

**ESRD Network 11
Medical Review Committee
Recommended Treatment Guidelines
Rationale for 2008 Changes**

The Network 11 Medical Review Committee and Executive Committee have approved two significant changes to the 2008 MRC Recommended Treatment Guidelines. The rationale for these changes is listed below.

Anemia Management.

Given recent studies regarding the adverse consequences of hemoglobin levels above 13 gm/dL^{1,2}, the previous MRC recommendation (80% of patients should have Hgb \geq 11 gm/dL) is no longer satisfactory. Facilities now need to more tightly control the range of hemoglobin levels for their patients. Hemoglobin levels that are either too low or too high lead to increased morbidity and mortality. The most recent update to the K/DOQI anemia management guidelines³ recommends targeting hemoglobin levels between 11 and 12 and avoiding hemoglobin levels greater than 13 gm/dL. The purpose of this revision to the MRC recommended treatment guidelines for anemia management is to address these important issues.

Hemoglobin values appear to be normally distributed, that is, hemoglobin values are distributed above and below a mean hemoglobin value with 68% of all values falling within one standard deviation (SD) above and below the mean value. Targeting a hemoglobin value of 11-12 gm/dL provides the ability to develop an ideal normal distribution for hemoglobin values for all dialysis patients in Network 11. This ideal distribution is centered around a mean hemoglobin value of 11.5 gm/dL. Analysis of past standard deviations of Network 11 data, 80% of all patients would have hemoglobin values between 10 and 13 in this ideal distribution (\pm 1.25 SD). Therefore, \leq 10% of patients would have Hgb levels \leq 10 gm/dL and \leq 10% of patients would have Hgb levels \geq 13 gm/dL. Based on this analysis, facilities will be evaluated based on their normal distributions for hemoglobin levels.

Network 11 will provide facilities with their normal distribution compared to the ideal distribution described above ([insert link](#)). Changes in a facility's anemia management protocol may need to be made when their distribution deviates from the ideal distribution, i.e., when $>$ 10% of patients have mean Hgb levels either \leq 10 gm/dL or \geq 13 gm/dL. The new MRC review criterion (review criteria document page 1) evaluates both tails of the normal distribution in an effort to minimize patient risk. These recommendations take effect for the year 2008 and will be in effect for the Q4 2008 lab data collection.

Vascular Access.

The recommended guideline for vascular access has been changed for 2008. As CMS evaluates the progress made by Networks towards achieving the CMS goal of 66% of hemodialysis patients dialyzing with an AV fistula, it applies a formula to set an annual improvement rate for each Network. Accordingly the Network 11 MRC will set an individual facility improvement rate based on the same formula used by CMS and the recommended treatment guideline will state that each facility will reach its facility goal on an annual basis. Facilities that have reached and maintained the best practice goal of 65% are encouraged to continue improving but will be exempt from the individual facility goal process. The formula used to set the goal is:

(66% [CMS program goal]) – (facility baseline percent [AVF rate in Q4]) x 20%
This formula will apply to all facilities with AVF rate \leq 65%. Facility goal will be 1% or greater depending on the facility AVF rate.

These recommendations take effect in 2008 and will be periodically reviewed by Network staff throughout the year to assess progress towards the goal. Annual improvement results will be reviewed by the MRC as part of the lab data review process.

¹ Drueke TB, Locatelli F, Clyne N, et al. CREATE investigators. Normalization of hemoglobin level in patients with chronic kidney disease and anemia. *N Engl J Med* 355:2071-2084, 2006

² Singh AK, Szczech L, Tang KL, et al. CHOIR investigators. Correction of anemia with epoetin alfa in chronic kidney disease. *N Engl J Med* 355:2085-2098, 2006

³ KDOQI Clinical Practice Guideline and Clinical Practice Recommendations for Anemia in Chronic Kidney Disease: 2007 Update of Hemoglobin Target. *Am J Kidney Dis* 50:3 (September), 479-512, 2007