20. CLINICAL INDICATIONS FOR RED BLOOD CELL TRANSFUSION

Red blood cell (RBC) transfusion is indicated for the treatment of clinically significant anaemia with symptomatic deficit of oxygen carrying capacity, and for replacement of traumatic or surgical blood loss.¹

Key messages

- RBC transfusion may be life-saving.
- RBC transfusion is associated with risks and adverse outcomes including increased morbidity and mortality. Some risks are dose dependent.
- Each RBC transfusion should be an independent clinical decision based on the risk, benefits and alternatives.
- Each unit of RBCs contains enough haemoglobin to raise the haemoglobin concentration in an average sized adult by approximately 10 g/L.¹

Clinical implications

- The decision to transfuse patients should be based on the need to relieve clinical signs and symptoms of anaemia, and the patient’s response to previous transfusions. It should not be dictated by Hb concentration alone.²³⁴
- Where transfusion is indicated, a single unit of RBC, followed by clinical reassessment to determine the need for further transfusion, is appropriate. This reassessment will also guide the decision on whether to retest the Hb level.³⁴
- Increasingly evidence is favouring a restrictive transfusion strategy.

Background

The National Blood Authority Patient Blood Management Guidelines provide guidance on the principles of PBM – the management and preservation of patients’ own blood to reduce or avoid the need for transfusion. However, where transfusion is required, the guidelines provide evidence where available, and guidance where evidence is lacking, on appropriate transfusion practices. The guidelines support restrictive transfusion and a single unit transfusion guideline.

Examples of specific guidance include:

- 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. Where indicated, transfusion should be of a single unit of RBC followed by reassessment of clinical efficacy and fluid status (MED-PP7).³
• There is a lack of specific evidence relating to the effects of RBC transfusion in patients with cancer. (MED-PP9).³

More information can be found in the Single unit transfusion and Restrictive transfusion threshold companions.

References