Acute Transfusion Reaction Flow Chart
within 24 hours of blood transfusion

MILD REACTION
Localised rash – hives, wheals, itching

- Slow transfusion
- Record vital signs
- Observe patient

MODERATE REACTION
Generalised rash – hives, wheals, itching
Rigors – chills, shivering
Fever – >1°C above baseline or >38.5°C
Tachycardia, palpitations. Flushing
Restlessness
Mild Dyspnoea

- Slow transfusion
- Record vital signs
- Keep IV open with N/Saline
- Keep blood connected but not running
- Reassure patient (call for help as necessary)
- Administer oxygen and maintain airway

SEVERE REACTION
Pain – loin, back, chest, IV site
Feeling of “impending doom”, “sinking” feeling
Fever, Rigors
Tachycardia, hypotension, collapse
Restlessness
Unexplained bleeding, haemoglobinuria
Respiratory distress, shortness of breath

STOP TRANSFUSION IMMEDIATELY

- Record vital signs
- Keep IV open with N/Saline
- Keep blood connected but not running
- Reassure patient (call for help as necessary)
- Administer oxygen and maintain airway

Recheck blood unit against patient ID band and compatibility report

Notify: Nurse-In-Charge, Medical Officer and Blood Bank (Insert your Hospital numbers here)

MILD REACTION
Localised rash – hives, wheals, itching

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MEDICAL ASSESSMENT
Are signs and symptoms attributed to the transfusion?

- Fever only?
  - Allergic – NOT SEVERE?
  - Stable obs?

- Consider paracetamol / antihistamine
  - If transfusion still indicated, commence new blood bag
  - Document as MODERATE REACTION

NO

- Improvement within 30mins?
  - No improvement
  - Deterioration within 30mins?
  - Treat as a MODERATE REACTION

YES / UNSURE

FOR SEVERE REACTIONS:
If determined to be a severe reaction after medical assessment –
- Notify Haematopathologist via Insert your Hospital numbers here, 24hrs, 7 days
- Notify Clinical Haematologist On-Call – 24 hours (Insert your Hospital numbers here)
- Vital signs at least every 5 mins, including SpO₂
- Follow Haematology/Consultant Advice
- Initiate appropriate support – IV fluids, cardiovascular and respiratory, bronchodilators, adrenaline, corticosteroids, chest XRay, bacterial screening flow chart

Document as a SEVERE REACTION

Reviewed and updated by the Eastern Health Transfusion Committee 2012 | For further information refer to the Blood Matters webpage: EH intranet > Useful Links > Blood Matters
Acute Transfusion Reaction Diagnoses
(additional clinical information)

MILD ALLERGIC REACTION
Localised rash – hives, wheals, itching
Incidence 1-3 in 100

Additional Clinical Actions:
• Consider antihistamine
• If reaction subsides – transfusion may be completed

SEVERE ALLERGIC REACTION / ANAPHYLAXIS
Flushes, wheezing, hypotension, anaphylaxis
Incidence 1 in 20,000-50,000

Additional Clinical Actions:
• Adrenaline and/or steroids may be indicated
• CAUTION – this may become a medical emergency.
• Support blood pressure and maintain airway.
• Resuscitation may be required.
• Consult the Haematologist before administering any additional blood packs

FEBRILE REACTION
Fever rise >1° above baseline or >38.5°C
May be accompanied by rigors and chills
Incidence 1 in 100

Additional Clinical Actions:
• These usually respond to antipyretics
• Avoid aspirin in thrombocytopenic and paediatric patients.
• Rule out a haemolytic reaction, septic reaction and TRALI

CAUTION – fever alone maybe the 1st manifestation of a life threatening reaction

SEPTIC REACTION / BACTERIAL CONTAMINATION
Fever, chills, rigor, nausea, vomiting, hypotension
Incidence 1 in 75,000 platelets, 1 in 500,000 red cells

Additional Clinical Actions:
• Administer broad spectrum antibiotic coverage after obtaining blood cultures from the patient
• Support blood pressure
• Send the pack to hospital Blood Bank for urgent culture and Gram stain
• Notify the hospital Blood Bank to contact ARCBS to ensure quarantining and testing of related components from the same donor

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ACUTE HAEMOLYTIC REACTION
Rigors, fever, flank or IV site pain, tachycardia, dyspnoea, hypotension, unexplained bleeding, oliguria, haemoglobinuria, haemoglobinaemia
Incidence 1 in 12,000-77,000

Additional Clinical Actions:
• Induce diuresis with fluids and diuretics
• CAUTION – this may become a medical emergency.
• Support blood pressure and maintain airway.
• DO NOT administer further blood products until cleared by Haematologist

TRANSFUSION ASSOCIATED CIRCULATORY OVERLOAD – TACO
Dyspnoea, cyanosis, sudden anxiety, pulmonary oedema
Incidence up to 1 in 100

Additional Clinical Actions:
• Slow transfusion rate

TRALI – Transfusion Related Acute Lung Injury
Dyspnoea, tachypnoea, respiratory failure, noncardiogenic pulmonary oedema, chills, fever
Incidence 1 in 5,000-190,000

Additional Clinical Actions:
• Administer supplemental oxygen and employ ventilation support as necessary
• CAUTION – this may become a medical emergency.
• Support blood pressure and maintain airway.
• Notify the hospital Blood Bank to contact ARCBS to ensure quarantining and testing of related components from the same donor.

Source: ARCBS website [www.transfusion.com.au]