In-Center Hemodialysis Standing Orders – Erythropoietin (EPO)

ICD-10 code D63.1 – Anemia in chronic kidney disease
Erythropoietin (EPO) refers to epoetin alfa (Epogen®) or epoetin alfa-epbx (Retacrit®) EPO use for in-center hemodialysis is reserved for medical contraindications to Mircera® (requiring facility medical director or CMO approval) or if required due to insurance coverage determinations.

Hemoglobin Target Goal: 10.0-11.0 g/dL

Labs:

a. Check CBC monthly as per in-center hemodialysis standing orders
b. If Hgb <10 g/dL or ≥11.5 g/dL, check Hgb every 2 weeks
c. If Hgb ≥ 12 g/dL and EPO on hold, check Hgb weekly
d. If Hgb is increased or decreased at least 1.0 g/dl since the last Hgb level, adjust EPO per protocol and recheck Hgb at next dialysis treatment. If redraw indicates a further drop by 1.0 g/dL or greater, contact nephrologist for orders.

Maximum dose: EPO dose ceiling is 450 units/kg/week or 30,000 units per week, whichever is lower. Doses ordered above these levels require approval from the facility medical director or CMO.

Table 1 - Epoetin alfa (EPO) Dosing:

EPO doses are based on estimated dry weight. Dose steps are as follows:

Step	Weekly Dose	Per Session Dose for 3x per Week
1	1500 units	500 units
2	2100 units	700 units
3	3000 units	1000 units
4	4500 units	1500 units
5	6000 units	2000 units
6	7500 units	2500 units
7	9000 units	3000 units
8	12,000 units	4000 units
9	15,000 units	5000 units
10	18,000 units	6000 units
11	21,000 units	7000 units
12	24,000 units	8000 units
13	30,000 units	10,000 units

Patient Name_____ **NKC#** _____

1. EPO is administered intravenously (IV) equally **divided into three evenly spaced doses for patients dialyzing three or more times weekly, and into two doses for patients dialyzing twice weekly**. For patients dialyzing twice weekly, round dose down to the nearest 200 units. For patients dialyzing once weekly, contact nephrologist for orders.
2. If pre-dialysis systolic blood pressure is >190 mm Hg, do not administer EPO at the beginning of treatment. If systolic blood pressure falls to <190 mm Hg during hemodialysis, administer EPO during treatment. If EPO is held for the entire hemodialysis session due to persistent systolic blood pressure >190 mm Hg, notify nephrologist and reassess for administration of EPO dose at next hemodialysis session.

Initiating EPO new patients or ESA naïve patients

For new patients or established patients who have not received an ESA within the last 3 months, initiate as follows:

1. Iron repletion per iron standing orders
2. AND
   a. If Hgb < 10 g/dL, then start EPO at 100 units per kg per week, and round down to closest step per Table 1.
   b. If Hgb 10.0-10.4 g/dL, then start EPO at 50 units per kg per week and round down to closest step per Table 1.
   c. If Hgb >= 10.5 g/dL, then do not start EPO until Hgb falls to <10.5 g/dL

EPO Dosing Adjustment

1. Titrate EPO per the following table for patients who have a EPO order that has not been changed in the last 4 weeks:

Table 2 - EPO Dosing Adjustment	
Hgb decreased by greater than or equal to 0.5 g/dL since last Hgb level	
Current Hgb (g/dL)	**Step Dose Change**
Less than 10	2 step dose increase
10.0-10.9	1 step dose increase
11-11.9	No Change
Hgb increased/decreased by less than 0.5 g/dL since last Hgb level	
Current Hgb (g/dL)	**Step Dose Change**
Less than 9.5	2 step dose increase
9.5-9.9	1 step dose increase
10.0-10.4	If Hgb decreased, do 1 step dose increase. If Hgb increased or stayed the same do NOT change
10.5-11.4	No change
11.5-11.9	1 step dose decrease; if patient is on Step 1, do not HOLD
Hgb increased greater than or equal to 0.5 g/dL since last Hgb level	
Current Hgb (g/dL)	**Step Dose Change**
Less than 10	1 step dose increase
10-10.4	No Change
10.5-11.9	1 step decrease; if patient is on Step 1, do not HOLD
Current Hgb (g/dL)	**Dose Change**
Greater than or equal to 12 g/dL	Hold EPO; check Hgb every week

Patient Name_____ **NKC#** _____

2. Do not change EPO dose more frequently than every 4 weeks EXCEPT:
   a. If Hgb falls from above 10 g/dL to less than 10 g/dL, increase dose after 2 weeks.
   b. If Hgb is already less than 10 g/dL and drops greater than 0.5 g/dL, increase dose after 2 weeks.
   c. If Hgb >= 12 g/dL, hold EPO and check Hgb every week. Resume EPO with 1-step decrease as soon as Hgb is < 11.8 g/dL and last dose was administered 2 weeks ago or more. If dose was at step 1 at time of hold, resume EPO at step 1. If Hgb remains >= 12 g/dL for more than 2 months, return to regular Hgb testing policy.
3. Post hospitalization: check Hgb during the first treatment after hospitalization and if the patient is due to receive EPO, administer pre-hospitalization dose. When post hospitalization Hgb result is received, titrate EPO as needed per Table 2.

Conversion from Mircera® to EPO

1. When a patient with a Mircera® order switches to EPO, discontinue Mircera® order.
2. Convert Mircera® to appropriate dose of EPO, per conversion dose chart below. Convert to EPO when the next Mircera® dose was due.
3. If Mircera® was held per protocol, resume ESA when Hgb is below 11.8 g/dL. Use Table 3 to convert the previous Mircera® dose to the EPO Step, then refer to Table 1 and decrease by one Step. **If the converted dose is already at the lowest dose, restart at Step 1.**

Table 3 – Mircera® to EPO Conversion Dose Chart

Mircera® dose	EPO dose per week – total*
30 mcg every ***four*** weeks	1500 units
50 mcg every ***four*** weeks	3000 units
30 mcg every two weeks	4500 units
50 mcg every two weeks	7500 units
60 mcg every two weeks	9000 units
75 mcg every two weeks	12,000 units
100 mcg every two weeks	15,000 units
150 mcg every two weeks	21,000 units
200 mcg every two weeks	30,000 units
Other dose	Contact nephrologist for orders

* EPO administered intravenously (IV) equally divided into three evenly spaced doses for patients dialyzing three or more times weekly, and into two doses for patients dialyzing twice weekly. For patients dialyzing twice weekly, round dose down to the nearest 200 units. For patients dialyzing once weekly, contact nephrologist for orders.

Matthew Rivara, MD — Physician Name (Please Print)

July 1st, 2026 — Date

Patient Name_____ **NKC#** _____