

PubMed

Search

Display Settings:  Abstract

*Vox Sang.* 2011 Dec 13. doi: 10.1111/j.1423-0410.2011.01573.x. [Epub ahead of print]

## Clinical benefits and cost-effectiveness of allogeneic red-blood-cell transfusion in severe symptomatic anaemia.

Beliaev AM, Marshall RJ, Gordon M, Smith W, Windsor JA.

Department of General Surgery, Auckland City Hospital, Grafton, Auckland, New Zealand  
 Department of Epidemiology and Statistics, University of Auckland, Auckland, New Zealand  
 Decision Support Group, Auckland City Hospital, Grafton, Auckland, New Zealand  
 Department of Cardiology, Auckland City Hospital, Grafton, Auckland, New Zealand  
 Department of General Surgery, University of Auckland, Grafton, Auckland, New Zealand.

### Abstract

**Background** It is well known that blood transfusion is life-saving, but also that it carries a serious risk of transmitting viral infections. Introduction of new methods of testing for transmissible diseases, blood banking and dispatch regulations has considerably increased the cost of blood products. However, the clinical benefits and cost-effectiveness of allogeneic red-blood-cell (ARBC) transfusion remain assumed yet undetermined. We assessed the clinical benefits and cost-effectiveness of ARBC transfusion in severe anaemia. **Methods** This was a multicenter observational study comparing Jehovah's Witness (JW) patients with matched ARBC-transfused patients. Inclusion criteria were age  $\geq 15$  years and severe anaemia (haemoglobin  $\leq 80$  g/l). Two JW patients with palliative care cancer and five JW patients with haemoglobin (Hb) concentration between 70.1 and 80 g/l, mild symptoms of anaemia and Auckland Anaemia Mortality Risk Score of 0-3 were excluded. **Results** The entry criteria were met by 103 JW patients and the same number of patients treated with ARBC transfusion. ARBC transfusion reduced mortality by 94%, shock by 88%, gastrointestinal bleeding by 81%, infective complications by 81%, cardiac arrhythmia by 96%, angina by 86%, ischaemic myocardial injury by 81%, acute/acute on chronic renal failure by 66%, neurologic complications by 92%, delirium by 76%, depression by 91% and syncopal episodes by 95%. The incremental cost-effectiveness ratio of ARBC transfusion was 2011 US\$22 515 for death prevented. **Conclusion** ARBC transfusion in anaemic patients is clinically beneficial and cost-effective.

© 2011 The Author(s). *Vox Sanguinis* © 2011 International Society of Blood Transfusion.

PMID: 22150804 [PubMed - as supplied by publisher]

**LinkOut - more resources**