effectiveness of HLA-B*5801 genotyping compared to no testing. The incidence of SJS/TEN was estimated based on case reports from Health Product Vigilance Center of Thailand in year 2009. The prevalence of HLA-B*5801 was obtained from Thai population reported in dbMHIC database, while the association of gene and SJ/TEN was based on a meta-analysis. Cost of SJ/TEN management and case-fatality rate were derived from National Inpatient Governmental Hospital Database in year 2007.

We used PGSI5801 DNA detection kit as a genotyping tool with 100% specificity and sensitivity. We varied genotyping costs and selected values that would make the cost-effectiveness values being 100,000 or 300,000 THB/life-year gained. One-way sensitivity analysis was undertaken to identify influential parameters. RESULTS: The estimated life-years (LY) were 21.9999 and 21.9964 for testing and no testing groups, respectively. Setting the genotyping cost as 393 and 1083 THB resulted in a potentially cost-effective scenario of 100,000 and 300,000 THB/ELT, respectively. The most influential parameters were the cost of genotyping and SJ/TEN management.

CONCLUSIONS: Pharmacogenetic testing for HLA-B*5801 appears to be potentially cost-effective if the testing cost falls in the range of 393 and 1083 THB. It was important to note that this analysis has not taken into account sequelae associated with SJ/TEN and has not performed based on the societal perspective yet. Policymakers should consider our findings for guiding health policy during decision-making process.

SYSTEMIC DISORDERS/CONDITIONS – Cost Studies

PSY2

POTENTIAL COST SAVINGS ASSOCIATED WITH FASTER BLEEDING RESOLUTION IN THE INPATIENT TREATMENT OF HEMOPHILIA WITH INHIBITORS

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OBJECTIVES: A US hospital-based economic model was developed to quantify the potential cost savings associated with use of an improved non-immunogenic bypassing agent with faster bleeding resolution, sustained control and a reduced need for retransfusion, and to estimate inpatient cost savings for patients with Hemophilia patients with inhibitors. METHODS: An Excel-based model patterned the inpatient care associated with use of currently available bypassing agents: plasma-derived activated prothrombin complex concentrate (pd-aPCC) and recombinant Factor VIIa (rFVIIa). We used the model to simulate the potential impact of faster bleeding resolution associated with an improved bypass agent by examining a realistic range of potential improvements to the rFVIIa molecule. The model was parametrized with treatment-specific average resource use, service and pharmacy costs, and sourced admission estimates based on a retrospective analysis of the Premier PerspectiveTM Database, including 1218 inpatient stays with an ICD-9 diagnosis of hemophilia A that were identified from 2003–2008. All costs are reported in 2008 USD. RESULTS: In the baseline analysis, the average per-patient costs associated with the inpatient treatment of hemophilia with inhibitors were slightly lower with rFVIIa as compared to pd-aPCC ($78,086 vs. $78,141). The observed cost difference was attributable to an observed difference in the percentage of inpatient stays where the patient was admitted through the ER associated (rFVIIa: 54%; pd-aPCC: 80%). Exploratory sensitivity analyses showed that a potentially faster-acting non-immunogenic treatment (e.g., 10% reduction in length of stay per patient admission and a 10% reduction in average duration of bypass agent therapy per patient admission) could impart appreciable clinical and economic gains ($78,086 vs. $78,141) compared with prFVIIa. CONCLUSIONS: Our analysis showed that the availability of more effective bypassing agents with faster bleed resolution may have the potential to confer significant inpatient cost savings through reductions in length of stay and duration of bypass agent treatment.

PSY3

HEALTH-CARE UTILIZATION AND COST IN PERSONS WITH FACTOR VIII DEFICIENCY: RESULTS OF THE HUGS VA STUDY

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OBJECTIVES: To examine utilization of health care and factor concentrate among persons with hemophilia A receiving care at US Hemophilia Treatment Centers (HTCs).

METHODS: Hemophilia Utilization Group Study (HUGS-Va) is a prospective multicenter study evaluating burden of illness and cost of care in persons with hemophilia A in the United States. Patients or parents of patients <18 from six HTCs completed a standardized interview, including demographics, health insurance coverage, barriers to care and treatment pattern. One-year clinical data and two-year dispensing records were abstracted for health care and factor utilization. Annual factor use and costs were calculated as the average of two-year data. Generalized linear model with Poisson distribution was used to assess the association between factor replacement and emergency room visits after adjusting for covariates.

RESULTS: Of 329 participants (30% adults), 68% had severe hemophilia. Ninety-one percent reported using health services at least once during the year: 65% had a HTC comprehensive evaluation, 31% visited a clinician, 21% had physical therapy, 28% visited the emergency room, and 14% were hospitalized. Emergency room visits per person-year were 58% lower among prophylaxis users (vs.episodic) after adjusting for age, employment, and insurance coverage (RR = 0.42, P = 0.0002). Patients without inhibitors and severe disease had significantly more factor dispensed (4236 u/kg/yr), compared to those with moderate (1089 u/kg/yr) or mild (582 u/kg/yr) disease (P < 0.0001). The average factor cost was $165,188 (median: $104,170) per patient-year in persons without inhibitors and $700,272 (median: $197,621) in patients with inhibitors.

CONCLUSIONS: Patients access an array of comprehensive health services provided by HTCs. Prophylactic infusion of factor may be associated with decreased health-care utilization compared to episodic treatment.