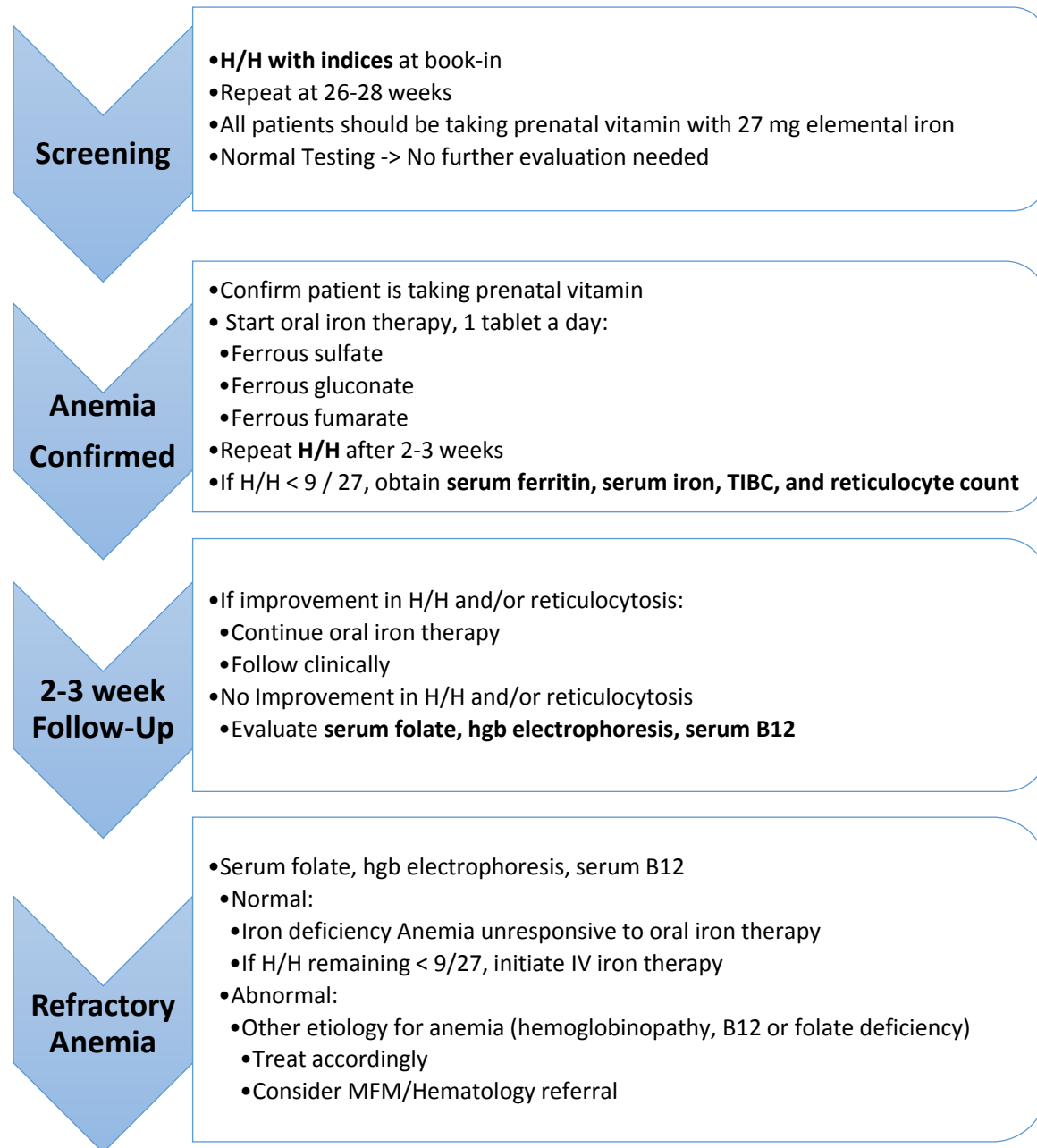


Obstetric Iron Protocol



References:

- i. Treatments for iron-deficiency anemia in pregnancy – WHO, 2016
- ii. UK guidelines on the management of iron deficiency in pregnancy; British Committee for Standards in Haematology; July 2011
- iii. Aetna; Intravenous Iron Therapy; Clinical Policy Bulletin Notes; 10/23/15
- iv. Blue Cross of Idaho; Intravenous Iron Therapy, 2014
- v. American Society of Hematology; Anemia and Pregnancy; Jul 2015

Use of Parental Iron in Pregnancy

- Anemia in Pregnancy is associated with LBW, PTD, and increased perinatal mortality.
- Definition of Anemia:** Hemoglobin or Hematocrit < 5th percentile for the population:

| | Hemoglobin | Hematocrit |
|---------------------------|-------------|------------|
| 1 st Trimester | < 11 g/dL | < 33% |
| 2 nd Trimester | < 10.5 g/dL | < 32% |
| 3 rd Trimester | < 11 g/dL | < 33% |

*Levels < 8.5 g/dl are at the greatest risk

- Lab Evaluation recommended for patients meeting criteria in #1.

| Tests Recommended: | Normal for Pregnancy |
|---------------------------|-----------------------------|
| Serum Iron | 40-175 mcg/dL |
| TIBC | 216-400 mg/dL |
| Serum Ferritin | >10g/dL |
| Reticulocyte Count | |
| CBC w/indices (MCV) | |

- Candidates for IV Therapy** for patients w/ defined anemia:

- Unable to tolerate oral supplementation
- Losing blood too rapidly for oral supplementation to compensate
- GI disorder which may be worsened by oral iron supplementation (i.e. UC and Crohn's)
- Patients who repeatedly fail or are noncompliant with oral therapy
- Hgb <9g/dl antepartum, unresponsive to oral therapy
- Patients w/ iron deficiency and a history of gastric bypass surgery
- High risk patients for blood loss with a need for rapid replacement of iron stores (i.e. placenta accreta/percreta or blood refusal/Jehovah's Witness)

-Pregnancy anemia is not an indication for IV Iron in the absence of above-

- Iron sucrose IV Dosing:**

While single dose of up to 500 mg IV has been approved, doses greater than 300 mg not recommended for optimal efficiency. *Note: Data from cancer patients.*

- Max dosing generally considered 1000mg every week.
- 200 mg every other day until goal realized **OR** 500 mg every week until goal reached.

- Erythropoietin

- Adjunctive use associated with significantly shorter time (less than 2 weeks) to target hemoglobin and improved indices

- Erythropoietin dosing:**

- SQ 10,000 units x 3 over 14 days (Acta Haematologica, 2006) **OR** SQ 300 units/kg x 1.

- Post-Partum Iron vs Transfusion**

IV therapy NOT shown to be more effective than oral supplementation alone except indication of #4 a, c, d, e and f. If acute blood loss and symptomatic - recommend transfusion.

- Calculations for Correction of anemia:

| | |
|-------------------------------------|--|
| Normal term blood volume = 65 ml/kg | Total blood volume (TBV) = 65 ml x weight kg |
| Normal pregnancy Hgb = 14 g/dL | Each gram of hemoglobin has 3.3 mg iron |

Example: 100 kg pregnant patient

- TBV = 100 kg x 65 ml = 6500 ml or 65 dl
- If the hgb level is 8 g/dl the deficit is 6g/dl (14 normal minus 8 actual) with total deficit 390 grams (6g/dl x 65 dl)
- Total RBC iron deficit is 1287 mg (390g of hgb x 3.3 mg iron per gram of hemoglobin)
- Round up to the next nearest dose

May or may not opt to replace iron stores (approx. 5 mg/kg in woman).