North West Anglia NHS Foundation Trust

Cryoprecipitate Transfusion – Guideline for Practice
Version 6

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Standards and Legislation and key related documents:	British Society of Haematology (2018) Guidelines on the spectrum of fresh frozen plasma and cryoprecipitate products: their handling and use in various patient groups in the absence of major bleeding A guideline for the haematological management of major haemorrhage: a British Society for Haematology Guideline (2022)		
Specialty Meeting Approval:	Hospital Transfusion Committee	**Date:**	4 February 2026
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Additional Approval *(if required)*:				
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First-Level Approval: (Divisional Leadership Board)	FISS Divisional Leadership Board	**Date:**	25 March 2026
Second Level Approval: (*if required* – please consult sect. 6.4 of the Trust Wide Document Control Policy)	N/A	**Date:**	Enter date
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Trust Partnership Group Approval:	N/A	**Date:**	Enter date
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AUTHOR'S CHECKLIST

Document Title:	Cryoprecipitate Transfusion – Guideline for Practice
Central Index Number:	C0330

Must be completed when reviewing existing published documents only

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			"Yes"	"No"
1.	Is the document still required?	Yes	Please see question 2.	Arrange document removal with Exec Director/Chair of DLB and forward to the relevant compliance team.
2.	Has there been any change in guidance or national policy since the previous version?	No	Please see question 4.	Please see question 3.
3.	**REVIEW DATE ROLL ON:** Where there has been no major[1] change to the document, can it be approved without having to go through all relevant committees (including those in chronological order)?	No	Exec Director/Chair of the DLB to approve new review date by email*. *(see version control summary/page 3)* The following information must be sent to the relevant compliance team: 1. Evidence of review date approval (*email). 2. Author's Checklist page only. Non-Clinical Compliance Team Clinical Compliance Team	Please see question 4.
4.	Can the document be approved at first-level only? (Please refer to section 6 of the Trust-wide Document Control Policy)	Yes	Proceed with review and **first-level only** approval processes.	Proceed with review and both first and second-level approval processes.

[1] As defined in section 7.3 of the Trust-wide Document Control Policy

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VERSION CONTROL SUMMARY

Version:	Page/Section of Document:	Description of change: (List all amendments made to the document. "Review" or "Update" is not sufficient information.)	Date Exec Director/Chair of DLB approval given for change of review date only	Date approved:	Date published:
V1-2009		Original version of document	N/A	April 2009	May 2009
V2-2013		Re formatted into current trust procedural documents format	N/A	27/02/2013	February 2013
V3-2016		NICE guidance on indications for use incorporated. Advice on Hepatitis E negative components included.	N/A	12/07/2016	13/07/2016
V4-2019		Advice on Hepatitis E negative components removed as all components now screened. Early use advised in major obstetric haemorrhage when fibrinogen is <2·0g/L. Revised NHSBT leaflet included.	N/A	10/10/2019	14/10/2019
V5-2023		Updated guidance on indications for use Revised NHSBT factsheet included Revised advice from SaBTO that following a review of risk reduction measures for variant Creutzfeld-Jakob disease (vCJD), individuals born on or after 1st January 1996 no longer require imported (Methylene Blue MB-pathogen inactivated) cryoprecipitate	N/A	18/1/2023	25/1/2023
V6-2026		Revised NHSBT factsheet – replaced with the newest version: cryo-factsheet-v2-2024 Updated to 2024 NBTC indication codes.	N/A	25/03/2026	30/03/2026

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DOCUMENT CONTRIBUTORS

Please list the details of all who contributed to the development of this document.

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Emily Rich	Lead Transfusion Practitioner	Versions 5-6
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1. INTRODUCTION

1.1 Cryoprecipitate is a blood product concentrate. It is rich in Factor VIII:C, von Willebrand factor (VWF), fibrinogen, Factor XIII, and fibronectin and is produced by further processing of Fresh Frozen Plasma (FFP). Clinically it is used to replace fibrinogen.

1.2 NHS Blood and Transplant (NHSBT) manufacture pooled cryoprecipitate prepared from five single blood donations which contain approximately 700 mg fibrinogen and 350 iu of FVIII in a typical volume of 200–280 ml. Similar to FFP, the plasma from which the cryoprecipitate was produced has been leucodepleted and sourced from a male donor to reduce the risk of transfusion-related acute lung injury (TRALI).

1.3 Cryoprecipitate is stored at a temperature of −25°C for a maximum of 36 months. When requesting cryoprecipitate from the Transfusion Laboratory, a minimum of 30 minutes should be allowed between the request and the issue time to ensure proper thawing.

1.4 Once thawed, cryoprecipitate must not be refrozen and should be used immediately. If delay is unavoidable, the component should be stored at **ambient** temperature (not in a fridge) and **used within 4hours.**

1.5 Following a review of risk reduction measures for variant Creutzfeldt-Jakob disease (vCJD), in September 2019 SaBTO reported that individuals born on or after 1st January 1996 no longer require imported (Methylene Blue MB-pathogen inactivated) plasma.

1.6 The risks of transfusing cryoprecipitate are similar to those of other UK blood components. Of particular concern are allergic reactions and anaphylaxis, pulmonary complications and haemolysis resulting from transfused antibodies to blood group antigens; especially anti-A and anti-B antibodies.

2. PURPOSE

2.1 The purpose of this document is to give guidance to clinical staff who may be involved in the requesting, prescription or administration of Cryoprecipitate in North West Anglia NHS Foundation Trust. The guidelines aim to standardise use of FPP across the trust in line with national guidelines.

3. SCOPE

3.1 These guidelines apply to all members of staff involved with the prescription, handling and administration of cryoprecipitate.

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4. DEFINITIONS OF TERMS

4.1 **FFP** – Fresh Frozen Plasma - Plasma produced from blood donations and stored at -25°C.

4.2 **Cryoprecipitate** – the cryoglobulin fraction of plasma obtained by thawing a single donation of Fresh Frozen Plasma (FFP) at 4˚C (+/- 2 ˚C).

4.3 **DIC** – Disseminated Intravascular Coagulation - An acquired syndrome characterised by activation of coagulation pathways, resulting in formation of intravascular thrombi and depletion of platelets and coagulation factors.

5. INDICATIONS FOR USE

5.1 The National Blood Transfusion Committee has summarised indications for blood products considering appropriate national guidelines (NBTC 2024). FFP indications are grouped into F codes to enable monitoring of use.

C1 Clinically significant bleeding and fibrinogen < 1.5 g/l (< 2.0 g/l in obstetric bleeding)

5.2 **C2 Pre-procedure with a risk of bleeding and fibrinogen < 1.0 g/l**

In chronic liver disease it is uncertain whether fibrinogen levels are causally associated with bleeding risk. Some guidelines recommend a threshold fibrinogen of < 1.2 g/l in this setting16; others discourage routine correction of fibrinogen deficiency

5.3 **C3 Bleeding associated with thrombolytic therapy**

5.4 **C4 Inherited hypofibrinogenaemia - fibrinogen concentrate not available**

Under direction of a haemostasis consultant.

6. DOSE AND GROUP

6.1 An adult therapeutic dose is 2 packs of cryoprecipitate (total of 10 male pools), which contains 3-6g of fibrinogen in a volume of 200 to 500 ml, and will raise the plasma fibrinogen level by about 1g/L.

6.2 Paediatric packs are available and contain approximately 30mls of cryoprecipitate. For children, the recommended dose is 5–10 ml/kg body weight, using the higher volume particularly in bleeding patients.

6.3 Whenever possible, cryoprecipitate of the identical ABO group should be used. Due to its limited availability, AB cryoprecipitate is typically ordered for AB patients. Non-identical ABO group cryoprecipitate may only be used if it is labelled as High Titre negative (HT),

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indicating a low concentration of ABO antibody. Group A HT negative cryoprecipitate is generally issued for patients with an unknown ABO group. **Group O cryoprecipitate must only be given to Group O patients.**

6.4 Cryoprecipitate does not need to be matched for D group. D positive plasma components may be given to D negative recipients without the need for anti-D Ig prophylaxis.

6.5 Cryoprecipitate has no cellular content and therefore does not need to be irradiated or selected as Cytomegalovirus (CMV) sero-negative.

6.6 The prescription must be made on the dedicated Blood and Blood Products Prescription Chart. For adults the prescription must indicate the number of packs to be administered (e.g.: 2 packs of 5 pools). In paediatrics, the prescription must be in mls/kg body weight.

6.7 Re-assess the patient's clinical condition after each dose given, repeat the fibrinogen level measurement. Give further doses if needed.

7. ADMINISTRATION

7.1 Cryoprecipitate must be administered through a 170-200micron filter (a standard blood giving set). A 170-200micron filter is also required if giving cryoprecipitate via a syringe for neonatal transfusion.

7.2 The cryoprecipitate pack should be visually inspected for pack integrity and discolouration prior to transfusion. Check that packs do not appear grainy or more cloudy than usual. If in doubt, DO NOT TRANSFUSE and contact the transfusion laboratory for advice.

7.3 All patients receiving cryoprecipitate must wear a trust ID band. The patient’s identity must be checked INDEPENDENTLY by 2 members of staff (either a Doctor, Registered Nurse or Midwife or ODP) prior to commencement of the transfusion. The details on the tag attached to the pack must be checked against the details on the patient’s ID band. In addition, the patient should be asked to confirm their name and date of birth, if they are able to do so.

7.4 Cryoprecipitate takes approximately 20- 30 minutes to thaw and for maximum efficacy should be administered as soon as possible after thawing. Start the transfusion as soon as the pack is received from the laboratory. Cryoprecipitate is stored at **room temperature** (or in the platelet incubator) when thawed and must be used within **4 hours of thawing**. Cryoprecipitate must never be refrigerated, as this will cause formation of insoluble precipitate.

7.5 In adults each pack should be given over 30-60 minutes, though more rapid infusion may be required in major bleeding. In paediatrics, the recommended rate of transfusion is 10-20ml/kg/hr.

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7.6 Inform the patient of possible complications of transfusion, and the importance of reporting any adverse effects. A number of reactions may follow cryoprecipitate transfusions. They are the same as those which can occur after the transfusion of red cell concentrates including: -

- Febrile Reactions.
- Urticarial Reactions.
- Anaphylactic Reactions.
- Pulmonary complications such as Transfusion Associated Circulatory Overload (TACO) and Transfusion Associated Dyspnoea (Transfusion Related Acute Lung Injury TRALI is rare since cryoprecipitate is now sourced from male UK donors)
- Reaction to a bacterially contaminated unit.

7.7 Follow the same baseline, 15 minute and post-transfusion observation checks as for red cell transfusions. If a reaction is suspected, **STOP THE TRANSFUSION**, and inform medical staff and the Transfusion laboratory immediately. The Transfusion Related Adverse Events Report Form must be completed. Please also report the incident via DATIX.

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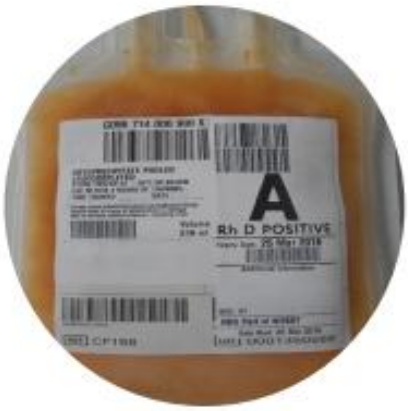
APPENDIX A: NHS BLOOD AND TRANSPLANT FACTSHEET – CRYOPRECIPITATE

NHS
Blood and Transplant



Information for Healthcare Professionals

FACTSHEET
Cryoprecipitate

The indications for transfusing cryoprecipitate are limited and specific.
Please transfuse appropriately.

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Patient Blood Management

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Cryoprecipitate

Cryoprecipitate contains concentrated Factor VIII:C, von Willebrand factor, fibrinogen, Factor XIII, and fibronectin and is produced by further processing of Fresh Frozen Plasma (FFP). Clinically it is used to replace fibrinogen.

As with FFP, the plasma from which the cryoprecipitate was produced has been leucodepleted and was obtained from a male donor to reduce the risk of transfusion-related acute lung injury (TRALI). Cryoprecipitate should be stored at a core temperature of -25°C or below for up to 36 months.

Clinical indications for use of cryoprecipitate in adults*

- **Clinically significant bleeding and a fibrinogen level <1.5g/L (<2g/L in obstetric bleeding)**
- **Fibrinogen level is <1g/L and pre-procedure**
- **Bleeding associated with thrombolytic therapy**
- **Inherited hypofibrinogenaemia where fibrinogen concentrate is not available**

**National Blood Transfusion Committee Indication Codes for Transfusion, 2020*

Presentation and dosage of cryoprecipitate

Cryoprecipitate is available as a single unit, or as a pooled product made up of five single units. Pooled units are more commonly used to treat adult patients.

The adult therapeutic dose is two pooled units, or one single unit per 5-10kg body weight, dependant on the degree of fibrinogen deficiency. Paediatric dosing is 5-10mL/kg.

Practical instructions for the use of Cryoprecipitate

Once thawed, Cryoprecipitate must not be refrozen and should be used immediately. If delay is unavoidable the component should be stored at ambient temperature (i.e. **not** in a fridge), to prevent re-precipitation, and must be transfused within four hours. Transfuse using a CE or UKCA- marked blood transfusion set. The typical infusion rate is 10-20mL/ kg/hr (30-60 min per five pool unit).

Compatibility

ABO group identical Cryoprecipitate should be given whenever possible; if not possible Cryoprecipitate of a different ABO group may be acceptable as directed in the blood group selection table.

ABO compatibility for plasma components is different to that of red cells and **group O Cryoprecipitate MUST only be given to group O recipients.**

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Blood group selection for Cryoprecipitate

Recipient Group	O	A	B	AB
1st Choice	O	A	B	[2]AB
2nd Choice	A	[1]B	[1]A	[1]A
3rd Choice	B	-	-	[1]B

[1]Suitable for use in adults if negative for high titre anti-A/anti-B (labelled HT-)
[2]Small numbers of Group AB cryoprecipitate may be available on request but this item is not routinely stocked, due to the low frequency of group AB in the population group A, HT- is in practice the universal component.

D group

Cryoprecipitate **does not need to be matched for D group**. D positive plasma components may be given to D negative recipients without the need for anti-D Ig prophylaxis. The EU Blood Directive currently requires that the D group is stated on the label.

If you are unsure about the compatibility of Cryoprecipitate for your patient always check with your hospital transfusion laboratory staff before transfusing.

Specific requirements

Cryoprecipitate has no cellular content and therefore does not need to be irradiated or selected as Cytomegalovirus (CMV) sero-negative.

The use of other frozen components produced is covered in a separate factsheet 'Fresh Frozen Plasma (FFP)'.

References

Green, L. et al on behalf of British Society of Haematology (2018) Guidelines on the spectrum of fresh frozen plasma and cryoprecipitate products: their handling and use in various patient groups in the absence of major bleeding. Available at: https://www.b-s-h.org.uk/guidelines/guidelines/spectrum-of-fresh-frozen-plasma-and-cryoprecipitate-products/

Stanworth, S. et al on behalf of the British Society for Haematology (BSH) (2022) Haematological management of major haemorrhage. Available at: https://b-s-h.org.uk/guidelines/guidelines/haematological-management-of-major-haemorrhage-2022

National Blood Transfusion Committee (2020) Indication Codes for Transfusion – An audit tool. Available at: https://nationalbloodtransfusion.co.uk/recommendations

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NHS Blood and Transplant (2022)Portfolio of components and guidance for their clinical use (specification SPN223/11.1). Available at: https://hospital.blood.co.uk/components/portfolio-and-prices/

Robinson, S. et al on behalf of the British Society for Haematology (BSH) (2017) Administration of Blood Components. Available at: https://www.b-s-h.org.uk/guidelines/guidelines/administration-of-blood-components/

Contact us

We would welcome your feedback and comments on this leaflet. You can contact us:

By email to: PBM.team@nhsbt.nhs.uk

NHS Blood and Transplant (NHSBT) saves and improves lives by providing a safe, reliable and efficient supply of blood and associated services to the NHS in England. We are the organ donor organisation for the UK and are responsible for matching and allocating donated organs. We rely on thousands of members of the public who voluntarily donate their blood, organs, tissues and stem cells.

For more information
Visit nhsbt.nhs.uk
Email enquiries@nhsbt.nhs.uk
Call 0300 123 23 23

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APPENDIX B: QUALITY ASSURANCE CHECKLIST

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		Y/N/ n/a	COMMENTS (to author for amendments)
1	**Title of document**		
	Is the title clear and unambiguous	Y	
2	**Type of document (e.g. procedure, guidance)**		
	Is it clear whether the document is a procedure, guideline, SOP?	Y	
3	**Introduction**		
	Are reasons for the development of the document clearly stated?	Y	
4	**Content**		
	Are all sections of the front cover completed correctly?	Y	
	Is the document in the correct Trust approved format?	Y	
	• Paragraphs numbered consecutively	Y	
	• Headers: only on front page to contain logo	Y	
	• Footers: on every page except front page	Y	
	Has the Author's Checklist been fully updated?	Y	
	Are the Version numbers correct in the title, summary and the footers?	Y	
	Has the Version Control Summary been fully updated with changes?	Y	
	Has the Document Contributors section been completed?	Y	
	Are the objectives/aims clearly stated?	Y	
	Does this document concern the handling, moving or storage of personal identifiable or commercially sensitive information? If yes, has a Summary Privacy Impact Assessment been completed?	N/A	
5	**Evidence Base**		
	Is the type of evidence to support the document explicitly identified?	Y	
	Are associated documents referenced?	Y	
6	**Approval Route**		
	Has email approval been received for change of review date only?	N/A	
	Does the document identify which committee/group will approve it?	Y	
	Does the document meet the criteria for Second Level approval or Information Only?	Y	Info only

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CORPORATE GOVERNANCE COMPLIANCE TEAM:		
1.	Date comments returned to author by Compliance Lead:	
2.	Date of Corporate Governance Compliance Team approval:	14 January 2026
3.	Name of Compliance Lead:	Carly Goddard 

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Chair's Name	*Dr L Menadue*	**Date**	04/02/2026
Signature			

CBU APPROVAL MEETING: Pathology Management and Governance committee			
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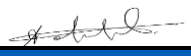
Chair's Name	Dr Ashraf Ibrahim	**Date**	24/02/2026
Signature			

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Date	Enter date	**Date**	Enter date
Signature		**Signature**	

Select Meeting.		Select Meeting.	
Chair's Name	***Not Applicable***	**Chair's Name**	***Not Applicable***
Date	Enter date	**Date**	Enter date
Signature		**Signature**	

FIRST-LEVEL APPROVAL: FISS Divisional Leadership Board			
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Chair's Name	DR. TIM JONES	**Date**	25/03/2026
Signature			

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	✓ **INFORMATION ONLY**

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Signature			

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