General practice audit of preoperative anaemia – background, instructions and audit questions

This audit has been accredited for 40 category 1 QI points in the RACGP QI&CPD 2017-2019 triennium. In order to qualify for points, GPs will be required to complete Parts 1 and 2 of the audit and the Evaluation and QI activity.

Introduction

Anaemia is the most common blood disorder in the world, affecting almost a third of the population (1). The prevalence in Australia is between 10 – 20%, increasing with age (2). Even mild anaemia is associated with increased risk of morbidity, hospitalisation and all-cause mortality (3). However, it is often overlooked and untreated. A US study found that only 15% of those with anaemia received any treatment, the most common being a blood transfusion (4), which is also associated with increased morbidity and mortality (5). Appropriate treatment of anaemia is associated with decreased length of stay and costs (4, 6).

International data consistently shows that approximately 30% of patients scheduled for major elective surgery have preoperative anaemia. Australian data from over 12,000 patients undergoing elective gastrointestinal, orthopaedic and gynaecology procedures found that 88% were assessed for anaemia, with 4.4% occurring in general practice. Management of this anaemia occurred in 22%, and of these, 13.6% in general practice. Iron studies were performed in 46% of patients (none recorded in general practice), and of those identified with iron deficiency, 49% were managed, 15.5% of these in primary care (7).

Patient Blood Management (PBM) improves patient outcomes by ensuring the focus of the patient's medical and surgical management is optimising and conserving the patient's own blood, thus minimising unnecessary blood transfusion. This is now incorporated in the National Safety and Quality Healthcare Standards.

General Practitioners have an integral role to play in recognising, investigating and treating anaemia and iron deficiency in the community, including patients considered for major surgery in which there can be substantial blood loss (8). Iron deficiency needs investigation, and iron stores replenished to allow patients to replace haemoglobin lost during surgery.At the conclusion of the audit a feedback report benchmarked to guidelines and other audit participants will be provided.

An interactive workshop 'TransfusEd workshop for GPs: Anaemia in primary care' will occur in Melbourne CBD Saturday October 12, 2019 (an additional 40 Category 1 QI and CPD points in the 2017-2019 triennium have been applied for).

References:

1. Kassebaum NJMD. The Global Burden of Anemia. Hematology/Oncology Clinics of North America. 2016;30(2):247-308.
2. Kassebaum NJ, Jasrasaria R, Naghavi M, Wulf SK, Johns N, Lozano R, et al. A systematic analysis of global anemia burden from 1990 to 2010. Blood. 2014;123(5):615-24.
3. Riva E, Tettamanti M, Mosconi P, Apolone G, Gandini F, Nobili A, et al. Association of mild anemia with hospitalization and mortality in the elderly: the Health and Anemia population-based study. Haematologica. 2009;94(1):22-8.
4. Nissenson AR, Wade S, Goodnough T, Knight K, Dubois RW. Economic burden of anemia in an insured population. J Manag Care Pharm. 2005;11(7):565-74.
5. Marik PE, Corwin HL. Efficacy of red blood cell transfusion in the critically ill: a systematic review of the literature. Crit Care Med. 2008;36(9):2667-74.
6. Froessler B, Rueger AM, Connolly MP. Assessing the costs and benefits of perioperative iron deficiency anemia management with ferric carboxymaltose in Germany. Risk Manag Healthc Policy. 2018;11:77-82.
7. Australian Commission of Safety and Quality in Health Care. National Patient Blood Management Collaborative (the Collaborative). Available at: https://www.safetyandquality.gov.au/national-priorities/pbm-collaborative/
8. Minck S, Robinson K, Saxon B, Spigiel T, Thomson A. Patient blood management - the GP's guide. Aust Fam Physician. 2013;42:291-7.

Objective

To assess primary health care uptake of iron deficiency screening and treatment for patients with planned elective major surgery.

Learning outcomes of audit activity and feedback

By the end of this activity, participants will be able to:

1. Screen for iron deficiency with/without anaemia in pre-operative patients due to undergo major elective surgery
2. Evaluate and interpret FBC, iron studies and CRP to assess adequacy of iron stores in pre-operative patients due to undergo major elective surgery.
3. Manage pre-operative iron deficiency and anaemia in alignment with the Preoperative haemoglobin assessment and optimisation template (as per Patient Blood Management Guidelines Module 2 Preoperative)

Method:

Part 1 – Demographics and awareness of preoperative anaemia guidelines and patient information.

Part 2 - Clinical audit of ten (10) patients in your practise who you have referred for elective major surgery for which substantial blood loss is anticipated.* Please refer to definitions.

Inclusions:

Adult patients greater than 18 and less than 110 years of age, referred for elective surgery where substantial blood loss is anticipated (see definitions).

Please complete your audit responses using the audit links below by 31 May 2019.

https://dhhsvic.limequery.com/214574?newtest=Y&lang=en

https://dhhsvic.limequery.com/945658?newtest=Y&lang=en

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Please contact Blood Matters with any queries, on 03 9694 0102 or email bloodmatters@redcrossblood.org.au

Thank you for your participation

Instructions:

Data Entry:
Data is to be entered electronically using the links above or from the Blood Matters website < https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/speciality-diagnostics-therapeutics/blood-matters/transfusion-audits>. Please contact Blood Matters if having difficulties submitting data, on 03 9694 0102 or email bloodmatters@redcrossblood.org.au

Definitions

Surgical speciality	Examples of major surgery*
Orthopaedic	• Primary hip/knee replacement • Redo hip/knee replacement • Laminectomy • Spinal fusion – 2 levels or more
Vascular	• Aorto-femoral bypass graft • Aorto-iliac bypass graft • Carotid endarterectomy • Femoro-popliteal bypass graft • Ilio-femoral bypass graft
(Gynaecology	• Hysterectomy • Myomectomy • Ovarian cystectomy
Gastro-intestinal/abdominal	• Abdomino-perineal resection • Anterior resection • Bowel resection • Open cholecystectomy • Colectomy • Gastric stapling • Open hiatus hernia repair • Pancreatectomy • Splenectomy
Cardiac	• All types excluding angiograms

*Reference: Australian and New Zealand Society of Blood Transfusion - Guidelines for transfusion and immunohaematology laboratory practice - Appendix 1 Maximum surgical blood order schedule https://anzsbt.org.au/data/documents/guidlines/GuidelinesforTransfusionandImmunohaematologyLaboratoryPractice_1ed_Nov20_.pdf

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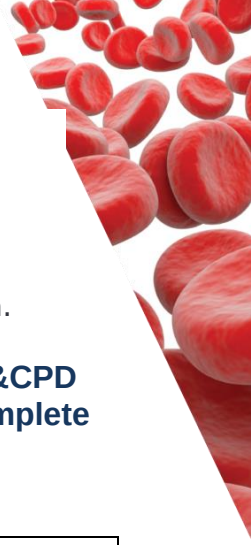


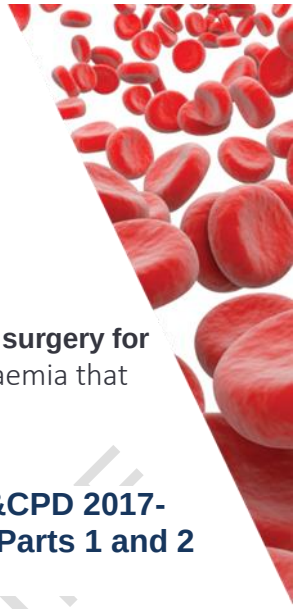
Part 1: General practice audit of preoperative anaemia

Demographics and awareness of preoperative anaemia guidelines and patient information.

This audit has been accredited for 40 category 1 QI points in the RACGP QI&CPD 2017-2019 triennium. In order to qualify for points, GPs will be required to complete Parts 1 and 2 of the audit and the Evaluation and QI activity.

First name: *
Surname: *
Email address: *
RACGP number: *
Postcode of primary place of practice: *
Qualifications of GP completing audit: * Please choose **only one** of the following: - GP in-training - Fellow ACRRM/RACGP - Non-vocationally registered GP - Other
Are you aware of any of the following guidelines in relation to preoperative anaemia screening and management? * Please choose **all** that apply: - National Blood Authority Patient Blood Management Guidelines: Module 2 Perioperative - National Blood Authority Iron product choice and dose calculation guide for adults - NPS MedicineWise Fit for Surgery - Elective surgery patient blood management decision aid - General practice anaemia management pathways - HealthPathways - Iron deficiency anaemia - None of the above - Other: (specify)
Are you aware of any of the following patient information material/handouts on anaemia, +/-iron deficiency? * Please choose **all** that apply: - Australian Red Cross Blood Service patient information (for example, Iron deficiency anaemia patient information) - NPS MedicineWise – patient fact sheets (Managing my iron & Fit for surgery) - Gastroenterological Society of Australia and Digestive Health Foundation – Information about iron deficiency - John Murtagh Patient Education - iron supplement handout - None of the above - Other:

Thank you for completing this survey.



Part 2: General practice audit of preoperative anaemia

Clinical audit of ten (10) patients in your practice who you have referred for elective major surgery for which substantial blood loss is anticipated. (*blood volume loss great enough to induce anaemia that would require therapy.)

This audit has been accredited for 40 category 1 QI points in the RACGP QI&CPD 2017-2019 triennium. In order to qualify for points, GPs will be required to complete Parts 1 and 2 of the audit and the Evaluation and QI activity.

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*RACGP number (required for QI&CPD point allocation): **

Patient audit number (audit number 1 - 10):

*Age of patient: **

*Gender of patient: **

Please choose **only one** of the following:
- Female
- Male

*Type of elective major surgery planned: **

Please choose **only one** of the following:
- Orthopaedic
- Vascular
- Gynaecology
- Gastro-enterology/abdominal
- Cardiac
- Other, specify

*What blood tests were taken within two months prior to/or at time of specialist referral: **

Please choose **all** that apply:
- Full blood count (including haemoglobin) (provide result below)
- Iron studies (including ferritin) (provide result below)
- Urea and creatinine
- C-reactive protein (provide result below)
- None

*Provide haemoglobin result (g/L): **

*Provide ferritin result (mcg/L): **

*Provide CRP results (mg/L): **

Was the patient diagnosed with anaemia? *

Only answer this question if the following conditions are met:
-------- Scenario 1 -------- Answer was 'Female' *and* Hb was less than '120'
----- or Scenario 2 -------- Answer was 'Male' *and* Hb was less than '130'

Please choose **only one** of the following:
- Yes
- No

If diagnosed anaemic, was the cause of anaemia: *

Please choose **only one** of the following:
- Known
- Investigated/under investigation
- Not investigated

Was the patient diagnosed with iron deficiency/inadequate iron stores? *

Only answer this question if the following conditions are met:
Answer was less than '100' at Provide ferritin result (mcg/L):

Please choose **only one** of the following:
- Yes
- Not excluded
- No
- Not documented

If diagnosed iron deficient, was the cause of iron deficiency: *

Please choose **only one** of the following:
- Known
- Investigated/under investigation
- Not investigated

If diagnosed anaemic and/or iron deficient, was the patient referred to/discussed with: *

Please choose **all** that apply:
- Gastro-enterologist
- Haematologist
- Gynaecologist
- Renal physician
- None of the above
- Other:

Were gastro-intestinal investigations completed? *

Only answer this question if the following conditions are met:
(If diagnosed anaemic and/or iron deficient AND patient referred/discussed with gastro-enterologist)

Please choose **only one** of the following:
- Yes
- No

If diagnosed with iron deficiency, was oral iron therapy commenced? *

Please choose **only one** of the following:
- Yes
- No

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What oral iron product was recommended? *

Please choose **all** that apply

- FERRO-LIQUID
- FEFOL® Iron and folate supplement
- Ferro-f-tab
- Ferro-tab
- FERRO-GRADUMET
- FERRO-GRAD C
- FGF
- Maltofer
- Maltofer Syrup
- Nothing specific
- Other:

Was a dose recommended to the patient? *

Only answer this question if the following conditions are met:
(If diagnosed with iron deficiency AND oral iron therapy commenced)

Please choose **only one** of the following:

- Yes
- No

Was duration of oral iron therapy recommended to the patient? *

Only answer this question if the following conditions are met:
(If diagnosed with iron deficiency AND oral iron therapy commenced)

Please choose **only one** of the following:

- Yes
- No

Was oral therapy tolerated? *

Only answer this question if the following conditions are met:
(If diagnosed with iron deficiency AND oral iron therapy commenced)

Please choose **only one** of the following:

- Yes
- No
- Unknown

Was the response to oral therapy assessed? *

Only answer this question if the following conditions are met:
(If diagnosed with iron deficiency AND oral iron therapy commenced)

Please choose **only one** of the following:

- Yes
- No
- Unknown

Was IV iron therapy administered? *

Only answer this question if the following conditions are met:
(If diagnosed with iron deficiency)

Please choose **only one** of the following:

- Yes
- No

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Where was the IV iron therapy administered? *

Only answer this question if the following conditions are met:
(If IV iron therapy was administered)

Please choose **only one** of the following:

- In this practice
- In another primary care setting
- Referred to specialist
- Referred to hospital
- Other; (specify)

IV iron indicated for this patient due to: *

Only answer this question if the following conditions are met:
(If IV iron therapy was administered)

Please choose **all** that apply:

- short time to non-deferrable surgery associated with substantial blood loss
- rapid iron repletion clinically important to prevent decompensation
- demonstrated intolerance to oral iron (despite modification of dose and frequency) or lack of efficacy to therapeutic doses
- demonstrated noncompliance with oral iron
- Other: (specify)

Was the response to IV therapy assessed? *

Only answer this question if the following conditions are met:
(If IV iron therapy was administered)

Please choose **only one** of the following:

- Yes
- No
- Unknown

Was dietary advice/information given to the patient? *

Only answer this question if the following conditions are met:
(The patient diagnosed with iron deficiency/inadequate iron stores)

Please choose **only one** of the following:

- Yes
- No

What other actions were taken to identify cause, manage, and/or correct deficiency? (add comment)

Only answer this question if the following conditions are met:
(The patient diagnosed with iron deficiency/inadequate iron stores)

Were any patient information material/handouts given (anaemia/iron deficiency/iron therapy)? *

Only answer this question if the following conditions are met:
-------- Scenario 1 -------- (The patient diagnosed with iron deficiency/inadequate iron stores)
----- or Scenario 2 -------- (The patient diagnosed with anaemia)

Please choose **only one** of the following:

- Yes
- No

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Thank you for your response