

TRANSFUSION MEDICINE SERVICES

OTHER NAMES Pooled Platelets Apheresis Platelets Pooled Platelets Psoralen Treated	CLASSIFICATION Blood Component	ALERTS HIGH ALERT SUBSTANCE VERIFICATION REQUIRED BY 2 HCP
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PREPARATION and ADMINISTRATION

Prepared from Human Blood.

Ensure ABO Type is compatible with patient, consent is signed and blood matches prescribed order.

Primary Infusion

IV Bag (large volume pump)

Pooled or Apheresis platelets: Ready-to-use bag "unit" – exact amount is located on the unit label and Transfusion Medicine (TM) tag Diluent: none

Adults: 60–120mL/hr for initial 15 min then increase to ordered rate

Pediatrics: When appropriate, initiate at half the ordered rate for first 15 minutes. Increase rate if tolerating well

Transfuse as rapidly as clinically tolerated and as specified by Authorized Prescriber

Maximum rate: 1500 mL/h

Complete infusion within 4 hours of **time of issue** found on the TM tag, or the time removed from a transport cooler

Do NOT transfuse multiple units simultaneously outside of an emergency

Syringe (syringe pump)

For instructions on portioning (aliquot) units for syringe pumps, see [Transfusing via Syringe Pumps](#) Diluent: none

Adults: 60 mL/h for initial 15 min then increase to ordered rate

Pediatrics: When appropriate, initiate at half the ordered rate for first 15 minutes. Increase rate if tolerating well

Complete infusion within 4 hours of **time of issue** found on TM tag or time removed from transport cooler

Requirements and Monitoring

Administration: Infusion device, IV tubing with standard (170–260micron) blood filter "*Dual spike blood tubing*"
 Do not over-spike the blood units. Insert with one quarter turn, clockwise twists. Do not pull, or twist in both directions while spiking or un-spiking.

Discard tubing after 4 units or 4 hours; if more than one hour has elapsed between transfusions; in accordance with the manufacturer's insert, and/or if tubing becomes occluded, contamination is suspected, or integrity compromised

Keep unopened back up bag of NS and standard IV tubing nearby for prompt response if an adverse event (AE) occurs.

Baseline vitals within 60 minutes before starting infusion. Reassess 15 minutes after starting infusion under direct observation, Q1h (minimum), when infusion is complete and 20 minutes to 1h post completion. Q4hx24hours for inpatients. **Document all vitals taken.**

Blood pressure via cuff or arterial line

Temperature

Heart Rate

Respirations

Lung sounds in non-verbal, non-oriented or pediatric patients and patients with CHF or pulmonary dysfunction

Assess patient for risk factors of TACO: Cardiac or renal dysfunction; older age; positive fluid balance; signs of cardio/pulmonary strain

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INDICATIONS

- Prevent or treat bleeding due to platelet deficiency or dysfunction
- Treatment of patients with clinically significant bleeding and low platelet counts secondary to decreased production or dilutional thrombocytopenia
- May be indicated for the treatment of patients with platelet destructive conditions or functionally abnormal platelets in the setting of clinically significant bleeding or prior to an invasive procedure associated with high risk of bleeding
- Prophylactic platelet transfusions may be indicated for very low platelet counts ($\leq 10 \times 10^9/L$) secondary to decreased production
- Prophylactic transfusions at higher platelet count thresholds may be indicated for invasive procedures and/or in the presence of additional risk factors for bleeding
- For patients with alloimmune refractoriness, HLA and/or HPA matched Apheresis Platelets may be indicated

ADVERSE EFFECTS

NEW onset of any of the following:

Hypertension/Hypotension	Significant change in cardiac rate/rhythm	Patient feels unwell
Tachypnea/bradypnea/dyspnea	Severe headache	Unexplained anxiety
Fever/chills/rigors	Back/chest/flank pain	Bleeding/pain at IV site
Puritis/urticaria/rash	Anuria/hematuria/oliguria	Nausea/vomiting

If an AE is suspected: stop the transfusion, disconnect and cap the blood tubing, initiate the backup line of NS and consult the authorized prescriber (AP) for medical management. Notify the TM lab of a suspected reaction.

- Review the component label, TM tag and patient ID to rule out a verification (clerical) error and that the expiry date and time have not passed.
- Resume transfusion cautiously as directed by AP. Directly observe patient x5min then closely observe x10min.
- Ensure TM tag, along with a copy of the documented clinical data and interventions are sent to TM lab once transfusion is discontinued or completed.
- If the transfusion must be discontinued and a transfusion reaction workup is ordered, send the additional following items to TM lab:
 - Blood work (1 Red top and 1 EDTA (Pink or Lavender top))
 - *possible exception for pediatric patient: lab testing to be performed at discretion of Hematopathologist
 - Component and administration set (ensure set is safely capped)

Note: AP may also require additional testing such as: blood cultures, chest x-ray, EKG, or urine specimen

DOSAGE		
Indication	Platelet Count	ADULT Recommendation and Dose
– Immune thrombocytopenia purpura (ITP) with major bleeding – Bone marrow failure	Less than $10 \times 10^9/L$	1 unit

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<ul style="list-style-type: none"> - Hematopoietic stem cell transplantation /chemotherapy - Therapy-induced hypoproliferative thrombocytopenia <p>NOTE - The trigger for platelet transfusion may be higher when the patient's platelet count must be a specific level, as determined by the treatment protocol, for chemotherapy administration or concurrent anticoagulation.</p>		
<ul style="list-style-type: none"> - Elective central venous catheter placement in subclavian vein - Elective diagnostic lumbar puncture - Major elective non-neuraxial surgery - Other significant bleeding 	Less than $50 \times 10^9/L$	1 unit If related to procedure, administer 1 unit immediately before procedure and recheck platelet count again before starting procedure
<ul style="list-style-type: none"> - Head trauma or CNS hemorrhage - CNS surgery 	Less than $100 \times 10^9/L$	1 unit and check platelet count

Indication	Platelet Count	Pediatric (Greater Than 4 Months Corrected Age) Recommendation and Dose
<ul style="list-style-type: none"> - Immune thrombocytopenia purpura (ITP) with major bleeding - Bone marrow failure - Hematopoietic stem cell transplantation /chemotherapy - Therapy-induced hypoproliferative thrombocytopenia 	Less than $10 \times 10^9/L$	Body weight less than or equal to 20 kg, give 10-15 mL/kg Body weight greater than 20 kg, give 1 unit of platelets
<ul style="list-style-type: none"> - Severe mucositis - Sepsis - DIC in the absence of bleeding - Anticoagulant therapy - Risk of bleeding due to local tumor infiltration - Insertion of non-tunneled CVL 	Less than or equal to $20 \times 10^9/L$	Body weight less than or equal to 20 kg, give 10-15 mL/kg Body weight greater than 20 kg, give 1 unit of platelets
<ul style="list-style-type: none"> - Elective central venous catheter placement in subclavian vein - Elective diagnostic lumbar puncture - Major elective non-neuraxial surgery - Other significant bleeding 	Less than or equal to $50 \times 10^9/L$	Give the following immediately before procedure and recheck platelet count again before starting procedure: Body weight less than or equal to 20 kg, give 10-15 mL/kg Body weight greater than 20 kg, give 1 unit of platelets

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COMPATIBILITY, STABILITY

- Compatible with NS only

NOTE: Solutions, other than NS, intended for intravenous use may be used in an administration set with plasma if they have been approved by Health Canada for this use under applicable requirements; or there is documentation available to show that addition of the solution is safe.

- Only viable for four (4) hours from the **time of issue** found on TM tag or time removed from transport cooler
- Do not store unused units in refrigerator or in opened transport cooler. Return to TM

DOSAGE FORMS

- 1 bag (unit); See Unit label or TM tag for exact amount
- Peditactic/neonate doses may be aliquoted into smaller volumes, based on ordered amount

MISCELLANEOUS

- Ensure patient receives a blue transfusion notifiCARD card once per calendar year.
- Verification outside of hospital settings will include the Transfusionist and a capable adult.

LIBRARIES

- [Searchable Drug Library Document](#)

REFERENCES

- [CL-BP-001 Blood Component Utilization in Adults and Pediatrics](#)
- [CL-BP-030, IWK-625 Blood Component and Blood Product Administration - Policy and Procedure](#)
- <http://www.cdha.nshealth.ca/nova-scotia-provincial-blood-coordinating-program-7>
- Canadian Blood Services Circular of Information (2022), found at https://www.blood.ca/sites/default/files/IM-00003_Revision_1.pdf