

A NOF is enough : an audit of post-operative Hb checks and delays to transfusion

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Introduction

- The AAGBI recommends that all patients have early Hb assessment post-operatively to guide blood transfusion¹
- Haemoglobin targets in this population are $>90\text{g/L}^{-1}$ or $>100\text{g/d.L}^{-1}$ in the presence of ischaemic heart disease¹
- As part of a four year project looking to improve quality of care for fractured NOF patients at Croydon University Hospital, this audit looked specifically at how well we are assessing post-op anaemia and need for transfusion

Method

- Pre-op, Post-op and time to checking FBC was obtained for all patients who underwent surgical fixation for a NOF fracture between March 2017 and October 2017 at Croydon University Hospital
- Following initial data analysis, the following changes were implemented:
 - An 'Hb care pathway' was created for all NOF patients
 - Education and training was delivered to recovery staff
 - A haemocue device was made available in recovery to be used on all NOF patients
 - Hospital guidelines on the management of NOF patients were updated by these authors
- A second set of data was then collected for the period January 2018 to April 2018 at the same institution

Results

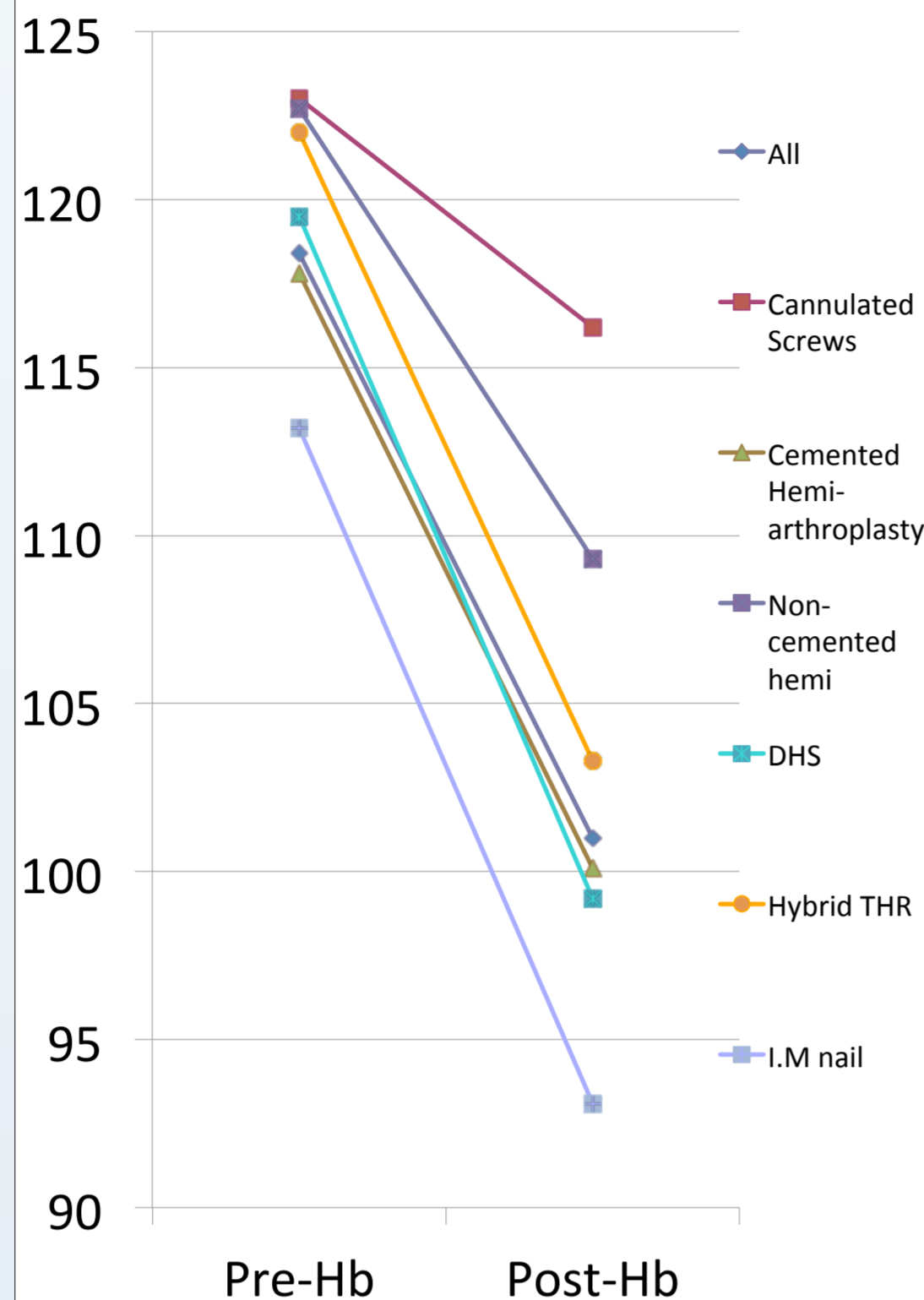


Fig 1. Graph showing average Hb fall with different surgical techniques

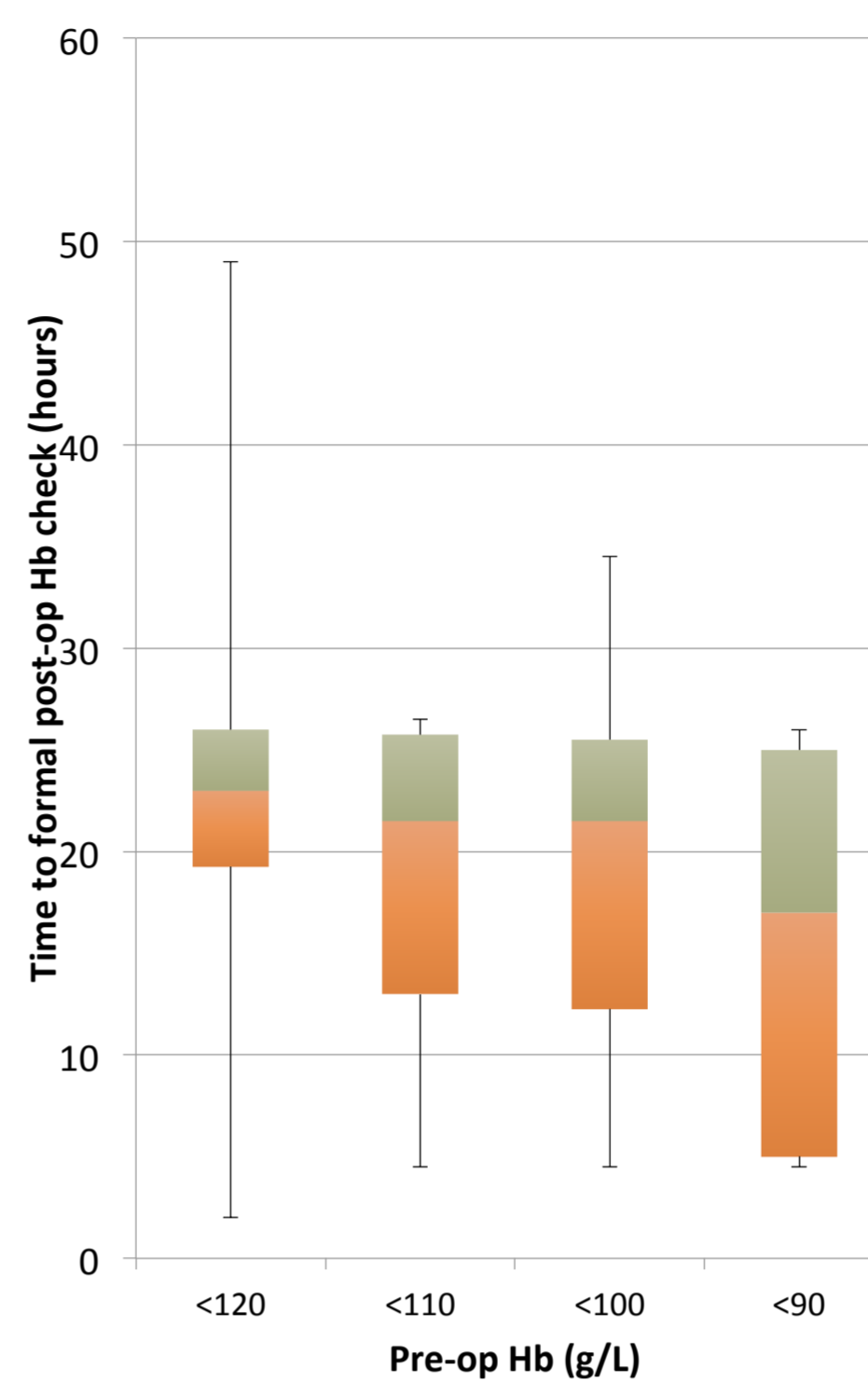


Fig 2. Graph to show how pre-operative Hb level influenced time taken from surgery to post-op Hb check

- Mean time to formal Hb check for all patients was **23.55 hours vs 22.8 hours** after changes were implemented
- Those at high risk of post-operative anaemia, with starting Hb <90 , were waiting on average **15.5 hours** for a post-op formal Hb check
- In those who met criteria for transfusion, mean time to formal Hb check was **24 hours vs 28.5 hours** following the implementation of changes
- The mean time to transfusion in these patients was **33.2 hours vs 39.4 hours** for those who had NOF operations following interventions

Conclusion

- At Croydon Hospital there is a significant time period between the completion of surgery and post-op Hb check in NOF patients
- This is leading to a delay to transfusion in a high-risk population
- Following initial data collection this led to an initial package of interventions designed to improve care in this area for NOF patients
- After implementation of this package, there has been no improvement in either the time taken for a formal Hb check nor the time taken for post-operative blood transfusion in NOF patients at Croydon Hospital

Discussion

- The initial package of interventions has failed in its current form to improve the care for NOF patients at Croydon Hospital. The 'Hb care pathway' is still something in which these authors believe will improve care with some changes
- It was noticed that there was no clinical accountability for the Hb checks as the recovery staff who were trained had shift changes and sometimes agency staff were not aware of the pathway
- Pathway has been altered now and the Orthogeriatrician consultant will be responsible for the postoperative Hb check and further management. Their bleep number is added to the pathway
- Since completion of this audit, a trauma coordinator has also been appointed, who is currently being trained to oversee the pathway
- Hopefully these changes will bring improvement. The results will be analysed again in three months

References

- AAGBI safety guideline: Management of Proximal Femoral Fractures 2011. *Anaesthesia* 2012; **67**: pages 85-98

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