

Grŵp Goruchwylio lechyd Gwaed Cenedlaethol Blood Health National Oversight Group



## Pre-Operative Anaemia Stakeholder Meeting

## Wednesday 15<sup>th</sup> June 2023



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### Perioperative Anaemia Management Setting the scene Why? When? How? Who?

Dr Caroline Evans Consultant Cardiothoracic Anaesthesia UHW BHNOG lead for Anaemia VBHC Clinical Lead Blood Heath National Oversight Group (BHNOG)









Who we are
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What we do

Communications

Education

Events

#### **BHNOG Key Workstreams**



Appropriate Platelet Use



Appropriate Use of O D Negative Red Cells



Anaemia Management



Intraoperative Cell Salvage



#### https://bhn Three pillars of patient blood management

#### Why?

- Avoids unnecessary transfusion •
- Optimisation of patients own • physiological blood reserve
- Both key messages in Patient Blood • Management
- Why is it our responsibility? •
- The Welsh Blood Service message  $\bullet$

Pillar 1: Detection and management of anaemia and iron deficiency

Pillar 2: Minimization of blood loss and optimization of coagulation

Pillar 3: Leveraging and optimizing the patient specific physiological tolerance of anemia



#### Why?

- Avoids unnecessary transfu ullet
- Optimisation  $\bullet$ physiolog
- Both key me • Managemen
- Why is it our re ullet
- The Welsh Blood Service message •

THE URGENT PATIENT AGENT ....u loss and optimization of coagulation

nagement

Three nills

https://bhn

Pillar 3: Leveraging and optimizing the patient specific physiological tolerance of anemia

## The purpose and goal of an All Wales Pathway for Anaemia



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https://bhnog.wales.nhs.uk/wp-content/uploads/2022/03/BHNOG-Transfusion-Education-Strategy-2021.pdf

- Opportunity for us to uniformly optimize patients
- Same standards across all hospitals in Wales
- Equity for all 'surgical' patients in Wales
- Allow access to 'Big ' data to demonstrate effect on outcome and cost
- Develop Key Performance indicators to demonstrate good practice

- In 2020 anaemia workstream developed in BHNOG
- Meetings and surveys across 2021
- Eventual agreement from POM/POAC leads on pathway



- Pathway that screens and treats
- @ 6 weeks IV iron
- > 6 weeks, trial of oral remains acceptable(NICE)
- recognise requirement of further referral (gastro/renal/haem)
- timing of surgery
- Fits with NICE/ CPOC / PBM/ consensus statement/ BSH



Pathway with permission of the Welsh Blood Service Blood Health Oversite group



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#### Delivery of an All Wales Pre operative Pathway for Anaemia

**VHBC** Anaemia Team



	BHN	CG C C C C C C C C C C C C C C C C C C C	BHNCG	BHNCC
	All Wales Derieperative	pd management programme for NHS Wales; the first piller of hat supports anaemia and iron deficiency detection in patients blood into the presenting for surgery with thestable causes h introvenation (in for those identified with iron deficiency h, or offer a reasonable atternative	Not Anaemia using Pre-op Anaemia Screen spatient hous the USU(2) s) S to be digitals for the performant? YES We digitals for the performant? TAX - 2006 Phylogeneous to be set to be	In ansemia of chronic inframmation with IDA (a functional iron deficiency) estee as iron deficient, first line treatment should be IV iron (Figure 2.) on the urgency of surgery patients with macrocytic ensemits should be; referres to Hearnalogist for avice (furgent < 4 weeks) referres to Hearnalogist for avice (furgent < 4 weeks) referres to Periorite structure anaemias and there is no expectation olves prior to schedules surgery start if this is the main cause. In anaemia for this forguing law target haremoglon.
	All Wales Perioperative		U&E, CRP, 812/folate (if MCV>100)	
	Anaemia Pathway	er) uniess otherwise specified the following should follow the pathway: globin (Ho) (z30g/) having surgery with possible blood loss yr J304	Ferritin 5.000µ/l and TBAT 4000 ev CRP5hm/l Afternation         Ferritin 5.000µ/l (v/er TBAT 5000)           Anormia of Uncold Information Aftergray (b)         Other anarmias Aftergray (b)	Check 82/Yolde and renal results, refer to Heemstology and/or nep/rodg/r dapoprote based on results. If Surgery cannot be desiged for investigation and TSAT «20% consider IV iron (Regret 2) Treatments
	This is a consensus document developed by All Wales Pre-Operative Anaemia Leads Group & the Blood Health National Oversight Group (BHNOG)	ensemic iron deficiency with a possible blood loss of >300ml or his is diagnosed with a Ho >300g/L with a Ferritin 430g/L or ting for minor or intermediate risk surgical procedures who are ic organing blood loss. This includes but is not exclusive to per or lover gastributismia bleeding. Uses the following blood tests is full blood count (FEO), serum	(IDA) is identified or snaemia of chronic inflammation with iron rate erry as possible before surgery (Pigure 2) N.B. patients with pation with mo deficiency (a nuclical and no deficiency) and	eyd of side effects and solvice to return if patient cannot toerste ns ex with surgen, continue iron treatment for 3 months further with Ho recrueol year easternt annot toerste ans iron prescribe. If iron
		Ts), O-reactive protein (ORP), urea and electrolytes (U&E) and port.	have a restarce. In the case of the restarce	ron prescribed is given at 20mg/kg at one sitting to minimise patient visits to a
		vouid need a FBC and either a serum ferritin OR TSATs to be pre-operative assessment clinic (POAC) or surgical referral, id identification of those requiring iron treatment ahead of or these tests could be taken in primary care (pre-referral).	ic or ansemis of chronic inflammation without iron deficiency.	to product XPC) in as soon apositive or preferably at least 2 weeks prior to surgery there is often not an existing timescale, but IV iron should be considered until the to reduce the need for perioparative transfusion verp possippendixely of the side effects
		ent clinics. same day sesting/refex testing of the pre-op anaemia screen. By treatment of iron deficiency in suitable patients, minimising sumber of hospital visits.	, with the aim of avoiding any delay to the procedure. a or iron deficiency is unexpected and cannot be explained, the must be considered and pathways to support this should be	y implemented locally should aim to minimise the requirement for patients to ents and obtain blood samples. Treatment selection may be influenced by this presents with IDA at 12 weeks prior to surgery and there is no opportunity to bloods after a trained for all not hey should be dered IV iron.
		he algorithm shown in Figure 1. Further details of patient in classification and urgency of surgery is found in the	e treatment should be oral iron where scheduled surgery is >12 stient cannot absorb oral iron or there are <12 weets until should be used as treatment if surgery cannot be delayed to	
-	Al Weles Perioperative Aneemia Pathway: Version 2.0		o be effective. Page 3 of 4 All Wales Perioperative Anaemia Pathway: Version 2.0	Page 4 of 4 All Wales Perioperative Anaemia Pathway: Version 2.0

Approved by BHNOG in December 2021

Development of All Wales Perioperative Anaemia Pathway

### What did you tell us?





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- A follow up survey was undertaken to assess compliance to the All Wales pathway
- Anaemia stakeholder group identified barriers to implementation including:
  - Test turnaround times
  - Ability to review results on the same day
  - Staff/ facilities to provide IV iron
- Workstream activity to address these:
  - Standardised blood testing across all sites in Wales
  - Ability to extract electronic data for audit purpose
  - Apply for Value Based HealthCare funding



Value Based Health Care (VBHC) Funding

- The BHNOG bid for funding for Implementation of an All Wales Pre-Operative Anaemia Pathway (24 months) starting Jan 2023
- To specifically look at :
  - Prudent use of donated RBCs and potential to reduce demand
  - Improved clinical outcomes post surgery (longitudinal data) including survival
  - Reduction in Perioperative Adverse events and length of stay
  - Ensuring equity of care in preoperative anaemia management
  - Provide evidence of the benefit of anaemia management for other patient groups.
  - Funding has allowed secondment of a team to run the project and includes data analysts

First steps: Assessing compliance with a pathway

- Develop individualized Healthboard baseline reports for preoperative anaemia screening and management- current status
- Benchmark hospital/HB activity against CQUIN anaemia standards
- Develop and agree reflexed preoperative anaemia test set( for ease of data tracking)
- Work towards coding Anaemia treatment to capture benefits
- Education and Training (multidisciplinary nursing, Doctors in training, pharmacy, dietetics)

#### • We have pulled the data for 2021 and 2022

- > 11, 000 operative procedures across all hospitals
- Colorectal, Gynaecology, Orthopaedics, Urology and Cardiac

#### The Challenges

• Limitations- operative activity post pandemic down, some centres carrying on their own pathway, identifying when treatment has occurred when patient identified as anaemic, matching transfusion data



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# **Initial Benchmarking Data**

**Preoperative Anaemia Team** 

## Data – its complicated

- Evidences activity and provides a baseline or for benchmarking
- But you need the right data
- Which patients?
- What specific data are we interested in?
- How will we capture it?



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#### Baseline for Preoperative anaemia management

#### Description of the data extract:

Determining the proportion of patients scheduled for major blood loss elective surgery that are treated in

line with the All Wales Perioperative anaemia pathway.

#### Numerator

Of the denominator, all admissions where the following actions were applied within the 12 week (as per

the pathway to allow use of oral iron) period prior to the procedure.

- Haemoglobin measured and
- Serum ferritin &/or TSATs tested and
- If diagnosed with iron deficiency anaemia offered appropriate iron treatment (oral and/or IV iron) or did the patient receive a transfusion of red blood cells and
- Length of stay for patients diagnosed with iron deficiency that were treated with iron, or transfused
  or no intervention
- Readmission rate for patients diagnosed with iron deficiency that were treated with iron, or transfused or no intervention
- Mortality/morbidity for patients diagnosed with iron deficiency that were treated with iron, or transfused or no intervention

#### The denominator data would be for one of the following (for agreement):

For early benchmarking focus on those from CQUIN : Coronary Artery Bypass Graft , Cardiac Valve

Procedures, Colorectal Resection, Cystectomy, Hysterectomy, Primary Hip Replacement, Hip

Replacement Revision, Primary Knee Replacement, Knee Replacement Revision, Nephrectomy, Carotid

Artery (open procedure), Other Aortic/Iliac Occlusive Disease (open procedure).



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CCG6: Anaemia screening and treatment for all patients undergoing major elective surgery				
Applicability:	There is detailed NICE guidance setting out the requirements to offer			
Acute (relevant	iron before surgery to patients with iron-deficiency anaemia. This			
surgical wards)	indicator draws attention to the importance of screening and treatment			
<b>CQUIN goal:</b> 45% to 60%	in line with that guidance and drives more consistent delivery of standard clinical practice.			
Supporting ref: NICE NG24 <sup>11</sup>	Improved compliance would reduce blood transfusion rate for major blood loss surgeries, reducing the occurrence of patient safety risks associated with blood transfusion including fluid overload, infection and incorrect blood transfusions being given. Overall, it is estimated that consistent uptake of screening to 60% would deliver savings of around £3m associated with units of blood being saved due to lower transfusion rates, reductions in critical care periods, saved bed days and reductions in admission rates.			

Are you comfortable with the data set for establishing baseline activity?



# Which Health Board are you attending from today?



#### Patient demographics – Age and Sex





Total of 11512 procedures captured

### Speciality split of the data set





#### Null data – patients missing anaemia screen data



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#### Is the data for your health board:



### Screening for anaemia and iron status





#### Anaemia data – patients with HB <130







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### Exploring Blockers to Pathway Implementation

Preoperative Anaemia Team



### Engagement with Health Boards



- Ongoing engagement with stakeholders across all HBs
   Anaesthetists
  - Pre op assessment nurses
  - $\circ$  Pharmacists
  - $\,\circ\,$  VBHC and transformation teams
- Establish baseline activity against the All Wales Pathway
- Determine local barriers to optimising pathways
- Identify opportunity to shared learning

## **Pathway Benchmarking**





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#### **Use of Pre-operative Anaemia Pathway**

7. Q2: Are you currently using a pre-operative anaemia pathway?







10. Q3: Are you aware of the All Wales pre-operative anaemia pathway?





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## Do all patients over 18 years of age have an anaemia screen prior to high risk surgical procedures?

(Basic anaemia screen will be FBC plus ferritin and/or TSAT)





# What do you think are the biggest barriers for optimising patients with anaemia?



# Do you think oral iron should be in the pathway?



# Patients under which speciality should have oral iron



#### **Categories of Blockers**





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#### Most reported blockers by sub-category





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# Lack/Limited Access to IV facilities

- IV suite
- Medical Day Ward
- Surgical Day Ward
- POAC
- Ad hoc Arrangements




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### Turnaround of testing and review of results

- Complexities of testing logistics to get timely testing, testing off site, reliance on add on requests
- Timing of review often at the end of clinic or next day

#### Do you currently offer a same day review of blood tests at preoperative assessment?



"Turnaround time of results from lab means we can't review them the same day"

"If the lab got the results to us the same day, we wouldn't be able to review them the same day as no staff available to do this"



# Patient Management – collaboration with clinical teams upstream of POAC





### Staffing

- Training Gaps
- Maximizing skillset



#### Do your currently prescribe iron in your clinic?



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# **Shared learning**

- Some great MDT services
- Dedicated staff
- Patient centric





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# What Happens Next?



### Agreeing next steps

### Decisions

- Actions to remove barriers
- Issue of HB reports

Business case for HB funding

#### Key Performance Indicators

Aim to identify deliverable KPI's for Pillar 1 of Patient Blood Management for **ELECTIVE surgery** 

PBM Tool	Clinical Recommendation	Process KPI
Pillar 1 (optimize red cell mass)	Assess preoperative anaemia early enough to tret if required	% patients with Hb 21- 90 days before surgery
	Assessment of iron status	% patients with Ferritin and /OR Tsats 21- 90 days before surgery
	Treatment of Preoperative Anaemia	% patients treated 7-90 days preoperatively before surgery
	Preoperative anaemia is a contraindication for elective surgery	% patients with anaemia prior to surgery
	Avoidance of preoperative transfusion	% patients with a preoperative transfusion*
	What else? Periprocedural iron ?	

# Decisions

1. Standards:

- I. There should be standardised pathway across the health board that covers all specialities and is aligned to the All Wales pathway
- II. All patients matched to CQUIN standard should be screened for anaemia prior to surgery
- III. Any patient with HB <130 (anaemic as per All Wales pathway) should be assessed for iron deficiency
- IV. Any patient identified as iron deficient should have opportunity to be treated ahead of scheduled surgery





Do you agree with Standard 1 - standardised pathway across HBs covering all specialities aligned to All Wales Pathway?



#### Do you agree with Standard 2 - All patients matched to CQUIN standards should be screened for anaemia?



### Do you agree with Standard 3 - Any patient with a Hb<130 should be assessed for iron deficiency?



Do you agree with Standard 4 - Any patient identified as iron deficient should have the opportunity to be treated ahead of scheduled surgery?



# Decisions

#### 2. Data

I. Is it important to have a robust data set for ongoing benchmarking?

(We need to capture treatment data to link in with the other patient information)

#### If yes?

- I. Ongoing audit coordinated by anaemia team
- II. A Live dashboard produced by DHCW





## Dashboard Development Opportunity with DHCW



# Decisions

- 3. Where possible, who should be prescribing/administering IV iron?
- I. Anaethetists
- II. Pharmacists
- III. Nursing staff
- IV. All
- V. Other





### Who should be prescribing IV iron?



#### Who should be administering IV iron?



## **Removing barriers**

#### **Supporting Training and Education**

- F1/F2 PBM education starting autumn 2023
- Explore IV iron administration training for appropriate staff
- Develop standardised resources for HC staff and patients



# Are you happy to use standardised resources?



# **Funding Opportunity**

- Recurrent funding for HB available
- HB individualised report pending issue
- Business Case required evidence value added
- Submit mid July
- Funds available Sept



# Thank you for attending and for all your engagement



If you would like more information please check out the BHNOG anaemia page using QR code above or contact the perioperative anaemia team at: WBS.BloodHealthTeam@wales.nhs.uk