

Policy

Clinical Guideline

South Australian Perinatal Practice Guidelines – Blood Transfusion

Policy developed by: SA Maternal & Neonatal Clinical Network

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Summary Guideline for the management of pregnant women requiring a blood transfusion

Keywords blood transfusion, haemoglobin level, haemoglobin, oxygen, atherosclerotic, arterial stenosis, purpura, latrogenic infection, creutzfeldt-jakob disease, morphine, pethidine, sodium chloride, Perinatal Practice Guidelines, clinical guideline

Policy history Is this a new policy? **N**
Does this policy amend or update an existing policy? **Y**
Does this policy replace an existing policy? **Y**
If so, which policies? Blood Transfusion

Applies to All SA Health Portfolio
All Department for Health and Ageing Divisions
All Health Networks
CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS
Other

Staff impact All Clinical, Medical, Nursing, Allied Health, Emergency, Dental, Mental Health, Pathology

PDS reference CG112

Version control and change history

Version	Date from	Date to	Amendment
1.0	08/12/2004	23/04/2007	Original version
2.0	23/04/2007	06/07/2009	Reviewed
3.0	06/07/2009	23/09/2013	Reviewed
4.0	23/09/2013	Current	

blood transfusion

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Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

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Critical bleeding / massive transfusion

- > Refer to PPH guideline (for guideline please visit <http://www.sahealth.sa.gov.au>). This guideline covers transfusion in haemodynamically stable women
- > see PPG: Massive blood transfusion guideline. This guideline covers transfusion in Haemodynamically unstable women
- > Activation of “massive transfusion / critical bleeding” protocols should be considered early in any major blood loss / PPH situation

Decision to transfuse

- > Appropriate and timely use of blood products for maternal resuscitation saves lives. It is important to distinguish this from transfusion decision-making in the elective settings in haemodynamically stable women once haemorrhage has stopped, which is the focus of this guideline
- > Transfusion should not be a default decision. It should be carefully considered, taking into account the full range of available therapies / strategies and balancing the evidence for efficacy and improved clinical outcomes against the risks
- > The decision to transfuse should not be made on the basis of haemoglobin level alone but on individual assessment of the woman including signs and symptoms of anaemia / hypoxia, comorbidities, and the nature of any on-going or potential further blood loss
- > Discussion of the risks, benefits and alternatives with the woman is essential for informed decision-making. The transfusion decision must be supported by the need to relieve clinical signs and symptoms of impaired oxygen delivery
- > It is important that symptoms are adequately assessed and other causes considered (e.g. dizziness due to hypovolaemia). Transfusion decision-making should be based on assessment of the clinical status of the woman and not on the assumption that an arbitrary level of haemoglobin needs to be achieved (e.g. for establishment of breast feeding)
- > In healthy women who are haemodynamically stable and in whom there is no significant continuing bleeding or threat of bleeding, transfusion is unlikely to be of benefit when the haemoglobin level is >70 - 80 g/L.
- > However, the threshold for transfusion is lower for women in the antenatal period who have potential for significant blood loss
- > It is important that junior staff seek senior advice about the risks and benefits of transfusion versus not transfusing in individual cases, as they may not fully appreciate the threat of further haemorrhage or the difficulties in interpreting haemoglobin levels in the context of recent blood loss and fluid shifts. Refer to the National Transfusion Guidelines (Obstetric Module at URL: <http://www.blood.gov.au/pbm-guidelines>) for updated information when they are released
- > The prescriber is responsible for ensuring:
 - > The transfusion is clinically appropriate
 - > The expected benefits outweigh the potential hazards
 - > Informed patient consent has been obtained and documented
 - > Clinical staff caring for the patient are informed that the blood product has been prescribed
 - > Patient risk factors are identified, and special requirements are documented

Transfusion guidelines

- > The 2001 NHMRC / ASBT guidelines on the Appropriate Use of Blood Components are currently under review as national 'Patient Blood Management' guidelines. The Critical Bleeding/Massive Transfusion, Peri-operative, Medical and Critical Care modules have been released. The Obstetric and Paediatric / Neonatal modules are in progress. To follow the progress of the Obstetric module of the National Patient Blood Management guidelines see <http://www.blood.gov.au/pbm-guidelines>
- > Unlike the current guideline process, the 2001 guidelines did not consider specific patient groups or scenarios. They covered transfusion decision-making in haemodynamically stable adults and didn't specifically cover pregnancy or the postpartum period. They did however, outline important general principles of transfusion-decision making in stable patients. This included the need to consider the clinical status of the patient rather than haemoglobin level alone, and single unit red cell transfusion with assessment of response before further units are given. Like other guidelines, including the UK Green Top Guideline on Blood Transfusion in Obstetrics (RCOG, 2007), they highlighted that transfusion is rarely indicated in the stable patient when the haemoglobin level is >100 g / L
- > For more information on transfusion seek advice of senior clinicians

Transfusion risks

- > While transfusion can save and improve lives, it has inherent risks that need to be balanced against the benefits in each individual patient
- > There is a perception that blood is safer than ever, and whilst this might be the case in regards to transmissible viruses such as Hepatitis or HIV (with a risk of less than 1 in 1 million in Australia), transfusion has inherent hazards, many of which are poorly defined and hard to remove. Some of these include:
 - > Transfusion related acute lung injury (TRALI)
 - > Immunomodulation
 - > Sepsis from bacterial contamination
 - > Development of clinically significant red cell antibodies
 - > Potential transmission of an infectious agent (including unrecognised agents) as well as allergic and febrile reactions
 - > Despite improvements in systems management, there remains a risk of harm due to administrative errors that have the potential to result in an acute haemolytic reaction from ABO incompatibility, which may be fatal
 - > Based on data from the FDA and from the Serious Hazards of Transfusion reporting scheme in the UK, TRALI and haemolysis (due to transfusion of the wrong blood) continue to be the most significant serious risks and leading causes of transfusion related mortality
 - > Patient information to assist with obtaining informed consent for transfusion can be on <http://www.sahealth.sa.gov.au>
 - > Clinician information on the current risks of transfusion can be on <http://www.sahealth.sa.gov.au>

Obtaining consent

- > Informed consent is required

- > Give a clear explanation of the potential risks and benefits of blood transfusion specific to the woman's situation and provide written information in a format appropriate to woman's situation
- > Health professionals should use appropriate language, and try to ensure that the information given is understood and retained by the woman
- > Document consent in the medical record either on a consent form or in the progress notes (as per hospital consent policy)
- > In an emergency, when immediate intervention is necessary, it may not be possible to provide information. In this situation, provide explanation after the transfusion to the woman and her family and document this in the medical record.
- > see PPG: Women who decline blood transfusion

Pre transfusion testing

- > A current transfusion specimen is required (group and screen / save also called a type and screen / hold) for compatibility testing
- > Specimens expire 72 hours after collection during pregnancy. The 72-hour expiry applies for 3 months after delivery and 3 months after transfusion
- > Refer to health service policies / procedures on pre-transfusion testing for more information

Administration of blood and blood products

- > Refer to local policies / procedures for administration of blood and blood products. See 'flippin blood' Second Edition for more information: <http://www.transfusion.com.au>)

Education and training

- > It is recommended that staff undertaking these processes complete the BloodSafe elearning Clinical Transfusion Practice module, Post-Partum Haemorrhage and Iron Deficiency Anaemia modules at www.bloodsafelearning.org

References

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2. National Blood Authority Patient Blood Management Guidelines. Available from URL: <http://www.blood.gov.au/pbm-guidelines>
3. Australian Red Cross Blood Service. Circular of information an extension of blood component labels 2012. Available from URL: <http://www.transfusion.com.au/sites/default/files/BCI%20290512%20FIN.pdf>
4. Australian and New Zealand Society of Blood Transfusion Ltd. (ANZSBT) Royal College of Nursing (RCNA). Guidelines for the Administration of Blood Products. 2nd Edition December 2011. Available from URL: http://www.anzsb.org.au/publications/documents/ANZSBT_Guidelines_Administration_Blood_Products_2ndEd_Dec_2011_Hyperlinks.pdf
5. BloodSafe Program, Australian Red Cross Blood Service. Flippin' Blood Second Edition June 2012. Available from URL: <http://www.transfusion.com.au/sites/default/files/Flippin%20Blood%20ONLINE.pdf>

Useful web sites

National Blood Authority Patient Blood Management:
<http://www.blood.gov.au/pbm-guidelines>

Australian Red Cross Blood Service
<http://www.transfusion.com.au/home.aspx>

Australian and New Zealand Society of Blood Transfusion
<http://www.anzsb.org.au>

Abbreviations

ANZSBT	Australia New Zealand Society of Blood Transfusion
e.g.	For example
FDA	Food and drug administration
g	Gram(s)
HIV	Human Immunodeficiency Virus
L	Litre(s)
mL	Millilitre(s)
NHMRC	National Health and Medical Research Council
%	Percent
PPH	Postpartum haemorrhage
RCNA	Royal College of Nursing Australia
RCOG	Royal College of Obstetrics and Gynaecology
TRALI	Transfusion related acute lung injury
UK	United Kingdom