

# Anaemia Management - What is happening across the UK?

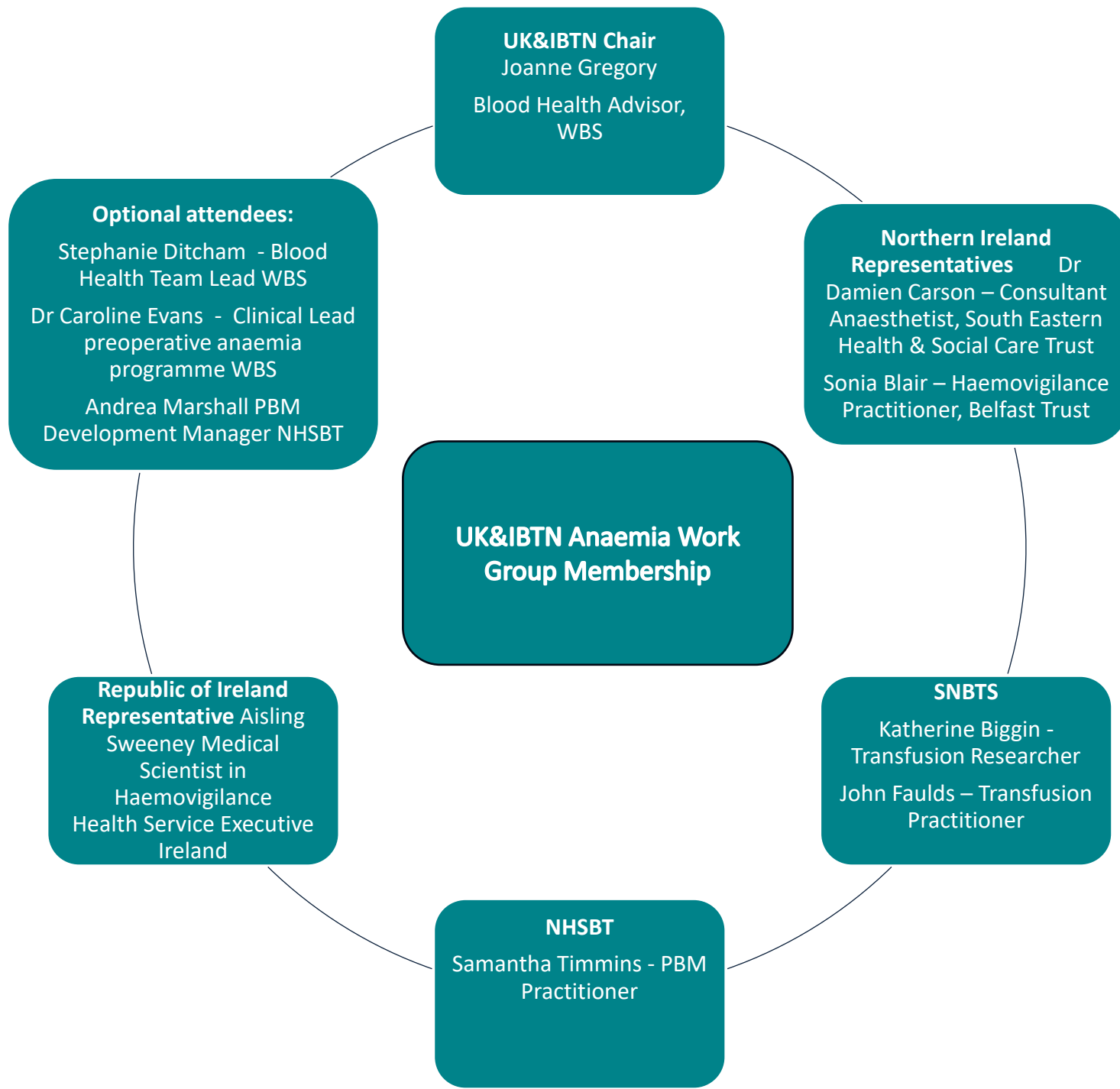
Joanne Gregory  
UK&IBTN Anaemia Group Chair  
Blood Health Advisor  
Welsh Blood Service

## UK &amp; Ireland Blood Transfusion Network (UK&amp;IBTN)

### 3. Remit

The remit of the UK&IBTN anaemia working group is to:

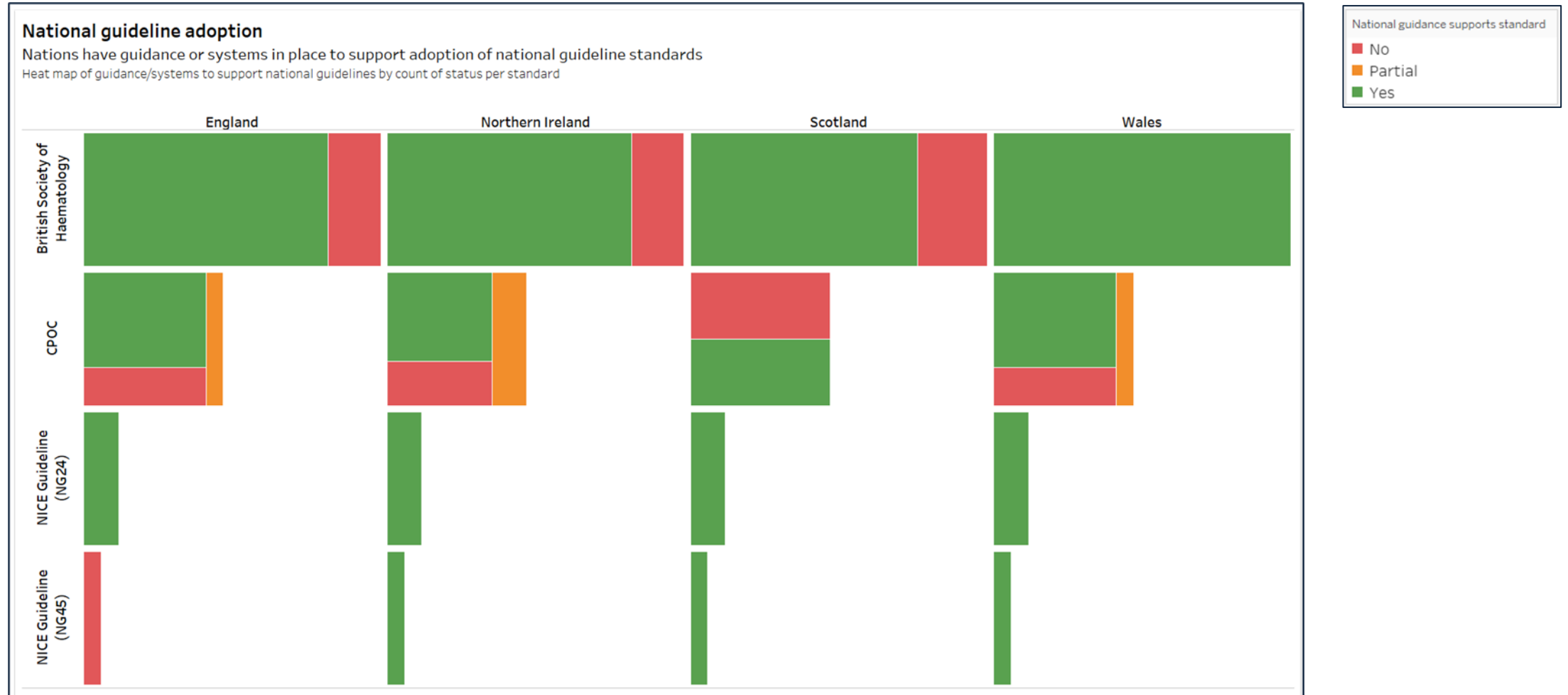
- Update and share relevant information to national, regional, and local hospital transfusion committees in their own country regarding anaemia management activities undertaken across the UK&I
- Evidence the scale of anaemia and its impact in UK&I populations (e.g., national audits) and identify areas for improvement
- Scope availability of useful data within each nation, linked to anaemia and outcomes to assist with evidencing the scale of problem
- Horizon scan for emerging trends, areas of opportunity for anaemia management initiatives and to suggest areas to focus efforts through collaboration with other nationally aligned subgroups such as Public Health, speciality subgroups and international bodies.



Preoperative anaemia Compliance matrix								AR* awaiting response	
			Devolved nation						
Guideline	Standard (please answer all, add detail to sections opposite)		England updated March 25	Northern Ireland updated March 2025	Wales Updated March 2025	SCOTLAND Update Feb 2025	Republic of Ireland		
	Assessment for anaemia in patients undergoing elective surgery should be performed early in the preoperative pathway.	a) Is there a national guideline to support this standard? Yes/No	Supported through promotion of BSH guidelines and Pre-Op toolkit	CPOC and RCOA guidance quoted by the preoperative Assessment workstream (2022). GAIN Guidelines also support this.	Yes - NHS Wales preoperative anaemia pathway (version 4)	Yes - Scottish Standard for the Optimisation of Preoperative Anaemia <sup>4</sup>	AR*	Compliant (evidence based)	
		b) Is there any evidence to support compliance to guideline? Yes/No	No	No	Yes via preoperative anaemia dashboard	No			
		c) Does the evidence indicate you are compliant to the guideline? Indicate using key (full compliance set at 90%)	NA	Not applicable	80% of patients are screened at 12 weeks	Not applicable			
	Patients undergoing major surgery should be screened for anaemia by full blood count (including red cell indices) in the first instance	a) Is there a national guideline to support this standard? Yes/No	Supported through promotion of BSH guidelines and Pre-Op toolkit	Management of the anaemic adult patient prior to scheduled major surgery (GAIN) - The Guidelines and Audit Implementation Network	Yes - NHS Wales preoperative anaemia pathway (version 4)	Yes - Scottish Standard for the Optimisation of Preoperative Anaemia	AR*	Partially compliant	
		b) Is there any evidence to support compliance to guideline? Yes/No	No	No	Yes via preoperative anaemia dashboard	No			
		c) Does the evidence indicate you are compliant to the guideline? Indicate using key (full compliance set at 90%)	NA	Not applicable	80% of patients receive an initial FBC	Not applicable			
	Patients should be provided with information regarding the results of preoperative screening tests and potential treatment options to allow for shared decision-making regarding further management	a) Is there a national guideline to support this standard? Yes/No	Supported through promotion of BSH guidelines and Pre-Op toolkit	No	Yes - NHS Wales preoperative anaemia pathway (version 4)	Yes - Scottish Standard for the Optimisation of Preoperative Anaemia	AR*	Non compliant	
		b) Is there any evidence to support compliance to guideline? Yes/No	No	No	No	No			
		c) Does the evidence indicate you are compliant to the guideline? Indicate using key (full compliance set at 90%)	NA	Not applicable	N/A	Not applicable			
In the preoperative context, Hb <130 g/L should be considered the threshold at which patients are likely to benefit from screening for iron and/or other nutrient deficiencies and enhanced PBM measures.	a) Is there a national guideline to support this standard? Yes/No	Supported through promotion of BSH guidelines and Pre-Op toolkit	Management of the anaemic adult patient prior to scheduled major surgery (GAIN). Men 130g/L, women 120g/L in most Trusts	Yes - NHS Wales preoperative anaemia pathway (version 4)	Yes - Scottish Standard for the Optimisation of Preoperative Anaemia	AR*			
	b) Is there any evidence to support compliance to guideline? Yes/No	NCA2023- 66% patients screened commenced iron therapy	No	Yes via preoperative anaemia dashboard	No				
	c) Does the evidence indicate you are compliant to the guideline? Indicate using key (full compliance set at 90%)	No	Not applicable	80% patients screened at this threshold	Not applicable				
Ferritin <30 µg/L suggests absolute iron depletion/deficiency likely to benefit from iron supplementation.	a) Is there a national guideline to support this standard? Yes/No	Supported through promotion of BSH guidelines and Pre-Op toolkit	Current prone to operation as acute phase reactant. NITC / GAIN peri-op guidance recommends use of Tests and decision making template	Yes - NHS Wales preoperative anaemia pathway (version 4)	Yes - Scottish Standard for the Optimisation of Preoperative Anaemia	AR*			
	b) Is there any evidence to support compliance to guideline? Yes/No	No	No	No	No				
	c) Does the evidence indicate you are compliant to the guideline? Please indicate using key opposite (full compliance set at 90%)	NA	Not applicable	No available treatment data awaiting national LIMEs - pilot in process of being undertake	Not applicable				
Ferritin 30–100 µg/L with a low TSAT (<20%) indicates possible iron depletion/deficiency in the context of inflammation that may benefit from iron supplementation.	a) Is there a national guideline to support this standard? Yes/No	Supported through promotion of BSH guidelines and Pre-Op toolkit	NITC / GAIN peri-op guidance recommends use of Tests and advises treatment routes.	Yes - NHS Wales preoperative anaemia pathway (version 4)	Yes - Scottish Standard for the Optimisation of Preoperative Anaemia	AR*			
	b) Is there any evidence to support compliance to guideline? Yes/No	No	Local practice /Local Audits only - No overall NI collation	No	No				

# Data Presented using Tableau

## Evidence of national guideline adoption



# Evidence of national guideline adoption

Nation	
<span style="color: red;">■</span>	England
<span style="color: orange;">■</span>	Northern Ireland
<span style="color: blue;">■</span>	Scotland
<span style="color: green;">■</span>	Wales

## National guideline adoption by standard

Nations' guidance or systems in place to support adoption of national guideline standards is variable

Dot chart of status by nation by standard

### Guideline: British Society of Haematology

Standard	No	Partial	Yes
Assessment for anaemia in patients undergoing elective surgery should be performed early in the preoperative pathway.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Commissioners and provider organisations should formalise integrated pathways for the referral of patients found to be anaemic during surgical workup.	<span style="color: red;">●</span>		<span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
ESA therapy may be indicated to treat preoperative anaemia in patients who decline transfusion therapy or in patients who have complex red cell antibodies.	<span style="color: blue;">●</span>		<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: green;">●</span>
Evaluation and audit of practice is encouraged to contribute to the evidence base for timing of iron therapy.	<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span>		<span style="color: green;">●</span>
Ferritin 30–100 µg/L with a low TSAT (<20%) indicates possible iron depletion/deficiency in the context of inflammation that may benefit from iron supplementation.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Ferritin <30 µg/L suggests absolute iron depletion/deficiency likely to benefit from iron supplementation.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
In the preoperative context, Hb <130 g/L should be considered the threshold at which patients are likely to benefit from screening for iron and/or other nutrient deficiencies and enhanced PBM measures.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
In unexplained anaemia without iron deficiency, referral to haematology should be considered according to the severity of anaemia (e.g., men with Hb <120 g/L, women with Hb <100 g/L, or according to locally agreed criteria). The likelihood of a serious cause or haemoglobinopathy is proportional to anaemia severity.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Intravenous iron may be considered in patients with confirmed iron deficiency who are intolerant of oral iron, or for patients where there is a suboptimal response to oral iron, or where there is insufficient time in the surgical pathway to assess response to oral iron.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Intravenous iron should not be offered indiscriminately to all patients with anaemia preoperatively.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Patients diagnosed with absolute IDA should be treated with iron replacement. Oral iron therapy should be offered as first-line treatment.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Patients should be provided with information regarding the results of preoperative screening tests and potential treatment options to allow for shared decision-making regarding further management	<span style="color: orange;">●</span>		<span style="color: red;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Patients undergoing major surgery should be screened for anaemia by full blood count (including red cell indices) in the first instance			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Patients with unexplained IDA should be referred for investigation according to local criteria or those set out by British Society for Gastroenterology.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
Preoperative transfusion should only be considered for the correction of preoperative anaemia in very anaemic patients when an urgency for surgery precludes other options for management of anaemia, or when these have been instituted but have not had the desired effect. Restrictive transfusion thresholds should be employed wherever possible.			<span style="color: red;">●</span> <span style="color: orange;">●</span> <span style="color: blue;">●</span> <span style="color: green;">●</span>
The use of reflex testing aiming to identify the cause of anaemia may reduce delays in anaemia diagnosis and minimise patient visits.	<span style="color: red;">●</span> <span style="color: blue;">●</span>		<span style="color: orange;">●</span> <span style="color: green;">●</span>
When ESA therapy is indicated preoperatively, it should be given with iron supplementation to maximise its efficacy.	<span style="color: orange;">●</span> <span style="color: blue;">●</span>		<span style="color: red;">●</span> <span style="color: green;">●</span>

# Data Presented using Tableau

## Evidence of compliance to national guidelines



Nation	
<span style="color: red;">■</span>	England
<span style="color: orange;">■</span>	Northern Ireland
<span style="color: blue;">■</span>	Scotland
<span style="color: green;">■</span>	Wales

## Evidence to demonstrate compliance by standard

Nations' ability to evidence compliance to national guideline standards is variable

Dot chart of status by nation by standard. N/A where no guidance/system in place to support standard (valid to combine N/A with No if desired)

Guideline: British Society of Haematology

Standard

N/A No Partial Yes

Assessment for anaemia in patients undergoing elective surgery should be performed early in the preoperative pathway.

## Guideline: CPOC

Standard

N/A No Partial Yes

All children and young people should be screened for anaemia before procedures associated with a 10% risk of transfusion as early as possible in the pathway

N/A

No

Partial

Yes

All hospitals should establish data capture systems to allow auditing against the metrics and recommendations provided.

All hospitals should work to develop pathways of perioperative care for surgical patients with anaemia that comply with the recommendations in these guidelines

All patients referred for surgery who fulfil the NICE preoperative testing criteria should have a full blood count (FBC) at referral to surgery or at first surgical consultation.

All patients undergoing surgery with a clinical finding of anaemia should have documentation of the type and likely cause of anaemia.

All patients undergoing surgery with anaemia or at risk of anaemia should be proactively provided with information (paper and/or digital) regarding causes and treatment of anaemia including options for blood transfusion.

All patients with anaemia having a major operation (with expected blood loss of >500ml or 10% blood volume) should have a documented plan for preoperative, intraoperative and postoperative management of anaemia, in line with Patient Blood Management (PBM).

All staff working in perioperative settings should have training in anaemia, PBM and blood transfusion. This includes those working with patients receiving emergency surgical care

Preoperative transfusion should only be considered for the correction of preoperative anaemia in very anaemic patients when an urgency for surgery precludes other options for management of anaemia, or when these have been instituted but have not had the desired effect. Restrictive transfusion thresholds should be employed wherever possible.

The use of reflex testing aiming to identify the cause of anaemia may reduce delays in anaemia diagnosis and minimise patient visits.

When ESA therapy is indicated preoperatively, it should be given with iron supplementation to maximise its efficacy.



## 2024 Audit of NICE Quality Standard QS138

### NICE QS 138\*

- **Quality Statement 1:** People with iron deficiency are given iron supplementation before surgery.
- **Quality Statement 2:** Adults who have had moderate blood loss are given transfusion if they are symptomatic.
- **Quality Statement 3:** People with iron deficiency have their haemoglobin levels checked after surgery unless they are bleeding or are on anti-thrombotic therapy.
- **Quality Statement 4:** People who have had moderate blood loss are given written information about blood transfusion.

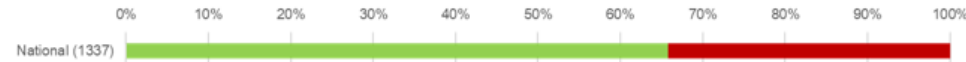
\*Measures are adapted from those issued in NICE QS 138

### Key Findings

	Patients Audited
National	5105
Regional	249
Aneurin Bevan University Health Board	50
Bronglais General Hospital	19
Glan Clwyd Hospital	33
Prince Charles Hospital	15
Prince Philip Hospital	50
Royal Glamorgan Hospital	16
University Hospital Llandough	14
University Hospital of Wales	19
Wrexham Maelor Hospital	13
Ysbyty Gwynedd	20

# Blood and Transplant

**Quality Statement 1:** People with iron deficiency anaemia are offered iron supplementation before surgery.



# Blood and Transplant

**Quality Statement 2:** Adults who are having surgery and expected to have moderate blood loss are given tranexamic acid.

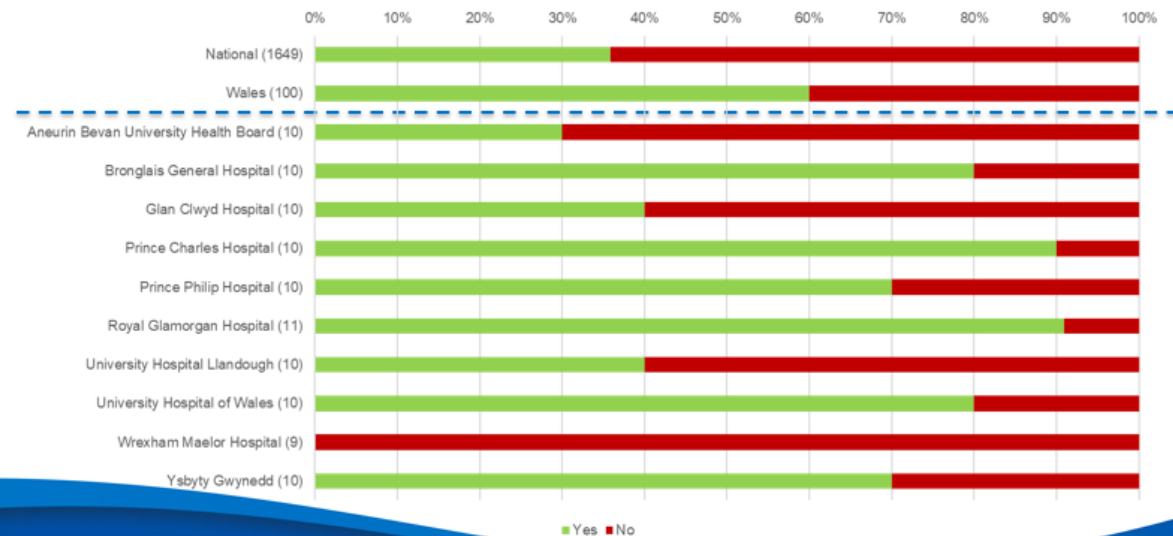


# Blood and Transplant

**Quality Statement 3:** People are clinically reassessed and have their haemoglobin levels checked after each unit of red blood cells they receive, unless they are bleeding or are on a chronic transfusion programme.

# Blood and Transplant

**Quality Statement 4:** People who have had a transfusion are given verbal and written information about blood transfusion.



Yes No



Grŵp Goruchwyllo Iechyd Gwaed Cenedlaethol  
Blood Health National Oversight Group

# Key Messages

- The analysis has yielded interesting information that can help to shape recommendations going forward
- Broadly, nations have guidance and/or systems in place to support the adoption of standards in national guidelines
- However, what is apparent is that nations are not able to evidence compliance with standards. The lack of information does not enable us to place a judgement on this finding, compliance could still be good or poor, and that is an interesting and actionable finding in itself
- Data visualisation can aid the presentation and interpretation of complex data such as these

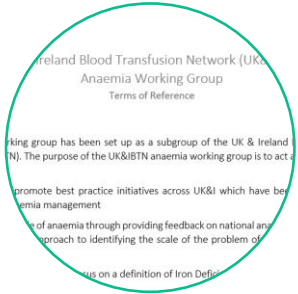


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Blood Health National Oversight Group

## Next Steps

- Position Paper in production to present the finding of the gap analysis which will be taken to the UK&IBTN parent group for further discussion
- Continue to work collaboratively to scope other areas of anaemia management such as women's health, obstetrics

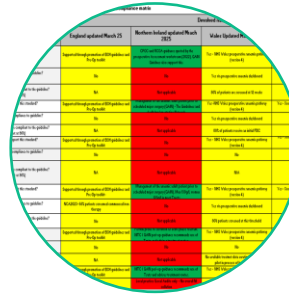
## Conclusion



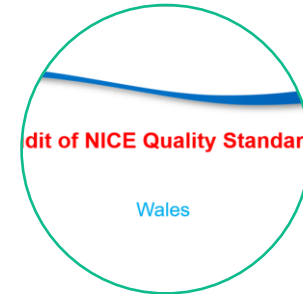
The development of a national group has helped us to gain insights into the national picture specifically for preoperative anaemia management in the cohort of patients with IDA



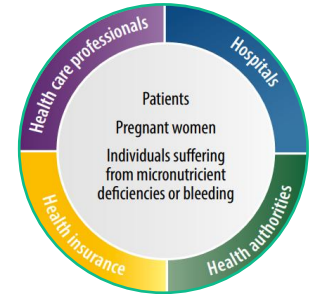
This work is transferable and can be replicated with other areas of anaemia management



The sharing of information is crucial in the understanding of the national picture



Collaboration is a key component to being able to identify the scale of the issue – we are stronger working together



The collection of evidence is vital to have a full understanding of the scale of the issue, nations should be working to ensure systems are interoperable and evidence is readily available



With thanks to the UK&IBTN Anaemia Working Group  
Members

special thanks to Katherine Biggin & John Faulds from SNBTS for their  
work on the data analysis