



Gloucestershire Safety and Quality Improvement Academy 2026  
**Improving Identification & Management of Iron Deficiency Anaemia in Neck of Femur Fracture Patients**  
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**Safety Concern:**

- Pre-op anaemia is common (35-50% anaemic, 80% due to IDA)
- Associated with poor wound healing, slow recovery/mobilisation
  - Independent risk factor for 20% more complications including morbidity and mortality
  - If addressed, leads to - reduced blood transfusions, reduced length of stay, reduced complications and reduced hospital costs

**PDSA 1 – Baseline Measurement (Jan–Mar 2024)**

Large variability prompting a full SPC-based quality improvement audit.

**PDSA 2 (Nov – Dec 2024) Interventions**

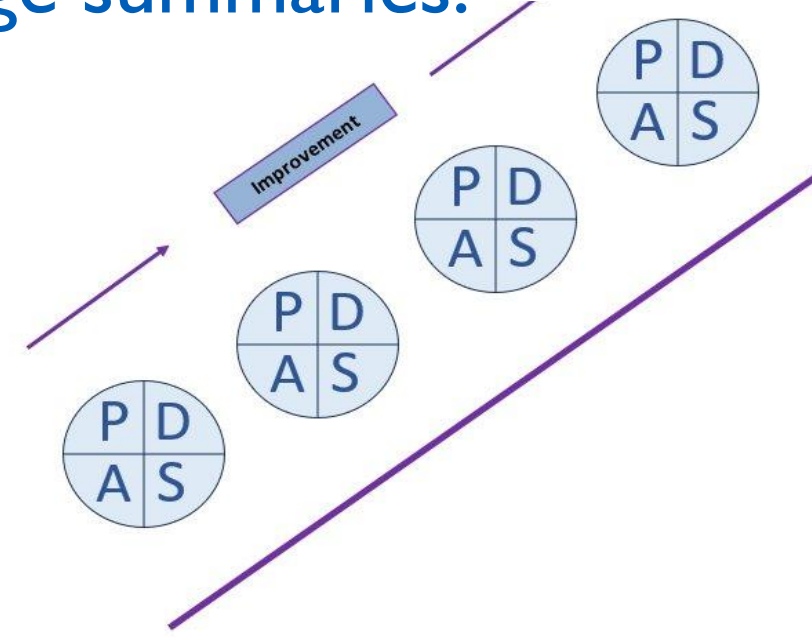
- **Education**  
Teaching delivered on IDA recognition and impact in #NOF patients to increase awareness
- **Pathway & Admission Bloods**  
Implemented an IDA investigation and management pathway and encouraged ferritin/TSAT as part of NOF admission bloods. This improved IDA identification and appropriate IV iron use.
- **IDA protocol** designed and displayed in clinical areas.
- **Acronym expansions** – Inclusion of IDA to working diagnosis and prompts on discharge summaries.

**PDSA 3 – Re-audit (Jan 2025)**

Improved identification of IDA and increased documentation of management plans, with greater standardisation of care and fewer missed treatment opportunities

**PDSA 4 – Re-audit (Mar 2025)**

Clinical improvement and process stability



**The Aim:**

Increase the diagnosis & appropriate management of IDA in NOF # patients by 50% within 1 year

How will we measure improvement?

**Outcome Measure**

- Percentage of #NOF patients with IDA appropriately diagnosed and treated with IV iron (P-chart)

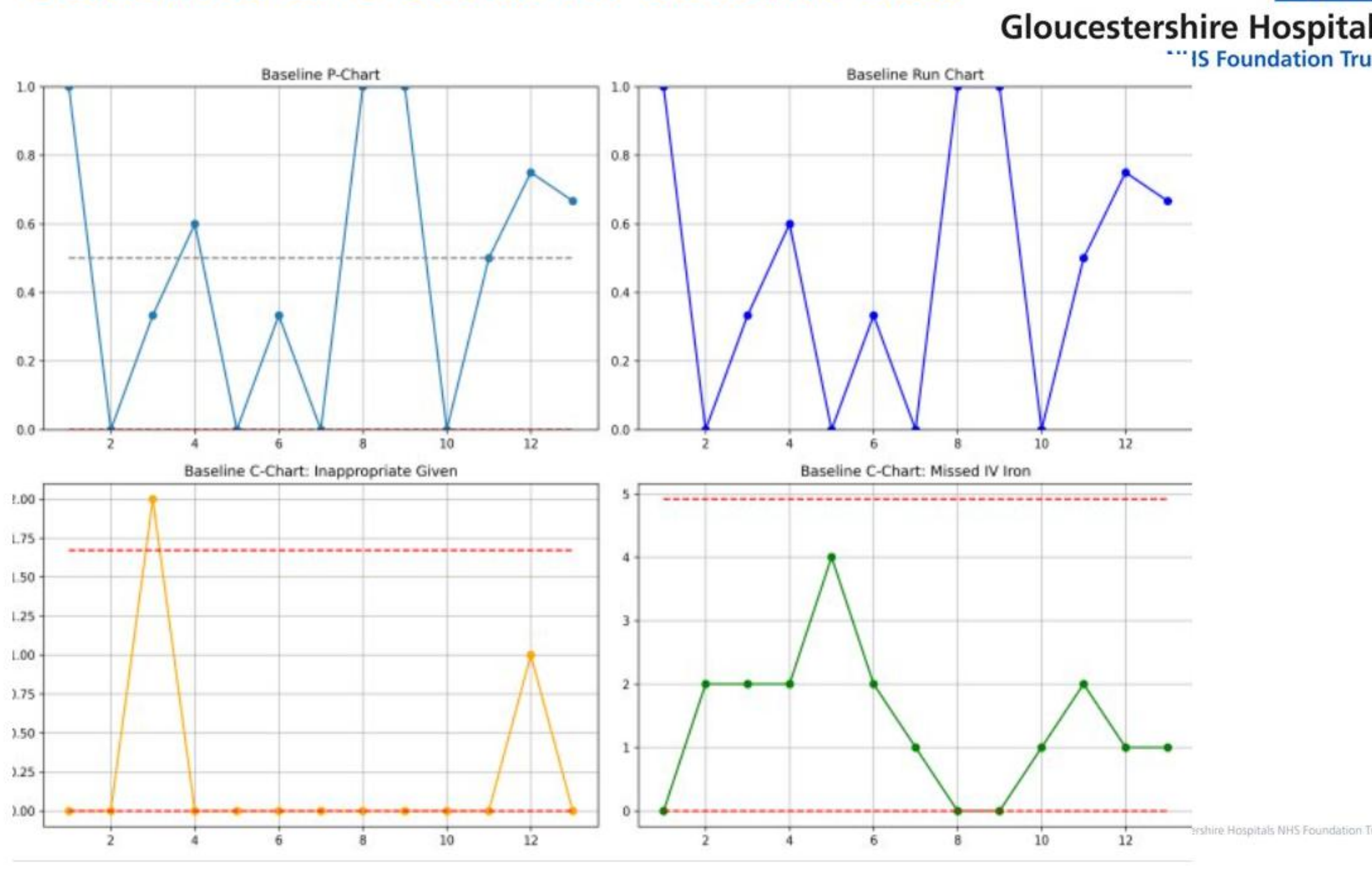
**Process Measures**

- Percentage of #NOF patients who missed IV iron (C-chart)

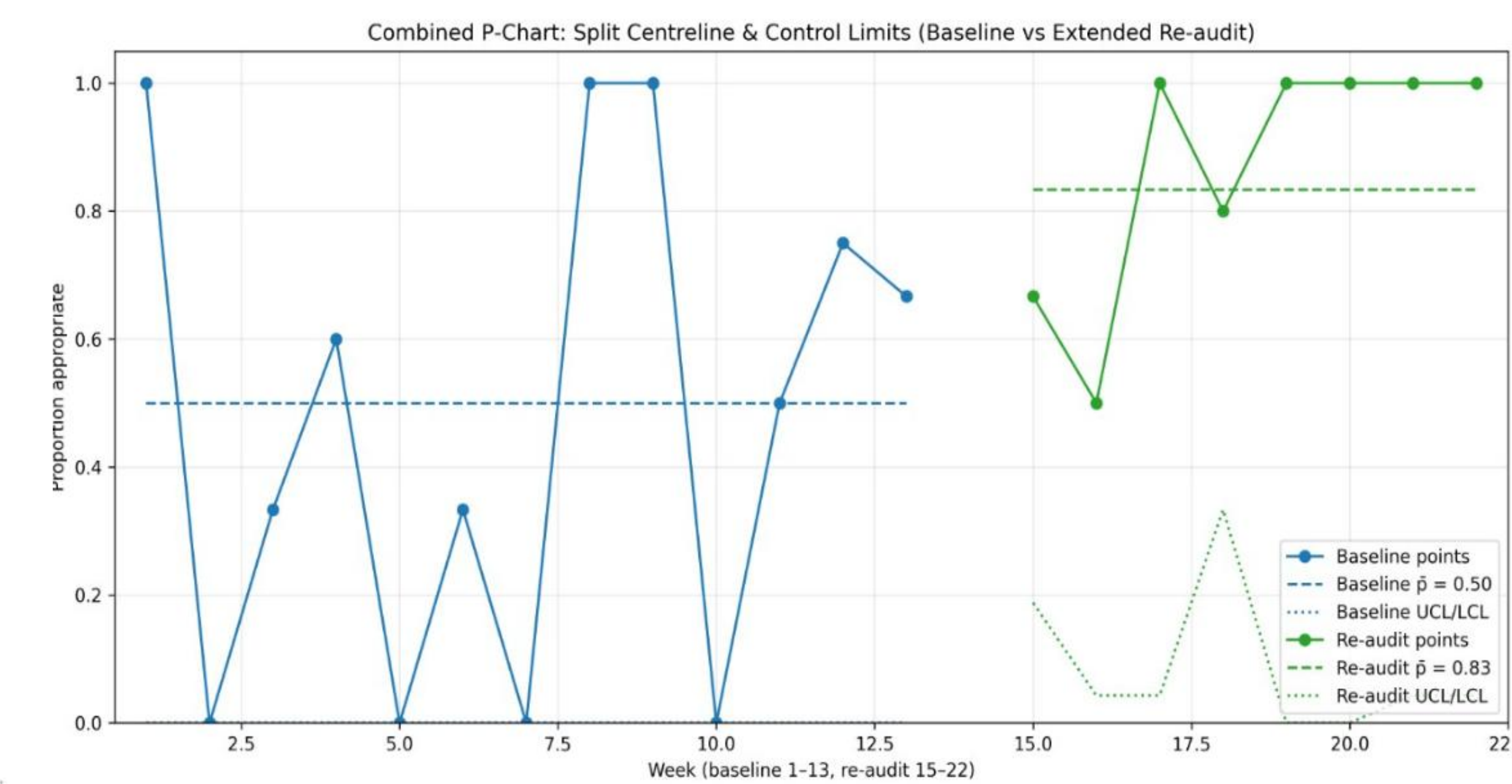
**Balancing Measures**

- Percentage of inappropriate IV iron given (C-chart)
- Variability in costs of IV vs PO iron

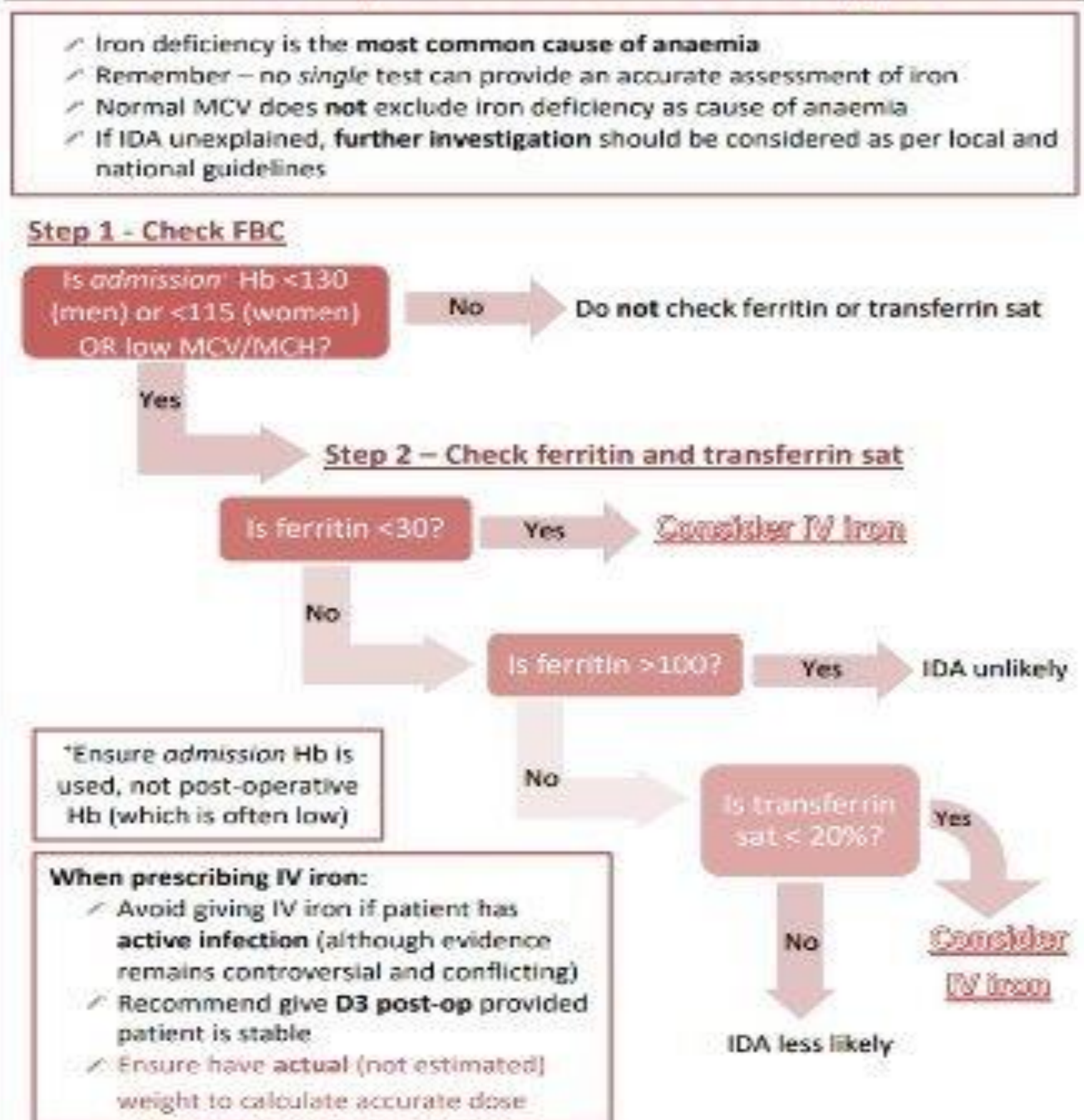
**Combined SPC charts for Baseline Data**



**Run chart - Baseline Data + 2x Re-audits**



**Iron Deficiency Protocol for Orthogeriatrics**



**Results –**

**Baseline data (Weeks 1-12)**

- Inconsistent, with large week-to-week variability.
- Capacity for great performance (Weeks 8–9), but not yet reliably reproduced.
- No sustained statistical improvement
- The biggest failure mode - eligible patients not being given IV iron
- Identified targets for process redesign.

**Reaudit Phase 1 (Weeks 1-12)**

Point cluster above the baseline median (A higher centreline (0.75) and tighter performance) - early but meaningful improvement in the system with reduced variability

Variation reduced → further monitoring essential for SPC signals

**Reaudit Phase 2 (Weeks 19-22)**

Intervention led to a statistically significant and clinically meaningful improvement in IV iron prescribing with a higher-performing and more stable system.

**Conclusion**

By combining clear criteria, regular education, pathway prompts, and weekly SPC monitoring - the system of identifying anaemia and management is now more reliable, predictable, and better aligned with clinical standards, supporting safer care for #NOF patients with IDA.

**Challenges and Limitations**

- Focused on hip fractures ? others frailty #s e.g pelvic, shafts & humeral #s
- Iron studies checked on post op bloods
- IV iron prescription remains on paper charts – lack of clarity on when administered, some cases of double infusions noted
- Outlying patients – missed infusions when plans abandoned on stepdown from hip #unit
- Medical team turnover – rotations, locum consultants

**Next Steps**

- EPR – design of iron studies bundle & prescription capabilities
- Signposting at resident doctor's inductions
- Consideration of implementation of protocol across T&O wards for pre-op # in frail patients
- Recommend GP follow-ups for repeat blood tests in 3months
- The cost element  
- ICB policy? (Secondary care proactive IDA management)  
- Oral PO for lower frailty groups where tolerable
- Continued audits to monitor compliance