

# Targeting the 'Agents of Change'



Gilda Bass  
Blood Transfusion Nurse Specialist

# Could we improve PBM for IDA?

- Medical Day Treatment Service
  - Informal referral
  - 20-30 regular attenders
  - GI, obstetric, pre-operative
- National audit indicated medical management of anaemia could be improved
- Hospital Episode Statistics (HES) data (Vifor Pharma) - ↑ cost, LOS, bed days used -v- national average



# Identifying potential 'beneficiaries'

- Clinical coding data
    - D50.0 Iron deficiency anaemia secondary to blood loss (chronic)
    - D50.8 Other iron deficiency anaemias
    - D50.9 Iron deficiency anaemia unspecified
  - Retrospective audit of LOS of 0-2 days
  - Concurrent clinical pre-op audit
- 77 admission episodes with primary diagnosis of iron deficiency anaemia
  - 34 admission episodes 0-2 days
    - 33/34 utilised in-patient bed
    - 1/34 referred for day treatment
  - Casemix
    - 22 medical
    - 10 gynae
    - 1 surgical
    - 1 paediatric

# 0-2 LOS treatment intervention

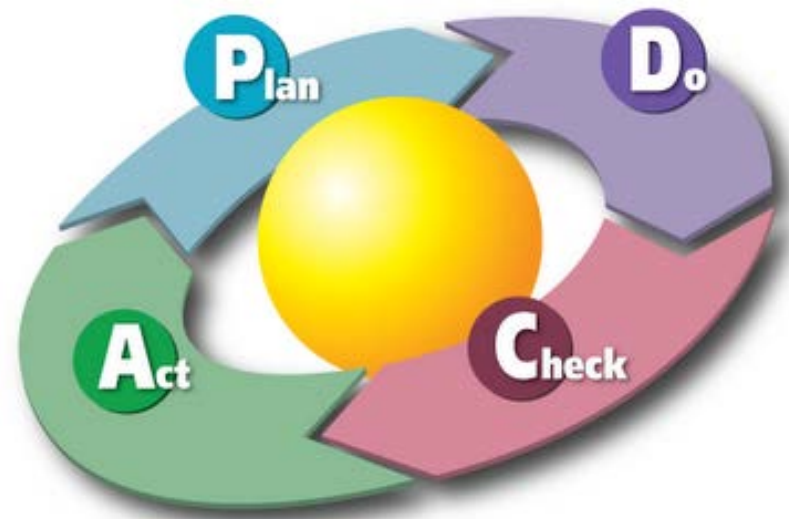
Result	Number (34)	% of total
<b>Transfused</b>	<b>25</b>	<b>74%</b>
• Transfused + IV iron	3	9%
• Transfused + oral iron	18	53%
• Transfused + no iron supplementation	4	<b>12%</b>
<b>Not transfused</b>	<b>9</b>	<b>26% (2 subsequently Tx)</b>
• IV iron	4	<b>12%</b>
• Oral Iron	5	14%
<b>Investigated for iron deficiency</b>		
Nil	2	<b>6%</b>
Pre admission	17	50%
Post discharge	8	<b>24%</b>
Pre & post admission/discharge	13	<b>38%</b>

# Clinical audit – 3/12 pre op anaemia

Elective Operation	Number	Anaemic	Iron deficient (% of total [% of anaemic])	Transfused perioperative (% of total)
Total knee replacement	88	9 (10%)	2 (2% [22%])	3 (3%)
Total hip replacement	99	13 (13%)	3 (3% [23%])	4 (4%)
Gynaecology	42	3 (7%)	1 (2% [33%])	0
Colorectal	43	<b>24 (56%)</b>	<b>14 (33% [58%])</b>	<b>10 (23%)</b>

# Action plan

- Harness enthusiasm
  - Pre-op Assessment Unit
  - Medical Treatment Unit
- Develop a simple pathway
- Agree coding
- ‘Spread the word’:
  - Acute medicine
  - Surgery
  - Gynaecology
- Review



# Process & referral

## Documents governance i.e.:

- Patient risk assessment
- Who is responsible for patient when attending day care
- When therapeutic effect is due to be evaluated
- Who evaluates therapeutic effect

West Suffolk **NHS**  
NHS Foundation Trust  
REFERRAL FOR IV IRON THERAPY  
(appt via extension 2986 with the following information)

Addressograph

Date referred: \_\_\_\_\_

Yes ☐ No ☐

Has patient had a hypersensitivity reaction i.e.:

Yes ☐ No ☐

Yes ☐ No ☐

Yes ☐ No ☐

Yes ☐ No ☐

Yes ☐ No ☐

kg

For dosing refer to:  
<http://www.medicines.org.uk/emc/medicine/24167/SPC/Ferinject/ferric+carboxymaltose/>

Prescription attached? Yes ☐ No ☐

Has patient received Vifor pharma "Ferinject patient information leaflet" NHSBT Yes ☐ No ☐  
"Iron in your diet" leaflet?

Follow-up bloods +/- appt arranged for: \_\_\_\_\_

Version 2: Issued February 2014, review February 2016  
S:\Haematology\Blood Transfusion\Guida Bass\Admin\iron deficiency anaemia\iron def anaemia - patient management algorithm V2.doc

Putting you first

Version 2: Issued March 2014, review January 2016  
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Putting you first

# £££ can focus the mind.....

## In patient transfusion

Activity	Income/Cost
<b>Tariff</b>	
Non elective admission	£848.61
Elective admission	£306.88
Excess bed day	£246.34
<b>Treatment costs</b>	
2 units red cells	£244.18

## Out patient iron therapy

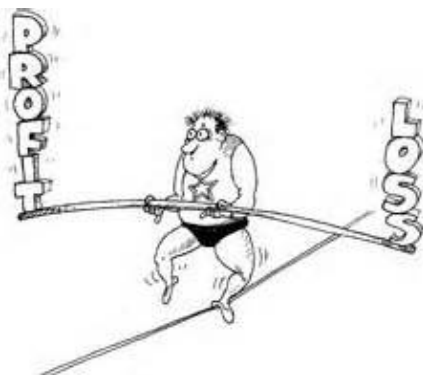
Activity	Income/Cost
<b>Tariff</b>	
Day case IV infusion	£417.00
Infusion	£173.00

400mg iron in 2 units red cells

- v -

1gm IV iron

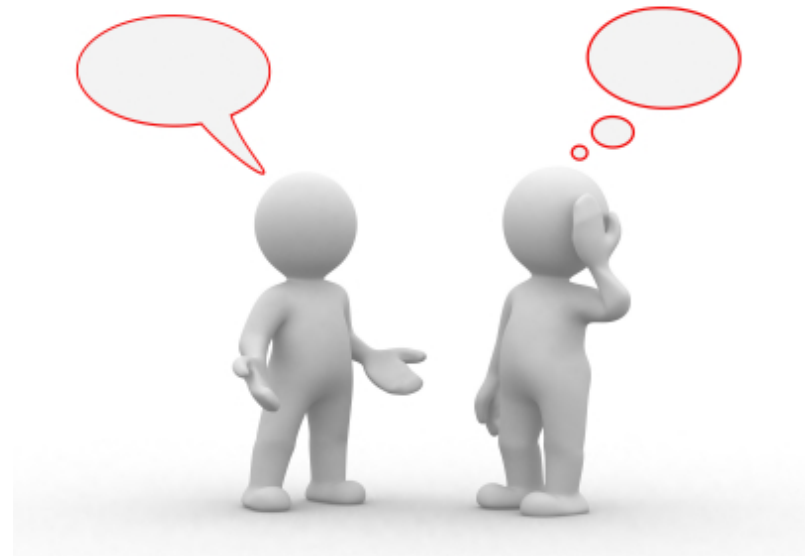
1.63mg/£ -v- 5.51mg/£





# Communication

- Clinical leads:
  - Emergency Medicine
  - Surgery
  - O&G
- Service Manager
- PAU working party
- CCG – APS Lead



# 'But we have already changed'.....

## 2012 (12 months data)

- 77 diagnosed
- 37 LOS 0-2 days
  - 0 days x 8
- 34 admission episodes
  - 33/34 (97%) utilised in-patient bed
- Casemix
  - 22 medical
  - 10 gynae
  - 1 surgical
  - 1 paediatric

## 2013 (6 months data)

- 115 diagnosed
- 27 LOS 0-2 days
  - 0 days x 8
- 27 admission episodes
  - 23/27 (85%) utilised in-patient bed
- Casemix
  - 21 medical
  - 4 gynae
  - 1 surgical

# It's too late to treat pre-op.....

- Hb known by colorectal team 14-129 days pre operatively (median 53)
- 70% transfused were iron deficient pre operatively
- 80% transfused outwith guidelines:
  - Hb 74-109 g/L pre transfusion (median 93g/L)
  - Hb 92-132 g/l post transfusion (median 111g/L)
- Transfused 1-3 units (median 2)

# Clinical audit – 3/12 pre op anaemia

Elective Operation	Number	Anaemic	Iron deficient (% of anaemic)	Transfused perioperative (% of total)
Total knee replacement	88	9 (10%)	2 (22%)	3 (3%)
	56	5 (9%)	1 (20%)	2 (4%)
Total hip replacement	99	13 (13%)	3 (23%)	4 (4%)
	78	8 (10%)	1 (12.5%)	1 (1%)
Urology				
	3 (+1)	0 (+1)	0 (+1)	1 (33%)
Colorectal	43	24 (56%)	14 (58%)	10 (23%)
	23	8 (35%)	7 (88%)	<b>3 (13%)</b>

# What went well ...& could improve

- Effective pathway for selected elective surgery patients
- Surgical 'ownership' of problems & solutions
- ID'd anaesthetists as a target to restrict transfusion
- Business case submitted for community APS
- ↑ use of IV iron 15 - 40%

- Embed practice within gynaecology
  - Source a 'champion' within medicine
  - Enhance staff knowledge
    - need to treat underlying cause of anaemia
- versus**
- safe to anaesthetise

# Refinement to surgical processes

- Agreed to extend pathway to all elective surgical referrals
- Adjust algorithm (120g/L for females)
- Implement near patient testing in PAU
- Documentation:
  - Standard letters to request investigation & treatment for anaemia for orthopaedic referrals
  - Include FBC 'tick box' on all rapid access pathways
  - Amend generic discharge letter to include 'tick box' for GP to check Hb & commence oral iron post discharge
- Educate patients – risks & responsibility

# Where next?



- Communicate key messages to clinicians:
  - Investigate underlying cause of anaemia
  - If transfuse
    - single unit & review
    - replace iron stores
  - Instigate on-going treatment & follow-up
- GP guidelines
- Governance strategy for ambulatory care pathway

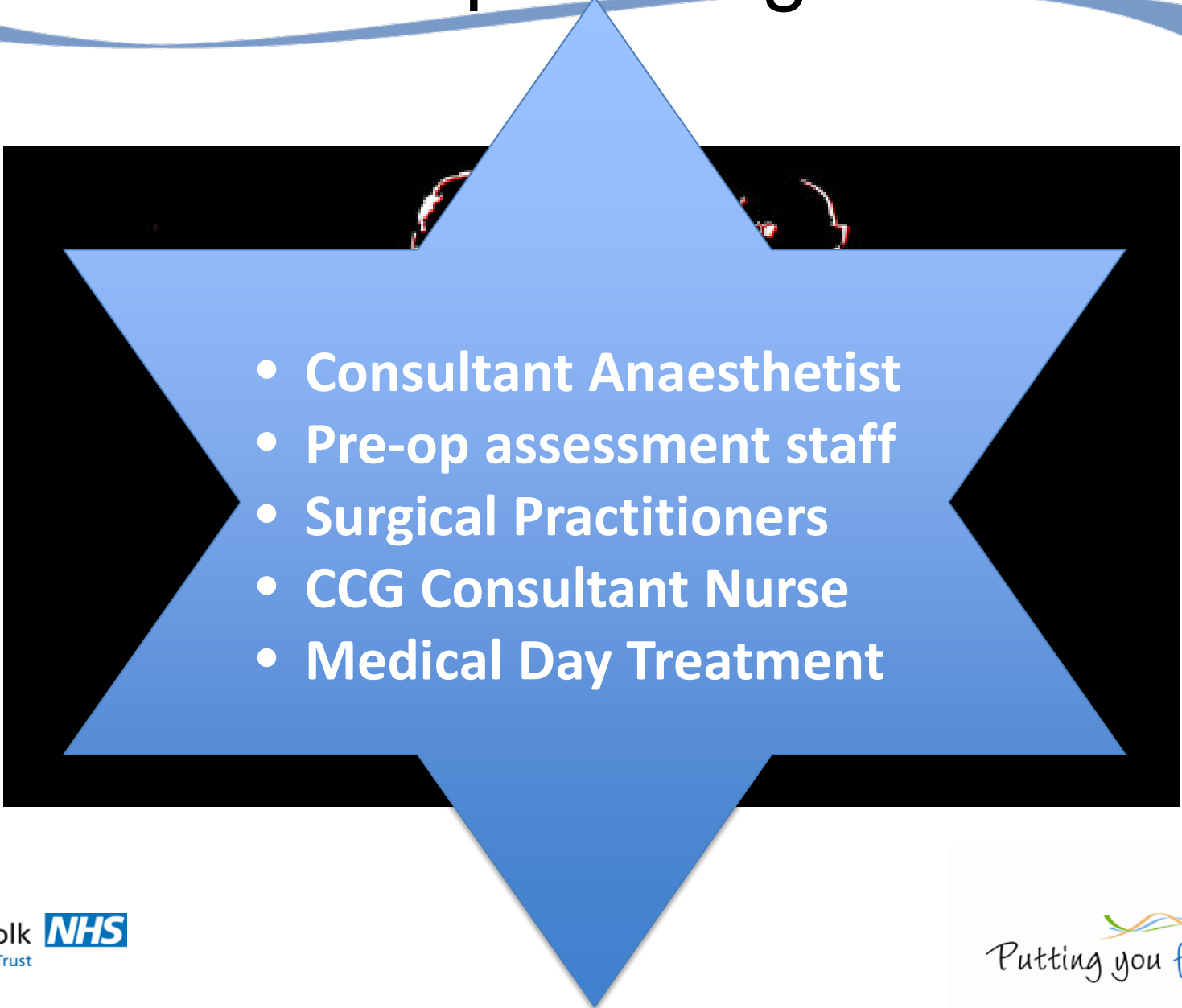
# Patient focussed care...

- 34 acute bed days
- £28,852 income/cost for non-elective admission
- £14,178 income/cost for day case IV iron
- 5 admissions within 19 months
- 24 acute bed days
- Transfused on 4/5 occasions
- IV iron 04/13, 06/13, 04/14
- No further admissions thereafter





# Who are the 'special agents'?

- 
- Consultant Anaesthetist
  - Pre-op assessment staff
  - Surgical Practitioners
  - CCG Consultant Nurse
  - Medical Day Treatment

# Acknowledgments



Sophie Earls (Vifor Pharma)  
Dr Anne Christensen  
Joanne Hoyle  
Dr Cynthia Beatty