

THE EFFECT OF ANEMIA IN HYPERTENSIVE PATIENTS WITH CHRONIC KIDNEY DISEASE: HOSPITAL COSTS AND LENGTH OF STAY

Sulsky S¹, Luippold RS¹, Bookhart BK², Corral M², Piech CT².

1) ENVIRON Int'l Corp, Amherst, MA, U.S.A.; 2) Ortho Biotech Products, Bridgewater, NJ, U.S.A.

According to the K/DOQI Clinical Practice Guidelines, CKD affects 11% of adults in the U.S. Hypertension (HTN) affects 50%–75% of patients with CKD. HTN is a risk factor for development and progression of kidney disease and development and worsening of Cardio Vascular Disease (CVD) in CKD. Anemia is a common and early complication of CKD and worsens as the disease progresses. The estimated 50 million Americans with HTN are at increased risk for CKD—and subsequently anemia. Hospital discharge records were analyzed to determine the effect of anemia on hospital costs and length of stay (LOS) in HTN patients (pts) with CKD. Hospital discharges for adult pts were identified from the 2004 Nationwide Inpatient Sample of the Hospital Cost and Utilization Project which comprises approximately 90 percent of all hospital discharges in the U.S.

Discharges with HTN, CKD, and anemia were identified by ICD-9-CM codes and were excluded if they had a code for organ transplant, lupus, cancer, chemotherapy, blood transfusions, dialysis and/or DRGs for surgery or trauma. Separate linear regression analyses accounting for survey sampling methods were conducted to determine the effect of anemia, CKD, and both, on hospital costs and LOS. Analyses were adjusted for age, gender, income level (based on zip code), severity of disease, and hospital characteristics to control for the confounding effects of these covariates. Nearly 2% of hospital discharges of pts with HTN included both anemia and CKD and another 5% included CKD alone. In models controlling for the effects of CKD, anemia was associated with increased hospital costs (\$3,378 vs. \$3,562., $p=0.0002$). Likewise, hospital LOS for pts with anemia was 0.24 days longer ($p<0.0001$) after controlling for the effects of CKD. HTN pts with CKD in the inpatient hospital setting had higher hospital costs (\$184) and longer LOS (0.24 days) when an anemia diagnosis was present. Our results indicate that, for HTN pts, anemia poses an additional burden beyond that associated with CKD alone.