

## PSY32

### COSTS OF A BLOOD TRANSFUSION IN HEMATO-ONCOLOGIC PATIENTS IN A PORTUGUESE HOSPITAL

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**OBJECTIVES:** Anaemia is a frequent adverse event associated with chemotherapy. In the past two decades, erythropoiesis-stimulating drugs have completely changed the treatment and prevention of chemotherapy-associated anaemia. However, these drugs have a high unitary cost, meaning that evaluation of their cost-effectiveness is of great importance. Cost analysis of erythropoiesis-stimulating drugs implies a comparison with the cost of a blood transfusion. This study attempts to estimate the cost of blood in a comprehensive «vein-to-vein» approach, calculating the cost of a blood transfusion carried out at the Immunohemotherapy Service of Instituto Português de Oncologia in Lisbon as treatment for neoplasia-associated anaemia. **METHODS:** Cross sectional study, which evaluated the resources and direct costs, associated with a blood transfusion of two red blood cells units in patients with hemato-oncologic disease. Hospital and National Health System perspectives were applied. Data regarding consumables, human resources, laboratory analysis and occupation of facilities was collected by direct observation for a period of seven consecutive days. Data was collected for blood donation, blood-screening analysis and transfusion itself, at the Instituto Português de Oncologia. Costs for each item were given by the Instituto Português de Oncologia. **RESULTS:** The estimated cost of two red blood cells units transfusion was €676.20, the greatest proportion of which was attributed to blood preparation, analysis and storage. **CONCLUSIONS:** Determining the actual costs in relation to standard medical actions and procedures is essential for a robust analysis of the cost-effectiveness of new drugs. This study evaluated all the costs involved in transfusing two red blood cells units and the results presented are consistent with those obtained by several other authors in European countries.

## PSY33

### CLINICAL AND ECONOMIC OUTCOMES ASSOCIATED WITH BLOOD TRANSFUSION DURING INPATIENT HOSPITALIZATION: AN ANALYSIS OF THE 2004 HEALTH CARE COST AND UTILIZATION PROJECT NATIONWIDE INPATIENT SAMPLE DATABASE

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**OBJECTIVES:** Trauma, surgery, and abnormalities in hemostasis are common causes of excessive bleeding and the need for blood transfusion. Factors such as acute shortages in blood inventory, rising costs of blood products, and inherent risks associated with blood transfusion increasingly warrant limiting the inappropriate use of blood and broader adoption of blood conservation techniques and strategies. The aim of this study was to estimate morbidity, mortality, and resource-use associated with blood transfusion in hospitalized patients in the U.S. in 2004. **METHODS:** The 2004 Healthcare Cost and Utilization Project Nationwide Inpatient Sample was queried to group discharges into Transfused and Non-Transfused cohorts based on International Classification of Diseases, Ninth Revision, Clinical Modification procedure codes for blood transfusion.

Average differences between cohorts in length of stay (LOS) and total hospital charges were calculated. Odds ratios were calculated for mortality and postoperative infection rates. Results are reported after controlling for age, gender, comorbidities, admission type, and diagnosis related group. **RESULTS:** LOS, charges, mortality, and infection were significantly higher in transfused patients than in non-transfused patients. The average difference in LOS was 3.0 days higher among the Transfused cohort ( $p < 0.0001$ ; F test) and average difference in charges were \$8476 higher for the Transfused cohort ( $p < 0.0001$ ; F test) compared to the Non-Transfused cohort. Additionally, the Transfused cohort had a 1.6 times higher odds of death ( $p < 0.0001$ ; Rao-Scott chi-square test) and a 2.3 times higher odds of infection ( $p < 0.0001$ ; Rao-Scott chi-square test) compared to the Non-Transfused cohort. **CONCLUSIONS:** Our study demonstrates that hospitalized patients receiving blood transfusions remain at risk for experiencing adverse clinical and economic outcomes. Raising awareness about the potential negative clinical and economic outcomes of blood transfusion may encourage the adoption of blood conservation techniques and strategies, reduce the need for transfusions, and ultimately, yield meaningful clinical benefits at the individual patient level.

## PSY34

### COSTS AND PATIENT-REPORTED OUTCOMES (PRO) IN GERMAN PATIENTS WITH CHRONIC KNEE AND HIP PAIN

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**OBJECTIVES:** To evaluate costs related to health care resource use and PRO in German patients with chronic knee and/or hip pain, specifically for guideline-, non-guideline- and self-treatment-groups. **METHODS:** Patients ( $n = 126$ ) were consecutively recruited by physicians in general practice ( $n = 49$ ) in 2005 and categorized into the three groups ( $n = 61$  self-treatment,  $n = 19$  guideline-,  $n = 46$  non-guideline-groups). PRO were assessed by SF-36, von Korff Index, and Patient Health Questionnaire Depression (PHQ-D) questionnaires at time of enrollment. Resource utilization data was collected retrospectively for six months. Groups were compared using multivariate general linear modeling (GLM). **RESULTS:** Participants had an average duration of knee and/or hip pain of about 5.4 years, were on average 60 years old, predominantly females (71%), overweight (mean BMI 27.8 kg/m<sup>2</sup>) and unemployed (69%). Patients with self-treatment were younger compared to guideline- or non-guideline patients (54.4 vs. 63.7 vs. 65.5 years, mean age,  $p = 0.0070$ ). Regarding SF-36, von Korff Index, and PHQ-D (with exception of major depressive symptoms) the groups were similar. Mean total societal perspective costs per patient were €210.22 [95%CI 77.47; 342.97] vs. €2886.07 [95%CI 107.93; 5664.21] vs. €1087.50 [95%CI 600.73; 1574.27] (self-treatment-vs. guideline-vs. non-guideline-group, respectively,  $p = 0.0686$ , adjusted by age and employment status). The major cost factors were: in the self-treatment-group, hospitalizations, remedies, and sport activities (29.3%, 27.9%, and 21.9% of the mean total cost per patient, respectively); in the guideline-group, hospitalizations, sick leaves, and remedies (25.8%, 24.6%, and 19.6%, respectively); and for the non-guideline-group, remedies, hospitalizations, and visits to physicians (19.8%, 19.0%, and 13.7%, respectively). **CONCLUSIONS:** PRO in patients with chronic knee and/or hip pain are worse compared to the general reference population in Germany. However, PRO and societal mean total adjusted costs per patient with knee and/or hip pain are comparable among guideline-, non-guideline- and self-treatment-groups.