Setting up an anaemia management service

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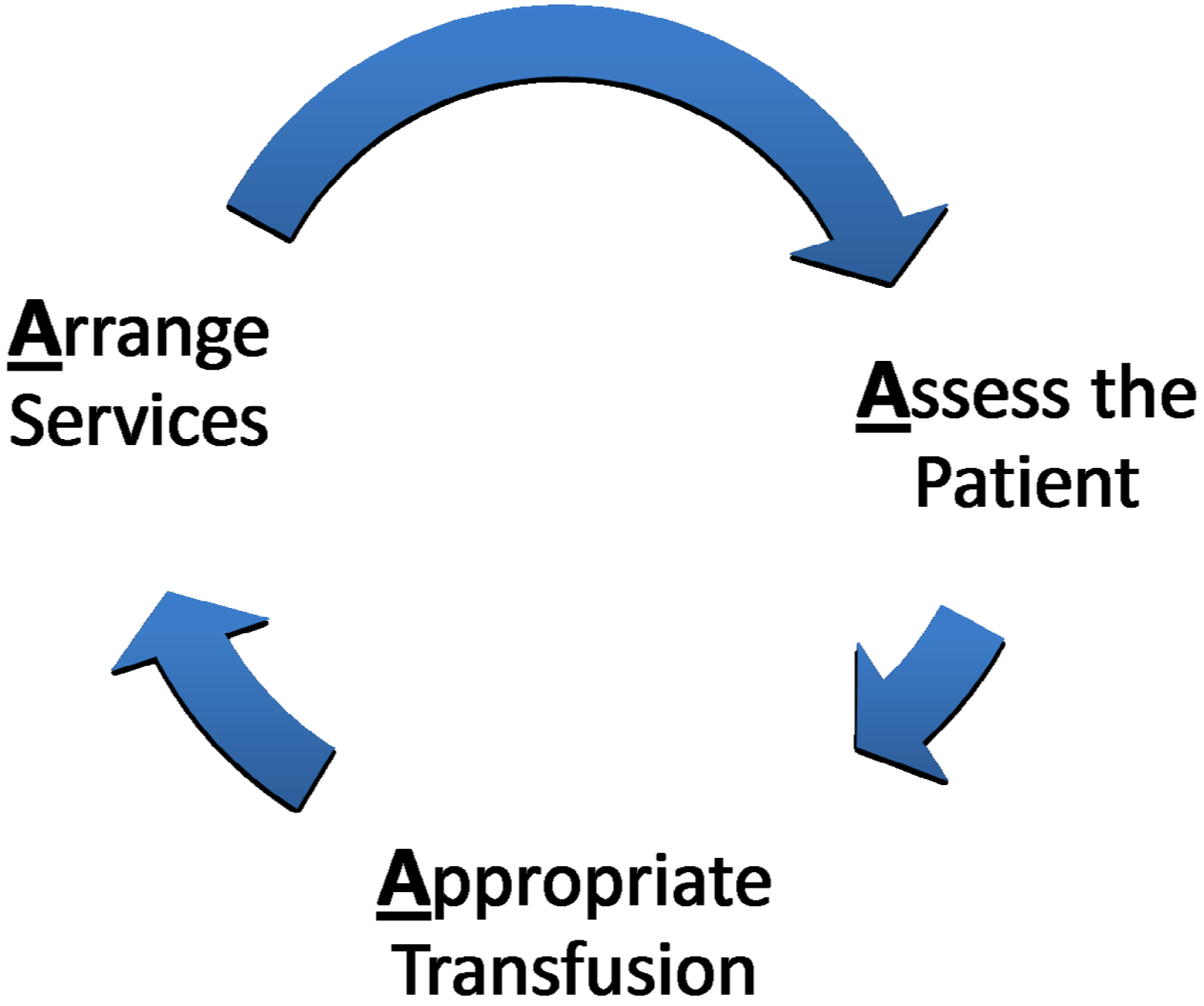
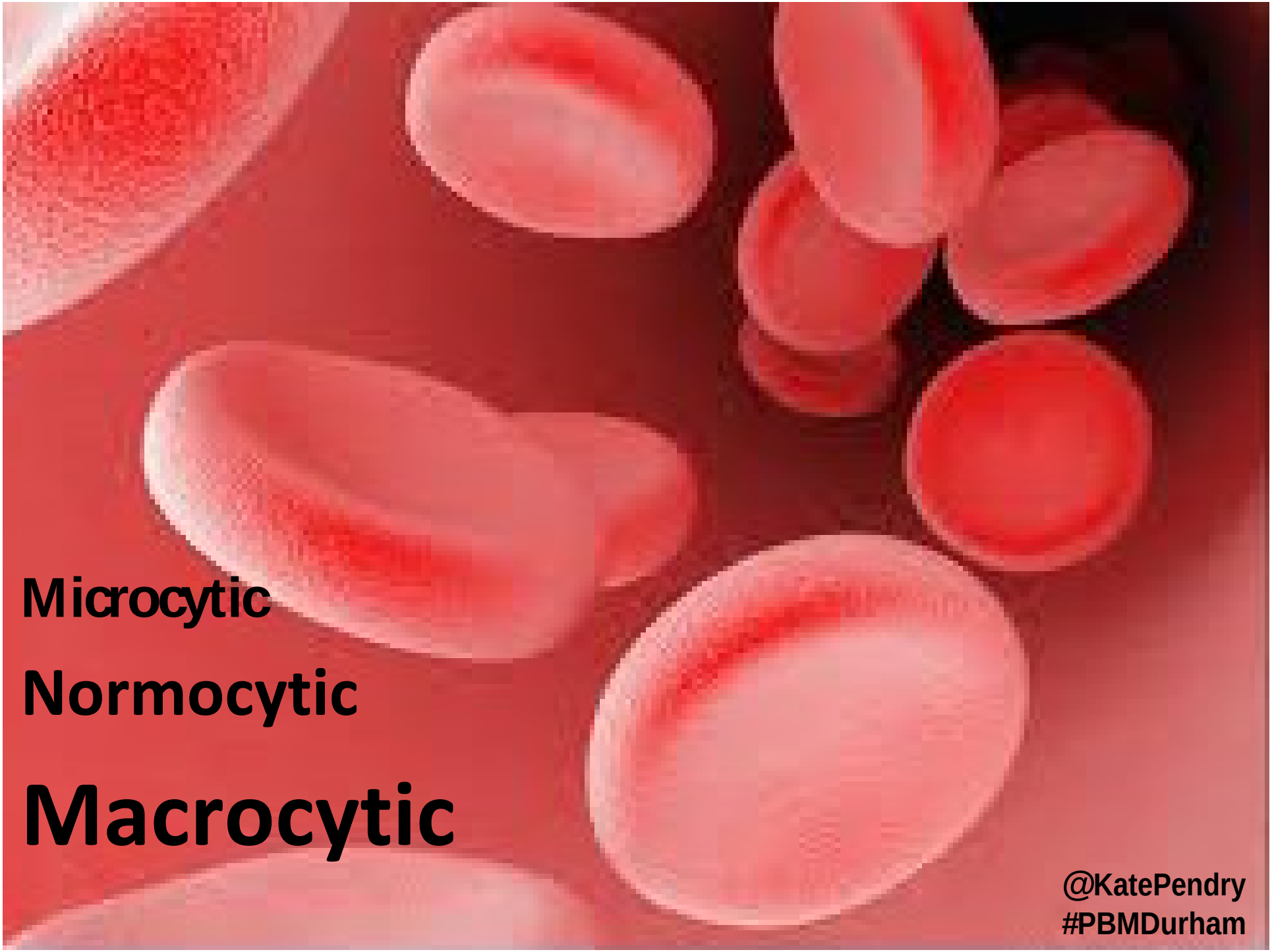
The 3 As of Anaemia


Arrange Services
Assess the Patient
Appropriate Transfusion

Assess the patient

Investigations

- FBC
- Reticulocytes
- UEC
- LFT
- B12, folate, ferritin
- Serum iron studies
- CRP / ESR


Microcytic
Normocytic
Macrocytic
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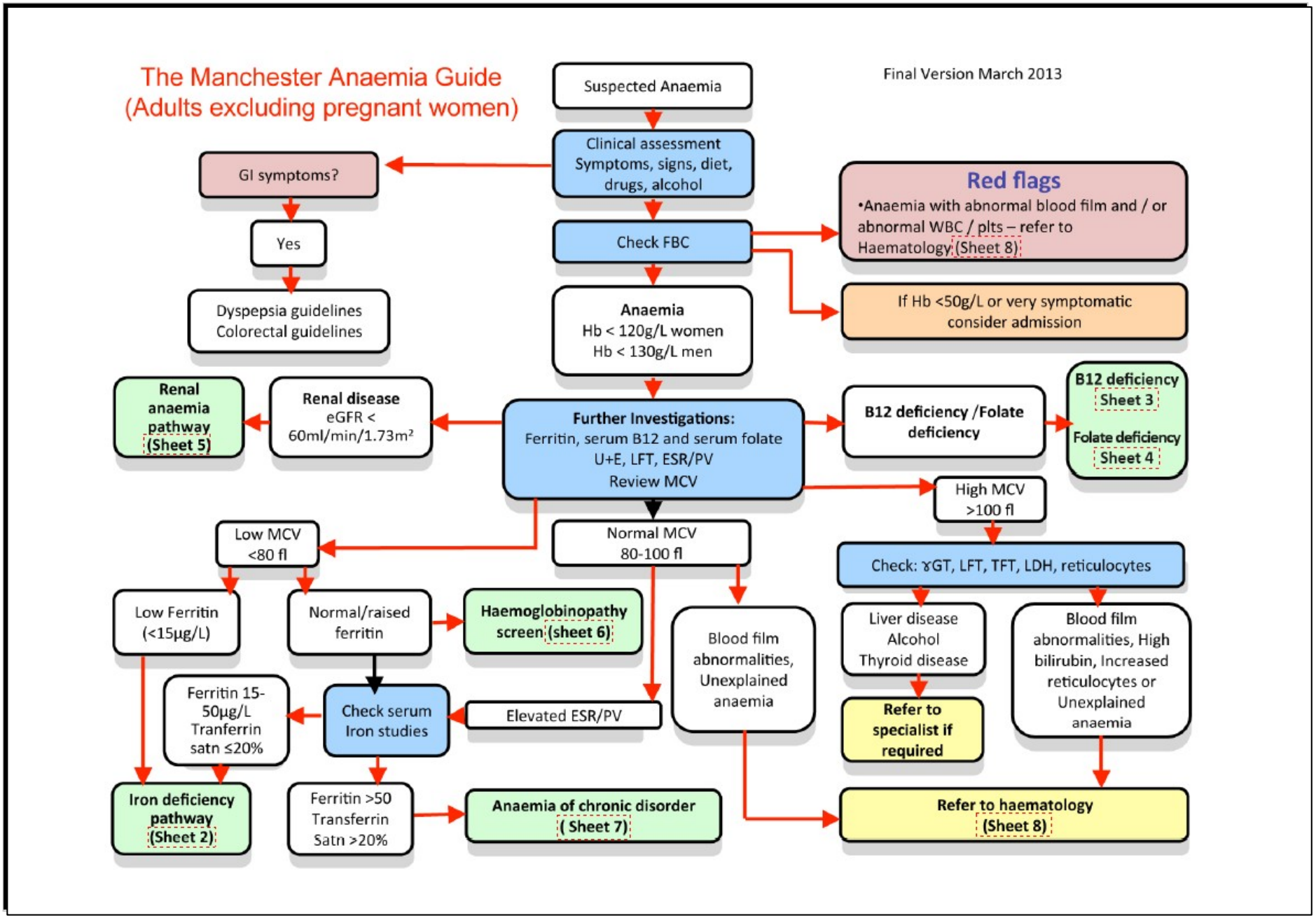


https://www.cmft.nhs.uk/media/499600/manchester%20anaemia%20guide.pdf

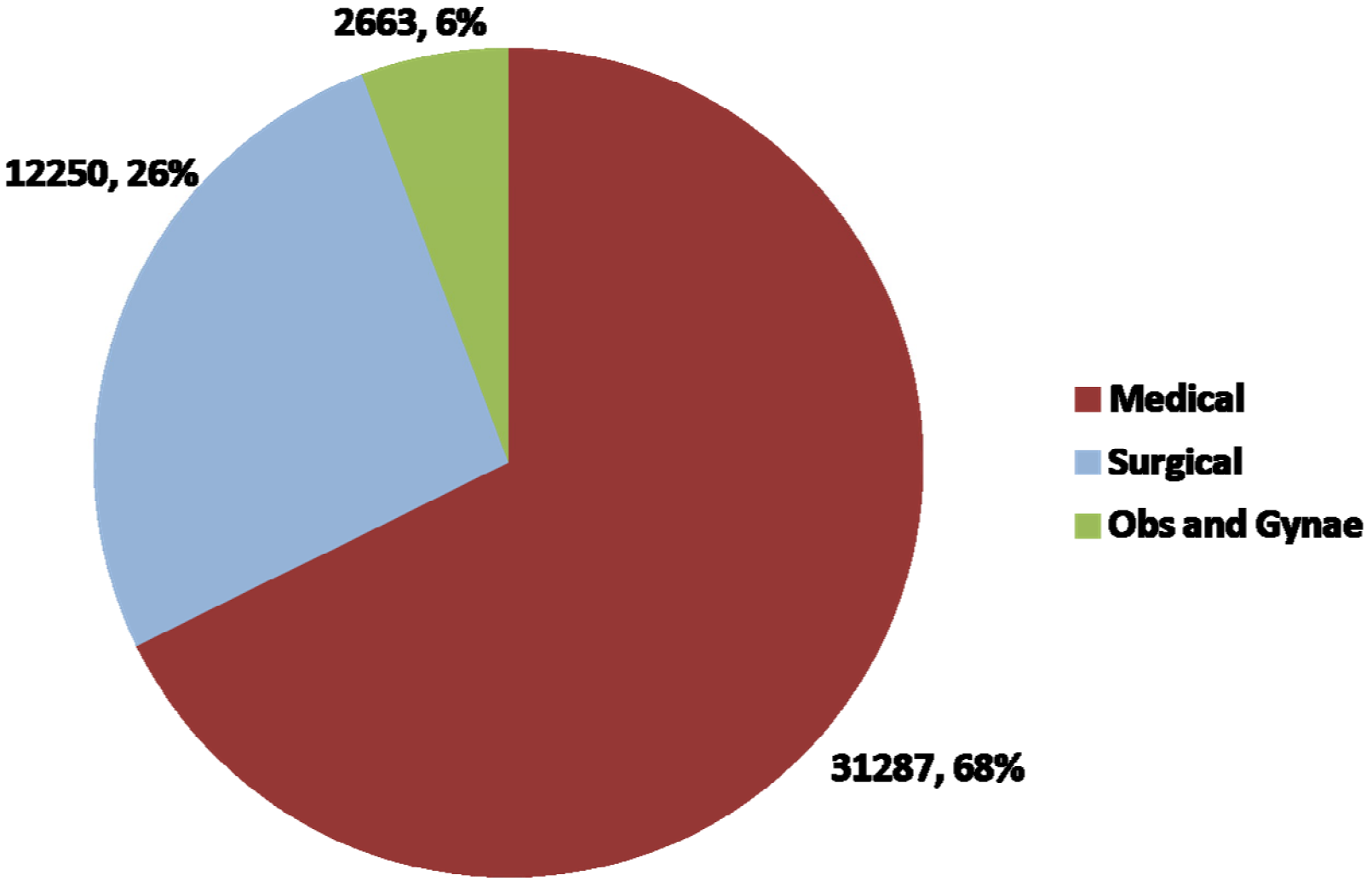
Appropriate Transfusion

Two patient stories

•A 46 year old female with fatigue, headaches and palpitations
•Pre Hb 55g/L, MCV 56.8, WBC 8.5, platelets 379, ferritin 3.
•The anaemia was first noted in primary care 1 day before transfusion. Investigations were undertaken as an inpatient
•Oral iron was commenced in the day of transfusion
•It was noted in the notes:' patient reluctant

•88year old female weight 36kg
•Pre transfusion Hb 69g/L, MCV 69.2, MCH 20.4, plts 238, WBC 6.7, creatinine 87
•Ferritin not done
•No symptoms documented
•No comorbidities or medications
•Cause of anaemia not documented
•No oral iron given Transfused 3 units red cells
•Post transfusion Hb 157g/L

Where does blood go?



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Anaemia is the most common reason for transfusion in medical patients

78%

National Comparative Medical Audit 2011

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Avoidable Transfusion

20% Reversible Anaemia

29% Above trigger

33% Over transfused

National Comparative Medical Audit 2011

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Pre operative anaemia

Common: 25%

Associated with increased risk of transfusion x 3

Associated with increased mortality, increased risk of stroke, infection, MI, increased length of stay

Shander and Javidroozi Curr Opin Anethesiol 2015

Systematic approach to management of anaemia

Identify the cause and treat it

When to transfuse

Hb 70-80g/L

except:

- Treatable anaemia
- Symptomatic patients
- Patients with acute coronary syndrome
- Patients with major haemorrhage

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Arrange Services

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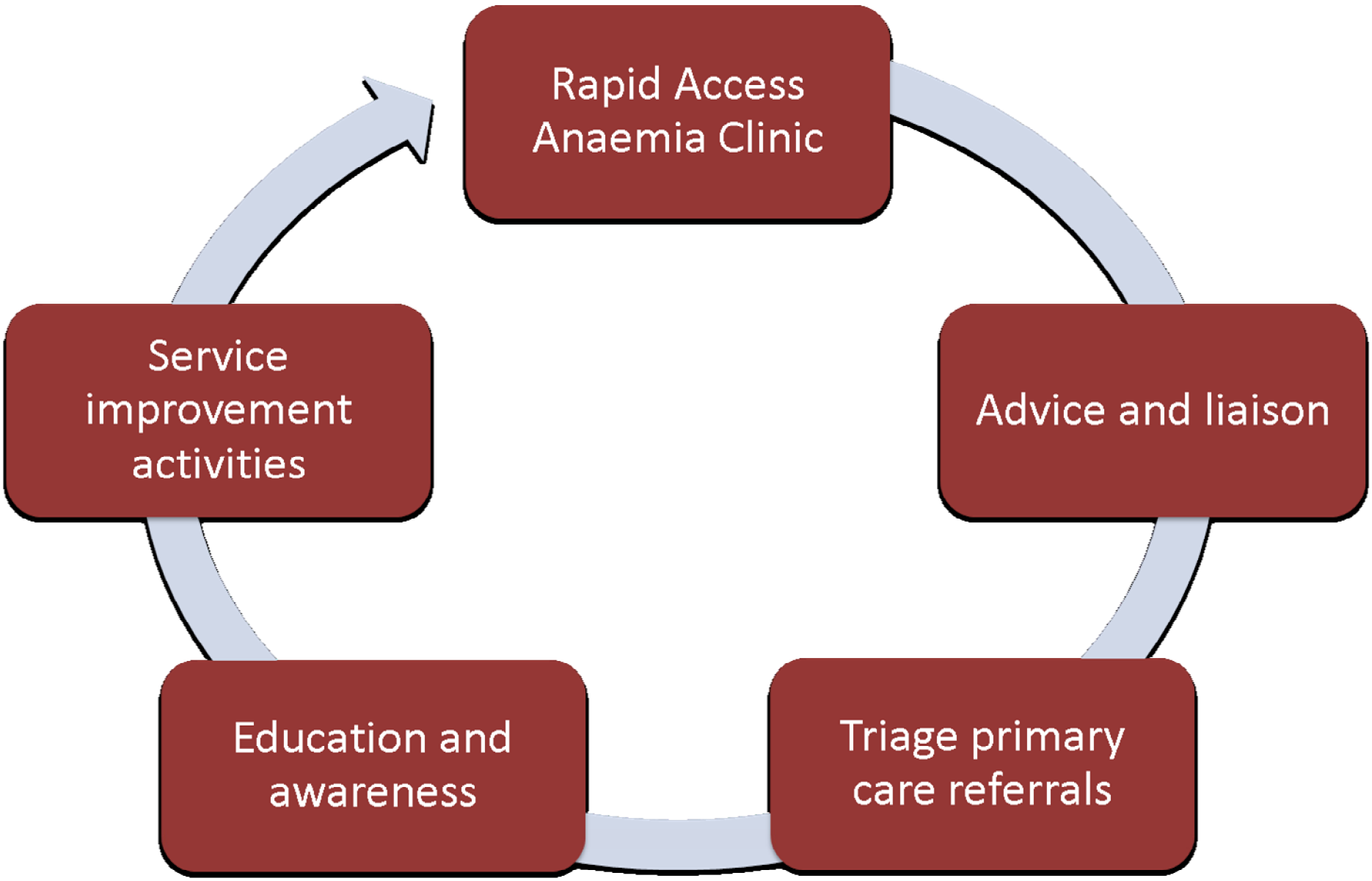
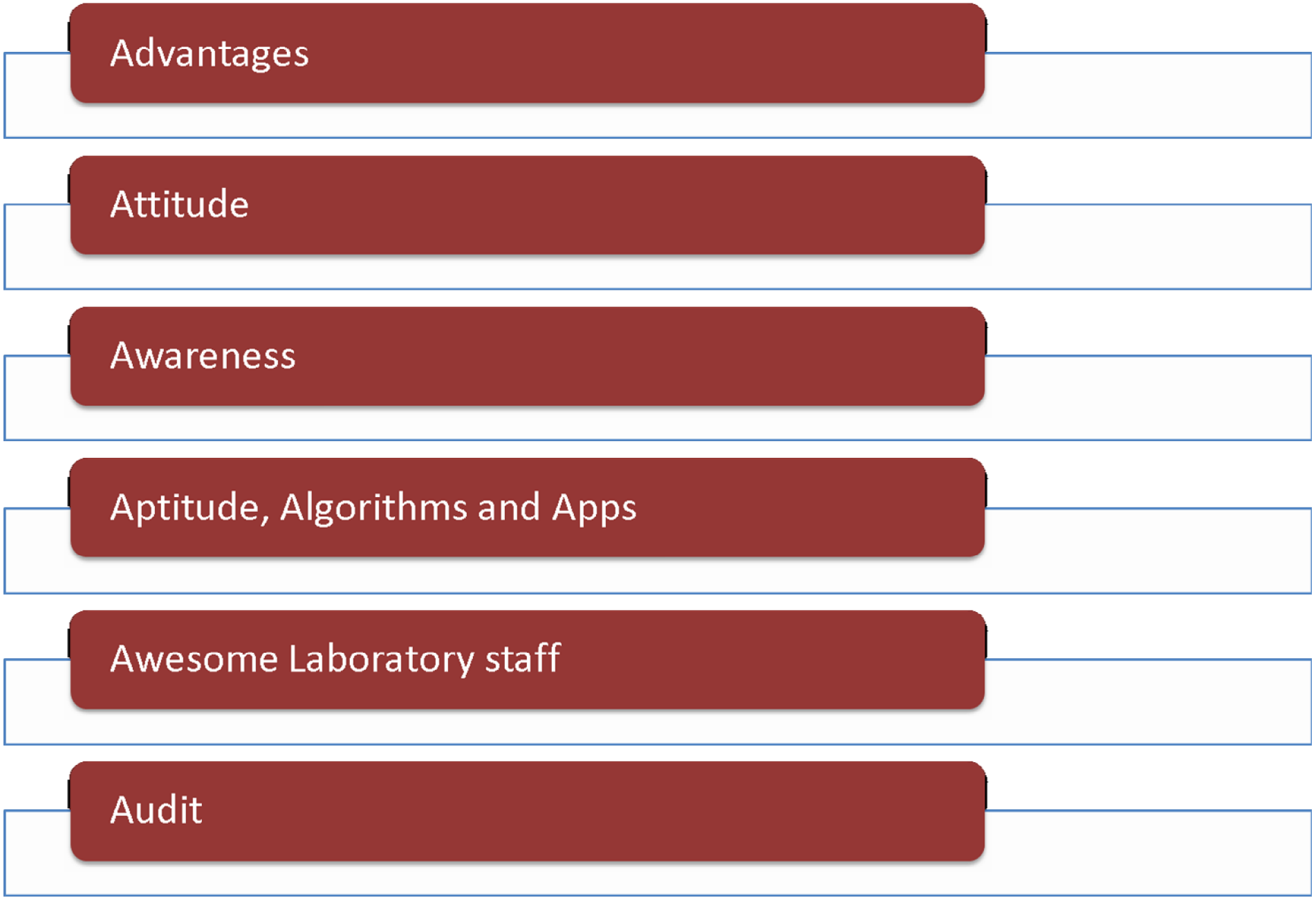
Obstacles

- Insufficient engagement of key stakeholders (managers, pre op assessment staff, primary care)
- Limited timescales for investigation and treatment
- Lack of awareness and recognition
- Lack of capacity to deliver treatment
- Lack of resources
- Poor understanding of the benefits
- Better quality evidence needed


Rapid Access Anaemia Clinic
Advice and liaison
Triage primary care referrals
Education and awareness
Service improvement activities


Advantages
Attitude
Awareness
Aptitude, Algorithms and Apps
Awesome Laboratory staff
Audit

Achieve Funding

Anaemia Business Case Template
http://hospital.blood.co.uk/patient-services/patient-blood-management/general-resources/

Drivers for change

PATIENT BLOOD MANAGEMENT

Enhanced RECOVERY
ERAS Society (UK) www.erasuk.net

BCSH Guidelines

NICE National Institute for Health and Care Excellence

The Royal College of Anaesthetists

Department of Health

The NHS Outcomes Framework 2015/16

Expected impact

- ✓ Better anaemia management
- ✓ Better patient outcomes
- ✓ Better patient experience
- ✓ Improved patient safety
- ✓ Reduced length of stay
- ✓ Avoidance of unnecessary emergency admissions
- ✓ Better use of secondary care resources
- ✓ Reduced clinic referrals
- ✓ Improved primary care management of haematological conditions
- ✓ Laboratory demand management
- ✓ Reduced transfusion rates
- ✓ Cost neutral quality initiative

- X Reduced referrals to haematology clinics: reduced income
- X Capacity issues: staffing, space, timeliness
- X Impact on gastroenterology: increased Fe defy investigations

Cost savings

- Reduction in LoS and critical care admission
- Reduction in transfusion
- Reduction in post-operative complications

Cost implications

- Staff to run the service:
  - Consultant, nurse specialist, secretarial
- Drugs and consumables cost
- Investigation costs
- Capital costs

HRGs for Iron Deficiency Anaemia

2014/15	Diagnosis	Elective/ daycase cost	Non-elective cost	Same day emergency care BPT (LOS = 0 days)	Non-elective tariff BPT (LOS > 0 days)"
SA04D	Iron Deficiency Anaemia with CC	£417	£1,929	£2,171	£1.929
SAO4F	Iron Deficiency Anaemia without CC	£294	£813	£1,055	£813

	Current Situation	Proposed Iron Service
Intervention	Red blood cells	Ferinject
Amount	2 units	1g
Cost of Drug per unit/g (£)	£243.70	£154.23
time in required hours	6	0.45
band 5 nurse (cost per Hour)	£84.00	£84.00
cost of nurse per infusion	£504.00	£37.80
Giving set Cost	£6.75	£6.75
Cost of Treatment	£754.45	£198.78
Day case Payment via HRG	£406.00 (SA13A)	£294.00 (SA04F)
Income to dept per patient	-£348.45	£95.22
If all patients treated during audit period	[from audit]	[from audit]
Annual scope for patients	[from scope]	[from scope]

Advice from GSTT

- run a pilot to direct the development of the service and to demonstrate the viability and benefits of the clinic, in order to gain internal support
- provide an easy-access, comprehensive service that not only diagnoses and treats anaemia but also investigates the underlying cause in unknown cases
- establish well-defined patient pathways and treatment protocols to deliver an efficient and simple service
- carefully select the IV iron: these are not equivalent, and the choice of product can have an impact on a wide range of service factors, not just cost
- regularly review the service and choice of first-line IV iron to ensure continued provision of a patient-centered service.

Radia et al Anemia management: development of a rapid-access anemia and intravenous iron service
Risk Management and Healthcare Policy 2013:6 13–22

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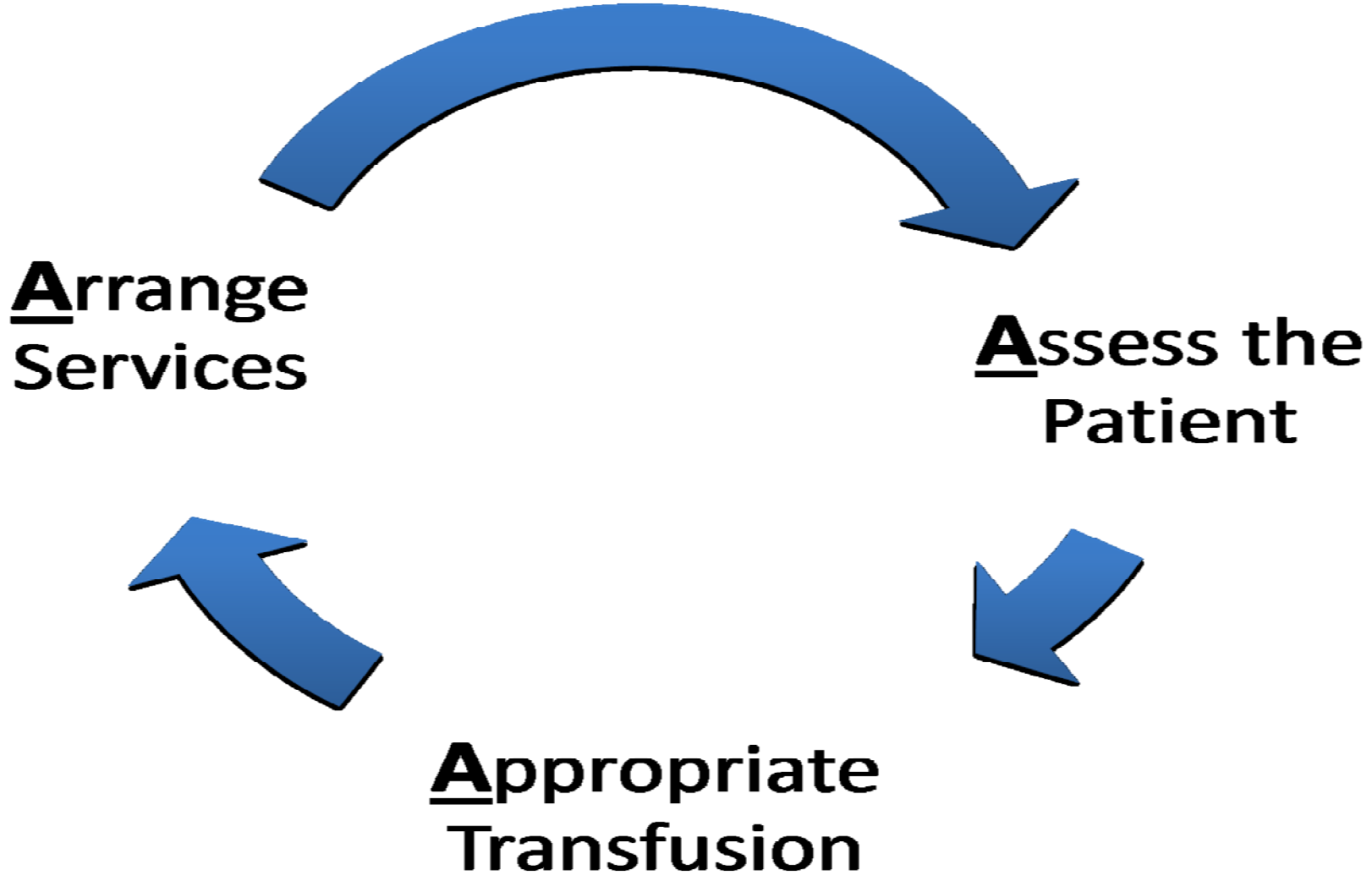

Conclusions

- Timely investigation and management of patients with anaemia is important
  - For Patients, For Health Services, For Blood Services
- Systematic approach to delivery of evidence based care
- Supported by international initiatives such as Patient Blood Management and the Choosing Wisely campaign