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## Introduction

The Covid-19 pandemic has increased the fragility of the blood supply chain. In response the Welsh Blood Service (WBS) and the Blood Health National Oversight Group (BHNOG) have promoted the need for Patient Blood Management initiatives (PBM).

UK guidance on the first pillar of PBM, anaemia management<sup>1,2,3</sup>, is well established, however pathway implementation across Wales is inconsistent leading to avoidable transfusions.

Development of an All-Wales Perioperative Anaemia Pathway would ensure equitable, prudent healthcare for pre-operative patients throughout Wales and avoid transfusion

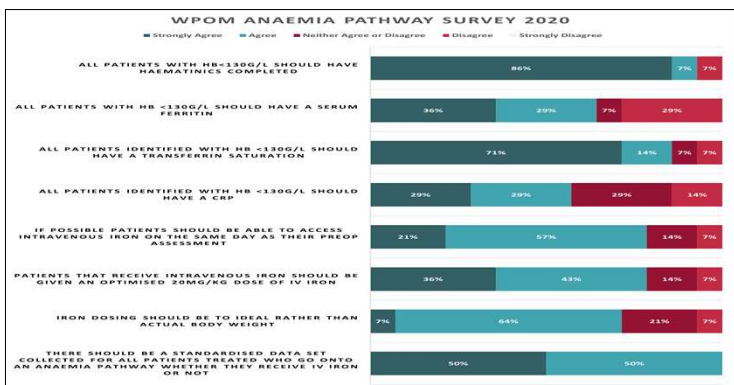


Figure 1. Results from the WPOMS anaemia pathway survey 2020

## Methods and Materials

In July 2020, the BHNOG anaemia workstream engaged with multidisciplinary key stakeholders, primarily the Welsh Perioperative Medicine Society (WPOMS), having representation from Health Boards (HBs) across Wales. Virtual meetings outlining the current and proposed positions were held with the agreement to develop and implement an All-Wales Perioperative Anaemia Pathway.

All HBs shared local guidance to establish baseline practice followed by a survey (Figure 1) to support prioritisation of pathway standards. A pathway was agreed (Figure 2), against which benchmarking was performed to determine current compliance and barriers (Figure 3 and 4).



Figure 2. Agreed All Wales Perioperative Anaemia Pathway<sup>4</sup>

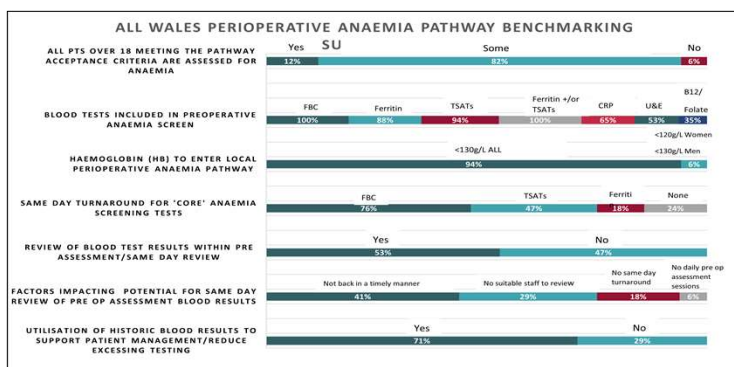


Figure 3. Results from the WPOMS Benchmarking survey 2021

## Results

At baseline, 50% (9/18) hospitals in Wales had a perioperative anaemia pathway. In June 2021, all 18 hospitals (100%) in Wales agreed to use the All-Wales Perioperative Anaemia Pathway<sup>4</sup>.

Benchmarking against the agreed pathway demonstrated significant compliance across Wales. 15/16 (94%) hospitals responded using Haemoglobin >130g/L for all patients and serum Ferritin and/or TSATs for anaemia identification in line with the pathway. With regards to anaemia management, 14/16 (88%) used IV iron for first line treatment of iron deficiency anaemia for urgent surgical patients, again in line with the pathway.

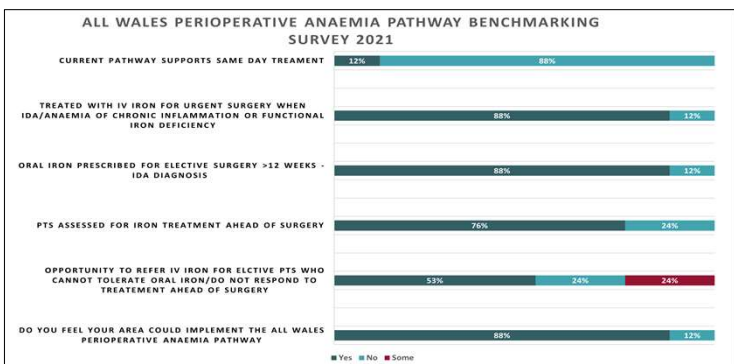


Figure 4. Further Results from the WPOMS Benchmarking survey 2021

## Discussion

Prior to this work, only pockets of perioperative anaemia management existed across Wales leading to variation in pre-optimisation of anaemia. Engagement with stakeholders has allowed agreement of a deliverable All Wales Perioperative Anaemia Pathway, the standard to which all preoperative services within Wales should be working.

Next steps to support full implementation include;

- Support from pathology services to standardise testing and give same day results for all departments where possible;
- develop a digital anaemia audit tool
- Successful valued based healthcare funding will support the establishment of an all Wales anaemia strategy team.

## References

1. <https://b-s-h.org.uk/guidelines/guidelines/identification-and-management-of-pre-operative-anaemia/>
2. <https://www.nice.org.uk/guidance/ng180/resources/perioperative-care-in-adults-pdf-66142014963397>
3. GPP Preoperative patient blood during the SARS-CoV-2 pandemic
4. <https://wbs-intranet.cymru.nhs.uk/bht/wp-content/bht-uploads/sites/4/2022/01/All-Wales-Pathway-Final-Version-2.pdf>
5. Klein AA et al 2016. The incidence and importance of anaemia in patients undergoing cardiac surgery in the UK – Anaesthesia 71(6) pp 627 – 635

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