Western Health

Guidelines for RBC Transfusion for General Practitioners

It is the responsibility of all doctors to ensure that transfusions are only given when clearly indicated.[1] Clinical judgement should be central to any decision to transfuse RBC and should not be dictated by a Hb concentration alone but should also be based on assessment of the patient's clinical status[2]. The decision should be supported by the need to relieve clinical signs and symptoms of anaemia and prevent significant morbidity and mortality.

Urgent assessment/treatment

Community-based patients including Aged Care Facility Residents who:

- are haemodynamically compromised, or
- have active uncontrolled bleeding, or
- have a Hb <70g/L with significant clinical signs and symptoms of anaemia

should be referred to the Emergency Department for assessment and Resuscitation +/- transfusion.

Please note: the above patients **cannot** be referred to the Medical Ambulatory Day Unit(MADU) for transfusion.

Non-Urgent

Unless urgent (as defined above) community-based patients including Aged Care Facility Residents **should not** be referred to the Emergency Department for the purpose of transfusion.

- For a patient who has an established diagnosis/cause of anaemia requiring intermittent transfusions (e.g. Myelodysplastic Syndromes), RBC transfusion may be required.
- In all patients with heart failure, there is an increased risk of transfusion-associated circulatory overload. This needs to be considered in all transfusion decisions.[2]
- In well-compensated patients with acute upper gastrointestinal blood loss that is non-critical, there is no evidence to favour a liberal transfusion policy.[2] There are no data to support a specific Hb treatment target in these patients.[2]
- In iron deficiency anaemia, it is also important to be mindful that RBC transfusion will not address underlying iron deficiency, and iron replacement is the most important factor.

The following parameters may be a useful guide:

Hb <70 g/L	• Transfusion may be associated with reduced mortality and is likely to be appropriate. However, transfusion may not be required in well-compensated patients or where other specific therapy is available.[2] • If there has been a recent rapid decline in haemoglobin, it is also important to consider blood loss as an exacerbating factor for anaemia.
Hb 70 - 100 g/L	• The decision to transfuse patients should be based on the need to relieve clinical signs and symptoms of anaemia, and the patient's s response to previous transfusions[2]. There is no evidence to warrant a different approach for patients who are elderly or who have respiratory or cerebrovascular disease[2] • If there are clinical signs and symptoms of anaemia or significant consequences of anaemia (e.g. angina, claudication), then transfusion is likely to be appropriate. • In the asymptomatic patient with mild-moderate anaemia, transfusion is generally not appropriate. • All patients on a regular transfusion program (e.g. Myelodysplastic Syndromes) should be medically reviewed periodically to re-assess the appropriateness of the transfusion program.
Hb >100g/L	• Transfusion is likely to be unnecessary and is usually inappropriate.[2] Transfusion has been associated with increased mortality in patients with ACS.[2] • Longstanding mild anaemia (Hb > 100 g/L) generally does not require transfusion, rather requires diagnostic work-up. • If the patient has iron deficiency or symptoms of gastrointestinal blood loss (or FOB positive with iron deficiency), they should be commenced on oral iron replacement and referred for endoscopy. • If the patient is iron replete, they should be referred to haematology or general medicine outpatient clinic with the appropriate investigations enclosed (e.g. FBE & Blood film report, Haematinic Studies (B12/Folate/Fe Studies), others as clinically appropriate).

1. National Health and Medical Research Council (NHMRC) and Australasian Society of Blood Transfusion (ASBT) (2001). *Clinical practice guidelines on the use of blood components,* NHMRC, Canberra, Australia.
2. National Blood Authority (2012) *Patient blood management guidelines: Module 3 – Medical. National Blood Authority, Canberra, Australia.*

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