant year 2; death) was used to estimate disease burden from 2002–2012. Model simulation started from 1991; all subjects were started from the chronic HBV state; cycle length was one year; subjects could move between health states annually. Transition probabilities were derived from literature. Costs were derived from a claims database analysis (PharMetrics) and literature. RESULTS: We estimated that 653,101 people had chronic HBV infection in 1991. These formed the base population for our analysis. We estimated that from 2002–2012, there will be 133,661 cirrhosis cases; 41,101 HCC cases; 6653 liver transplants; 133,722 deaths attributable to chronic HBV infection. The total direct medical costs for these cases was estimated at $9.4B over the same time frame. CONCLUSIONS: The results of this analysis shows that HBV infection is a significant burden on the US healthcare system. These results are probably an underestimation of the true burden given that our estimated patient population was half of the CDC estimate and incident cases are not accounted for. The availability of an effective antiviral agent capable of modifying the disease progression would decrease this economic burden to society.

COST-SAVINGS OF AN IV TO PO ACYCLOVIR SWITCH IN A STANDARDIZED HSV PROPHYLAXIS PROTOCOL ON A BMT UNIT

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OBJECTIVES: The objectives of this study are to examine the clinical efficacy of using an oral (PO) acyclovir prophylactic herpes (HSV) protocol before a bone marrow transplant (BMT) versus the intravenous (IV) formulation of acyclovir, as well as the cost-savings that the oral formulation has relative to the intravenous. METHODS: Two retrospective cohorts were examined on the UCSF Medical Center Adult BMT/Leukemia Service. The first cohort consisted of 31 patients on the service for either a BMT or Peripheral Stem Cell Transplant (PSCT) in 1996. These patients were started on an IV acyclovir prophylactic protocol. The second cohort consisted of 41 patients on the same service for either a BMT or PSCT in 2001. These patients were started on an oral acyclovir prophylactic protocol. The two main outcome variables include cost per day of acyclovir treatment/prophylaxis and percentage stay on IV acyclovir. Further analyses conducted include subgroup analysis, sensitivity analysis, principal components analysis, linear regression, and an exploratory analysis. RESULTS: This study found that the oral protocol has similar clinical efficacy (2 infection in the PO group and 0 in the IV group) to the IV formu-