

and 0.006 in women. **CONCLUSION:** There was an association between height and health-related utility. The determinants of this association are not as yet clear and are likely to be complex involving social, environmental and other factors. Treatments are available to increase the height of children with short stature. This analysis suggests that these treatments would be cost effective depending upon effect and price.

HEMATOLOGICAL DISORDERS

PHM1

EFFECTIVENESS OF EPOETIN ALFA IN REDUCING THE NUMBER OF BLOOD TRANSFUSIONS IN CRITICALLY ILL SICU PATIENTS

Luh VW¹, Barlev A², Kern J³

¹City of Hope National Medical Center, Duarte, CA, USA; ²Covance, San Diego, CA, USA; ³University of Southern California, Los Angeles, CA, USA

OBJECTIVE: To determine whether the administration of epoetin alfa (rHuEPO) reduced the amount of blood transfusions required by patients during surgical intensive care unit (SICU) admission. **METHODS:** A retrospective cohort of all adult patients admitted to the SICU of the LAC + USC Medical Center between January, 2001 and December, 2003, who remained in the SICU for at least five days. Patients who met entry criteria were stratified into two groups based on whether rHuEPO was administered. Series of T-tests were performed using variables such as, demographics, laboratory data, monitoring parameters, medication dosing, intervention histories, and mortality between the groups to determine whether or not any differences existed after stratification. Multivariate stepwise logistic regression analyses were conducted to determine the significant covariates which were associated with rHuEPO administration. Selection bias was adjusted by matching subjects using propensity score methods. **RESULTS:** The primary efficacy end point was the amount of packed red blood cells (PRBC) transfused per patient after day-seven of SICU stay between rHuEPO and non-rHuEPO groups. After matching for likelihood of receiving rHuEPO using propensity scores method, rHuEPO patients received 900.1 ± 1678.2 mL of PRBC after day-seven of SICU stay while non-rHuEPO patients received 875.1 ± 1687.2 mL of PRBC ($p = 0.9165$). There was no statistical difference in transfusion independence between the number of patients in the matched groups who received transfusions after day-seven of SICU stay (rHuEPO 47/100 (47%) vs. non-rHuEPO 51/100 (51%), $p = 0.5715$) or for the last recorded hematocrit (Hct) values of SICU stay (rHuEPO 30.3 ± 5.6 mg/dL, non-rHuEPO 30.0 ± 3.5 mg/dL, $p = 0.5540$). There also was no statistical difference between matched groups for SICU mortality (rHuEPO 11/100 (11%), non-rHuEPO 15/100 (15%), $p = 0.4003$). **CONCLUSIONS:** In our cohort, administration of rHuEPO was not associated with a difference in units of PRBC transfused, transfusion independence, discharge Hct or SICU mortality.

PHM2

IMPACT OF ANEMIA ON IN-HOSPITAL FALLS: A MATCHED CASE-CONTROL STUDY

Mallik AV¹, Coley KC¹, Kirisci L¹, Painter L²

¹University of Pittsburgh, Pittsburgh, PA, USA; ²University of Pittsburgh Medical Center, Pittsburgh, PA, USA

OBJECTIVES: The objective of this study was to determine whether anemia contributes to the likelihood of experiencing an in-hospital fall. **METHODS:** A retrospective case-control study was conducted at the University of Pittsburgh Medical Center between January 1, 1998 and June 30, 2003. To be included as

a case, patients had to be ≥18 years of age, hospitalized for >24 hours, have a hemoglobin (Hgb) test during their stay, and experience an in-hospital fall. Control patients were matched 1:1 on age, gender, race, service, length of stay (±one day), and year of admission. Anemia was assessed using the first Hgb value and defined as Hgb < 12 g/dL for females or Hgb < 13 g/dL for males. A reference fall date was calculated for each control patient by using the same timeframe (e.g. days to fall) as its matched fall case. Drug utilization was identified two-days before the fall date for cases and the reference fall date for controls. Statistics performed were T-tests, chi-square, and logistic regression using "fall" as the dependent variable and comorbidities, drug class, and anemia status as covariates. **RESULTS:** There were a total of 1248 patients identified for study. The mean age was 68 ± 15 years, 49% were female, and 89% were Caucasian. Cases were more likely to have congestive heart failure (23% vs. 19%), chronic kidney disease-CKD (12% vs. 7%), and diabetes (29% vs. 23%) and be receiving antidepressants (27% vs. 21%), benzodiazepines (30% vs. 24%), and anticonvulsants (22% vs. 15%). Regression analysis demonstrated that patients with CKD (OR = 1.8, $p = 0.003$), pneumonia (OR = 1.6, $p = 0.03$), and those receiving antidepressants (OR = 1.3, $p = 0.02$), benzodiazepines (OR = 1.4, $p = 0.007$), and anticonvulsants (OR = 1.5, $p = 0.006$) were more likely to experience an in-hospital fall. **CONCLUSION:** In this case-control study, anemia did not contribute to in-hospital falls.

PHM3

DOES ANEMIA CONTRIBUTE TO LONGER LENGTH OF STAY IN PATIENTS WITH IN-HOSPITAL FALLS?

Mallik AV¹, Coley KC¹, Kirisci L¹, Painter L²

¹University of Pittsburgh, Pittsburgh, PA, USA; ²University of Pittsburgh Medical Center, Pittsburgh, PA, USA

OBJECTIVES: The objectives of this study were to describe the characteristics of patients experiencing in-hospital falls, to identify the prevalence of anemia, and to evaluate whether anemia contributes to longer length of stay. **METHODS:** A retrospective study of patients experiencing an in-hospital fall between January 1, 1998 and June 30, 2003 was conducted at the University of Pittsburgh Medical Center. To be included, patients had to be ≥18 years of age, admitted into the hospital for >24 hours, and have a hemoglobin (Hgb) test during their stay. Demographics, comorbidities, Hgb tests, and drug groups were extracted from a medical record data repository. Anemia was assessed using the last Hgb value prior to the fall date and defined as Hgb < 12 g/dL for females or Hgb < 13 g/dL for males. Statistics included T-tests, chi-square, and a linear regression analysis using length of stay (log transformed) after the fall date as the dependent variable and demographics, comorbidities, drug class, and anemia status as independent variables. **RESULTS:** There were 1518 patients that met study criteria. The mean age was 65 ± 16 years, 49% were female, 81% were Caucasian, and 79% were anemic. Most patients (60%) fell within one week of hospital admission. Anemic patients were more likely to have chronic kidney disease (8% vs. 4%) and gastrointestinal diseases (20% vs. 8%). Drug utilization was similar except that anemic patients were less likely to receive anticonvulsants (20% vs. 26%). A linear regression analysis showed that patients who were younger ($p = 0.01$), had cardiac arrhythmias ($p < 0.001$), pneumonia ($p < 0.001$), and gastrointestinal disease ($p < 0.001$) and those receiving antihistamines ($p = 0.02$) were more likely to have longer lengths of stay. **CONCLUSION:** The majority of patients experiencing an in-hospital fall were anemic, however, anemia did not contribute to increased length of stay.