BLOOD BANK MANAGEMENT OF TRANSFUSION REACTIONS DUE TO POSSIBLE BACTERIAL CONTAMINATION

REASON FOR ISSUE: New document.

1. SCOPE:

This information sheet is intended as a guideline for DHB Blood Banks.

2. GUIDELINES:

2.1 Which transfusion reactions should be investigated for bacterial contamination?

Investigate for bacterial infection if **one or more** of the following signs occurs within 90 minutes of transfusion:

Fever	Temperature ≥39°C or rise of ≥1.5°C
Rigor	Shaking, chills
Tachycardia	Heart rate ≥120/min or rise of ≥40/min
Drop or rise of systolic BP	≥ 30mm Hg

These may be associated with nausea and vomiting, shortness of breath and lower back pain. Platelet components carry a higher risk of bacterial contamination and all transfusion reactions involving platelet components should be investigated for bacterial contamination.

2.2 What should the Blood Bank do when informed of a transfusion reaction that meets the above criteria?

1. Contact the clinical team and put them in touch with NZBS MO / TMS if necessary.
2. Advise the clinical team that a blood culture from the recipient will be appropriate.
3. Inform NZBS MO / TMS.
4. Save and collect, aseptically, all blood component units transfused within 90 minutes of the reaction diagnosis.
5. Obtain recipient's post-transfusion blood sample, for transfusion reaction investigation.

2.3 What should the Blood Bank do with the post-transfusion sample and the blood components?

1. Post transfusion blood sample - investigate for haemolytic transfusion reaction (visual and clerical checks, blood group, DAT, antibody screen, and IAT crossmatch).
2. Send all implicated units to the microbiology laboratory for Gram stain as soon as possible. Gram stain is positive if there are 2 or more bacteria / high power field.
3. Send all implicated units to microbiology for culture as soon as possible. Both aerobic and anaerobic culture to be done using the usual blood culture methods. If the bag is likely to be contaminated, culture both the bag and the segments. If there is not enough sample in the bag, rinse the bag with culture broth and then extract and culture the contents.
4. Inform the clinical team of any positive result immediately.
5. Inform Blood Centre of any positive culture result immediately.

2.4 What additional information will the NZBS Haemovigilance team require?

Component units:	Gram stain results and culture results including information about the sample source and quality (bag, segment etc).
Transfusion recipient:	Details of signs, symptoms and outcome. Blood culture results (both pre and post transfusion). Antibiotics used (both pre and post transfusion).