

IF UNSURE ALWAYS DISCUSS WITH SENIOR / HAEMATOLOGY

PACKED RED BLOOD CELL TRANSFUSION

PACKED RED BLOOD CELLS

WHEN TO TRANSFUSE

Most patients:

- Transfusion threshold: 70g/L
- Post-transfusion target: 70-90g/L

ACS / IHD patient:

- Transfusion threshold: 80g/L
- Post-transfusion target: 80-100g/L

DOSE

1 unit and then re-assess whether further transfusion required

OTHER POINTS

Above excludes patients with Major Haemorrhage / repeated transfusions due to chronic anaemia. Discuss **threshold / target / dose** with Senior / Haematology

Alternatives to PRBC transfusion for patients having surgery:

- Oral iron before and after surgery to patients with iron deficiency anaemia
- Can be given IV if unable to tolerate or absorb oral or if there is a short period between transfusion and surgery
- Offer tranexamic acid to adults undergoing surgery who have an expected blood loss >500ml
- Consider intra-operative cell salvage for patients who are expected to lose a high volume of blood

BLOOD TYPE	ANTIGENS ON RBCS	ANTIBODIES IN BLOOD	SAFE TRANSFUSION	
			TO	FROM
A	A	B	A, AB	A, O
B	B	A	B, AB	B, O
AB	A, B	-	AB	A, B, AB, O
O	-	A, B	A, B, AB, O	O

Rhesus -ve blood can be donated to rhesus antigen -ve and +ve patients

Rhesus +ve blood may only be given to rhesus +ve patients

OTHER TRANSFUSIONS

PRODUCT REPLACEMENTS SHOULD BE GUIDED BY DYNAMIC TESTING SUCH AS TEG OR ROTEM WHERE AVAILABLE

PLATELETS

WHEN TO TRANSFUSE

Patient NOT Bleeding:

- Prophylactic platelet transfusions to patients with a platelet count below $10 \times 10^9/L$ if they do not have
 - Chronic bone marrow failure
 - Autoimmune thrombocytopenia
 - Heparin induced thrombocytopenia
 - Thrombotic thrombocytopenic purpura
- Target of $75-100 \times 10^9/L$ (procedure dependent) in patients undergoing procedures or surgery.
 - This target does not include CVC insertion or bone marrow biopsy

Patient BLEEDING:

- Transfusion threshold: 30×10^9
- Higher thresholds in patients with severe bleeding or bleeding in critical areas:
 - CNS / Eyes eg up to $100 \times 10^9/L$

DOSE

Do not routinely transfuse more than a single dose of platelets

FRESH FROZEN PLASMA

WHEN TO TRANSFUSE

Patient BLEEDING:

- Only offer FFP in patients with clinically significant bleeding if they are coagulopathic
- Does not apply in major haemorrhage

Patient NOT Bleeding:

- Offer prophylactic transfusion in coagulopathic patients undergoing invasive procedures / surgery

DOSE

15ml/kg
Maximum dose up to 100kg

OTHER POINTS

Do not offer FFP transfusion to correct coagulopathy in patients who:

- Are not bleeding unless having invasive procedure with a risk of clinically significant bleeding
- Need reversal of a vitamin K antagonist

PROTHROMBIN COMPLEX CONCENTRATE

WHEN TO TRANSFUSE

Offer immediate transfusion for the emergency reversal of warfarin in patients with either:

- Severe bleeding
- Head injury with suspected intracerebral haemorrhage

DOSE

Drug, INR and Bodyweight dependent

OCTAPLEX - example dosing

INR	Dose ml/kg
2-2.5	0.9-1.3
2.5-3	1.3-1.6
3-3.5	1.6-1.9
>3.5	>1.9
Maximum dose up to 120ml	

BERIPLEX - example dosing

INR	Dose ml/kg
2-3.9	1
4-6	1.4
>6	2
Maximum dose up to 100kg Bodyweight	

CRYOPRECIPITATE

WHEN TO TRANSFUSE

Patient BLEEDING:

- Consider transfusion for patients with clinically significant bleeding and fibrinogen <1.5g/L

Patient NOT Bleeding:

- Consider prophylactic transfusion for patients undergoing invasive procedures or surgery with fibrinogen <1.0g/L
- Do not transfuse whatever the fibrinogen if not bleeding or undergoing procedures

DOSE

Use a dose of 2 pools for adults then reassess and re-check fibrinogen

OTHER POINTS

Above does not apply in major haemorrhage

Always consult BNF for dose / administration and contraindications for all above medications