been quantified adopting the perspective of the third party payer, i.e. the National Health Service. To determine cost-effectiveness, we calculated the incremental cost-effectiveness ratio (ICER) as the ratio of the difference in costs between ODP and PP to the difference in number of bleedings. The nonparametric bootstrap procedure was employed to generate Confidence Intervals (CIs). A cost-effectiveness plane and an acceptability curve were created. The cost-effectiveness acceptability curve represents the probability that Prophylactic treatment with Refacto® is cost-effective at all possible values of the maximum acceptable CER appropriate for decision-making. RESULTS: Nineteen patients, aged 23–58 years (mean = 33.2) with a mean of 2.97 events/patient/month (median = 1.67, range: 0.5–15) were enrolled. The incremental costs of PT versus ODT was estimated to be €11,619/month (95% CI €7,649–13,589) with an additional effect of 2.49 bleeding-avoided/month (1.06–3.93). The cost-effectiveness was estimated to be €5184 per bleeding avoided (€1071–9297). If the ceiling CER is €4500 per bleeding-avoided, there is a 50% chance that PT is cost-effective. The likelihood of PT being cost-effective increases to 95% with a ceiling ratio of €9000/bleeding-avoided. CONCLUSIONS: These findings showed prophylaxis with Refacto® in adults with haemophilia was effective. Our cost-effectiveness results can represent the point of reference for other similar evaluations.

**PHM2**

**INPATIENT RESOURCE USE AND COSTS OF TRAUMA IN PATIENTS WITH VS WITHOUT BLOOD TRANSFUSION: EVIDENCE FROM THE HEALTH CARE COST AND UTILIZATION PROJECT DATABASE**

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**OBJECTIVE:** To examine characteristics, length of stay (LOS), and costs associated with trauma-related hospital admissions with and without blood transfusions. METHODS: The 2003 Health care Cost and Utilization Project database was used to examine short-stay acute-care hospital discharges for trauma among adults with and without transfusions. This dataset includes all discharges from 995 hospitals in 35 states in the U.S. Trauma discharges were identified using ICD-9-CM diagnosis and E-codes; evidence of transfusion was inferred from procedure codes. Patient-level information included demographics, hospital characteristics, comorbidities, primary payer, admission source, discharge destination, estimated loss of function (ELOF), LOS, and hospital charges. Costs were estimated by applying hospital-specific cost-to-charge ratios to charges. Determinants of LOS and cost were assessed through multivariate least-squares regression. LOS and costs were log-transformed prior to the multivariate analyses and retransformation following estimation was undertaken employing the smearing method developed by Duan and colleagues. RESULTS: Of the 263,816 trauma-related discharges in 2003, 28,859 (11%) had evidence of blood transfusion. Patients with transfusion were more likely than those without transfusion to be female (68% vs. 52% without hemorrhage), aged 65+ years (76% vs. 47%), major or extreme ELOF (46% vs. 19%), and to die in hospital (6% vs. 2%). After adjusting for covariates and retransformation, patients with transfusion, on average, stayed 1.8 more days and cost an additional $5400 (both p < 0.01). Significant predictors (all p < 0.01) of increased cost included older age; Hispanic and Asian race; care at large, urban, and teaching hospitals; coverage by private (vs. public) payer, admission through the emergency room, increased ELOF, and in-hospital mortality. Predictors of decreased cost included older age, black (vs. white) race, and Midwest region (vs. Northeast). CONCLUSION: Trauma patients with transfusion account for a disproportionate share of inpatient trauma-related resource use and cost.

**PHM3**

**HEPARIN-RELATED THROMBOCYTOPENIA ASSOCIATED WITH MAJOR INCREASE IN HOSPITAL COSTS**

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**OBJECTIVES:** To estimate the incremental hospital costs and related length of stay associated with the development of thrombocytopenia in a general medical/surgical population. METHODS: We included patients from the Complications After Thrombocytopenia Caused by Heparin (CATCH) Registry treated with heparin for ≥96 hours (n = 1997). Hospital costs for all CATCH patients were estimated using hospital cost accounting system results for CATCH Registry patients enrolled at Duke University Medical Center (n = 336). After adjusting for baseline characteristics, and procedures and complications occurring before 96 hours, we estimated incremental hospital costs associated with thrombocytopenia defined prospectively by a platelet count drop to <150 × 10^3/mm^3, a platelet count reduction >50% from admission level, or both. RESULTS: Overall, 28% of CATCH patients receiving heparin for ≥96 hours developed thrombocytopenia. These patients more commonly had a history of MI (23% vs. 15%), heart failure (29% vs. 24%), and experienced more in-hospital death (5.1% vs. 1.1%) than patients who did not develop thrombocytopenia. The total population's average length of stay was 14.5 days with mean hospital costs of $29,523, but both values were significantly greater among patients developing thrombocytopenia (18.0 vs. 13.2 days, and $45,192 vs. $23,527). After adjustment, the development of thrombocytopenia in all groups remained a significant marker for increased hospital costs over patients without thrombocytopenia (incremental costs = $5262 in patients with a platelet count drop to <150 × 10^3/mm^3, $9340 in patients with a platelet count reduction >50% from admission level, and $18,488 in patients meeting both criteria). CONCLUSIONS: The incremental economic impact of thrombocytopenia, experienced commonly among hospitalized patients, is substantial. Strategies that minimize or effectively prevent the development of thrombocytopenia may therefore be economically attractive.

**PHM4**

**SYSTEMATIC REVIEW OF THE COSTS OF HEMATOLOGIC ADVERSE EVENTS IN ADULT CANCER PATIENTS TREATED WITH CHEMOTHERAPY**

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**OBJECTIVES:** Cancer patients receiving chemotherapy commonly experience hematologic adverse events (AEs) which increase the costs of care. This study examined the economic outcomes of neutropenia, thrombocytopenia, and anemia as AEs of chemotherapy treatment. METHODS: A systematic search of the medical literature (1990–2006) was conducted for each AE using costs/economics as search terms. Additional searches were conducted from article bibliographies and conference proceedings (2000–2006). Articles selected were prospective or retrospective studies specifically designed to examine burden of illness, direct medical costs, or cost drivers associated with hematologic AEs in adult cancer patients undergoing chemotherapy.
RESULTS: Of 290 abstracts screened, 65 met selection criteria and were reviewed in detail. The average direct medical costs associated with chemotherapy-induced AEs ranged from $8,400–$13,500 for neutropenia hospitalization, $5,300–$7,500 per thrombocytopenia episode, and $14,500–$114,000 annually for anemia. Key cost drivers for each AE were: neutropenia—hospital length of stay, antibiotics, growth factors, and diagnostic tests; thrombocytopenia—platelet transfusions and major bleeding episodes; anemia—EPO-type drugs and transfusions. Neutropenia and anemia events in patients with hematologic malignancies resulted in direct medical costs more than double compared to solid tumors. Indirect costs were >50% of the direct costs. CONCLUSIONS: Hematologic AEs from cancer treatments result in substantial economic burden for payers, patients, and society. This burden appears particularly heavy for the hematologic malignancies where chemotherapy-induced hematologic AEs represent >20% of the overall cost of treatment. Targeted therapies for hematologic malignancy offer superior outcomes to chemotherapy with reduced AEs. However, the hematologic toxicities of these targeted agents vary and may affect the total cost of treatment of the underlying disease. Therefore, in addition to treatment outcomes, AEs and the cost of treating AEs should be taken into consideration when determining the optimal treatment for patients.

ECONOMIC ANALYSIS OF SURGICAL INTERVENTIONS IN ROMANIAN HAEMOPHILICS

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In Romanian haemophiliacs, because of limited access to clotting factor concentrates, surgical interventions are made especially in case of severe, life-threatening complications.

OBJECTIVE: To realize an economic analysis of orthopedic and surgical interventions. METHODS: In a seven-year period, 37 haemophiliacs (from 224 haemophilia patients registered and treated in Haemophilia Centre Timisoara) underwent 54 surgical and orthopedic interventions. We evaluated: direct medical costs (therapy and hospitalization costs) of these interventions, direct non-medical costs (home-hospital travel costs), indirect costs (morbidity costs; loss of income of family members who forfeit paid employment for haemophiliac home care; average number of days off at school or work), treatment compliance. Data were obtained from patients’ medical charts and from questionnaires administered to patients. RESULTS: Therapy costs represented 91.14% of direct medical costs (85.8% in haemophilia A without high-titer inhibitors, 95.34% in haemophilia B with high-titer inhibitors and 92.52% in haemophilia B patients). Direct non-medical costs represented high percents of mean patient and family income. Mean monthly morbidity cost was €97.5 and loss of income of family members who forfeit employment in order to offer home care for haemophilia patients was €115.04/month. Average number of days off at school/work was 72.59/year. CONCLUSIONS: Insufficient resources lead to severe complications in haemophiliacs, which can be life-threatening, requiring costly surgical interventions. In the absence of home therapy programs and of Comprehensive Haemophilia Care Centers, patients have to travel long home-hospital distances to a hospital where they can receive treatment, delaying substitution administration, which is also responsible for complications appearance. Poor social integration of patients has a negative impact on personal income, affect- ing treatment compliance. It is therefore necessary a better resource allocation for haemophilia treatment, in order to increase direct medical costs and also to offer a better social protection of the patients.