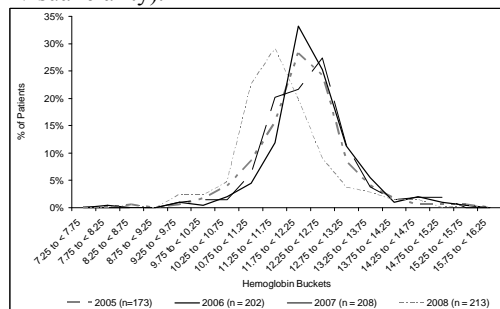


INDIVIDUAL HB VARIABILITY IS MORE DIFFICULT TO MANAGE THAN POPULATION HEMOGLOBIN (HB) MEAN

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Most dialysis units follow a physician protocol to adjust Erythropoiesis Stimulating Agents (ESAs) to achieve the target Hb in the greatest number of patients. This process has been complicated by changing Hb targets and reimbursement schemes. A computer algorithm to dose ESAs for the past 10 years has been used, but continually modified to meet the changing anemia guidelines. The purpose of this study was to evaluate the results of these efforts with regard to Hb targets and secondarily evaluate changes in Hb variability. Hb data from a single practice from January 2005 thru June 2008 was analyzed in 2 ways. The 1st 6 months of Hb values were averaged per patient for each year. In addition, the Hb coefficient of variability (Hb_{CV}) was calculated for the 1st 6 months of each year per patient [$Hb_{CV} = (\text{standard deviation} / \text{mean Hb}) \times 100$]. The figure below provides the distribution of Hb buckets by 0.5 g/dL increments (a line has been used for visual clarity).



Adjustment of the algorithm shifted the proportion of patients into the labeled target range of 10-12g/dL (2005-2007: 36-46% 2008:70%), but did little to reduce Hb variability as the percent of patients achieving healthy subject Hb_{CV} levels ($\leq 4\%$ as defined by Dot et al. 1992) increased only slightly from 10 to 17% ($p=0.53$) from 2005 to 2008. Hb variability was not affected by changing the population's mean Hb. In addition to improving treatment algorithms, focus on factors such as intercurrent events, specifically those including hospitalization, should be investigated.