COST-EFFECTIVENESS OF TRANSFUSING BLOOD PLATELETS PREPARED WITH PATHOGEN INACTIVATION TREATMENT IN CHINA

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OBJECTIVE: Viral transmission of current (e.g., HIV) infectious blood-borne pathogens via platelet transfusion is high in China, and emerging pathogens (e.g., SARS) continue to threaten the blood supply despite recent advances in blood-banking procedures and security. The INTERCEPT Blood System (IBS) for platelets has been developed to further reduce pathogen transmission risks during platelet transfusions. The objective of this study was to assess the cost-effectiveness of using random-donor platelets (RDP) processed with IBS in China. METHODS: A literature-based decision analysis model was used to assess the cost-effectiveness of the IBS in four patient populations that account for most of the platelet usage in China: 1) a ten-year old male with acute lymphocytic leukaemia (ALL); 2) a 50-year old male with non-Hodgkin’s lymphoma (NHL); 3) a 60-year old male undergoing heart bypass surgery (CABG); and 4) a 70-year old female undergoing a hip arthroplasty. Pathogen exposure included HIV, HCV, HBV and bacterial contamination. The model compared projected quality-adjusted life-year saved (QALY) and costs for patients receiving untreated vs. treated platelets. RESULTS: The incremental cost per QALY gained by using RDP + IBS vs. RDP ranged in the most conservative scenario from Yuan321,000–Yuan4,665,000. Sensitivity analysis using RDP vs. IBS vs. RDP ranged in the most conservative scenario from Yuan321,000–Yuan4,665,000. The in-hospital mortality rate was 39%. CONCLUSION: RHF7F carries FDA-approval for marketing (in 1999) in bleeding patients with haemophilia A or B who have developed antibody inhibitors to factor VIII or IX. Given the wide range of DRGs and primary diagnoses recorded, substantial off-label use appears to be common medical practice.

A HIDDEN EPIDEMIC AMONG ACUTE CARE INPATIENTS: ECONOMIC AND CLINICAL IMPACTS OF ANEMIA IN SELECTED CHRONIC DISEASES

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OBJECTIVES: 1) To understand the prevalence of anemia among hospital inpatients with selected chronic diseases; and 2) to evaluate current anemia treatment strategy in acute care hospitals. METHODS: Using Premier's PerspectiveTM Comparative database, the largest US hospital database, all inpatients discharged between January, 2003 and December, 2003 with a primary diagnosis of chronic kidney disease, congestive heart failure, diabetes, cancer, AIDS, and rheumatoid arthritis were retrieved. Anemia was identified using ICD codes (280–285). Patient demographics, insurance type, institution characteristics, severity, and anemic treatment patterns were examined. Outcomes variables included length of stay, total cost, and in-hospital mortality. RESULTS: Of 300,494 subjects, close to a quarter (23.5%) were diagnosed with anemia. Prevalence rates varied by disease from 46.1% (chronic renal insufficiency) to 20.2% (diabetes). Only 20.4% anemics received epoetin alfa and 13.7% received iron supplement. Anemic patients were associated with longer length of stay (4.9 vs. 7.6 days, P < 0.01), higher total hospitalization cost ($8014 vs. $11,752, P < 0.01) and elevated in-hospital mortality (4.3% vs. 6.1%). CONCLUSIONS: Anemia is associated with many chronic diseases among acute care inpatient populations. It is often under-treated with less than one third of the anemic patients receiving readily available drugs. When left untreated anemia can be associated with suboptimal clinical and economic outcomes.

RECOMBINANT HUMAN FACTOR VII USE: AN EVALUATION OF PATIENT CHARACTERISTICS AND OUTCOMES FROM AN ELECTRONIC DATABASE OF ACADEMIC HEALTH CENTERS

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OBJECTIVES: To describe patient characteristics and selected outcomes related to the inpatient use of recombinant human factor VII (RHF7) in US academic health centers (AHC). METHODS: All discharges from the fourth quarter 2001 to third quarter 2004 were captured from AHCs participating in the University HealthSystem Consortium’s Clinical Database-Pharmacy. Descriptive statistics were used to evaluate patient demographics and coded diagnoses. Other outcomes of interest included in-hospital mortality, total hospital costs and charges, and length of stay. RESULTS: A total of 37 AHCs were included in the analysis, representing 1889 discharges. The mean patient age was 43 years (SD 23, median 47). Sixty-six percent were male and 51% were white. Ten DRGs accounted for approximately 50% of the cases, with the top 3 most frequently cited being those for tracheostomy (11%), coagulation disorders (9%), and liver transplant (8%). Of the total 645 unique primary diagnoses, 13% were related to chronic liver diseases or seque-