Blood/Blood Product Administration

Site Applicability

PHC Acute Care Sites

Practice Level

Registered Nurses (RNs), Nurse Practitioners (NPs), Physicians, Perfusionists and Anesthesia Assistants (AAs) may transfuse blood products/components and are referred to as the **Transfusionist** in this document.

- Completion of initial and annual learning Hub course is required by nursing (RN, RPN, LPN): Nursing Competency Safe Transfusion Practice: Second Edition (5523)

Licensed Practical Nurses (LPNs) or Registered Psychiatric Nurses (RPNs) may be the **second person** required for the process of patient/product identification but **CANNOT** act as the transfusionist.

Employed Student Nurses (ESNs) and Student Nurses (SNs) **CANNOT** act as the transfusionist or the second person for patient/product identification but can observe the transfusionist.

Requirements

1. Verification of blood/blood products and patient identification by 2 qualified personnel is required.
2. A prescriber's order is required for the administration of all blood products/components and must contain:
   - Patient identification (first and last name, unique identifier),
   - Type and amount of product,
   - Date time and rate of administration,
   - Sequence in which multiple components are to be transfused (if applicable),
   - Modifications to product or special requirements if any,
   - Use of special equipment i.e. rapid transfuser (other than blood warmer in critical care),
   - Pre and post transfusion medication orders (if any) and
   - Reason for transfusion
3. Transfusion of blood/blood products cannot begin until one of the following is obtained:
   a. Consent for Transfusion of Blood and/or Blood Products (Form ID - 2750) or
   b. Certification of need for Emergency Transfusion of Blood and/or Blood Products: Emergency Waiver (Form ID - 2749)

4. If there is a REFUSAL to Accept Transfusion of Blood and/or Blood Products (Form ID - 2751), do not transfuse until consent is obtained.
5. In the **in-patient** setting consent is valid for the duration of that admission.
6. In the **out-patient** setting consent is valid for one year unless the patient's condition or disease trajectory changes as assessed by the most responsible physician at which point a new consent would be required.
7. **Identification bands** are required for the transfusion of any matched blood products and all efforts should be made to apply an identification band to the patient. If the patient refuses or cannot wear an identification band, consult Transfusion Medicine for direction.
8. Blood /blood products must be administered in accordance with the guidelines set by Health Canada, the Canadian Standards for Transfusion Medicine (CSTM) and the College of Physicians and Surgeons of British Columbia's Diagnostic Accreditation Program (DAP).

Quick Links:

Need to Know

1. **The Transfusionist** is responsible for assessing the patient *before, during and after* transfusion.
2. **LPNs / RPNs** may take and record vital signs.
3. Recombinant products (e.g. some Factor VII, IX) do **NOT** require consent as they contain no donated human product. If you are unsure, check with the Transfusion Medicine Laboratory (TML).
4. **DO NOT add** medications or other IV fluids to blood/blood products or to administration sets used for transfusion. This includes any secondary lines, ports for IV direct and Y-type connectors.
5. Transporting/transferring a patient with transfusion in progress:
    - Transfer to another clinical area (with nursing staff available) may take place **after the first 30 minutes** of initiation of transfusion (except in case of emergencies in which case a nurse and / or physician will accompany patient).
    - The staff receiving the patient in transfer must be informed that a transfusion is in progress and what the patient's status is (e.g. current vital signs).
    - Ambulatory patients (clinics etc.) must remain in a clinical area for ongoing assessment for the duration of the transfusion.

6. Blood/blood products may be administered with an infusion pump (preferred), by gravity or by rapid infuser depending on clinical situation and clinical area. Ensure appropriate IV tubing is used for all blood/blood products: See Blood Product Information: Quick Reference Guide (Appendix A)
    1. Blood set tubing for the infusion pump **CAN** be used off the pump as a "gravity set". For the Alaris Carefusion "smart" pump, the roller clamp can be used to control flow rates.
    2. The use of an external pressure device (cuff) is acceptable only during gravity administration to increase the rate of infusion: See Peripherally Inserted Central Catheter (PICC) Pressure Bag for IV Administration/Blood Products.
    3. Blood set tubing with a BULB-hand pump is used by gravity ONLY in the Operating Room (O.R) and approved Critical Care areas.
7. **Vascular (venous) Access** is required for the transfusion of all blood/blood products, approved forms of access are:
    - Peripheral IV catheter all gauge sizes: 16, 18, 20, 22, 24 (26 to 29 gauge in neonate/pediatrics)
    - Midline catheter 3Fr or 4Fr: use with CAUTION and monitor for signs of upper extremity deep vein thrombosis
    - Central venous catheters: PICC, non-tunneled CVC, tunneled CVC
    - Large-bore central venous catheters: Hemodialysis CVC, percutaneous sheath, any catheter larger than 7Fr. (O.R., Critical Care, ED and Hemodialysis only)
    - Intra Osseous device: **ONLY** in ED, Critical Care and in **emergency situations**
8. Blood/blood products that have been transported with a patient from another hospital must be sent directly to Transfusion Medicine Laboratory (TML) for inspection. **DO NOT** transfuse products. **DO NOT** open transport box.
9. Certain blood products (e.g. Factor products) will be reconstituted and made by TML to within +/- 10% of ordered dose based on product supply; administer **FULL VOLUME** sent by TML.
10. In the **O.R., the Emergency Department (ED) and Critical Care,** blood/blood products can be pre-checked by 2 qualified personnel (see Practice Level) and then administered by a third qualified personnel providing:
    1. The pre-checks were completed in the presence of the patient and done according to this protocol (Steps 1 to 4 must be completed) **AND**
    2. The blood/blood product did not leave the unit / area (if the product leaves the unit/ area at any time the checks MUST be re-done)
    3. The transfusionist (third person) is still required to do a final check of blood/blood product to the patient when the blood/blood product is being administered
11. If **group O unmatched emergency RBCs** are used, a patient label MUST be placed on both copies of the attached Transfusion Record: then 1 copy filed in the patient's chart and 1 copy returned to TML.
12. **Cleaning**: **DO NOT** clean or wipe blood product bags/containers outside of TML - this includes using alcohol wipes, Cavi-wipes or any other products.
13. If more information on a product is required the product monograph can be requested from TML.

14. The product compatibility tag **MUST** remain attached to the product throughout the transfusion. At the end of the transfusion, if no reaction has occurred, discard the tag in the confidential waste. If a reaction has occurred leave tag attached to the product and return to TML.
    If a product is found hanging without a product compatibility tag attached, immediately stop the transfusion and call the physician/NP and TML. Immediately return administration line and product to TML.

Equipment and Supplies

1. Blood/blood product
2. Transfusion Medicine Laboratory Transfusion Record (comes with product)
3. Cerner banner bar (or face sheet in Chartlet)
4. Non sterile gloves
5. Infusion pump
6. Appropriate administration tubing See: Blood Product Information: Quick Reference Guide (Appendix A)
7. Transfusion Reaction Line - Primary IV set (macro tubing) and 500 mL bag normal saline
8. Compatible IV solution for flushing: See Blood Product Information: Quick Reference Guide (Appendix A)

Procedure

Steps

Prepare for Transfusion

1. Ensure the following are complete/available:
   a. Provider's / MRP order
   b. Group and Screen as required for product being administered. See: Blood Product Information: Quick Reference Guide (Appendix A)
   c. Completed **Consent** for Transfusion of Blood and/or Blood Products (Form ID - 2750) or Certification of need for Emergent Transfusion of Blood/Blood Products: Emergency Waiver (Form ID - 2749).
2. Ensure patient has patent vascular access. See Blood Product Information: Quick Reference Guide (Appendix A)
3. Ensure patient has identification band and allergy wristband (if appropriate) in place
4. Prepare and administer pre medications (as / if ordered).
5. Conduct a **baseline patient assessment within 30 minutes of transfusion** that includes**:**
   a. Vital signs**:** BP, HR, T°, RR and SpO_2
   b. Signs or symptoms that may be confused with a transfusion reaction

c. Focused systems assessment based on history: i.e. Cardiovascular assessment if circulatory overload is a risk

6. Ensure transfusion reaction line (IV tubing with compatible IV solution) available at bedside.

Obtain Product:

1. Obtain blood/blood product by sending product request form to TML, TML will only issue one product at a time, unless massive transfusion protocol initiated:
   - **In approved areas**: If product is required at bedside request TML cooler; cooler good for 6 hours, if time extends beyond 6 hours cooler needs to either be changed out or product returned to TML
2. Inspect product for any discoloration, clumps or leaks. Call TML if any concerns, anticipate returning product.
3. Blood product transfusion must begin within **30 minutes from the time product issued from TML.** If the transfusion is delayed return product to TML or a TML approved and monitored fridge or cooler (**NOT** ward fridge) **IMMEDIATELY**.

Check the Blood / Blood Products:

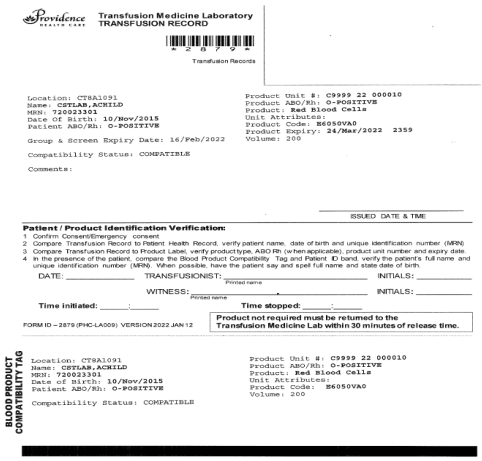
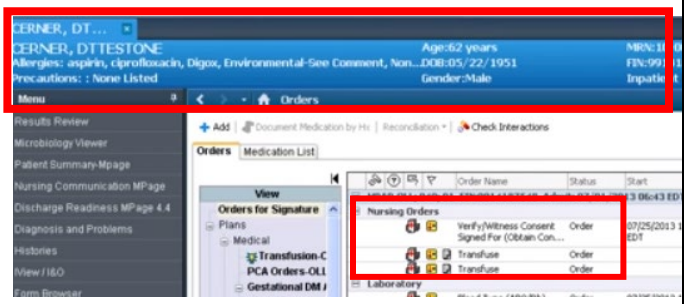
1. The checks shall be completed by two qualified health care professionals (see Practice Level)
   a. The person initiating the checks will be the transfusionist and is the one administering the product and completing the documentation
2. Checks are completed immediately prior to administration of product in the presence of the patient
3. **Compare and verify** the required information is **exactly the same in each place**
   a. Each of the two people required for checking the product takes a turn reading and when needed spelling the information on the documentation they have
   b. The person listening compares the information they are hearing to the documentation they have
4. The following are checked on the Transfusion Record, Banner bar, Product Compatibility Tag, Product Label and Patient Identification band:
   - Patient first and last name (including spelling)
   - Patient unique identifier (MRN)
   - Patient date of birth
   - Type of product and ABO group (e.g. red blood cells, A positive)
   - Product unit number/Lot number
   - Product expiry date and time
   - Any special requirements (e.g. irradiation)
5. In the **Operating Room ONLY**: in the event that the Patient Identification band is inaccessible; it is acceptable to use the Banner Bar in Cerner to check the patient's ID against the blood product information (to replace Step 4 below) provided:

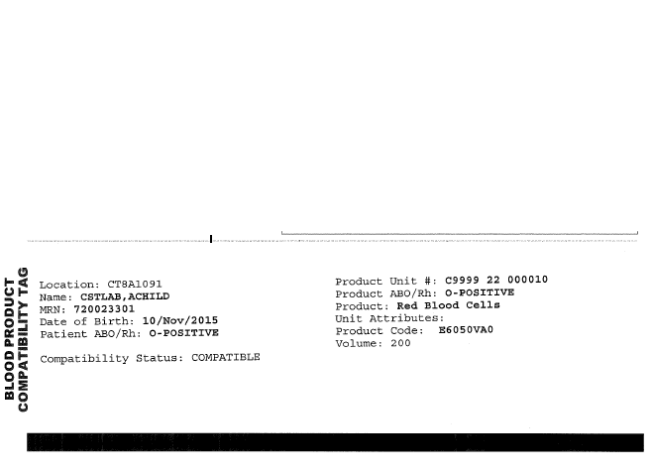
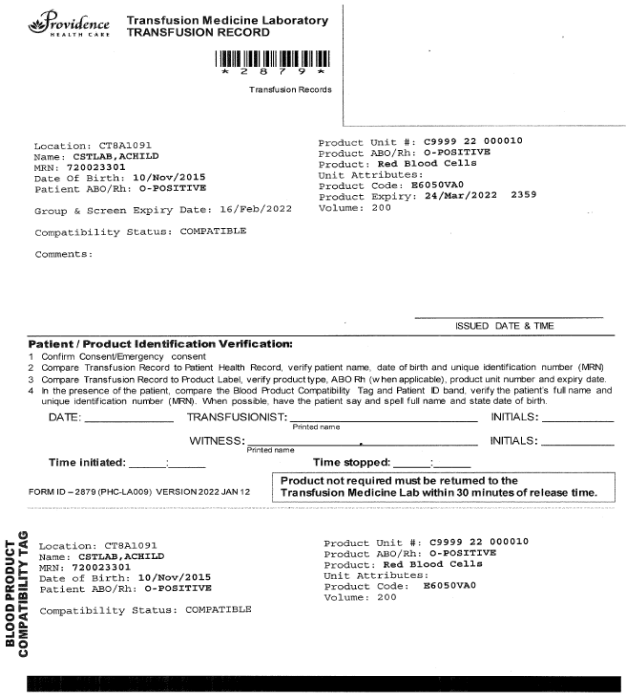
a. The O.R. staff has validated the patient's full name, DOB and MRN upon admission to the O.R. using both the identification band and the Banner Bar **AND**

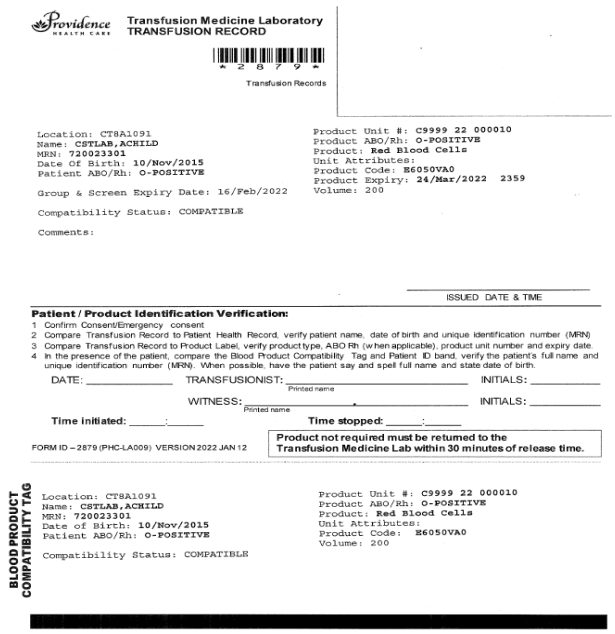
b. The patient has not left the room.

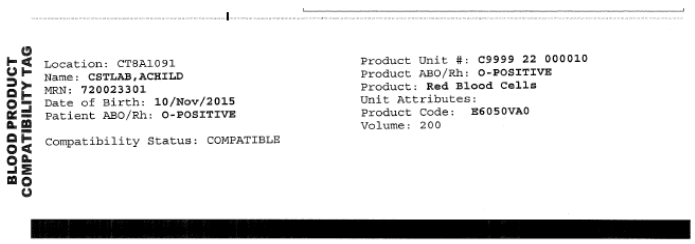
6. If **ANY** information **does not EXACTLY** match with the patient ID band, the Transfusion Record and/or the Banner Bar in Cerner, immediately contact the TML for further instruction and prepare to return the product.

Steps:

1. Transfusionist	Person two
	
Using **Transfusion Record** (say it out loud and spell it out loud) a) Patient first and last name b) Patient unique identification number (MRN) c) Date of birth	Read back to confirm from the banner bar in Cerner (say it out loud and spell it out loud) a) Patient first and last name b) Patient unique identification number (MRN) c) Date of birth
Confirm information is exactly the same on both the record and in Cerner.	

2. Transfusionist	Person two
 BLOOD PRODUCT COMPATIBILITY TAG Location: CT8A1091 Name: CSTLAB,ACHILD MRN: 720023301 Date of Birth: 10/Nov/2015 Patient ABO/Rh: O-POSITIVE Compatibility Status: COMPATIBLE Product Unit #: C9999 22 000010 Product ABO/Rh: O-POSITIVE Product: Red Blood Cells Unit Attributes: Product Code: E6050VA0 Volume: 200	 Providence HEALTH CARE Transfusion Medicine Laboratory TRANSFUSION RECORD Transfusion Records Location: CT8A1091 Name: CSTLAB,ACHILD MRN: 720023301 Date Of Birth: 10/Nov/2015 Patient ABO/Rh: O-POSITIVE Group & Screen Expiry Date: 16/Feb/2022 Compatibility Status: COMPATIBLE Comments: Product Unit #: C9999 22 000010 Product ABO/Rh: O-POSITIVE Product: Red Blood Cells Unit Attributes: Product Code: E6050VA0 Product Expiry: 24/Mar/2022 2359 Volume: 200 ISSUED DATE & TIME Patient / Product Identification Verification: 1 Confirm Consent/Emergency consent 2 Compare Transfusion Record to Patient Health Record, verify patient name, date of birth and unique identification number (MRN) 3 Compare Transfusion Record to Product Label, verify product type, ABO Rh (when applicable), product unit number and expiry date. 4 In the presence of the patient, compare the Blood Product Compatibility Tag and Patient ID band, verify the patient's full name and unique identification number (MRN). When possible, have the patient say and spell full name and state date of birth. DATE: _____ TRANSFUSIONIST: _____ (Printed name) INITIALS: _____ WITNESS: _____ (Printed name) INITIALS: _____ Time initiated: _____:_____ Time stopped: _____:_____ FORM ID – 2879 (PHC-LA009) VERSION 2022 JAN 12 Product not required must be returned to the Transfusion Medicine Lab within 30 minutes of release time. BLOOD PRODUCT COMPATIBILITY TAG Location: CT8A1091 Name: CSTLAB,ACHILD MRN: 720023301 Date of Birth: 10/Nov/2015 Patient ABO/Rh: O-POSITIVE Compatibility Status: COMPATIBLE Product Unit #: C9999 22 000010 Product ABO/Rh: O-POSITIVE Product: Red Blood Cells Unit Attributes: Product Code: E6050VA0 Volume: 200
Read from **blood product compatibility** tag (say it out loud and spell it out loud) a. Patient first and last name b. Patient unique identification number (MRN) c. Date of birth	Read back to confirm from **Transfusion Record** (say it out loud and spell it out loud) a. Patient first and last name b. Patient unique identification number (MRN) c. Date of birth
Confirm information is exactly the same on both documents	

3. Transfusionist	Person two
	
Read from **Transfusion Record** (say it out loud) a) Type of product and ABO group b) Product Unit number c) Product expiry date and time d) Any special requirement e.g. irradiation	Read back to confirm from **blood product label** on product (say it out loud) a) Type of product and ABO group b) Product Unit number c) Product expiry date and time d) Any special requirement e.g. irradiation
Confirm information is exactly the same in both places	

4. Transfusionist	Person two
Final Check – MUST be completed in the presence of the patient	
	
Read from **blood product compatibility tag** (say it out loud and spell it out loud) a) Patient first and last name b) Patient unique identification number (MRN) c) Date of Birth	Read back to confirm from **Patient Identification band** (say it out loud and spell it out loud) a) Patient first and last name b) Patient unique identification number (MRN) c) Date of Birth
Confirm information is exactly the same in both places	
Recommended additional check: Have the patient state first and last name and date of birth	

Transfuse Product:

1. Ensure baseline assessment completed and documented.
2. For a product being administered by **IV infusion**:
   - In the presence of the patient spike bag/bottle and prime IV administration set with blood/blood product or with compatible IV solution.
   - Connect tubing to patient's vascular access. Note: Maximum volume of any connection tubing (e.g. extension tubing, saline lock) is 2 mL.
   - Do not administer blood products through add-on manifold sets attached to tubing – it is difficult to fully flush through manifold ports and prevent occlusion.
   - Commence infusion **at slow rate** x 15 minutes See: Blood Product Information: Quick Reference Guide (Appendix A)
   - After first 15 minutes, if no reaction noted, increase transfusion rate as per Provider's Orders and based on volume and infusion time or "time ordered" (e.g. over 2 hours).
   - Check the actual volume of the product for pump programming (VTBI)

3. For products being administered **IV Direct or IM** see specific product monograph for administration rates or See: Blood Product Information: Quick Reference Guide (Appendix A) for reference.
4. For critical incidents requiring **rapid transfusion**, refer to local unit protocol and use appropriate blood set tubing with filter. Use clinical judgment for transfusion on urgent basis – infusion time and maximum rate will be based on clinical situation.
    - Patient will require constant monitoring and clinician responsible for transfusion should be at patient side throughout transfusion.
5. When transfusing multiple units/products change blood administration set:
    - Between each product type
    - After 4 hours or 2 units (whichever comes first)
    - For Rapid Infuser only – RBC and Plasma can be given back to back without changing tubing. CHANGE the filter every 3 hours or as flow slows down/decreases NOTE: platelets or other product must be given on a separate dedicated line

Patient Assessment:

- Transfusionist to remain in view of patient for at least 5 minutes after initiation of transfusion.
- Observe for signs or symptoms of transfusion reaction (B-00-13-10068)
- Monitor and document patient's VS and assess for signs & symptoms of transfusion reaction:
    - ✓ 15 minutes after start of **EACH** transfusion
    - ✓ A minimum of every hour during transfusion
    - ✓ At end of transfusion.
    - ✓ PRN

If at any time the patient has signs or symptoms of a TRANSFUSION REACTION:

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the transfusion
- **Disconnect** the transfusion line
- **Run** transfusion reaction line at TKVO
- **Notify** the MRP and TML
- **Follow** instructions on the back of the Transfusion Record and from the MRP

Transfusion End:

1. For IV Infusion: flush tubing with a 50 mL minibag of compatible IV solution
    - It is not necessary to flush between units of same product if using same administration set within 4 hours. (i.e. two units being infused within 4 hour period).
2. Disconnect administration set from patient and discard in biohazard waste bin (unless a transfusion reaction occurred then follow guidelines in protocol B-00-13-10068)
3. For CVC (including PICC) - an additional 20 mL NS flush (using NS pre-filled syringes) is required.

4. For peripheral IV line – an additional 5 to 10 mL NS flush (using NS pre-filled syringe) is required.

Documentation

1. Complete Transfusion Record. Ensure two signatures appear on record (witness and transfusionist). File in the patient's chartlet.
    - In the **O.R., ED and Critical Care:** when pre-checks are completed the two staff completing the checks will both sign as witness; the staff administering the product will sign as transfusionist.
2. CERNER: Document in the **Blood Product Administration** Band in the Interactive View and I&O section:
    - Vascular access device transfused through (i.e. PIV, CVC, PICC, or IVAD, etc.) – choose appropriate Dynamic Group and Lumen Type.
    - Blood product transfusion education
    - Vital signs
    - Volume of product infused at end of transfusion
3. Document as a free text note any change in patient condition related to the transfusion or any interruptions to transfusion.
4. Once all the product in the order has been administered complete the Cerner task.

Patient and Family Education

1 Review purpose of transfusion. Give "About Blood Transfusions" pamphlet.

2 Instruct patient to report to staff any unusual symptoms (See B-00-13-10068) promptly.

3 If the patient is being discharged within 24hr or is an outpatient give "After your Transfusion" pamphlet for aftercare and delayed transfusion reaction reporting information.

4 Patient education pamphlets are available in English, Chinese, Vietnamese and Punjabi from the Transfusion Medicine web page or the Print Health Education Resources Catalogue.

Related Documents

1. B-00-13-10068- Blood/Blood Products: Transfusion Reaction Identification and Management
2. B-00-13-10164- Intravenous Immunoglobulin (IVIG): Patient Care and Administration
3. B-00-12-10133- Hemodialysis: Blood/Blood Product Administration
4. B-00-13-10028- NICU: Blood/Blood Product Transfusion for Newborns
5. B-00-14-10003- Blood/Blood Product Transfusion (Pediatric): Quick Reference for Emergency Department
6. B-00-12-10118- Peripherally Inserted Central Catheter (PICC) Pressure Bag for IV Administration or Blood Products
7. Transfusion Medicine: Blood Product Fact Sheet

8. Transfusion Medicine: Laboratory Manual
9. Nursing Competency: Blood/Blood Product Administration Online Learning Hub

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Appendix A: BLOOD PRODUCT INFORMATION: QUICK REFERENCE GUIDE

1. Return all products to transfusion medicine that are not being used within **30 minutes of issue**
2. Vascular Access: PIV (any size); Midline (3Fr/4Fr); PICC; CVC; HD-CVC (**Hemodialysis,** Critical Care, ED and O.R.); Intraosseous Device(**ONLY** in Critical Care, O.R. and ED)

Product	Indication	Turn-Around	Volume mL	Compatible Solution	Tubing	Rate	GRS Required	Additional Information
Red Blood Cells	Active Bleeding: • Loss of more than 15% of total volume Anemia: • Hgb less than 60 • Hgb less than 70 + symptoms	Current GRS: 5 min GRS just sent: 30 to 120 min	250 to 350 (Bag)	NS (for flush)	170-260 micron filter Blood Set Wards: Straight-set Critical care: Straight or Y Set	Start: 120 mL/hour Suggested: over 2 to 3 hours	**Yes**	Need GRS within 3 days where day of collection is day 0 *exception with pre-admission patients (call TML)
Plasma	Correct Coagulation factors	20 to 30 min	250 to 350 (Bag)	NS (for flush)	170-260 micron filter Blood Set	Start: 120 mL/hour Max: 350 mL/hour Average over 1 hour	**Yes**	Need GRS from current admission
Platelets	Bleeding from platelet function abnormality or thrombocytopenia	5 min	250 to 350 (Bag)	NS (for flush)	170-260 micron filter Blood Set	Start: 120 mL/hour Max: 700 mL/hour (goal as fast as tolerated)	**Yes**	Required GRS with current admission
Cryo-Precipitate	Aquired hypo-Fibrongenemia	30 to 40 min	100 to 140 (Bag)	NS (for Flush)	170-260 micron filter blood set	Start: 120 mL/hour Max: 280 mL/hour (Over 10 to 30 min)	**Yes**	Need GRS within current admission

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Product	Indication	Turn- Around	Volume mL	Compatible Solution	Tubing	Rate	GRS Requirement	Additional Information
IVIG- intravenous immune globulin	Primary immune deficiencies, hematological disorders, neurological disorders, solid organ transplant	5 to 30 min (depending on volume)	25 to 200 (Bottle)	NS (for flush) D5W-ok	Vented Straight Set + 15 micron filter	See IVIG table (B-00-13-10164)	**NO**	**Requires baseline GRS from any SPH/MSJ admission** Dose is weight based and may be fulfilled using **MULTIPLE BOTTLES** ensure full dose is administered
Albumin 5%	Provides volume; minimal literature to support benefits: used in plasma exchange	5 to 30 min (depending on volume)	250 to 500 (Bottle)	NS (for flush) D5W-ok	Vented straight set tubing with no ports	Start: 120 mL/hour Max: 200 mL/hour normally over 30 to 60 min	**No**	
Albumin 25%	Provides colloid osmotic activity; minimal literature to support benefits	5 to 30 min (depending on volume)	100 (Bottle)	NS (for flush) D5W-ok	Vented straight set tubing with no ports	Start: 50 mL/hour Max: 200 mL/hour normally over 30 to 60 min	**No**	Not appropriate for patients at risk of circulatory overload

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Product	Indication	Turn-Around	Volume mL	Compatible Solution	Tubing	Rate	GRS Requirement	Additional Information
Factor VIII	Prevention or control of bleeding in Hemophilia A	30 min	5+ (Syringe)	NS (for flush)	In Syringe NO filter	IV Direct over 3 to 5min	**No**	**IF** Recombinant product, consent **NOT** needed Give **FULL Volume**
Factor VIIa (activated)	Prevention or control of bleeding in Hemophilia A or B	30 min	5+ (Syringe)	NS (for flush)	In Syringe NO filter	IV Direct 1 mL/min	**No**	**IF** Recombinant product, consent **NOT** needed Give **FULL Volume**
Factor IX	Prevention or control of bleeding in Hemophilia B	30 min	5+ (Syringe)	NS (for flush)	In Syringe NO filter	IV Direct over 3 to 5 min (can extend to 5 to 10 min for volume)	**No**	**IF** Recombinant product, consent **NOT** needed Give **FULL Volume**
Prothrombin Complex Concentrate	Rapid correction of Warfarin	30 min	20 to 100 (Bag)	NS (for flush)	Regular tubing NO filter	Octaplex: initial: IV 1 mL/min Max: 2 to 3 mL/min Beriplex: 8 mL/min	**No**	Give 30 to 60 min prior to surgery Give **FULL Volume** Octaplex: clear blueish color
Fibrinogen	Treatment of hemorrhagic diathesis in congenital hypofibrinogenemia or afibrinogemia	30 min	50+ (Bottle or Bag)	NS (for flush)	If in a bottle or bag: Vented Straight Set + 15 micron filter	IV: infusion or Direct Max: 5 mL/min	**No**	Monitor for thrombosis and/or Disseminated intravascular coagulation (DIC)

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2. Vascular Access: PIV (any size); Midline (3Fr/4Fr); PICC; CVC; HD-CVC (Hemodialysis, Critical Care, ED and O.R.); Intraosseous Device(**ONLY** in Critical Care, O.R. and ED)

Product	Indication	Turn-Around	Volume mL	Compatible Solution	Tubing	Rate	GRS Requirement	Additional Information
CMVIG- cytomegalovirus hyper-immune globulin	Prevent CMV in immunocompromised patients and in mismatched CMV transplant patients	30 min	50+ (Bag or bottle volume dependant)	NS (for flush) D5W-ok	If in a bottle or bag: Vented Straight Set + 15 micron filter	Initial dose: 15 mg Ig/kg/hour x 30 min → 30 mg Ig/kg/hr x 30 min → 60 mg Ig/kg/hour Subsequent: 15 mg Ig/Kg/hour x 15 min→ 30 mg Ig/kg/hr x 15 min → 60 mg Ig/kg/hour Max: 75 mL/hour	**No**	
HBIG- Hepatitis B Immune Globulin	Post exposure prophylaxis for Hepatitis B	5 min: **provided as vial or PFS**	Neonatal 0.5 (Vial) Adult 5 (Vial)	n/a	IM: NO filter	IM injection Preferred site: buttocks	**No**	Give with a series of HepB vaccines
VZIG- Varicella Zoster Immune Globulin	Passive immunization after exposure to varicella	5 min: **provided as vial**	5 to 10 (Vial)	NS (for flush)	IM:NO filter IV: NO filter	IM injection IV Direct over 3 to 5 min	**No**	Should be given within 96 hour of exposure
RhIG- Rh Immune Globulin	Prevent Rh immunization in Rh negative patients; Treatment of ITP	5 min: **provided as vial**	2+ (Vial)	NS (for flush)	IM:NO filter IV: NO filter	IM injection IV Direct 300 mcg over 5 to 15 sec	**Yes**	GRS from current pregnancy

BLOOD PRODUCT INFORMATION: QUICK REFERENCE GUIDE

1. Return all products to transfusion medicine that are not being used within **30 minutes of issue**
2. Vascular Access: PIV (any size); Midline (3Fr/4Fr); PICC; CVC; HD-CVC (**Hemodialysis,** Critical Care, ED and O.R.); Intraosseous Device (**ONLY** in Critical Care, O.R. and ED)

Product	Indication	Turn - Around	Volume mL	Compatible Solution	Tubing	Rate	GRS Requirement	Additional Information
Hemin (panhematin)	Acute porphyria in Women	5 min **MUST be given ASAP**	50 to 100 (bottle)	NS (for flush)	**Vented straight set + 0.2 micron filter**	Start: 1 mL/min Max: 8 mL/min **Over minimum 30 min**	**No**	**MUST flush with 100 mL NS post transfusion**
Hemlibra (emicizumab)	Prophylactic treatment of Congenital Hemophilia A with or without inhibitors to Factor VIII	30 min	Dependent on dose	n/a	Draw up using a **blunt- fill (Filter)** needle	SUBCUT injection Rotate sites max 2 mL/site	**No**	Product obtained from Transfusion Medicine**, Consent NOT required**
C1 Esterase Inhibitor	Hereditary angio-edema (HAE)	30 min	10 to 20 (Syringe)	NS (for flush)	In Syringe NO filter	IV Direct **(slow)** Max: 5 mL/min	**No**	Give **FULL Volume**
Anti-Inhibitor Coagulant Complex	Control of spontaneous bleeding in Hemophilia A, B or non-hemophiliacs with acquired inhibitors to factors VII, XI and XII with life threatening bleeding	30 min	60+ (Syringe or bag based on volume)	NS (for flush)	In Syringe NO filter; if in bag regular tubing No filter	IV Direct Max rate: 2 units/kg/min Large volume is pooled in bag and given via IV infusion	**No**	If transfusion reaction occurs must also monitor for DIC and acute coronary ischemia Give **FULL Volume**

BLOOD PRODUCT INFORMATION: QUICK REFERENCE GUIDE

1. Group Return all products to transfusion medicine that are not being used within **30 minutes of issue**
2. Vascular Access: PIV (any size); Midline (3Fr/4Fr); PICC; CVC; HD-CVC (**Hemodialysis,** Critical Care, ED and O.R.); Intraosseous Device (**ONLY** in Critical Care, O.R. and ED)

Anti-Thrombin III	Treatment of patients with hereditary anti-thrombin III deficiency or DIC	30 min	20+ (Syringe)	NS (for flush)	In Syringe NO filter	IV Direct Max: 5 mL/min	**No**	If transfusion reaction occurs & patient on heparin consider heparin dose reduction. Give **FULL Volume**
Factor VII	Prevention or control of bleeding in Factor VII deficient disorders	30 min	5+ (Syringe)	NS (for flush)	In Syringe NO filter	IV Direct Max: 2 mL/min	**No**	Initiated under experienced physician supervision Not given in DIC Give **FULL Volume**
Factor XI	Prevention or treatment of bleeding in congenital Factor XI deficiency	30 min	5+ (Syringe)	NS (for flush)	In Syringe NO filter	IV Direct Max 3 mL/min	**No**	Give **FULL Volume**
Factor XIII	Prophylactic or treatment of bleeding in congenital Factor XIII deficiencies	30 min	5+ (Syringe)	NS (for flush)	In Syringe NO filter	IV Direct Max: 4 mL/min	**No**	Give **FULL Volume**
Von Willebrand Factor	Prevention or control of bleeding in Hemophilia A and Von Willebrand Disease	30 min	5 +(Syringe)	NS (for flush)	In Syringe NO filter	IV direct Max: 4 mL/Min	**Yes**	Give **Full Volume**

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