

## UTILIZATION OF ERYTHROPOEISIS STIMULATING PROTEINS IN HOSPITALIZED PATIENTS

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The benefits of Erythropoiesis Stimulating Proteins (ESPs) are well described in the outpatient setting; however, data is limited on the utilization and benefits of ESPs in hospitalized patients. We sought to describe the patterns of ESP use in a tertiary care hospital setting.

The medical records of all inpatients admitted in the period of 4/1/2006 to 7/1/2006, who were started on an ESP during their hospital stay with no previous record of receiving ESPs were retrospectively reviewed. Data collected included: indication for initiating ESP, dosage, baseline hemoglobin (Hgb), delta Hgb during hospitalization, blood transfusions, inpatient comorbidities, iron studies before ESP, post discharge ESP utilization and the pharmacoeconomic impact on the cost of hospitalization.

A total of 174 patients were identified with a mean hospital stay of 15.1 days. The mean baseline Hgb was 9.1g/dl, mean change in Hgb was 0.14g/dl with 88 patients (50.5%) receiving blood transfusions plus ESP; One hundred and one patients (58.1%) had iron studies. Ninety four patients (54%) were started on ESP for renal related anemia (51% ESRD, 19% ARF on CKD, 25.5% CKD, 4.5% ARF), 24 (13.7%) for cancer related anemia, 2 (1.1%) for active bleeding, 11 (6.3%) for post surgical anemia and 36 (20.6%) without a clear reason identified by the reviewer. Fifty four patients (31%) had active infection, 62 (35.6%) had surgery, 11 (6.4%) had active bleeding and 46 (26.4%) had ICU stays. The mean initial weight based dose was 1.05 mcg/kg for renal related anemia, 2.42 mcg/kg for cancer related anemia, 0.6 mcg/kg in settings of GI bleeding, and 1.4 mcg/kg for post surgical anemia. Forty five patients (25.8%) were continued on ESPs at discharge.

In this study, ESPs were used in a substantial number of patients although a significant percentage did not have proper indications, ancillary testing, dosing regimen and desired effect on Hgb. Further, the use of ESPs increased cost despite lack of clear benefits. Thus, for the future, appropriate use of ESPs in hospital setting should be carefully defined and the full clinical and economic impact examined.