NATIONAL BLOOD AUTHORITY
AUSTRALIA

National Statement for the Emergency Use of Group A Clinical Plasma for patients with critical bleeding or a major haemorrhage

Note: Clinical plasma refers to fresh frozen plasma (FFP), extended life plasma (ELP) and cryoprecipitate

Group AB clinical plasma components have traditionally been used for all emergency plasma transfusions before a patient's blood group has been determined. Group AB, whether RhD positive or negative, is the least common blood type (only 4% of the Australian population) and clinical plasma is only collected from male plasma donors.

Using group A clinical plasma for emergency blood resuscitation is a safe alternative that provides clinical benefit and eases pressure on group AB donors and supplies.

Recommendations for the Emergency Use of Group A Clinical Plasma for patients with critical bleeding or a major haemorrhage

- Where there is no current valid pretransfusion specimen or where the patient's ABO group is unknown:
  - In adults and children (greater than 1 year) select group A clinical plasma with low titre anti - A/B where possible as first preference (AB plasma as second preference)
  - For neonates and infants (less than 1 year), use group AB or group A low titre anti-A/B clinical plasma
- Confirm the patient's ABO group as soon as possible in order to allow ABO compatible plasma to be issued where stocks allow or where available

Blood group selection of clinical plasma/actions

Patient blood group	1st choice	2nd choice	3rd choice	4th choice
Emergency issue (unknown ABO Blood group)	A (low titre anti-A/B)	AB	A (titre unknown)	
Unknown ABO blood group Neonates and infants (<1 year old)	AB or A (low titre anti-A/B)		A (titre unknown)	AB
O	O	A	B	AB
A	A	AB		
B	B	AB or A (low titre anti-A/B)	AB	
AB	AB	AB or A (low titre anti-A/B)		
Notes: RhD compatibility is not required for plasma or cryoprecipitate compatibility				

Please refer to Blood Component Information: An Extension of Blood Component Labels (www.lifeblood.com.au/health-professionals/clinical-practice/use-of-blood-components) for more information.

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Supporting notes

- Major Haemorrhage Protocols (MHP) rely on the ready availability of thawed clinical plasma, ideally ABO-identical; however, the immediate need for clinical plasma resuscitation in major haemorrhage often precedes patient ABO group determination.
- ABO-incompatible clinical plasma transfusion in the form of group A low titre anti-A/B clinical plasma can be used for patients with critical bleeding of unknown ABO group.
- Do not delay the provision of clinical plasma by awaiting group specific clinical plasma if thawed group A (low titre anti-A/B) or AB stock is available.
- Freshly thawed plasma or extended life plasma (ELP) thawed and refrigerated for less than 24hours is preferred for neonatal transfusion. However, in the setting of major haemorrhage or critical bleeding, do not delay provision of clinical plasma when ELP (>24 hours storage) is available.
- Group O clinical plasma should only be given to group O patients.
- Increasing use of emergency release of thawed group AB clinical plasma prior to patient ABO grouping being completed is leading to significant challenges in maintaining adequate supply.
    - Blood type AB, whether RhD positive or negative, is the least common blood type, only 4% of the Australian population.
    - Clinical plasma is only collected from male donors and only from collection sites within range of a processing centre to enable freezing of the plasma within the regulated timeframe.
    - The small proportion of male group AB plasma donations is also required for production of group AB cryoprecipitate. Consequently, group AB clinical plasma is an extremely limited resource.
- Studies in adult recipients of ABO-incompatible clinical plasma compared to those who received ABO-compatible suggest that the use of incompatible plasma is not associated with any clinically significant adverse events.
- Most patients will be compatible with group A clinical plasma, based on the known distribution of ABO groups in the population.
    - Approximately 83% of the Australian population are group A or group O and therefore would receive either group-specific or compatible plasma if given group A plasma.
    - In Australia, only a minority of recipients will receive incompatible plasma (approximately 13% group B and 4% group AB) prior to their blood group being determined.
    - Anti-B titres are relatively low in most group A donors and selecting low titre anti-A/B group A plasma will further reduce any risk of clinically significant haemolysis.
- All patients who have received clinical plasma should be monitored for adverse events according to local clinical practices.
- Acute or delayed haemolytic reactions related to ABO incompatible clinical plasma should be reported according to local and national haemovigilance practices.