AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

MR830.1

NORTHERN ADELAIDE LOCAL HEALTH NETWORK

Government of South Australia
SA Health

☐ MH ☐ LMH

PATIENT BLOOD MANAGEMENT CARE PLAN

Surname: U.R. No:

Given: D.O.B.:

Sex:

DO NOT HAND WRITE THESE DETAILS EXCEPT WHEN ADHESIVE BARCODE LABELS ARE UNAVAILABLE.

Surgical Team: Gynaecology / Orthopaedics / Gastrointestinal / Other *(circle)*

Diagnosis/Planned procedure:

Expected time to surgery: < 1 week / <1 month / 1-3 months / 3-6 months / 6-12 months / >12 months *(circle)*

☐ **Letter to GP requesting iron deficiency anaemia screen and management**		☐ Yes ☐ No	Date:
☐ **Hx of iron deficiency:**	☐ Yes ☐ No ☐ Unknown	**Date(s) of Dx:**	**Past Tx:** Oral iron / IM iron / IV iron *(circle)*

- See preoperative Hb assessment and Optimisation template on next page for more information (NBA PBM Guidelines: Module 2)
- For IV Iron Infusions, contact 2F ext. 21352 for booking.
- See IV iron prescribing checklist for indications, contraindications and precautions.

Iron therapy consumer information *(circle preferred language)*
English / Arabic / Greek / Italian / Polish / Turkish / Vietnamese / Croatian / Farsian / Simplified Chinese

FBE and Iron Studies review	Treatment Plan			Referrals		
	Iron therapy not required/	Oral Iron therapy	IV Iron therapy	GP referral to manage IDA/ID	For IV Iron Infusion	Other referrals / Investigations required
No anaemia or iron deficiency (ID) • Hb ≥130 g/L (male) or Hb ≥120 g/L (female) • Ferritin ≥100 mcg/L						
☐ **No anaemia, ferritin 30-99 g/L** • Hb ≥130 g/L (male) or Hb ≥120 g/L (female) • Ferritin <100 mcg/L						
☐ **Iron deficiency anaemia (IDA)** • Hb <130 g/L (male) or Hb <120 g/L (female) • Ferritin <30 mcg/L						
☐ **Possible iron deficiency anaemia (IDA)** • Hb <130 g/L (male) or Hb <120 g/L (female) • Ferritin 30-100 mcg/L • CRP raised • TSAT < 20%						
☐ **Possible anaemia of chronic disease or inflammation or other cause** • Hb <130 g/L (male) or Hb <120 g/L (female) • Ferritin 30-100 mcg/L or Ferritin >100 mcg/L • CRP normal • TSAT < 20%						

Comments:

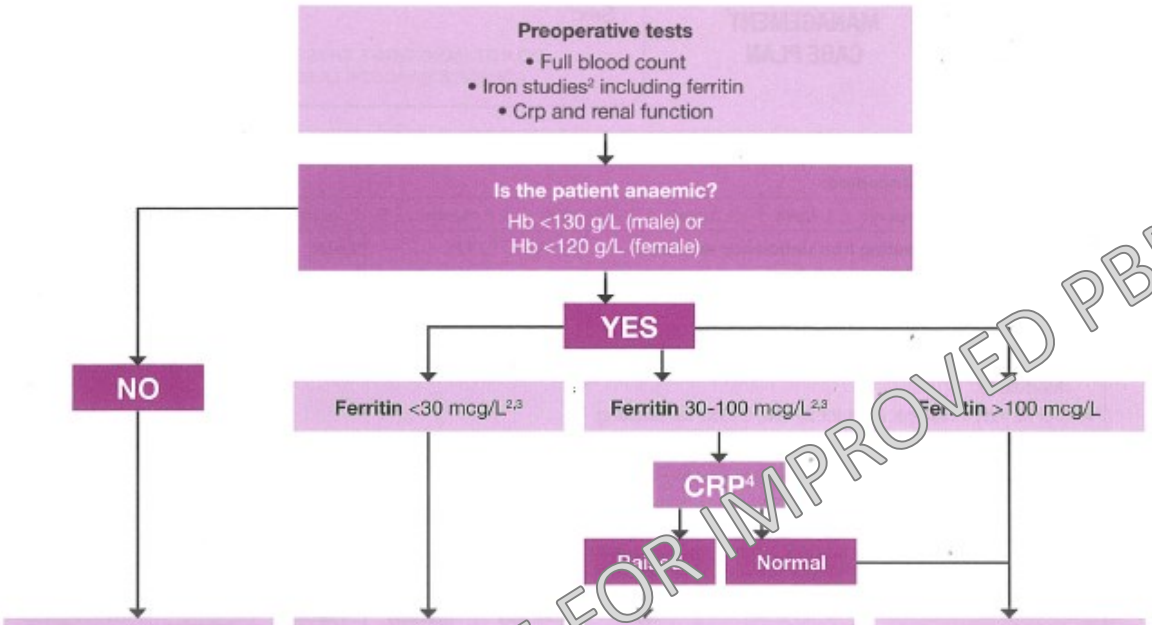
Date:	Name:	Signature	Pager/speed dial

PATIENT BLOOD MANAGEMENT CARE PLAN – MR830.1

National Patient Blood Management Collaborative

NBA PREOPERATIVE HAEMOGLOBIN ASSESSMENT AND OPTIMISATION GUIDE

This template is for patients undergoing procedures in which substantial blood loss is antipated such as cardiac surgery, major orthopaedic, vascular and general surgery. Specific details, including reference ranges and therapies, may need adaption for local needs, expertise or patient groups.



 # Iron therapy

Oral iron in divided daily doses. Evaluate response after one month. Provide patient information material.

IV iron if oral iron contraindicated, is not tolerated or effective; and consider if rapid iron repletion is clinically important (e.g. <2 months to non deferrable surgery).

NOTE: 1 mcg/L of ferritin is equivalent to 8=10 mg of storage iron. It will take approximately 165mg of storage iron to reconstitute 10 g/L of Hb in a 70kg adult. If preoperative ferritin is <100 mcg/L, blood loss resulting in a postoperative Hb drop of ≥30 g/L would deplete iron stores.

In patients not receiving preoperative iron therapy, if unanticipated blood loss is encountered, 150mg IV iron per 10g/L Hb drop may be given to compensate for bleeding related iron loss (1ml blood contains ~0.5mg elemental iron)

Abbreviations

CRP = C-reative protein

GI = gastrointestinal

Hb = haemoglobin

IV = intravenous

MCV = mean cell/ corpuscular volume (fL)

MCH = mean cell/corpuscular haemoglobin (pg)

Footnotes:

1. Anaemia may be multifactorial, especially in the elderly or in those with chronic disease, renal impairment, nutritional deficiencies or malabsorption.
2. A serum ferritin level of less than 30 ug/L for an adult is diagnostic of iron deficiency.
3. Serum ferritin levels of 30-100 ug/L in an anaemic adult may represent iron deficiency if there is coexisting inflammatory disease.
4. In the case of Anaemia in Chronic Kidney Disease, aim for a Ferritin of > 500 Mcg/L and Transferrin Saturations of >= 30% (as per KDIGO 2012)
5. Serum ferritin levels greater than or equal to 30 ug/L up to the method-related upper reference limit demonstrates healthy iron stores as long as co-existing inflammatory disease or hepatocellular damage are not present. (Lipschitz, Cook and Finch 1974)
6. Patients without a clear physiological explanation for iron deficiency (especially men and postmenopausal women) should be evaluated by gastroscopy/ colonoscopy to exclude a source of GI bleeding, particularly a malignant lesion. Determine possible causes based on history and examination; initiate iron therapy; screen for coeliac disease; discuss timing of scopes with a gastroenterologist.
7. CRP may be normal in the presence of chronic disease and inflammation.
8. Consider thalassaemia if MCH or MCV is low and not explained by iron deficiency, or if long standing. Check B12/folate if macrocytic or if there are risk factors for deficiency (e.g. decreased intake or absorption), or if anaemia is unexplained. Consider blood loss or haemolysis if reticulocyte count is increased. Seek haematology advice or, in presence of chronic kidney disease, nephrology advice
9. A raised percentage transferrin saturation in isolation may be the earliest indicator of iron overload.
10. Serum ferritin concentrations typically fall in the last 4 weeks of normal pregnancy. This reflects transfer of organic iron from mother to fetus, rather than any change in iron metabolism. However, a ferritin concentration around 30 ug/L or less is still considered diagnostic of iron deficiency at any stage of pregnancy. As for non-pregnant individuals, ferritin concentrations in the 30-100 ug/L range could indicate iron deficiency in the presence of co-existing inflammatory disease.

For more information on the diagnosis, investigation and management of iron deficiency anaemia refer to Pasricha SR, Flecknow-Brown SC, Allen KJ et al. Diagnosis and management of iron deficiency anaemia: a clinical update. Med J Aust. 2010, 193(9):525-532

Disclaimer: The information above, developed by consensus, can be used as a guide. Any algorithm should always take into account the patient's history and clinical assessment, and the nature of the proposed surgical procedure.

National Patient Blood Management Collaborative