A simulated randomized trial suggests similar outcomes with two common strategies for anemia management in elderly dialysis patients with multiple chronic conditions, reports Medical Care.

The researchers used data from the U.S. Renal Data System to emulate a randomized comparative effectiveness trial of two hematocrit target strategies for older adults receiving dialysis who had serious comorbidities. The study compared a “low” hematocrit target of 30.0 to 34.5 percent and a “mid” target of 34.5 to 39.0 percent. The analysis included 22,474 dialysis patients, aged 65 or older, who had both diabetes and cardiovascular disease and who started dialysis between 2006 and 2008. The analysis used follow-up data from 3 to 9 months after the patients started hemodialysis, including the “observational analogs” of intention-to-treat and per-protocol analyses. The models included inverse-probability weighting to adjust for time-dependent confounding by indication. All-cause mortality and a composite of mortality and cardiovascular events were compared between strategies.

The models found no significant differences between the mid- and low-hematocrit strategies. On both intention-to-treat and per-protocol analyses, hazard ratios were nonsignificant for all-cause mortality and for the composite outcome. There was also no evidence of benefit on analysis of patients with hematocrit greater than 30 percent at baseline, of those with serum albumin less than 3.5 g/dL, and excluding those with a poor response to epoetin. Randomized trials have found that anemia management strategies targeting near-normal hematocrit levels (>39.0 percent) may lead to increased cardiovascular risk and mortality. By contrast, few studies have examined the outcomes of the most widely used hematocrit target of 34.5 to 39.0 percent.

For older Americans approaching ESRD, the use of erythropoiesis-stimulating agents (ESAs) and intravenous iron for anemia management has increased in recent years, as has the rate of blood transfusions, according to a study in JAMA Internal Medicine.

The study included U.S. Renal Data System data on 466,803 patients, 67 years or older, who began receiving maintenance dialysis or underwent preemptive kidney transplantation between 1995 and 2010. All patients had uninterrupted Medicare coverage throughout the 2 years before the development of ESRD. Trends in the use of anemia treatments during this time were analyzed. The rates of ESA use during the 2 years before incident ESRD increased from 3.2 percent in 1995 to 40.8 percent in 2007, then decreased to 35.0 percent in 2010. On multivariable analysis, patients in 2010 were nearly 10 times more likely to receive ESAs than were those in 1995: utilization prevalence ratio (PR) 9.85. The median times from ESA use to incident ESRD were 120 and 337 days, respectively.

There was a similarly sharp increase in the use of intravenous iron: from 1.2 percent in 1995 to 12.3 percent in 2010, PR 9.20. At the same time, the rate of blood transfusions approximately doubled: from 20.6 percent to 40.3 percent, PR 1.88. The mean hemoglobin levels at the time of incident ESRD were 9.5 g/dL in 1995, 10.3 g/dL in 2006, and 9.9 g/dL in 2010. Several high-profile studies have examined the use of ESAs and other anemia treatments in patients with ESRD, but less is known about trends in anemia care before ESRD develops. This study shows sharply increased rates of treatment with ESAs and intravenous iron in older adults approaching ESRD from 1995 to 2010. Despite the use of these treatments, the use of blood transfusions also increased. The researchers call for efforts to identify “safe, effective, and economical anemia treatment strategies” for patients with chronic kidney disease [Winkelmayer WC, et al. Trends in anemia care in older patients approaching end-stage renal disease in the United States (1995–2010). JAMA Intern Med March 3, 2014, doi: 10.1001/jamainternmed.2014.87].