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**Title:** The impact of anemia on patients with chronic obstructive pulmonary disease in the community

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**Body:** Background: Anemia of chronic disease (ACD) has been shown to be linked with multi-faceted clinical consequences in patients with chronic obstructive pulmonary disease (COPD) enrolled in clinical trials. The predictive value of ACD has not been evaluated in stable COPD patients in the community. METHODS AND RESULTS: We evaluated 488 patients (9.4%) with stable COPD under the care of a regional nurse-led community respiratory team between June 2008 - November 2010. 86% of patients were on inhaled beta agonists; 43% on long acting anti-muscarinics, 54% on inhaled steroids and 8% on oral steroids. Mean age of the patients was  $73.9 \pm 6.1$  years, 43% were females and mean MRC grade was  $2.2 \pm 0.7$ . ACD was defined as hemoglobin (Hb) between 9-12g/dl. Mean Hb levels were  $14.1 \pm 0.7$ ;  $13.9 \pm 0.3$ ;  $14.0 \pm 0.6$  and  $13.7 \pm 0.2$  g/dL at 0, 6, 12 and 24 months. To rule out iron deficiency we sample serum ferritin. Mean serum ferritin levels in the entire study population were  $242 \pm 15.9$   $\mu$ g/L at the start and  $227 \pm 19.8$   $\mu$ g/L at the end. The prevalence of ACD was  $13.9 \pm 2$  % (+95% CI) and  $14.5 \pm 1.3$ % respectively at the start and end of the study period. 2-year survival was 93% in the entire population; 81% in the anemic group ( $p < 0.001$ ). Risk-adjusted hazard ratio for 24 month mortality were 1.43 (1.19-1.98) for the anemic patients. CONCLUSIONS: ACD is relatively common in ambulatory COPD patients in the community and is associated with worse clinical outcomes. It is also a stronger independent predictor for mortality in the short term.