

Primary Care Management: Anaemia in Chronic Kidney Disease

Guideline Responsibilities and Authorisation

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Guideline Review History

Version	Updated by	Date Updated	Description of Changes
3	P Sizeland	13 May 2016	Change in parameters

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1. Overview

1.1 Purpose

Erythropoietin (EPO) management programme led by General Practitioners (GP's), assisted by nephrologists and CKD Nurse Specialists for patients meeting PHARMAC criteria for EPO funding.

2. Clinical Management

2.1 Guideline

ACTION	RATIONALE
<p>Check</p> <ul style="list-style-type: none"> • B12 and folate deficiency • Iron deficiency (absolute iron deficiency: serum ferritin <20ug/L, functional iron deficiency: serum ferritin <100ug/L +/- iron saturation <20%) 	
<p>Check if it fulfils PHARMAC funding criteria for EPO</p> <ul style="list-style-type: none"> • Hb ≤100g/L • AND eGFR ≤45ml/min (with diabetes) • OR eGFR ≤30ml/min (without diabetes) • AND no other obvious cause of anaemia (e.g. blood loss, severe iron deficiency) 	
<p>Complete application form www.waikatodhb.govt.nz/GP under primary care management guidelines – chronic kidney disease or from the Renal Service and fax to CKD nurse Specialist (Fax 07 839 8657)</p> <ul style="list-style-type: none"> • Renal Physician will apply for special authority. • CKD Nurse Specialist will contact GP practice with approval number 	
<p>GP and Practice Nurse</p> <ul style="list-style-type: none"> • Prescribe EPO • Teaches patient to self-administer EPO (or Practice Nurse administers EPO) • Monitors response and changes EPO dose accordingly 	

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2.2 Potential Complications

Precautions with EPO

Hypertension

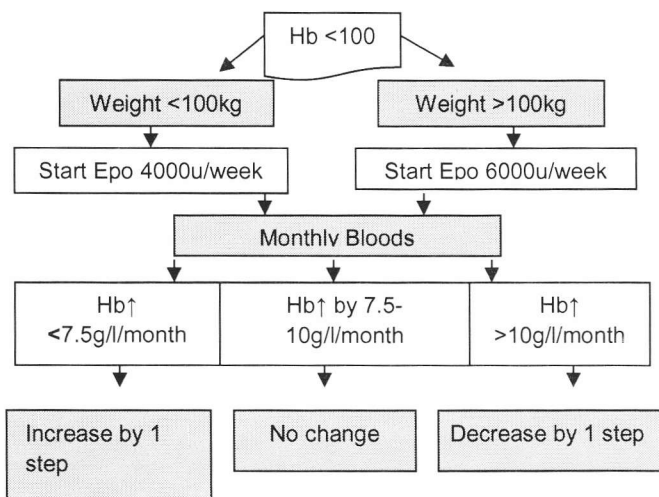
- Check patient BP before starting – BP may increase with EPO
- Withhold EPO if systolic BP >170mmHg or diastolic >100mmHg.

Contraindications for Use of EPO

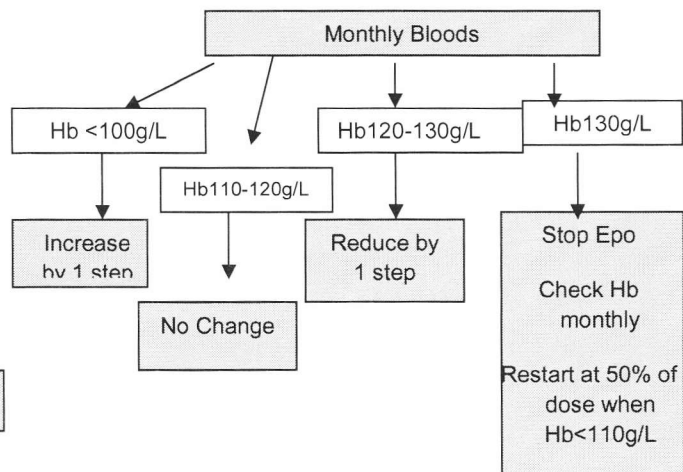
- Uncontrolled blood pressure (BP >180/110)
- Past ischaemic cerebrovascular event
- Active cancer
- Past history of cancer, particularly solid organ cancer.

3. Practical Guidelines for starting EPO

Initiation



Maintenance



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Epo dose step chart	
Weekly dose	Weekly frequency
1000 units	2000 units alternate weeks
2000 units	2000 units x1
3000 units	3000 units x1
4000 units	4000 units x1
6000 units	6000 units x1
8000 units	8000 units x1
10 000 units	10 000 units x1
12 000 units	6000 units x2 weekly
15 000 units	5000 units x3 weekly
18 000 units	6000 units x3 weekly
20 000 units	10 000 units x2 weekly
30 000 units	10 000 units x3 weekly

4. Monitoring

- Monthly CBC, U&E, renal function
- Iron studies three monthly (Serum Fe, ferritin and transferrin saturation)
- Monthly blood pressure until haemoglobin stable, then three monthly

5. Iron Deficiency in CKD

Iron deficiency is common in CKD and is one of the frequent causes for poor response to EPO.

- All patients should be prescribed oral iron (ferrous fumarate 1-3 tablets daily) unless ferritin >500ug/L.
- Some patients may benefit from intravenous iron if:
 - Not tolerating oral iron and ferritin ≤100ug/L and saturation <20%
 - Ferritin ≤100 and saturation <20% despite oral iron
 - Ferritin ≤500, saturation <20% and not responding to EPO
- Complete IV iron application form www.waikatodhb.govt.nz/GP under primary care management – chronic kidney disease and fax to 07 839 8657, attention: CKD nurse.

When to contact CKD Nurse Specialist (07 839 8899) or fax 07 839 8657

- If difficulty achieving target haemoglobin
- To arrange an iron infusion