

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

# Blood Transfusions in Rural and Remote Settings: Guidelines

Service Line: Rapid Response Service  
Version: 1.0  
Publication Date: February 14, 2020  
Report Length: 6 Pages

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**Cite As:** *Blood Transfusions in Rural and Remote Settings: Guidelines*. Ottawa: CADTH; 2020 February. (CADTH rapid response report: summary of abstracts).

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**Funding:** CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

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## Research Questions

1. What are the evidence-based guidelines regarding remote blood transfusions in rural and remote settings?
2. What are the evidence-based guidelines regarding remote blood transfusions during transportation to tertiary care?

## Key Findings

No relevant health technology assessments, systematic reviews, or evidence-based guidelines were found regarding remote blood transfusions in rural and remote settings or during transportation to tertiary care.

## Methods

A limited literature search was conducted by an information specialist on key resources including Ovid Medline, Embase, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were blood transfusions and rural or remote settings. Search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and February 4, 2020. Internet links were provided, where available.

## Selection Criteria

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

**Table 1: Selection Criteria**

<b>Population</b>	Patients (of any age) requiring blood transfusion products in rural or remote areas
<b>Intervention</b>	Administration of blood transfusion products
<b>Comparator</b>	Not applicable
<b>Outcomes</b>	Recommendations (e.g., patient safety, administration procedures)
<b>Study Designs</b>	Health technology assessments, systematic reviews, and evidence-based guidelines

## Results

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

No relevant health technology assessments, systematic reviews, or evidence-based guidelines were found regarding remote blood transfusions in rural and remote settings or during transportation to tertiary care.

Additional references of potential interest are provided in the appendix.

## Overall Summary of Findings

No relevant health technology assessments, systematic reviews, or evidence-based guidelines were found regarding remote blood transfusions in rural and remote settings or during transportation to tertiary care; therefore, no summary can be provided.

## References Summarized

### Health Technology Assessments

No literature identified.

### Systematic Reviews and Meta-analyses

No literature identified.

### Guidelines and Recommendations

No literature identified.

## Appendix — Further Information

### Previous CADTH Reports

1. Management of massive blood transfusion in the rural setting: guidelines. (*CADTH Rapid response: summary of abstracts*). Ottawa (ON): CADTH; 2014: <https://www.cadth.ca/management-massive-blood-transfusion-rural-setting-guidelines>. Accessed 2020 Feb 12.
2. Emergency use of uncrossmatched blood: safety, cost-effectiveness, and guidelines. (*CADTH Rapid response*). Ottawa (ON): CADTH; 2010: <https://www.cadth.ca/emergency-use-uncrossmatched-blood-safety-cost-effectiveness-and-guidelines-0>. Accessed 2020 Feb 12.

### Systematic Reviews and Meta-analyses – Alternative Intervention

3. Sellen KM, Jovanovic A, Perrier L, Chignell M. Systematic review of electronic remote blood issue. *Vox Sang*. 2015 Jul;109(1):35-43. [PubMed: PM25827223](#)

### Clinical Practice Guidelines

4. Royal Flying Doctor Service Western Operations. Clinical manual: clinical guidelines. 2020; [https://rfd-media.s3.amazonaws.com/dd/magazine/file/Part\\_1\\_-\\_Clinical\\_Manual\\_-\\_January\\_2020\\_-\\_Version\\_9.b410.pdf](https://rfd-media.s3.amazonaws.com/dd/magazine/file/Part_1_-_Clinical_Manual_-_January_2020_-_Version_9.b410.pdf). Accessed 2020 Feb 12

### Review Articles – Alternative Setting

5. Charuvila S, Davidson SE, Thachil J, Lakhoo K. Surgical decision making around paediatric preoperative anaemia in low-income and middle-income countries. *Lancet Child Adolesc Health*. 2019 November;3(11):814-821.
6. Knapp J, Pietsch U, Kreuzer O, Hossfeld B, Bernhard M, Lier H. Prehospital blood product transfusion in mountain rescue operations. *Air Med J*. 2018 November - December;37(6):392-399.
7. Kralievits KE, Raykar NP, Greenberg SL, Meara JG. The global blood supply: a literature review. *Lancet*. 2015 Apr 27;385 Suppl 2:S28. [PubMed: PM26313075](#)

### Additional References

8. Regina Qu'Appelle Health Region. Blood component administration. 2018 (see appendix 19); <http://www.rqhealth.ca/service-lines/clinical-quality-professional-practice/files/B.1.pdf>. Accessed 2020 Feb 12.
9. Chang R, Eastridge BJ, Holcomb JB. Remote damage control resuscitation in austere environments. *Wilderness Environ Med*. 2017 Jun;28(2s):S124-s134. [PubMed: PM28601205](#)
10. Powell-Dunford N, Quesada JF, Gross KR, Shackelford SA. Army air ambulance blood product program in the combat zone and challenges to best practices. *Aerosp*. 2016

Aug;87(8):728-734.

[PubMed: PM27634608](#)

11. Sicard B, Marouze F, Roche C, Carron M, Ausset S, Sailliol A. Bleeding management in remote environment: the use of fresh whole blood transfusion and lyophilised plasma. *Int Marit Health*. 2016;67(2):79-82.

[PubMed: PM27364172](#)