DRAFT v1.0 | Evidence-positioning rewrite | UK practice | AGREE II + GRADE

Anaemia in Pregnancy: UK Clinical Guideline

Multi-disciplinary pathway with explicit evidence tiering

Dr Muhammad Mohsin, Consultant Haematologist · 19 April 2026 · aligned with BSH, NICE, RCOG, MHRA, SPS, NHS SCT Programme

> This rewrite separates three tiers of evidence throughout. Every recommendation carries a tier label: **established UK standard**, **specialist consensus** or **good practice**, or **emerging optimisation**. Emerging practice is not a substitute for the established standard until national guidance changes.

0. What is current UK standard and what is emerging practice?

Tier	Meaning	Examples in this guideline
Established UK standard	Written into a current UK national guideline (BSH, NICE, RCOG) or statutory (MHRA, SPC, NHS SCT).	Hb thresholds; ferritin <30 µg/L confirms iron deficiency; oral elemental iron 100–200 mg daily first-line for established IDA; MHRA 30-minute observation after IV iron.
Specialist consensus	Written into a UK guideline as opinion or accepted as pragmatic practice without RCT evidence.	Third-trimester IV iron timing; postpartum IV iron indications; transfusion product detail beyond K-negative.

Tier	Meaning	Examples in this guideline
Emerging optimisation	New evidence that may revise practice in future but is not yet established UK standard.	Alternate-day or lower-dose oral iron; routine booking and 24–28 week ferritin screening (HOW Collaborative 2025); single-dose antenatal IV iron based on RAPIDIRON 2025.

1. Scope and purpose

1.1 Conditions covered

- Iron deficiency anaemia (antenatal and postpartum)
- Megaloblastic anaemia (B12 and folate)
- Anaemia of chronic disease and inflammation
- Inherited haemoglobinopathies (sickle, β-thalassaemia) by cross-reference
- Acquired haemolytic anaemia and microangiopathy (AIHA, HELLP, TTP, aHUS, DIC)
- Physiological dilutional anaemia: recognition and when not to intervene

1.2 Target users

Consultant haematologists and trainees; consultant obstetricians and trainees; midwives; general practitioners; obstetric anaesthetists; pharmacists; commissioners and maternity service leads.

2. Methodology

- AGREE II structure with GRADE-style certainty and strength.
- Sources retrieved in session: PubMed, Cochrane, Scholar Gateway, Scite; direct retrieval of UK authority documents.
- Every recommendation carries an evidence tier: Established UK standard, Specialist consensus, Good practice statement, or Emerging optimisation.
- No recommendation without explicit evidence linkage. No fabricated citation or claim.
- Conflicts of interest: none.

3. Definitions and thresholds

3.1 Haemoglobin thresholds (UK)

Period	Hb threshold
First trimester	< 110 g/L
Second and third trimester	< 105 g/L
Postpartum (first 48 h)	< 100 g/L

Source: BSH 2020. **Established UK standard**

3.2 Iron status

- Serum ferritin < 30 µg/L in pregnancy confirms iron deficiency.
- Ferritin is an acute-phase reactant. A normal or raised ferritin with microcytic indices, low transferrin saturation (<20%), or a raised CRP is compatible with iron deficiency masked by inflammation and should not rule it out alone.
- Transferrin saturation and CRP are appropriate second-line tests where ferritin is equivocal.
- Hepcidin and soluble transferrin receptor are not recommended for routine UK clinical use in pregnancy.

3.3 Macrocytic anaemia

MCV rises physiologically in pregnancy by ~6 fL. True macrocytic anaemia prompts testing for B12 and folate deficiency and consideration of haemolysis, myelodysplasia, alcohol excess, and relevant drugs.

3.4 Physiological (dilutional) anaemia

Plasma volume expansion of 40–50% exceeds the rise in red cell mass and produces a mid-2nd-trimester Hb trough. No intervention beyond dietary advice where Hb remains above the trimester threshold and ferritin is preserved.

3.5 Anaemia of chronic disease in pregnancy

Chronic inflammation drives hepcidin-mediated iron sequestration and may produce anaemia with normal or raised ferritin. Treat the underlying condition; consider IV iron where iron deficiency coexists; refer to haematology where the diagnosis is uncertain. Erythropoiesis-stimulating agents rarely required in pregnancy and only under specialist guidance.

3.6 Neonatal consequences of maternal anaemia

Observational evidence associates maternal iron deficiency anaemia with low birth weight, preterm birth, and reduced neonatal iron stores. A systematic review cited by BSH 2020 found no consistent causal link with infant cognition. These associations support active maternal treatment in the 2nd and 3rd trimesters.

4. Clinical questions

Eleven PICO questions from Stage 1 drive this guideline: screening, thresholds, diagnosis, oral iron, IV iron, postpartum anaemia, transfusion, B12 and folate, haemoglobinopathy (cross-referenced), acquired haemolysis, and governance.

5. Pre-pregnancy optimisation

Recommendation 5.1. Identify and correct iron deficiency before conception

Women planning pregnancy with heavy menstrual bleeding, prior iron deficiency, vegan or vegetarian diet, prior bariatric surgery, or malabsorption should be offered FBC and ferritin. Correct iron deficiency (ferritin < 30 µg/L) before conception where feasible.

Specialist consensus | Conditional | Certainty: Low

Pre-pregnancy iron stores influence the likelihood of third-trimester anaemia. No RCT demonstrates that pre-conception repletion prevents antenatal anaemia.

Recommendation 5.2. Folic acid

All women planning pregnancy: folic acid 400 µg daily. **5 mg daily** in higher-risk groups (sickle, thalassaemia, diabetes mellitus, prior NTD pregnancy, BMI ≥30 kg/m², anti-epileptic medication).

Established UK standard | Strong

Recommendation 5.3. Haemoglobinopathy status before pregnancy

Offer screening per NHS SCT Programme where status unknown. Partner testing if carrier identified.

Established UK standard | Strong

6. Screening and diagnosis

Recommendation 6.1. Routine screening schedule

FBC at booking and at 28 weeks (NICE NG201, BSH 2020). Earlier retest if symptoms, multiple pregnancy, short inter-pregnancy interval, known chronic disease, or booking Hb close to the lower limit.

Established UK standard **Strong**

Recommendation 6.2. Ferritin is NOT recommended as an unselected routine screening test

BSH 2020 does not recommend routine, unselected serum ferritin screening. Ferritin is appropriate in:

- women with anaemia, to confirm iron deficiency;
- women at increased risk of iron depletion (prior iron deficiency, heavy menstrual bleeding pre-pregnancy, malabsorption, vegan or strict vegetarian diet, short inter-pregnancy interval, multiple pregnancy, bariatric surgery).

Established UK standard **Strong**

Emerging optimisation practice: boxed note

The **HOW Collaborative 2025 consensus** recommends routine ferritin screening at booking and 24–28 weeks alongside FBC. This is a consensus statement, not current BSH or NICE UK national policy. Services adopting this approach should do so explicitly as a local policy change with clear audit and implementation plans, and should keep watch for a future BSH update. This guideline does not presently require routine ferritin at booking outside the BSH 2020 indications above.

Recommendation 6.3. Diagnosis when ferritin is equivocal

Where ferritin is ≥30 µg/L but microcytic indices are present and haemoglobinopathy has been excluded, measure transferrin saturation and CRP. TSAT <20% supports iron deficiency; raised inflammatory markers may mask true deficiency.

Established UK standard **Strong**

Recommendation 6.4. Trial of oral iron as a diagnostic test

Therapeutic trial acceptable where anaemia is mild and indices are suggestive. Hb rise of ~10 g/L by 2 weeks supports iron deficiency and response. Non-response triggers reassessment.

Established UK standard | Conditional

Recommendation 6.5. Look for alternative aetiologies

Macrocytic anaemia, haemolytic indices, or iron-unresponsive anaemia: consider B12/folate, haemoglobinopathy, AIHA, microangiopathic haemolysis, and rarer causes.

Good practice statement | Strong

How this differs from older practice

Some previous summaries of UK practice implied ferritin should be part of routine booking bloods. BSH 2020 confines ferritin to anaemic and high-risk women. The HOW Collaborative 2025 challenges this; until BSH updates, BSH 2020 remains the UK baseline.

7. Iron deficiency anaemia: first-line treatment with oral iron

Recommendation 7.1. Established first-line UK treatment

Prescribe oral elemental iron **100–200 mg daily** for confirmed iron deficiency anaemia. Options include:

- ferrous sulfate 200 mg two to three times daily (≈130–195 mg elemental iron);
- ferrous fumarate 210 mg two to three times daily (≈138–207 mg elemental iron);
- ferrous gluconate 300 mg two to three times daily (≈105–140 mg elemental iron).

Established UK standard | Strong | Certainty: Moderate

Source: BSH 2020 (Pavord et al.).

Recommendation 7.2. Review Hb at 2 weeks

In established iron deficiency anaemia, repeat Hb at 2 weeks. An increase of ~10 g/L is expected and supports diagnosis and response. Continue treatment until Hb normalises and for a further 3 months to replete stores.

Established UK standard Strong

Recommendation 7.3. Counselling and administration

- Empty stomach, 30–60 min before a meal.
- Avoid simultaneous tea, coffee, calcium, antacids.
- Vitamin C (orange juice or 250 mg ascorbic acid) improves absorption.
- Warn about GI side effects; offer laxative for constipation.
- Continue at least 3 months after normalisation to replete stores.

Good practice statement Strong

Recommendation 7.4. Managing intolerance

Consider dose reduction, change of formulation (fumarate or gluconate), or alternate-day dosing as a tolerability strategy. Continue to review Hb against the 2-week expectation.

Good practice statement Conditional

Emerging optimisation practice: lower-dose and alternate-day oral iron

Contemporary physiological studies in iron-depleted non-pregnant women (Moretti and colleagues) show 40–80 mg elemental iron once daily, and alternate-day rather than twice-daily dosing, can maximise fractional iron absorption by avoiding hepcidin upregulation. These findings are influential and are being incorporated into some local antenatal protocols. **They are not yet the definitive UK baseline** for established iron deficiency anaemia in pregnancy; BSH 2020 remains the current standard. Lower-dose or alternate-day regimens may be reasonable where tolerability is a barrier or as part of formal local quality improvement.

How this differs from older practice

The Churchill 2025 UK prospective cohort observed that only 36.5% of women on ferrous sulfate 200 mg three times daily achieved a 10 g/L Hb rise. This underlines the importance of reviewing response rather than the superiority of lower-dose regimens. It does not, by itself, establish 40–80 mg once daily as the new UK standard. The finding supports active clinical review at 2 weeks and honest conversations about adherence.

Recommendation 7.5. Do not commence iron empirically in suspected haemoglobinopathy

Do not start iron in women with microcytic indices, normal or raised ferritin, and background suggesting haemoglobinopathy, until confirmed with electrophoresis or HPLC. Inappropriate iron loading in thalassaemia trait or haemoglobin E states can cause harm.

Specialist consensus Strong

8. Iron deficiency anaemia: intravenous iron

Recommendation 8.1. Indications for IV iron

Consider IV iron (FCM or FDI) where any of the following applies. In line with current product SPCs, IV iron in pregnancy should generally be confined to the 2nd and 3rd trimesters unless clearly necessary.

Indication	Strength	Certainty	Tier
Oral iron intolerance despite different formulation and dose	Conditional	Moderate	Established
Malabsorption (coeliac, post-bariatric, IBD)	Conditional	Low	Consensus
True non-response to adequate oral iron at 2 weeks (adherence confirmed)	Conditional	Moderate	Established
Severe anaemia (Hb <90 g/L) from 2nd trimester	Conditional	Low–Moderate	Consensus with RCT support
Late presentation (≥34 weeks) with IDA and insufficient time for oral response	Conditional	Low	Consensus
Preference for fewer total doses in women with prior IDA/PPH	Conditional	Very Low	Consensus

Justification. Cochrane 2024 (Nicholson et al., 13 RCTs, 3939 participants): moderate certainty IV iron slightly raises antenatal Hb (MD 0.49 g/dL) and reduces anaemia at delivery (RR 0.81); likely no meaningful difference in PPH or transfusion. RAPIDIRON 2025 (Derman, n=4368, India, baseline Hb 7.0–9.9 g/dL): single-dose IV FCM reduced LBW (RR 0.87). Interpret RAPIDIRON as supportive rather than decisive for UK practice.

Recommendation 8.2. Dose calculation

Use the body-weight and Hb-based method in the current product SPC. Always refer to the current SPC on medicines.org.uk before prescribing; product maxima and infusion-rate guidance are updated periodically.

Established UK standard | Strong

Recommendation 8.3. Safe administration

- Resuscitation facilities and trained staff available.
- Observe for ≥30 minutes after every administration (MHRA).
- A routine test dose is no longer required by MHRA as a universal precaution; follow the current SPC and local protocol.
- Avoid in known iron hypersensitivity; caution with active infection.
- Document consent: hypersensitivity risk; FCM hypophosphataemia risk.

Established UK standard | Strong

Recommendation 8.4. Follow-up after IV iron

Reassess Hb no earlier than 4 weeks after the final administration of ferric carboxymaltose; align follow-up wording with the current SPC. The Hb response varies with baseline severity; avoid over-precise predictions. Where there are risk factors for persistent hypophosphataemia after FCM (repeated dosing, bariatric surgery, vitamin D deficiency, phosphate-wasting disorders), check serum phosphate at a clinically appropriate interval per current SPC and MHRA safety update.

Established UK standard (SPC/MHRA) | Strong

Recommendation 8.5. Pragmatic expert practice: timing of third-trimester IV iron

Where IV iron is given in the third trimester, many UK clinicians schedule the infusion to allow time for response assessment before anticipated delivery. **This is pragmatic expert practice, not sourced national guidance.** Individual timing should be decided by the attending obstetric and haematology teams, accounting for gestation, severity, and logistics.

Specialist consensus (pragmatic expert practice) | Conditional | Certainty: Very Low

9. Megaloblastic anaemia: B12 and folate

Recommendation 9.1. When to test

- Macrocytic anaemia (MCV above pregnancy reference);
- unresponsive anaemia despite adequate iron;
- higher-risk groups: vegan or strict vegetarian, bariatric surgery, IBD, pernicious anaemia, chronic metformin or PPI;
- clinical features of B12 deficiency (neurological symptoms, glossitis).

Established UK standard **Strong**

Recommendation 9.2. B12 replacement *without* neurological involvement

Aligned with SPS and NICE-linked pregnancy advice:

- **Oral cyanocobalamin at least 1 mg daily** may be considered in pregnancy, especially for dietary causes with intact absorption; **or**
- **IM hydroxocobalamin 1 mg three times weekly for 2 weeks**, then **1 mg every 2 to 3 months**.

Choice guided by cause, absorption, and patient preference. Dietary correction where applicable.

Established UK standard (SPS/NICE-linked) **Strong**

Recommendation 9.3. B12 replacement *with* neurological involvement

Seek urgent specialist advice (haematology or neurology). Where advice is not immediately available: **IM hydroxocobalamin 1 mg on alternate days until no further improvement**, then **1 mg every 2 months**.

Established UK standard (SPS/NICE-linked) **Strong**

Recommendation 9.4. Folate replacement

Folic acid 5 mg PO OD until resolved, then 400 µg daily (or 5 mg in high-risk groups) for the rest of pregnancy.

Established UK standard **Strong**

Recommendation 9.5. Do not treat B12 deficiency with folate alone

Combined deficiency: replace B12 first or concurrently. Folate alone can precipitate subacute combined degeneration of the spinal cord.

Established UK standard Strong

10. Haemoglobinopathies in pregnancy: cross-referenced pathway

Recommendation 10.1. Follow specialist guidelines

- **Sickle cell disease:** BSH 2021 (Oteng-Ntim et al.). Supersedes RCOG GTG61 (archived May 2023).
- **Thalassaemia syndromes:** BSH 2024 (Shah et al.). Supersedes RCOG GTG66 (archived).
- **Screening and lab diagnosis:** BSH 2023 (Bain et al.); NHS SCT Programme.

All confirmed haemoglobinopathy: combined obstetric and haematology care from booking, or earlier if planning.

Established UK standard Strong

Recommendation 10.2. Iron in haemoglobinopathy patients

- No iron without confirmed deficiency (ferritin < 30 µg/L or equivalent).
- Transfusion-dependent thalassaemia: continue chelation per BSH 2024; switch deferasirox/deferiprone to desferrioxamine at least 6–12 weeks pre-conception.
- Sickle cell disease: folic acid 5 mg daily throughout pregnancy.

Established UK standard Strong

11. Acquired haemolytic anaemia and microangiopathy

Recommendation 11.1. Structured diagnostic approach

Unexplained acute anaemia, thrombocytopenia, or haemolytic indices: consider

- HELLP: hypertension, proteinuria, raised transaminases;
- TTP: ADAMTS13 assay;
- aHUS: renal-dominant microangiopathy;
- DIC: placental abruption, sepsis, amniotic fluid embolism;

- AIHA: DAT (warm vs cold);
- acute fatty liver of pregnancy: liver-dominant with hypoglycaemia.

Good practice statement Strong

Recommendation 11.2. Escalation triggers

- Platelet count < 50 × 10^9/L with haemolytic indices;
- Hb fall > 20 g/L in 24 h without overt bleeding;
- Suspected TTP: ADAMTS13, plasma exchange preparation;
- Deranged DIC screen.

Blood products (including irradiated and CMV-seronegative where indicated) without clinical delay.

Good practice statement Strong

12. Postpartum anaemia

Recommendation 12.1. When to check a postpartum Hb

Measure Hb within 48 h postpartum where any of the following applies:

- estimated blood loss > 500 mL;
- uncorrected antenatal anaemia;
- symptoms: tachycardia, breathlessness, dizziness, severe fatigue.

Caesarean section alone is not an automatic BSH-recommended trigger. Trusts that routinely check post-CS Hb should record this as local policy.

Established UK standard (BSH 2020) Strong

Recommendation 12.2. Treatment stratified by Hb and symptoms

- **Hb ≥ 100 g/L:** oral iron, reassurance, review at 6-week postnatal check.
- **Hb 70 to 100 g/L, stable, minimal symptoms:** oral iron first-line; IV iron for severe fatigue, breastfeeding difficulty, marked morbidity, or poor anticipated adherence.
- **Hb < 70 g/L, or symptomatic with ongoing bleeding/instability:** red cell transfusion (single unit with reassessment) plus IV iron to replete.

Established for transfusion threshold Consensus for modality Strong

Justification. Bombač Tavčar 2023, 2024: postpartum IV FCM/FDI produces faster biochemical correction than oral iron with non-inferior fatigue, PND, and breastfeeding outcomes at 6 weeks; longer-term follow-up limited. **IV iron does not prevent postpartum depression**; treat anaemia on its own merits.

Recommendation 12.3. Replete stores after postpartum anaemia

Continue oral iron for 3 months after Hb normalises.

Specialist consensus Strong

13. Red cell transfusion

Recommendation 13.1. Restrictive threshold

Transfuse for Hb < 70 g/L, symptomatic anaemia despite iron repletion, or ongoing bleeding. Single-unit transfusion with reassessment preferred. Do not transfuse simply to reach a target Hb where symptoms are absent and IV iron is feasible. General restrictive-transfusion evidence is strong in hospital populations; obstetric-specific RCT data are more limited, and these recommendations draw on extrapolated principles from NICE NG24 and RCOG GTG47.

Established UK standard (with obstetric-specific caveat) Strong

Recommendation 13.2. Product selection

- ABO and RhD-compatible, **K-negative red cells** for all women of childbearing age.
- **CMV-seronegative components** for *elective* red cell transfusions during pregnancy where indicated. **CMV-negative blood should not delay urgent transfusion during delivery or postpartum**; in emergency, standard components are appropriate.
- CMV-seronegative remains required for intrauterine and neonatal transfusion.
- Group-specific preferred; group O RhD-negative K-negative only for emergency release.
- Irradiated for specific indications (congenital immunodeficiency, post-IUT recipient, HLA-matched, post-purine-analogue therapy).

Established UK standard Strong

Recommendation 13.3. Informed consent

Document consent for every elective transfusion: rationale, benefits, risks (alloimmunisation, febrile/allergic reactions, TACO, TRALI, infection), alternatives (IV iron, expectant management).

Good practice statement Strong

14. Patient information and shared decision-making

Recommendation 14.1. Written information

A concise written leaflet covering what anaemia is, why it matters, how oral and IV iron work, expected side effects, and when to seek advice.

Good practice statement Strong

Recommendation 14.2. Shared decision-making for IV iron

Oral and IV iron as the two main options, with honest communication of time to benefit, side-effect profile, administration setting, rare hypersensitivity risk, and FCM hypophosphataemia risk.

Good practice statement Strong

15. Governance, audit, quality metrics

Recommendation 15.1. Annual audit indicators

- FBC at booking and 28 weeks ≥ 99%
- Ferritin where indicated (anaemic + higher-risk) ≥ 95%
- Hb ≥ 100 g/L at delivery: benchmark locally, improve year on year
- Postpartum transfusion rate per 1000 deliveries
- IV iron rate per 1000 (balancing measure)
- Serious adverse events post-IV iron

Good practice statement Strong

Recommendation 15.2. Pathway ownership

A named Trust lead (typically consultant obstetric haematologist or equivalent) responsible for pathway, patient information, and annual audit feedback.

Good practice statement Strong

Recommendation 15.3. Data and safety reporting

Report serious adverse events related to IV iron (anaphylaxis, severe hypophosphataemia leading to fracture or hospitalisation) via MHRA Yellow Card.

Regulatory requirement Strong

16. Research gaps

- UK head-to-head RCT of oral vs IV iron with neonatal primary outcomes.
- Pregnancy-specific ferritin thresholds validated against reference standards.
- Optimal gestation and dose of IV iron in UK practice.
- Patient-centred outcomes (fatigue, return to work, infant feeding) with iron intervention.
- Anaemia of chronic disease in pregnancy: pathophysiology and management.
- Prospective comparative data on 100–200 mg daily vs lower-dose or alternate-day regimens in UK antenatal clinics.
- Impact of routine booking and 24–28 week ferritin screening (HOW Collaborative 2025) on maternal and neonatal outcomes.

17. Implementation and review

17.1 Barriers and facilitators

Barriers: community midwifery workload, variable specialist-clinic access, IV iron capacity, inconsistent patient information.
Facilitators: unified Trust pathway, named midwife or pharmacist lead, day-case infusion slots, shared electronic prescription templates, transfusion laboratory linkage.

17.2 Review schedule

- Next scheduled review: **April 2029** (3 years).
- Earlier review if: new BSH IDA-in-pregnancy update; material change in NICE NG201; new MHRA IV iron safety communication; new Cochrane update altering IV iron evidence; BSH formal adoption of a HOW Collaborative-type routine ferritin pathway.

18. References

All references retrieved in session; DOIs live.

UK authority guidelines Established UK standard

1. Pavord S, et al. UK guidelines on the management of iron deficiency in pregnancy. *Br J Haematol* 2020;188(6):819–830. DOI: 10.1111/bjh.16221
2. Oteng-Ntim E, et al. Management of sickle cell disease in pregnancy. *Br J Haematol* 2021;194(6): 980–995. DOI: 10.1111/bjh.17671
3. Shah FT, et al. Thalassaemia syndromes: conception and pregnancy. *Br J Haematol* 2024;204(6): 2194–2209. DOI: 10.1111/bjh.19362
4. Bain BJ, et al. Significant haemoglobinopathies screening and diagnosis. *Br J Haematol* 2023;201(6):1047–1065. DOI: 10.1111/bjh.18794
5. Fletcher A, et al. Laboratory diagnosis of iron deficiency (excluding pregnancy) and children. *Br J Haematol* 2022;196(3):523–529. DOI: 10.1111/bjh.17900
6. NICE NG201. Antenatal care. nice.org.uk/guidance/ng201
7. NICE NG24. Blood transfusion. nice.org.uk/guidance/ng24
8. RCOG GTG47. Blood Transfusions in Obstetrics (May 2015).
9. RCOG GTG52. Prevention and Management of Postpartum Haemorrhage (2016/2017).
10. MBRRACE-UK. Saving Lives, Improving Mothers' Care 2024 and 2025. npeu.ox.ac.uk/mbrrace-uk/reports
11. MHRA Drug Safety Update. IV iron and serious hypersensitivity reactions; FCM and symptomatic hypophosphataemia.
12. SPS. Medicines advice for B12 replacement in pregnancy.
13. NHS Sickle Cell and Thalassaemia Screening Programme standards.

Peer-reviewed evidence

1. Nicholson L, Axon E, Daru J, Rogozińska E. IV iron vs oral iron for IDA in pregnancy. *Cochrane* 2024;12:CD016136. DOI *(Scite not returned in session; verified via PubMed.)*
2. Derman RJ, et al. Single-dose IV iron vs oral iron for maternal IDA. *AJOG* 2025;233(2):120.e1–120.e18. DOI
3. Finkelstein JL, et al. B12 supplementation during pregnancy. *Cochrane* 2024;1:CD013823. DOI
4. Churchill D, et al. Oral iron response in UK cohort. *BMC Pregnancy Childbirth* 2025;25(1):863. DOI
5. Bombač Tavčar L, et al. Postpartum depression after IV vs oral iron. 2023;20:100247. DOI
6. Bombač Tavčar L, et al. Maternal fatigue after postpartum iron. 2024;13(3):758. DOI
7. Bombač Tavčar L, et al. Hypophosphataemia post-postpartum iron. 2025;14(23):8393. DOI
8. Muñoz M, et al. NATA consensus on obstetric patient blood management. *Transfus Med* 2018;28(1):22–39. DOI

9. Cappellini MD, et al. Iron metabolism and IDA in women. *Fertil Steril* 2022;118(4):607–614. DOI

Emerging optimisation consensus Emerging practice

1. HOW Collaborative (2025). Consensus on routine ferritin screening in pregnancy at booking and 24–28 weeks. *Exact citation and DOI to be verified at sign-off.*

19. Author statement

Lead author: Dr Muhammad Mohsin, Consultant Haematologist. Contributors: multi-disciplinary sounding board to be named at sign-off. Conflicts: none. Funding: none. Version: v1.0 DRAFT (evidence-positioning rewrite). **Disclaimer:** this guideline supports clinical judgement; it does not replace it.

20. Major changes (v0.9 to v1.0): changelog

1. **Oral iron first-line (7.1):** primary UK standard is now oral elemental iron 100–200 mg daily (BSH 2020); 40–80 mg once-daily and alternate-day regimens moved to a boxed note as emerging optimisation.
2. **Oral iron review interval (7.2):** 2 weeks, not 2 to 4 weeks, for established IDA (BSH 2020).
3. **Ferritin screening (6.2):** BSH 2020 does not recommend unselected routine ferritin screening. HOW Collaborative 2025 added as clearly labelled emerging practice only.
4. **B12 treatment (9.2 and 9.3):** SPS/NICE-linked wording. Without neurological involvement: oral cyanocobalamin at least 1 mg daily OR IM hydroxocobalamin 1 mg three times weekly for 2 weeks, then every 2 to 3 months. With neurological involvement: urgent specialist advice; if not available, IM hydroxocobalamin 1 mg alternate days until no further improvement, then 1 mg every 2 months. The previous 50 to 150 µg wording has been removed.
5. **IV iron follow-up (8.4):** "check Hb at 3 weeks, expect 20 to 30 g/L rise" replaced with "reassess Hb no earlier than 4 weeks after final administration" for FCM.
6. **Third-trimester IV iron timing (8.5):** 2-weeks-before-delivery wording reclassified as pragmatic expert practice, not sourced guidance.
7. **IV iron trimester scope (8.1):** explicitly confined to 2nd and 3rd trimesters per SPCs, unless clearly necessary.
8. **Postpartum Hb trigger (12.1):** caesarean section alone removed as automatic trigger; local policy labelling added.
9. **CMV in pregnancy transfusion (13.2):** refined to elective-where-indicated; must not delay urgent transfusion.
10. **Restrictive transfusion (13.1):** retained but with explicit caveat that obstetric-specific RCT data are more limited than general hospital evidence.
11. **New introductory box (Section 0):** "What is current UK standard and what is emerging practice?" with three-tier labelling convention.

12. **Evidence tier labels:** added to every recommendation alongside GRADE certainty and strength.
13. **References:** HOW Collaborative 2025 added as emerging-practice reference.
14. **Style:** em dashes removed throughout. British spellings preserved.

21. Claims softened or reclassified because evidence was weaker than first drafted

1. **40–80 mg once-daily or alternate-day oral iron** reclassified from main recommendation to emerging optimisation. Moretti physiology and Churchill 2025 cohort do not make this the UK baseline.
2. **Routine ferritin screening at booking and 24–28 weeks** reclassified as HOW Collaborative 2025 consensus, not BSH 2020 UK standard.
3. **"Check Hb at 3 weeks post-IV iron, expect 20–30 g/L rise"** removed as over-precise product-specific claim; replaced by SPC-aligned "no earlier than 4 weeks".
4. **"Complete 3rd-trimester IV iron at least 2 weeks before delivery"** reclassified as pragmatic expert practice; not sourced national guidance.
5. **Caesarean section as automatic postpartum Hb trigger** removed from defaults; labelled as local policy where retained.
6. **CMV-seronegative in all pregnancy transfusions** refined to elective-where-indicated; must not delay urgent transfusion.
7. **"Similar patient-centred outcomes at 6 weeks" (IV vs oral postpartum iron)** softened to "non-inferior at 6 weeks; longer-term follow-up limited".
8. **B12 replacement at 50–150 µg oral daily** removed as main pregnancy treatment statement; replaced with SPS/NICE-linked wording.
9. **Recommendation 5.1 strength** downgraded from Strong to Conditional (indirect evidence).
10. **RAPIDIRON generalisability** softened: baseline Hb 7.0–9.9 g/dL more severe than typical UK IDA; supportive rather than decisive.

22. Source hierarchy table

Recommendation	Primary source	Tier
3.1 Hb thresholds	BSH 2020	Established
3.2 Ferritin < 30 µg/L	BSH 2020	Established
5.1 Pre-pregnancy iron correction	BSH 2020	Consensus

Recommendation	Primary source	Tier
5.2 Folic acid	NICE, long-standing UK practice	Established
5.3 Haemoglobinopathy screening	NHS SCT; BSH 2023	Established
6.1 FBC at booking + 28 weeks	NICE NG201; BSH 2020	Established
6.2 Ferritin confined to anaemic + high-risk	BSH 2020	Established
6.2 (boxed) Routine ferritin booking + 24–28 wks	HOW Collaborative 2025	Emerging
6.3 Equivocal ferritin workup	BSH 2020; BSH 2022	Established
6.4 Oral iron trial as diagnostic	BSH 2020	Established
7.1 Oral elemental iron 100–200 mg daily	BSH 2020	Established
7.2 Repeat Hb at 2 weeks	BSH 2020	Established
7.3 Counselling and administration	BSH 2020; pharmacology	GPS
7.4 Managing intolerance	BSH 2020; clinical pharmacology	GPS
7.4 (boxed) Lower-dose / alternate-day	Moretti physiology; Churchill 2025	Emerging
7.5 No iron in suspected haemoglobinopathy	BSH 2020; BSH 2023	Consensus
8.1 IV iron indications	BSH 2020; Cochrane 2024; RAPIDIRON 2025	Mixed
8.2 Dose per SPC	Product SPCs	Established
8.3 Safety (30-min obs, hypersensitivity, consent)	MHRA; SPCs	Established

Recommendation	Primary source	Tier
8.4 Reassess no earlier than 4 weeks	Product SPCs	Established
8.5 Third-trimester timing	Attending teams, pragmatic expert practice	Consensus (labelled)
9.1 When to test B12 + folate	BSH; SPS	Established
9.2 B12 without neurology	SPS; NICE-linked	Established
9.3 B12 with neurology	SPS; NICE-linked	Established
9.4 Folate replacement	NICE; long-standing UK practice	Established
9.5 No folate alone in combined deficiency	Standard haematology teaching	Established
10.1 Haemoglobinopathy cross-reference	BSH 2021, 2024, 2023	Established
10.2 Iron in haemoglobinopathy	BSH 2021, 2024	Established
11.1 Haemolysis/microangiopathy differential	Standard haematology practice	GPS
11.2 Escalation triggers	Standard practice	GPS
12.1 Postpartum Hb trigger list	BSH 2020	Established
12.2 Postpartum treatment stratification	BSH 2020; Bombač Tavčar 2023–2025	Mixed
12.3 Continue oral iron 3 months	BSH 2020	Consensus
13.1 Restrictive transfusion threshold	NICE NG24; RCOG GTG47	Established (with caveat)
13.2 K-negative for women of childbearing age	UK transfusion standards	Established
13.2 CMV policy (refined)	UK transfusion standards	Established

Recommendation	Primary source	Tier
13.3 Consent	GMC Good Medical Practice	GPS
15.1 Audit indicators	BSH 2020; local audit standards	GPS
15.3 Yellow Card reporting	MHRA regulatory requirement	Established

This draft uses only references retrieved in session. Live DOIs where applicable. Items to verify at sign-off: NICE NG201 exact text; MHRA IV iron safety wording; EMA FCM hypophosphataemia DHPC; the HOW Collaborative 2025 exact citation and DOI; and the three Pavord BSH 2020 contrasting Scite citations.