GREENVILLE HOSPITAL SYSTEM NURSING STAFF POLICY & PROCEDURE

PLATELETS, ADMINISTRATION OF:
I.V. DRIP METHOD and I.V. PUSH METHOD

POLICY:

Greenville Hospital System employees, volunteers, nursing and medical students and members of the Medical Staff may obtain blood and blood components from the laboratory.

Only one unit or pooled unit of platelets may be taken at any given time for a patient on a nursing unit except in cases of extreme emergency. More than one unit or pooled unit may be obtained if it is to be taken to surgery or the Ambulatory Infusion Center (AIC) where special refrigerators are designated for blood/blood product storage. (Blood left at room temperature may develop bacterial growth.)

Platelets must be transfused using a filter. The filter must be a standard blood filter of 170 to 260 microns. Do NOT use a microaggregate filter because it will filter out the platelets. Filters may be used for more than one transfusion, but due to the risk of possible bacteria growth, filters and tubing sets must be discarded after 4 hours.

All blood and blood product infusion sets are to be disposed of following universal precautions (i.e., all blood containers/tubing go in bio-hazard bags).

The Blood Bank bracelet on the patient, must remain on the patient for 3 days because all blood issued on the Type and Crossmatch will be sent with the Blood Bank bracelet number as a primary source of ID. The Blood Bank bracelet number will appear after “Other Primary ID #” on the unit label and Transfusion Record.

Blood or blood components cannot be left out on the nursing unit after they are obtained from the lab for longer than 30 minutes before the transfusion is begun. Blood or blood components must never be put in a refrigerator on a nursing unit.

Blood or blood components cannot be returned to the lab after 30 minutes, except for areas where blood is kept in special refrigerators (i.e. Operating Room, Ambulatory Infusion Center) designated for storage of blood. Blood products taken into the Trauma Bay in the Emergency Department may not be returned to the Blood Bank, even if it has been under 30 minutes. The high temperatures in the bay causes the blood product to quickly go above the 10°F temperature limit.

Blood or blood components which are ordered “on hold” are held for 72 hours. If the blood / blood components must still be on hold after this time, it must be re-ordered and a new cross-match done.

A Consent for Blood/Blood Product Transfusion must be obtained and be on the chart prior to starting the transfusion. This consent covers all transfusions for one (1) admission, except in the AIC where the consents cover all transfusions for one calendar year.
Patients and or their significant others should receive education when appropriate on what signs and symptoms to report the nurse/physician that may indicate an adverse transfusion reaction.

**PERSONNEL:**

Registered Nurses can administer platelets. Registered Nurses may check blood information and patient identification with another Registered Nurse, Licensed Practical Nurse, Physician or Physician Assistant.

**DESIRED OUTCOME:**

To administer platelets properly and safely with a minimum occurrence of reactions and complications. To quickly detect signs of reactions and complications.

**SUPPORTIVE DATA:**

Platelets are given to control or prevent bleeding associated with deficiencies in platelet number or function.

To assess the therapeutic effect of platelet transfusion, the platelet count may be measured after the transfusion (10 minutes to one (1) hour later).

Platelet transfusions may be required every one to three (1-3) days for a period of time.

Platelets are available as:

1. Unit of platelets (single-donor pheresis)
2. Pooled platelets (platelets pooled into one unit from several donors)
3. Directed pheresis (platelets donated and designate for a particular patient)
4. HLA-matched platelets (used when HLA antibodies are causing platelet destruction)
5. Single platelet pack (non-pheresis) for infants

**EQUIPMENT:**

1. Platelets from Blood Bank (indicated by physician’s orders).
2. 250mL normal saline bag of IV fluid
3. Transfusion Record
4. Consent for Blood/Blood Product Transfusion, if not already signed for this admission
5. Patent IV site with 18g IV catheter or larger for an older child or adult and a 22g IV or larger for an infant or small child, if possible. If using a catheter smaller than a 22g care must be taken in how fast the platelets are delivered so as not to damage the platelets.
6. IV Push Method
   A. Blood component administration set (short tubing about 13 inches long, and is a Y-set).
   Filter is 170-micron.
   B. 60 mL syringe (with small tip, not catheter tip)

7. IV Drip Method:
   A. Blood Component Administration Set (straight set, approximately 56 inches long or longer).
   Filter size is 170 micron

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<th>STEPS</th>
<th>KEY POINTS</th>
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<tr>
<td>1. Verify order. The physician should have completed the Blood Transfusion Order form (M10458).</td>
<td>1. If the physician has not completed the Blood Transfusion Order form, call the physician to complete the form.</td>
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<tr>
<td>2. Obtain Consent for Blood/Blood Product Transfusion, if not already on chart.</td>
<td>3. The patient and/or family should be advised to report signs of a transfusion reaction which include itching, swelling, dizziness, dyspnea, chest pain and pain at the IV site.</td>
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<td>3. Educate the patient and/or family on what to expect with the blood transfusion and what signs to report that may indicate a transfusion reaction.</td>
<td>4. An 18 gauge catheter or larger is recommended. In Pediatrics, smaller gauge needles may be used because of the small size of children's veins.</td>
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<td>4. Ensure a patent IV is in place.</td>
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<td>5. Request platelets from the Blood Bank.</td>
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<td>6. Obtain the platelets and an appropriate transfusion set from the Blood Bank. Complete the Blood Pick Up Form by placing a patient identification sticker on the form, filling in the blood bracelet number and indicating the number and type of units to be picked up. Also list the unit where the blood product is going and the physician ordering the transfusion.</td>
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<td>7. Check vital signs and record on the Transfusion Record.</td>
<td>7. Vital signs are to be taken and documented when the transfusion is begun, 20 minutes after the transfusion is started, and when the unit has completely infused.</td>
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8. Establish proper patient identification by the following steps:

A. **At the bedside**, two RN’s, an RN and MD or an RN and LPN must check the following information on the blood unit label and Transfusion Record against the information on the patient’s ID bracelet:
   1. Blood bracelet number
   2. Full name
   3. Date of birth
   4. Medical Record Number

B. **Also at the bedside**, the same individuals must check the following information on the platelet unit label and Transfusion Record against the information on the unit of platelets.
   1) ABO type
   2) donor number or pooled unit number
   3) expiration date

C. When possible, it is recommended that a second ID check be made by asking the patient to state his/her name, or by requesting such information from a significant other at the bedside.

9. Also inspect the unit for abnormal color (clear yellow to pink is normal), for gas bubbles (may indicate bacterial growth), or for any type of clots. If found, do NOT infuse. Return the unit to the Blood Bank immediately.

10. Both persons checking the unit of platelets must sign the Transfusion Record. The date and time the transfusion is begun is also recorded.

**STEPS**

11. Document the transfusion information on the Transfusion Record.

**KEY POINTS**

11. See BloodPro 8, Appendix A, for an example of the Transfusion Record. Vital signs are to be taken and documented when the transfusion is begun, 20 minutes after the transfusion is started, and when the unit has
12. Stop any maintenance IV fluid. Flush the IV with normal saline; approximately 20-30 mL is recommended to flush the line completely if normal saline is not already infusing.

12. Normal Saline is the only solution which should be used to flush before or after blood/blood products. Other IV fluids and IV medications can cause precipitation, hemolysis or agglutination.

**I.V. PUSH ADMINISTRATION OF PLATELETS**

**STEPS**

1. Close both control clamps on the administration set.

2. Expose the port of the platelet bag and spike the port with the administration set, using a twisting motion.

3. Expose the Y-port which has no spike and attach the empty 60 mL syringe.

4. Open the control clamp to the spiked bag and aspirate the platelets into the syringe.

5. Close the control clamp to the platelet bag when the bag is empty or syringe is full.

6. Open the lower control clamp and prime the tubing by pushing the platelet syringe.

7. Gently infuse the platelets from the syringe at a rapid rate.

8. Repeat steps 4 through 7 until all the platelets are infused.

**KEY POINTS**

1. Use Blood Component Administration Set (short tubing, about 13 inches long, Y-set).

9. At the completion of administration, disconnect platelet bag and attach a bag of normal saline to the administration set. Aspirate 20-50 mL of normal saline into the syringe. Flush the administration set with saline to ensure that all of the platelets are infused.
10. Repeat steps 1-8 under “IV Push Platelet Administration”, if additional platelets are given.

10. The Blood Component Administration Set may be used for multiple unit administration. Visually inspect tubing after each use and replace as needed. There is no limit to the number of units that can be transfused through one set. However, sets must be changed every 4 hours.

I.V. DRIP ADMINISTRATION OF PLATELETS

**STEPS**

1. Close the control clamp on the administration set.

2. Expose the port of the platelet bag and spike the port with the administration set.

3. Open the control clamp and prime the infusion line with platelets, then close the clamp.

4. Connect the primed component administration set to the IV.

5. Administer platelets by IV drip at a rapid rate, or as ordered by the patient’s physician.

**KEY POINTS**

1. Use Blood Component Administration Set (straight set, approximately 56 inches long or longer). Use a 170-260 micron filter. Do not use microaggregate filter.

2. Expose the port of the platelet bag and spike the port with the administration set.

3. Open the control clamp and prime the infusion line with platelets, then close the clamp.

4. Connect the primed component administration set to the IV.

5. Infuse as rapidly as the patient’s condition permits. Platelets may be infused in a very short period of time.

POSSIBLE REACTION TO PLATELETS

**STEPS**

1. If the patient develops symptoms of a possible reaction, stop transfusion of platelets and keep IV open with Normal Saline at KVO rate.

   Symptoms of a possible reaction include:

   1. See policy and procedure on Transfusion Reactions for steps to follow after possible reaction occurs. If it is discovered that platelets are transfused to a patient for whom they were not intended, this must be worked up and steps taken as if it were a transfusion.
Fever, chills, back pain, chest pain, tachycardia, hypotension, rash / urticaria, wheezing, dyspnea, vomiting, diarrhea. reaction and the Blood Bank must be notified immediately.

2. Obtain vital signs and document on the Transfusion Record.  

2. See BloodPro 8, Appendix A, for an example of the Transfusion Record.

DOCUMENTATION:

1. Complete the Transfusion Record. (See BloodPro 8, Appendix A)

2. Notify the Blood Bank of the infusion either by electronic message or the approved manual method. It is the responsibility of the nurse completing the transfusion to ensure the message is sent before the end of the shift. If an electronic message is sent, save the confirmation that is printed in the patient's chart or designated area on the unit.

3. Include amount transfused on fluid balance record.

NOTES:

1. In emergency conditions when multiple unit are given as rapidly as possible initial vital signs should be obtained, if possible, but vital signs which are routinely done after 20 minutes and at the end of each unit may not be possible. Vital signs at the end of all units should be done.

2. Regardless of emergency, two people must check the information on each unit of platelets to ensure the correct product has been obtained.

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REFERENCES:


4. Circular of Information For the Use of Human Blood and blood Components (2002). Printed by the AABB.


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June, 1988
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**APPROVAL SIGNATURES APPEAR ON THE ORIGINAL DOCUMENT, ON FILE IN THE OFFICE OF THE CHIEF NURSING OFFICER, FOR:**

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