

Cryoprecipitate use in Newborn Intensive Care Unit (NICU)

Guideline Responsibilities and Authorisation

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Target Audience	Nurses, registrar, nurse practitioner, clinical nurse specialist, consultant
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Guideline Review History

Version	Updated by	Date Updated	Summary of Changes
2	Joyce Mok	Sept 2018	3 yearly review
3	Joyce Mok	Sept 2018	3 yearly review

Cryoprecipitate use in Newborn Intensive Care Unit (NICU)

1 Overview

1.1 Purpose

To outline guideline for the use of Cryoprecipitate in neonates.

1.2 Scope

Waikato DHB staff working in NICU

1.3 Patient / client group

Neonates and infants in NICU

1.4 Exceptions / contraindications

- Parental/cultural/religious reasons
- Previous serious reaction to plasma components

1.5 Indications

- Fibrinogen deficiency
- Can be used in von Willebrand disease, haemophilia A
- Deficiency of Factor XIII when specific factor concentrate not available.

2 Clinical Management

2.1 Guideline

Dose: Usually 10 mL/kg

Route: IV over 30 minutes. UAC only after consultation with NICU consultant.

Filter: A standard blood giving set is required, bypass or remove baby's IV filter before administration.

ABO Providing the product does not contain an ABO haemolysin (strong anti A or B antibody), Cryoprecipitate may be given without regard to ABO type. Where an ABO haemolysin (lysin) is present it may only be given to a recipient with a compatible ABO group. This will be indicated on the label of the cryoprecipitate as "[For ABO Identical Recipient Only](#)". If unsure contact Blood Bank.

Cryoprecipitate should follow the compatibility rules.

ABO Compatibility of Cryoprecipitate*

Recipient's ABO group	ABO group of Cryoprecipitate
O	O or A or B or AB
A	A or AB
B	B or AB
AB	AB

*This is different from red blood cells and platelet compatibilities

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- Rhesus (RhD):** Although frozen plasma components may contain small amounts of red cell stroma, sensitisation following transfusion of Rh (D) positive units is most unlikely, as stroma is less immunogenic than intact red cells. Therefore Cryoprecipitate of any Rh(D) type may be given regardless of the Rh(D) type of the recipient. Contact Blood Bank if you are not sure.
- Flush:** Use sodium chloride 0.9% for flushes
- Do Not:** Do not add medication to cryoprecipitate
Do not use 5% Dextrose solutions or hypotonic sodium solutions (may cause red cells to haemolyse)
- Storage:** Once issued, cryoprecipitate should be transfused as soon as possible.
Once thawed, cryoprecipitate may be stored at room temperature for up to 4 hours.
Never store cryoprecipitate in a fridge.
If the transfusion cannot be started within 30 minutes, return cryoprecipitate to Blood Bank immediately for appropriate storage.
- Adverse reactions** Acute transfusion reactions may occur if ABO incompatible, wrongly stored, inappropriately thawed or bacterially contaminated cryoprecipitate is transfused. They may present as a chill, fever, rigor, rash, pain, bronchospasm, haemolysis or cardio-respiratory collapse.
Immunisation to plasma protein antigens may cause difficulty with subsequent transfusion of blood and blood products.
Circulatory overload.
Infection

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3 Evidence base

3.1 References

- Waikato DHB Blood resources (2014). *How to administer Cryoprecipitate - Quick Guide*. Retrieved on September 20, 2018 from <https://clinicaldata.nzblood.co.nz/resourcefolder/cryo.php?dhbid=6>
- Australian and New Zealand Society of Blood Transfusion & Australian College of Nursing (2018). *Guidelines for the administration of blood product*, 3rd ed. Retrieved on September 19, 2018 from https://anzsbt.org.au/data/ANZSBT_Guidelines_Administration_Blood_Products_3rdEd_Jan_2018.pdf
- New Zealand Blood Services (2016). *Transfusion medicine handbook: A guide to the clinical use of blood components, blood products and blood transfusion procedures in New Zealand*, 3rd ed. Retrieved on September 20, 2018 from <https://www.nzblood.co.nz/assets/Transfusion-Medicine/PDFs/Transfusion-Medicine-Handbook-2016.pdf>

3.2 Associated Waikato DHB Documents

- Waikato DHB NICU Medical Procedure: [Blood Transfusions to Infants in the Neonatal Intensive Care Unit](#) procedure (1645)
- Waikato DHB NICU Nursing Procedure: [Blood Transfusions by Aliquots or Infusion - Nursing Management in NICU](#) procedure (4822)

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