

Appendix 1 (as supplied by the authors): Sample screenshots from Bloody Easy Lite (reproduced with permission from the Ontario Regional Blood Coordinating Network)



Bloody Easy LITE
Module 1 - Indications for Blood Transfusion

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- Transfusion of Red Blood Cells Introduction
- Red Blood Cell Transfusion Basics
- Acute Blood Loss
- Anemia in the Hospitalized Patient
- Transfusion and the Perioperative Patient
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Red Blood Cell Transfusion Basics

- Each RBC unit has a volume of ~300mL with a hematocrit of ~60%.
- Each unit is expected to raise the hemoglobin by about 10g/L in an average sized non-bleeding adult.
- In non-urgent situations, RBCs should be transfused 1 unit at a time.
- A single unit is usually transfused over 2 hours, maximum 4 hours.
- Slower transfusion over 3-4 hours is indicated in patients over 70 years old, with a history of ischemic heart disease or LV ejection fraction of < 45%. Diuretics should be prescribed at the start of the transfusion (not after).
- To decrease the risk of bacterial growth, RBCs must be refrigerated at a temperature of 1-6°C. For this reason, RBCs should not be removed from the blood bank or cooler until the patient is ready to be transfused.

GLOSSARY

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Bloody Easy LITE
Module 1 - Indications for Blood Transfusion

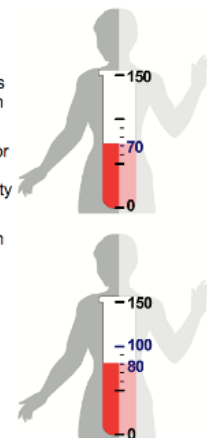
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Anemia in the Hospitalized Patient

Indications for transfusion:

- Transfusion is recommended when the patient's hemoglobin is less than 70g/L.
 - The TRICC Trial randomized critically ill patients to a restrictive (Hb < 70g/L) versus a liberal (Hb < 100g/L) transfusion threshold. Overall 30 day mortality was similar in the two groups.
 - The FOCUS trial randomized post operative hip fracture patients with risk factors for cardiac disease to a restrictive (Hb < 80g/L or symptoms) versus a liberal (Hb < 100g/L) transfusion threshold. There were no differences in rates of death or inability to walk at 60 days or in-hospital morbidity.
- Signs and symptoms that may indicate a need for a transfusion at a higher hemoglobin include presyncope, dyspnea, chest pain or signs of cardiac ischemia.
 - In these situations, there are insufficient data to recommend maintaining the hemoglobin level above a predetermined value.



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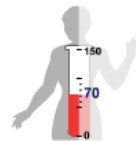
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Transfusion and the Perioperative Patient

Patients undergoing elective surgery should be managed with strategies to minimize the need for red cells.



• **Preoperatively**

Alternatives to transfusion should be considered sufficiently in advance of scheduled surgery (4-5 weeks at least) to allow planning and use of blood conservation measures (eg. erythropoietin, iron).

• **Intraoperatively**

Meticulous attention to surgical technique and use of advanced methods of hemostasis and dissection are essential. For high blood loss surgery, cell salvage should be considered.

• **Postoperatively**

Investigate patients with persistently low hemoglobins (e.g. occult blood loss or hemolysis). Minimize blood taken for laboratory tests. In non-bleeding and asymptomatic patients, RBC transfusion is advised if hemoglobin < 70g/L.