

Fresh Frozen Plasma (Leucocyte Depletion) Usage in NICU

Guideline Responsibilities and Authorisation

Department Responsible for Procedure	NICU
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Target Audience	Consultants, Registrars, NNPs, CNSs, RNs
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Procedure Review History

Version	Updated by	Date Updated	Summary of Changes
2	Joyce Mok	July 2015	New format
3 3.1	Joyce Mok	September 2018	3 yearly review Remove "... or 0.45%" from Flush in s2.1 Guideline
4	Maggie Rainbow	October 2022	3 yearly review, evidence based guidelines

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1 Overview

1.1 Purpose

To outline guidance for use of fresh frozen plasma (FFP) in neonates.

1.2 Scope

Te Whatu Ora Waikato staff working in NICU.

1.3 Patient / client group

Neonates and infants in NICU.

1.4 Exceptions / contraindications

Parental, cultural or religious reasons for declining consent

Note: If parents decline blood transfusion for their baby, they must sign the [Medical Directive for patients who refuse blood transfusions \(including Jehovah Witnesses\)](#) form (G3825HWF)

Parent information for blood transfusions in children and the Care of Children Act and blood transfusions can be found here ([Intranet link](#)).

1.5 Indications

- Active bleeding, coagulopathy,
- Disseminated intravascular coagulation.
- Massive transfusion protocol

Normal coagulation values:

INR 0.8 - 1.2 ratio

APTT 25 - 38 seconds

TCT <20seconds

Fibrinogen 1.5 - 5/L

NOTE: normal values given above are for term infants and may be slightly different in the preterm population.

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2 Clinical management

2.1 Guideline

Dose

- Usually 10 mL/kg (range 10-15 mL/kg)

Route

- Intravenous 30 minute
- Other vascular access devices such as UACs, and central lines may be used only after consultation with NICU consultant

Filter

- Blood products are not given through the usual IV filter (i.e. PALL™ filter). This should be bypassed or removed when administering blood products.
- Spike all blood product bags with an In-Line blood filter (i.e. standard blood giving set). This process is important to prevent infusion of any potential blood clots or cellular debris.

ABO

- Plasma components should be ABO compatible* as follows:

Recipient	Donor
A	A, AB
B	B, AB
AB	AB
O	A, B, AB

*Note: This is different from red cell and platelet compatibilities.

Consent

- Written consent required. Consent for use of all blood components and blood products form (T1528HWF)
- Verbal consent can be obtained in the absence of a parent/legal guardian, with written consent being obtained at earliest opportunity. Verbal consent must be clearly documented in the clinical notes
- In the event that a parent withholds consent for blood product transfusion, this requires discussion with SMO and transfusion can go ahead, under the “Care of Children Act 2004”, with clear documentation in the clinical notes.

Flush

- Use Sodium chloride 0.9% for flushes

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Do not

- **Do not** add medication to FFP
- **Do not** use 5% Dextrose solutions (may induce haemolysis)

Monitoring

- According to NICU nursing and medical procedures for blood transfusion
- For suspected transfusion-related reactions refer to protocol [Blood Transfusions to Infants in the Neonatal Intensive Care Unit procedure](#) (1645)

Storage

- Transfuse as soon as possible.
- Transfusions must be completed within four hours of being issued.
- Unspiked blood products can be returned to Blood Bank within 30 minutes of being issued to be returned to storage.

3 Evidence base

3.1 References

- Te Whatu Ora Waikato Blood Resource: How to administer Thawed Plasma (FFP-EL) - Quick Guide. Retrieved on August 27, 2018 from <https://clinicaldata.nzblood.co.nz/resourcefolder/plasmanew.php?dhbid=6>
- Australian and New Zealand Society of Blood Transfusion & Australian College of Nursing (2018). Guidelines for the administration of blood products. 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 Te Whatu Ora Waikato Documents

- [Blood Transfusions to Infants in the Neonatal Intensive Care Unit procedure](#) (1645)
- Te Whatu Ora Waikato Medical Directive for patients who refuse blood transfusions ([G3825HWF](#))
- Parent information for blood transfusion in children ([Intranet link](#))
- [Care of Children Act 2004 section 37](#)
<https://www.legislation.govt.nz/act/public/2004/0090/latest/DLM317465.html>

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