



**TITLE:** Blood Transfusions at End of Life: Clinical Effectiveness and Guidelines

**DATE:** 04 August 2016

## RESEARCH QUESTIONS

1. What is the clinical effectiveness of blood transfusions delivered at end of life?
2. What are the evidence-based guidelines on blood transfusions delivered at end of life?

## KEY FINDINGS

Two non-randomized studies were identified regarding the clinical effectiveness of blood transfusions delivered at end of life.

## METHODS

A limited literature search, with main concepts appearing in title or major subject heading, was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to the main search to limit the retrieval by study type. A second broader search with main concepts appearing in the title, abstract or subject heading was also conducted. Methodological filters were applied to this search to limit retrieval to guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and July 21, 2016. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

## SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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**Table 1: Selection Criteria**

<b>Population</b>	Adult patients at end of life in any care setting (acute, hospice, home)
<b>Intervention</b>	Blood transfusion
<b>Comparator</b>	Q1: No blood transfusion; No comparator Q2: No comparator
<b>Outcomes</b>	Q1: Clinical effectiveness (e.g., increased quality of life, reduced symptom burden [fatigue, dyspnea, pain, functional ability. etc.], prolong life, safety, harms) Q2: Guidelines
<b>Study Designs</b>	Health technology assessments, systematic reviews, meta-analyses, non-randomized studies, evidence-based guidelines

## RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Two non-randomized studies were identified regarding the clinical effectiveness of blood transfusions delivered at end of life. No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

## OVERALL SUMMARY OF FINDINGS

Two non-randomized studies<sup>1-2</sup> were identified regarding blood transfusions at end of life. The authors of one study<sup>1</sup> concluded that the majority of patients in palliative care had subjective benefit from receiving blood transfusions. Authors from the second study<sup>2</sup> observed that patients who received blood transfusions at the end of their life lived significantly longer than anemic patients who did not receive blood transfusions. In addition, the authors concluded that terminal cancer patients in palliative care should not be denied blood transfusions.<sup>2</sup>

## REFERENCES SUMMARIZED

### Health Technology Assessments

No literature identified.

### Systematic Reviews and Meta-analyses

No literature identified.

### Randomized Controlled Trials

No literature identified.

### Non-Randomized Studies

1. To TH, To LB, Currow DC. Can we detect transfusion benefits in palliative care patients? *Palliat Med.* 2016 Jun 29. [Epub ahead of print]  
[PubMed: PM27355984](#)
2. Goksu SS, Gunduz S, Unal D, Uysal M, Arslan D, Tatli AM, et al. Use of blood transfusion at the end of life: does it have any effects on survival of cancer patients? *Asian Pac J Cancer Prev.* 2014;15(10):4251-4.  
[PubMed: PM24935379](#)

### Guidelines and Recommendations

No literature identified.

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**APPENDIX – FURTHER INFORMATION:**

**Systematic Review and Meta-Analysis – Alternate Population**

3. Zheng Y, Lu C, Wei S, Li Y, Long L, Yin P. Association of red blood cell transfusion and in-hospital mortality in patients admitted to the intensive care unit: a systematic review and meta-analysis. *Crit Care* [Internet]. 2014 [cited 2016 Aug 3];18(6):515. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4256753>  
[PubMed: PM25394759](#)
4. Marik PE, Corwin HL. Efficacy of red blood cell transfusion in the critically ill: a systematic review of the literature. *Crit Care Med*. 2008 Sep;36(9):2667-74.  
[PubMed: PM18679112](#)

**Non-Randomized Studies – Qualitative Studies**

5. Martinsson U, Lundstrom S. The use of blood transfusions and erythropoietin-stimulating agents in Swedish palliative care. *Support Care Cancer*. 2009 Feb;17(2):199-203.  
[PubMed: PM18773226](#)

**Review Articles**

6. Uceda Torres ME, Rodriguez Rodriguez JN, Sanchez Ramos JL, Alvarado GF. Transfusion in palliative cancer patients: a review of the literature. *J Palliat Med*. 2014 Jan;17(1):88-104.  
[PubMed: PM24325560](#)