



2008 Clinical Performance Goals

1. Anemia Management for Hemodialysis and Peritoneal Dialysis

Medical Review Board (MRB) ESRD Networks 9 and 10
Statement on the use of ESA in CKD patients requiring dialysis.

The MRB is re-examining the Quality Improvement goal for Anemia Management. Currently, The Renal Network's goal is to have 85% or more patients achieve a hemoglobin of 11 gm/dL or greater (http://www.therenalnetwork.org/quality_improvement.html). We believe that the recently published trials^{1,2} and the K/DOQI revised Anemia guidelines (<http://www.kidney.org/news/newsroom/newsitem.cfm?id=380>) make the use of a percent cutoff above a hemoglobin of 11 gm/dL misleading and not in the best interest of patient care. The Renal Network will no longer use this goal as a quality indicator for dialysis units.

Facilities should analyze the monthly hemoglobin results. Review not only the percent above 11, but also the percent in the range 11 to 12 (for our Network, about 35%) and the percent in the range over 12. They should look at the average (mean) hemoglobin over time and review the EPO dosing rules.

This analysis should reveal the intention of the protocol. If the average hemoglobin is over 12, and there is a stable or increasing population of patients over 12, then the intention of the protocol (or target) is greater than 12. It is more important to address the systematic issue of the dosing protocol or rules than it is to react to individual patient's excursions over 12.

The trials do not show an increased risk of death or cardiovascular morbidity for chronic kidney disease patients treated by dialysis randomized to high hemoglobin targets. However, no study of CKD or ESRD patients published thus far shows a cardiovascular or mortality benefit to any group from a hemoglobin over 13 gm/dL.

Since the question of harm is unsettled, in the absence of benefit, the "risk to benefit ratio" favors conservative hemoglobin targets. K/DOQI made a recommendation that the target range generally be between 11 and 12 gm/dL, but made a guideline that the target should not exceed 13 gm/dL.

Historically, despite a gradual increase in the average hemoglobin, the variation around that average (standard deviation) has been consistent. The result is an increasing number of patients with higher hemoglobins as the mean hemoglobin rises.

The purpose of clinical practice guidelines is to advise practitioners making decisions about individual patients. The goal of quality improvement organizations like the Renal Network is to advise medical directors and facilities making decisions about systems of care for populations of patients.

Wolfe et al³ analyzed hemoglobin and SMR data in the CMS database for 5600 dialysis facilities between 1999 and 2002. At the facility level, there was a significantly lower SMR for those facilities with a high percentage of patients with hemoglobins over 11 gm/dL and a reduction in SMR for those facilities with a large improvement in the percentage of patients over 11 gm/dL. There does appear to be slightly higher mortality risk (unpublished analysis) in facilities with a high percentage of patients over 13, however the risk under 11 is greater than the risk over 13.

The MRB recommends that facilities pay attention to patients in both ranges of hemoglobin. The risk in the studies comes from the “target” or “intended” hemoglobin NOT the achieved or “as treated” hemoglobin.

The Renal Network is able to help facilities analyze their hemoglobin data, define frequency distributions and reference values of facilities of similar size.

1. Singh AK, Szczech L, Tank KL, et al. Correction of anemia with epoetin alfa in chronic kidney disease. *New England Journal of Medicine*. 2006; 355:2085-2098

2. Drueke TB, Locatelli F, Clyne N, et al. Normalization of hemoglobin level in patients with chronic kidney disease and anemia. *New England Journal of Medicine* 2006; 355:2071-2084

3. Wolfe RA, Hulbert-Shearon TE, Ashby VB et al. Improvements in Dialysis Patient Mortality Are Associated With Improvements in Urea Reduction Ratio and Hematocrit, 1999-2002. *American Journal of Kidney Diseases*, Vol 45, No 1 (January), 2005:127-135.

2. Adequacy of Dialysis

a. Hemodialysis –

- All patients measured for adequacy every month
- ≥95% of hemodialysis patient population achieve URR ≥65%
- ≥95% of hemodialysis patient population achieve Kt/V Daugirdas II ≥1.2

b. Peritoneal Dialysis –

- All patients measured for adequacy every 4 months
- > 85% of peritoneal patient population achieve a weekly Kt/V urea > 1.7.

3. Nutrition

- A stabilized serum albumin equal to or greater than the lower limit of the normal range (approximately 3.5 g/dl for the bromocresol green method) is the outcome goal
- All hemodialysis patients measured for nutrition every month
- All peritoneal dialysis patients measured for nutrition every month of PD clinic visit

4. Mineral Metabolism Management

a. Hemodialysis –

- All patients measured for calcium and phosphorus every month
- ≥75% of hemodialysis patient population will have a Ca/PO Product of $<55 \text{ mg}^2/\text{dL}^2$
- All patients will be measured for “intact” PTH quarterly
- (K/DOQI range 150-300 pg/mL)

b. Peritoneal Dialysis –

- All patients measured for calcium and phosphorus every month of PD clinic visit ≥75% of peritoneal dialysis patient population will have a Ca/PO₄ Product of $<55 \text{ mg}^2/\text{dL}^2$
- All patients will be measured for “intact” PTH quarterly
- (K/DOQI range 150-300 pg/mL)

5. Vascular Access

- ≥ 50% prevalent fistula use
- ≤ 10% catheter use