

Management of Anaemia in Musgrave Park Hospital Pre-Operative Assessment Clinic for Patients undergoing Orthopaedic Surgery

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Background

- Peri-operative anaemia and blood transfusion are **independent risk factors** for **poor post-operative outcomes**, including:
 - increased length of hospital and critical care stay
 - post-operative complications
 - increased mortality
- **Variation in practice** was noted when managing anaemia in Pre-Operative Assessment (POA) Clinic.
- Resulted in patients presenting for surgery with **un-investigated, un-optimised anaemia**.
- Patients were then undergoing **potentially avoidable blood transfusion** with consequent risk of related complications

Methods

Intervention group
164 patients, selected from Wednesday POA Clinics

Comparison group
174 patients - selected from Monday and Friday POA Clinics

- between 02/11/19 - 13/12/19
- eligible if undergoing orthopaedic surgery with expected blood loss >500ml.

- Introduction of a **pre-operative pathway** in our intervention group - based on the 2016 AAGBI Consensus Guideline for **managing Peri-operative Anaemia**.
- Rapid identification of anaemic patients using a **Point of Care Hb device (Haemocue)** to ensure appropriate, early investigation and treatment of anaemia.
- Pathway indicated which patients required **Haematinics** sent, and appropriate treatment based on results.
- Comparison group managed pre-operatively in the usual way.
- Data collected using BOIS, NIECR, Belfast Lab Centre

Outcomes

1. Does the pathway improve **investigation** of anaemia pre-operatively?
2. Does the pathway improve **treatment** of anaemia pre-operatively?
3. Does the pathway reduce the incidence of patients **presenting for surgery anaemic**?
4. Does the pathway reduce the incidence of patients **becoming anaemic** in the immediate post-operative period?
5. Does the pathway reduce incidence of **blood transfusion** in the peri-operative period?

Results

1. Does the pathway improve investigation of anaemia pre-operatively?

Yes - Improvement of 64%

| Percentage of patients that had appropriate investigation of anaemia with haematinics: | |
|--|------|
| Intervention group | 100% |
| Comparison group | 36% |

2. Does the pathway improve treatment of anaemia pre-operatively?

Yes - Improvement of 16%

| Percentage of patients that had appropriate treatment of anaemia (based on haematinics): | |
|--|-----|
| Intervention group | 95% |
| Comparison group | 79% |

3. Does the pathway reduce the incidence of patients presenting for surgery anaemic?

Yes - Improvement of 6%

| Percentage of patients that presented for surgery anaemic: | |
|--|-----|
| Intervention group | 12% |
| Comparison group | 18% |

4. Does the pathway reduce the incidence of patients becoming anaemic in the immediate post-operative period?

Yes - Improvement of 8%

| Percentage of patients that were anaemic Day 1 post-op: | |
|---|-----|
| Intervention group | 80% |
| Comparison group | 88% |

5. Does the pathway reduce incidence of blood transfusion in the peri-operative period?

Yes - Improvement of 3%

| Percentage of patients that received transfusion: | |
|---|----|
| Intervention group | 1% |
| Comparison group | 4% |

Conclusion

- Pre-operative anaemia is a strong predictor for peri-operative blood transfusion
- **Our pathway improved early diagnosis and appropriate treatment of pre-operative anaemia, reduced incidence of anaemia immediately post-operatively and reduced incidence of blood transfusion in the peri-operative period.**