

RACIAL AND GENDER DIFFERENCES IN PREVALENCE AND PREDICTORS OF ANEMIA OF CHRONIC KIDNEY DISEASE: KEEP AND NHANES 1999-2004

Samy I. McFarlane¹, Shu-Cheng Chen², Adam Whaley-Connell³, James Sowers³, Joseph A. Vassalotti⁴, Moro O. Salifu¹, Suying Li², Changchun Wang², George Bakris⁵, Peter McCullough⁶, Allan J. Collins², and Keith Norris⁷, on behalf of the KEEP Investigators.

¹⁻⁷Attributions for the authors will be provided if accepted as a poster.

Early identification of anemia of chronic kidney disease (CKD) is important for development of preventive strategies. We compared anemia prevalence and characteristics in the National Kidney Foundation Kidney Early Evaluation Program (KEEP) and National Health and Nutrition Examination Survey (NHANES) populations.

Clinical, demographic, and laboratory data were collected from participants of KEEP, a large community-based CKD screening in high-risk adult populations. Anemia was defined as hemoglobin < 13.5 g/dL for men and < 12.0 g/dL for women (Kidney Disease Outcomes Quality Initiative [K/DOQI 2006]), or < 13 g/dL for men and < 12.0 g/dL for women (World Health Organization [WHO]).

Women made up 68.3% of the KEEP population (August 2000-December 31, 2006, $n = 70,069$) and 52% of NHANES 1999-2004 ($n = 17,061$). African Americans represented 33.9% of the KEEP and 11.2% of the NHANES cohorts and Hispanics 12.4% of KEEP and 13.2% of NHANES. WHO anemia was 2.2 times more prevalent among KEEP than NHANES participants (KEEP, 11.8%; NHANES, 5.3%). Anemia (K/DOQI definition) in the KEEP cohort was present in 15.4% of men and 13.2% of women (odds ratio, 1.30, 95% confidence interval 1.23-1.37, $p < 0.01$). Odds of anemia were higher for African American than white participants (2.98, 2.80-3.16, $p < 0.01$).

Anemia was twice as common in the targeted KEEP screening program cohort than the NHANES sample population. African Americans had 3 times the odds of having anemia compared to whites. Targeted screening is effective for identification of anemia in a high-risk population.