New Nurse Led Urgent Anaemia Treatment Service Prevents Acute Admissions

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Background: Iron-deficiency anaemia is one of 19 ambulatory care-sensitive conditions identified by the NHS Institute for Innovation and Improvement, where effective management should prevent admission1. To address this issue Nottingham University Hospitals introduced a day case nurse led anaemia service.

The Service: Since June 2012, patients meeting the referral guidelines (Figure 1) can be referred from GPs, ambulatory, or out of hours services for review the next working day. This service operates Monday-Friday 9am-5pm.

Patient Assessment: A full history and examination, including ECOG performance status is completed by our nurse. Bloods for full blood count, haematinsics and iron studies are checked.

Patient Management: Nutrient deficiencies are corrected. Other cases are discussed with haematology. Limited transfusion is offered if severely symptomatic. GPs are advised to refer onward to the most appropriate specialty (including 2WW pathway).

Patient outcomes:  
- Up to July 2013, the service has received 153 referrals, with demand increasing monthly  
- Age ranged from 16 to 96 years old  
- The mean average haemoglobin was 7.1 g/dL (range 4-11) (figure 2)  
- 127 patients had an iron-deficient picture on presentation (figure 3); 98% (n=124) of these received parenteral iron (Ferinject®)  
- Only 16 units of blood have been transfused for all causes of anaemia (equivalent to 0.1 units per patient), with 3% (n=4) of iron deficient patients requiring transfusion at some point.  
- Only 8 patients required haematology input  
- All 153 patients had their anaemia treated as outpatients  
- 95% (n=145) required only one treatment visit

Conclusions: This service although in its infancy has prevented 153 admissions, most without transfusion. Similar systems across the NHS could be introduced to decrease pressure on admission units.


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Figure 1  
Urgent Anaemia Treatment Pathway  

- Hb < 5g - no active bleeding, hemodynamic compromise or organ dysfunction
- Hb < 5g - no active bleeding, moderate/severe organ dysfunction
- Severe symptoms → haemoglobin ≤ 5g/dL
- Severe symptoms → ferinject 3g
- Severe symptoms → ferinject 3g + 10ml intravenous fluid
- Severe symptoms → ferinject 3g + 10ml intravenous fluid + dobutamine

Figure 2  
Haemoglobin (g/dL) Range on Presentation

Figure 3  
Number of Patients by Referral Reason  

- Iron deficiency anaemia  
- Microcytic anaemia  
- Normocytic anaemia  
- Mixed deficiency anaemia  
- Macrocytic anaemia  
- B12 deficiency anaemia

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