

Purpose of this procedure:

This procedure outlines the considerations that should be incorporated into the decision to transfuse a blood component to a patient.

This procedure should be read in conjunction with these complementary Blood Transfusion Procedures:

- [Patient information and shared decision making](#)
- [Consent for transfusion](#)
- [Written authorisation to transfuse a blood component](#)

The Procedure:

The decision to transfuse must be made by assessing all the risks and benefits of, and alternatives to, blood transfusion.

The principle of shared decision making should be applied, requiring a collaborative relationship between patient and healthcare professional.

Alternatives to blood transfusion should be implemented on an individual patient basis.

Clinicians should base their decision to transfuse on the patient's complete clinical picture. This includes an appropriate trigger for transfusion combined with an assessment of severity of symptoms related to the anaemia, thrombocytopenia or coagulation defect or expected adverse outcome if the blood component is not given. It is essential, in order to maintain patient safety, to transfuse patients when medically necessary and not to delay transfusing when it is clinically indicated. Patients have a right to refuse transfusion, however they must be given a complete clinical picture to enable them to make an informed decision.

The [NICE \(The National Institute for Health and Care Excellence\) Guideline NG24 on Blood Transfusion](#), published in November 2015, makes recommendations on the transfusion of blood components and some alternative treatment options. Their recommendations on red cell transfusion are reproduced below:

1.2 Red blood cells

Thresholds and targets

1.2.1 Use restrictive red blood cell transfusion thresholds for patients who need red blood cell transfusions and who do not:

- have major haemorrhage or
- have acute coronary syndrome* or
- need regular blood transfusions for chronic anaemia

1.2.2 When using a restrictive red blood cell transfusion threshold, consider a threshold of 70 g/litre and a haemoglobin concentration target of 70–90 g/litre after transfusion.

1.2.3 Consider a red blood cell transfusion threshold of 80 g/litre and a haemoglobin concentration target of 80–100 g/litre after transfusion for patients with acute coronary syndrome*.

1.2.4 Consider setting individual thresholds and haemoglobin concentration targets for each patient who needs regular blood transfusions for chronic anaemia.

Doses

1.2.5 Consider single-unit red blood cell transfusions for adults (or equivalent volumes calculated based on body weight for children or adults with low body weight) who do not have active bleeding.

1.2.6 After each single-unit red blood cell transfusion (or equivalent volumes calculated based on body weight for children or adults with low body weight), clinically reassess and check haemoglobin levels, and give further transfusions if needed.

*The higher transfusion threshold of 80 g/litre may also be appropriate in other patients with coronary artery disease.

Transfusion Associated Circulatory Overload (TACO) is a common and serious hazard of transfusion and is a particular risk for older patients, babies and those who are of low body weight. A [TACO pre-transfusion risk assessment](#) [NHS Lothian Intranet link] must be completed prior to each transfusion episode (this is found on the front of the National Transfusion Record). If the patient is recognised to be at risk of TACO, deferral of the transfusion should be considered. If it is clinically imperative that the transfusion progresses, the risk assessment tool outlines suggested risk reduction strategies (e.g. single unit transfusion, slower transfusion, concomitant administration of a diuretic).

An indication of the post-transfusion haemoglobin level can be obtained as early as 2 – 4 hours following completion of transfusion in stable patients. Timing of post-transfusion haemoglobin measurement should be tailored according to the clinical circumstance.

See [Links to other relevant policies, references, resources](#) for British Society for Haematology (BSH) guidelines on clinical indications for all blood components.

Associated materials/references:

[NHS Lothian Blood Transfusion Policy](#)

NHS Lothian Blood Transfusion Procedures, in particular:

- [Patient information and shared decision making](#)
- [Consent for transfusion](#)
- [Written authorisation to transfuse a blood component](#)

NICE (The National Institute for Health and Care Excellence) Guideline NG24 on Blood Transfusion
<https://www.nice.org.uk/guidance/ng24>

[British Society for Haematology \(BSH\) blood transfusion guidance](#)