

Transfusion Reactions: Management and Reporting Protocol

Who	Division 1 Registered Nursing Staff Medical Staff
Expected Outcomes	That all recipients receiving a transfusion will be monitored and transfusion reactions will be promptly identified, treated and reported.
Precautions	Except for allergic urticarial and febrile non-haemolytic reactions, all adverse transfusion reactions are potentially fatal and require urgent treatment.
Why	To ensure that all transfusion reactions are recognised and then managed appropriately. To ensure that all transfusion reactions are reported via the correct means.
Equipment	<ul style="list-style-type: none">• Blood sampling equipment• 10ml clotted tube• Urine specimen container• All blood units and administration equipment used in the transfusion• Transfusion Reaction Report MRL31• Incident Form See 'Collect a Specimen of Blood for Crossmatching'

- Step 1** STOP THE TRANSFUSION IMMEDIATELY at the first appearance of any signs or symptoms of a transfusion reaction.
- Step 2** Keep the intravenous line open with 0.9% saline.
- Step 3** Immediately do a clerical check at the bed side: **Steps 4-8.**
- Step 4** Ask the recipient to identify themselves by given name, surname and date of birth. If the recipient is unconscious, ask a relative or a second member of staff to verify the recipient's identity.
- Step 5** Check the recipient's full name, UR number and date of birth exactly match:
- Compatibility Label
 - Compatibility Report
 - Identification wristband
 - Intravenous Infusion Chart MRL09
- Step 6** Check that the ABO group, Rh group and unique donation number exactly match on the:
- Compatibility Label
 - Compatibility Report
 - Blood product label
- Step 7** Check the expiry date on the blood pack.

SYMPTOMS	POSSIBLE REACTIONS	NURSING ACTION
Fever (greater than 1°C over baseline) Recipient otherwise well	<ul style="list-style-type: none"> • Febrile non-haemolytic 	<ul style="list-style-type: none"> • Check recipient and pack identification • Give antipyretics as ordered • If no further symptoms recommence transfusion
Fever (greater than 1°C over baseline) Plus dyspnoea, hypotension, pain, anxiety or the recipient becomes unwell	<ul style="list-style-type: none"> • Acute haemolytic • Bacterial contamination 	<ul style="list-style-type: none"> • Seek urgent medical advise • Check recipient and pack identification • Collect blood samples • Return blood pack and giving set to the Blood Bank
Hives, itching, rash	<ul style="list-style-type: none"> • Allergic 	<ul style="list-style-type: none"> • Give antihistamines/steroids as ordered
Dyspnoea	<ul style="list-style-type: none"> • Heart failure • Anaphylaxis • Acute haemolytic • Transfusion-related acute lung injury 	<ul style="list-style-type: none"> • Sit recipient upright • Administer oxygen • Seek urgent medical advice
Hypotension	<ul style="list-style-type: none"> • Acute haemolytic • Anaphylaxis • Bacterial contamination • Transfusion-related acute lung injury 	<ul style="list-style-type: none"> • Seek urgent medical advice • Check recipient and pack identification • Collect blood samples • Return blood pack and giving set to the blood bank
Other	<ul style="list-style-type: none"> • Complication of intravenous therapy • Incompatible intravenous solutions given with blood component 	<ul style="list-style-type: none"> • Treatment depends on symptoms/causes

Step 8 Immediately report all reactions to the recipient's treating medical officer and to the hospital Blood Bank.

Follow the medical officer's orders for treatment.

Step 9 Monitor the recipient's:

- Temperature
- Pulse
- Blood pressure
- Respiratory rate
- Recipient's general appearance



The frequency of assessment is dependent on the recipient's condition. For a mild reaction, monitoring should occur every 10-15 minutes. For severe reactions (eg. dyspnoea, shock or pain) the recipient should not be left alone.

Step 10 Only recommence the transfusion if it is ordered by the Medical Officer.

Step 11 For all reactions complete a Transfusion Reaction Report MRL31 and send it to the hospital blood bank with the following:

- Post-transfusion blood specimens: 9ml EDTA tube, 10ml clotted blood.
- Post-transfusion urine specimen.
- All transfused donor packs and giving sets.

(Remove sharps, spigot the blood bag and tie off all tubing to prevent spillage. Transport in a sealed container).

- Additional tests may be required if HTR, TRALI or bacterial contamination is suspected.

Further blood or blood components will not be issued by the blood bank until the transfusion reaction investigations are complete and show that the reaction is non-red cell mediated.

Step 12 An Incident Report must be completed for all reactions except febrile non-haemolytic and mild allergic.

Step 13 Document all events including investigations in the recipient's medical record.

Step 14 The registered nurse checks the pathology results and seeks advice from the medical officer as to further transfusion and treatment.

Step 15 The medical officer checks the pathology results and contacts the blood bank scientist for further advice if required.



If an adverse event (actual or 'near miss') is associated with a blood transfusion reaction document details in the medical record and complete an incident report.



Brecher, M. (ed), (2002). AABB Technical Manual, 14th edition. Bethesda: American Association of Blood Banks

Circular of Information: an extension of blood component labels, 2003, ARCBS

The Clinical Use of Blood in Medicine, Obstetrics, Paediatrics, Surgery and Anaesthesia, Trauma and Burns, World Health Organisation, Blood Transfusion Safety, Geneva

Guide to the preparation, use and quality assurance of blood components. 9th edition, Council of Europe Publishing

Popovsky, M. (Ed), (2001). *Transfusion Reactions*, 2nd edition, Bethesda: AABB Press

Serious Hazards of Transfusion Annual Report 2000-2001.
www.shot.demon.co.uk

Transfusion Medicine Manual 2003: Blood transfusion and clinical use of blood in Australia, ARCBS

SH Policy	Patient Care	ACHS	Continuum of Care
Reviewer	Transfusion Committee	Last review date	May 2006
Authoriser	Executive Quality and Risk	Next review date	May 2009

This hard copy might not be the latest version of this document. Please see the Southern Health Policy and Protocol Internet site for current policies, protocols and guidelines.