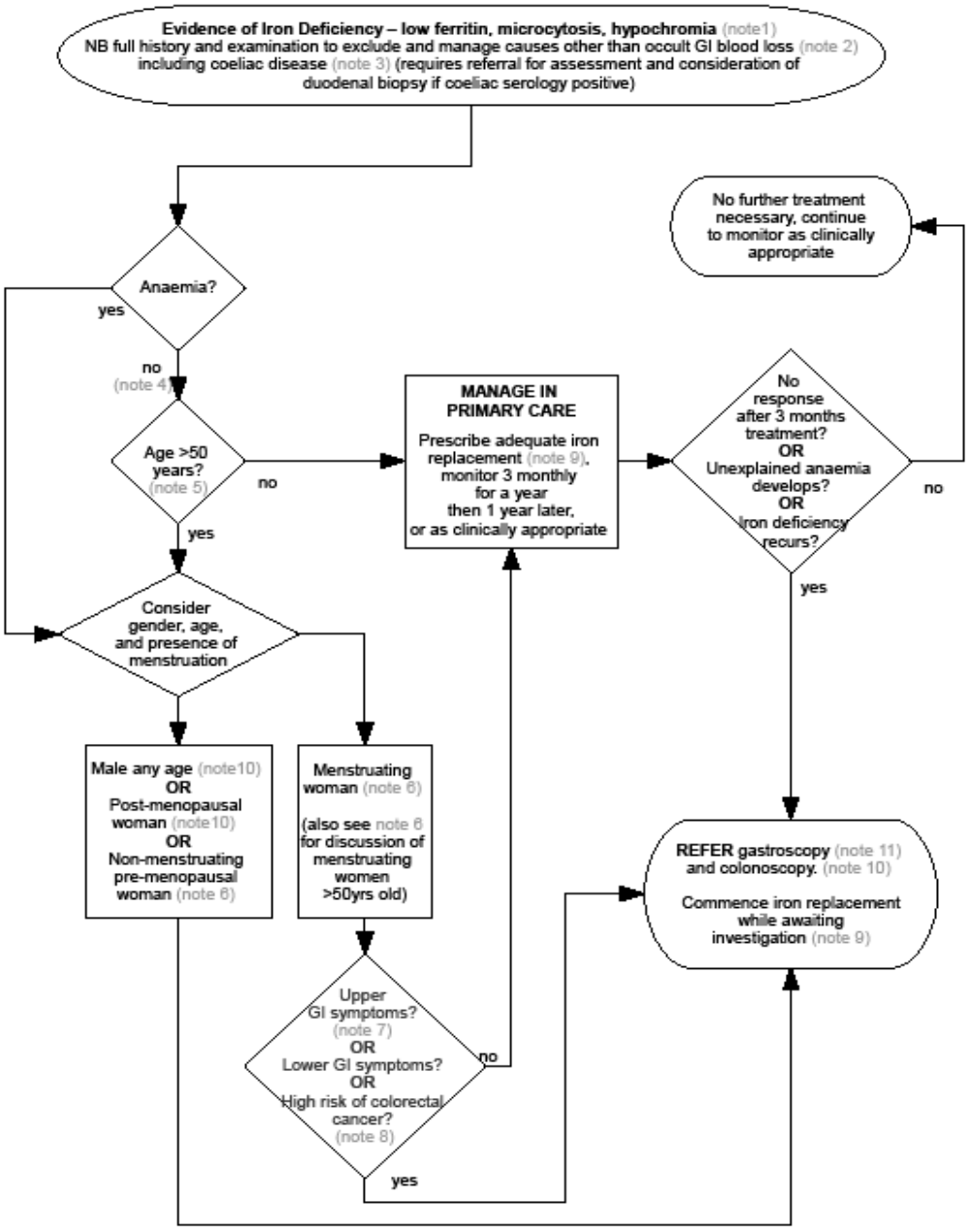
AUCKLAND REGIONAL CLINICAL PATHWAY FOR THE MANAGEMENT OF IRON DEFICIENCY ANAEMIA IN ADULTS

Adapted from the British Society of Gastroenterology Guidelines for the management of iron deficiency anaemia
Goddard et al 2005 http://www.bsg.org.uk/pdf_word_docs/iron_def.pdf



AUCKLAND REGIONAL CLINICAL PATHWAY FOR THE MANAGEMENT OF IRON DEFICIENCY ANAEMIA IN ADULTS – EXPLANATORY NOTES

1. Iron deficiency should be confirmed by a *low serum ferritin, red cell microcytosis or hypochromia in the absence of chronic disease or haemoglobinopathy* eg thalassaemia.

2. *Full history and examination and consideration of possible causes* are recommended before referral for specialist assessment/gastroscopy (see note 11)/colonoscopy:

- Anaemia is defined as haemoglobin below the lower limit of normal for the laboratory performing the assay. The BSG recommend investigating any level of iron deficiency anaemia.

- Family history may be helpful e.g. coeliac disease, bleeding disorder, other rare inherited conditions

- Consider the presence of chronic disease or haemoglobinopathy i.e. the possibility that this is not a true IDA. (see note 1)

- Occasionally chronic iron deficiency may co-exist with anaemia of chronic disease, and in that context iron studies may be equivocal, making it difficult to confirm iron deficiency. Haematologist interpretation of iron studies and soluble transferrin receptor measurements may help to resolve the precise diagnosis – thus discussion with a haematologist is recommended.

- Consider dietary intake, use of aspirin/NSAID's, other significant sources of blood loss (e.g. heavy menstrual blood loss, frequent blood donation, severe epistaxis)

- Those with previous gastrectomy commonly have IDA as a result of poor absorption, but also have a 2-3 fold increase in gastric cancer risk after 20 years. Gastroscopy (see note 11) is recommended for investigation of post-gastrectomy patients >50 years with IDA.

- Perform urine dipstix: haematuria from a renal malignancy accounts for ~1% of all cases of IDA and ~one third of patients with renal cell carcinoma will have anaemia.

- Consider rectal examination.

- Faecal occult blood testing is of no benefit in the investigation of IDA due to its low sensitivity and specificity.

3. *Coeliac disease* accounts for 4-6% of all cases of IDA. This is confirmed at OGD (oesophago-gastro-duodenoscopy), and a biopsy demonstrating gluten enteropathy is necessary for subsidy by Special Authority for funded gluten-free foods (specialist-only application). The lifetime risk of GI malignancy is increased for these patients, and if IDA occurs in such a patient with treated coeliac disease, who is diet-compliant, GI investigation should be considered.

4. *In iron deficiency without anaemia*, there is a very low prevalence of GI malignancy (0.9% of men and post-menopausal women, and 0% of pre-menopausal women). Men >50 and post-menopausal women should be considered for GI screening for the investigation of iron deficiency without anaemia, only after assessment for other causes (see note 2)

5. Age is the strongest predictor of pathology in the iron deficient patient.

6. 5-12% of pre-menopausal women who are menstruating have IDA.

- The commonest overall cause of IDA is menstrual blood loss (20-30% of all IDA). ~30-40% of young menstruating women may have low ferritin with usually normal iron studies and no anaemia or microcytosis - this is termed "latent iron deficiency" and is due to a negative iron balance where iron loss due to menstruation exceeds dietary intake.

- Other causes of iron deficiency in this group of women include increased demands in pregnancy and breast-feeding, significant blood loss at delivery, dietary deficiency or coeliac disease (4% of pre-menopausal women with IDA have coeliac disease).

- Pre-menopausal women with IDA who are not menstruating (e.g. post-hysterectomy, Mirena, Jadelle or other progesterone-only implant, anovulation): When assessing a woman in this group consider the length of time that she has not been menstruating and refer if the anaemia is not clearly caused by recent heavy menstrual bleeding or recent pregnancy-related increased iron demands/ blood loss (or other causes as in note 2). If significant blood loss or significant increased demands (with inadequate replacement) occurred prior to recent cessation of menses – a trial of oral iron and assessment of response to this is recommended. Lack of response within 3 months should prompt referral for assessment.

- The menstruating woman >50 years old is at higher risk of GI pathology and this should be considered when deciding on a time-frame for trial of iron supplementation before referral.

7. *Menstruating women with IDA and upper GI symptoms* should be referred for gastroscopy (see note 11). Anaemia is an alarm for gastric pathology in the presence of dyspepsia.

8. *Menstruating women with IDA and lower GI symptoms or those that are at high risk of Colo-rectal cancer (CRC)* according to the NZGG guidelines for CRC screening (see NZGG guideline), should be referred for colonoscopy.

9. All patients should have *sufficient iron therapy to correct the anaemia and replenish iron stores*.

- This is usually achieved with oral iron - currently ferrous fumarate 200mg bd is the only formulation fully subsidised - until correction of blood parameters, then for a further 3 months to replenish stores.

- If no response after 3 months therapy - check compliance, interaction with other medication (eg omeprazole) or dietary components (eg tea).

- Those intolerant of one formulation of oral iron may do better on another formulation or reduced daily dose.

- Parenteral iron may be considered for those intolerant of oral iron, or non-compliant.

- Patients with symptomatic anaemia should be considered for transfusion, after which oral supplementation is still necessary to replenish stores.

- IDA resistant to therapy or transfusion dependent IDA should be considered for further investigation eg capsule endoscopy or repeat endoscopy if the former is not available.

- Once fully treated with oral iron – monitoring is recommended every 3 months for a year, then a year later to check for relapse.

10. *Blood loss from the GI tract is the commonest cause of IDA in men and post-menopausal women*.

- Common causes are aspirin/NSAID use (10-15%), CRC (5-10%), gastric carcinoma (5%), benign gastric ulceration (5%), and angiodysplasia (5%).

- Uncommon causes include oesophagitis (2-4%), oesophageal carcinoma (1-2%), and other rare conditions.

- IDA is often multifactorial and dual pathology is not uncommon (1-10%)

11. "OGD" is the more accurate term here – stands for oesophago-gastro-duodenoscopy. However the term "gastroscopy", although essentially inaccurate, is better known and used more commonly in primary care, thus has been chosen for the purposes of this pathway. Gastroenterologists prefer the term "OGD" as it more accurately describes the procedure.