GREENVILLE HOSPITAL SYSTEM NURSING STAFF POLICY & PROCEDURE

FRESH FROZEN PLASMA (FFP), ADMINISTRATION OF

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 of blood or components may be taken at any given time for a patient on a nursing unit except in cases of extreme emergency. More than one unit may be obtained if it is to be taken to surgery or Ambulatory Infusion Center (AIC). (Blood left at room temperature may develop bacterial growth.)

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/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 from surgery or the AIC where blood is kept in special refrigerator 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 temperature in the bay causes the unit to quickly go above a safe temperature for restoring.

FFP must be administered through a filter. The standard blood filter is 170 to 260 microns. Multiple units given consecutively may be given through one administration set:

A. up to two (2) units within a four (4) hour limit using straight and Y-type sets; or
B. up to ten (10) units using a multiple infusion filter (see instructions for specific filter used).

There is no need to use a microaggregate filter with FFP since there are no cellular products that can cause aggregates.

FFP may be given under pressure in an emergency. The pressure should not exceed 300 mmHg.

All blood and blood product infusion sets are to be disposed of following the 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 #” on the unit label and Transfusion Record.

Blood or blood components, which are ordered "on hold", are held for 72 hours. If the blood/component must still be held after this time, it must be re-ordered and a new crossmatch done.
A Consent for Blood/Blood Product Transfusion must be obtained and be on the chart prior to initiating the FFP 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 signs and symptoms to report the nurse/physician that may indicate an adverse transfusion reaction.

**PERSONNEL:**

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

**DESIRED OUTCOME:**

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

**SUPPORTIVE DATA:**

FFP is plasma, which has been separated from whole blood and frozen within 6 hours of collection. FFP is used for coagulation deficiencies. It is transfused to provide clotting factors to patients who are hemorrhaging, to patients in disseminated intravascular coagulation (DIC), and to patients with thrombotic thrombocytopenic purpura (TTP). FFP may be given prophylactically to patients who are being massively transfused with whole blood or packed red blood cells to prevent depletion of coagulation proteins during massive transfusions.

- GHS Nursing Staff Policy & Procedure: BloodPro 1 – Blood Bank Collections

**EQUIPMENT:**

1. Unit of FFP from blood bank
2. Blood administration set with a filter (normally the filter is 170-260 microns,)
3. Patent IV site with #22 IV catheter or needle, or larger gauge
4. Normal saline (NS) IV bag, usually 250mL
5. Transfusion Record
6. Consent for Blood/Blood Product Transfusion, if not already signed for this admission

**PROCEDURE:**
**STEPS**

1. Verify order. The physician should have completed the Blood Transfusion Order form (M10458).

2. Obtain Consent for Blood/Blood Product Transfusion, if not already on the chart.

3. Educate the patient and/or family on what to expect with the FFP transfusion and what signs to report that may indicate a transfusion reaction.

4. Ensure that a patent IV is in place.

5. Notify the blood bank at least 30 minutes prior to the time the FFP is to be picked up.

6. Obtain the FFP and a 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 FFP is going and the physician ordering the transfusion.

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

8. Establish proper patient identification by the following steps:

   A. **At the bedside**, two RN’s, an RN and an MD, or an RN and LPN must check the following information on the blood unit label and the Transfusion Record against the information on the patient’s ID bracelet:

   1) Blood bank bracelet number
   2) Full name

**KEY POINTS**

1. If the physician has not completed the Blood Transfusion Order form, you should call the physician to complete the form.

2. 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.

3. A large gauge needle is not necessary because RBCs are not being transfused and plasma is not viscous.

4. A unit of FFP can be thawed in the lab in approximately 30 minutes.


6. Vital signs are to be taken and documented at start of transfusion, 20 minutes after the transfusion is begun, and when transfusion is complete.

7. If the patient’s name or identifying numbers do not match EXACTLY, DO NOT BEGIN TRANSFUSION. Notify the blood bank immediately.
3) Date of birth
4) Medical Record Number

B. **Also at the bedside**, the same individuals must check the following information on the FFP unit label and the Transfusion Record against the information on the unit of FFP:

1) ABO type
2) donor or pooled unit number
3) expiration date

B. Note that it is not necessary to match the Rh type when giving FFP. The Rh antigen is not present in the plasma.

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

10. Document the transfusion information on the Transfusion Record.

10. See BloodPro 6, Appendix A.

11. For Outpatient transfusions, complete the Outpatient Transfusion area on the Transfusion Record.

12. Hang the bag of FFP and prime the blood administration set and tubing. If using a Y-set to administer the FFP, prime the tubing with NS.

13. Flush IV with normal saline. Approximately 20-30mL is recommended to flush the line completely if NS not already infusing.

13. NS is the only solution that should be used to flush before or after administration of blood/blood products. Other IV fluids and IV meds can cause the following problems: precipitation, agglutination, and hemolysis.

14. Cut off NS and administer FFP. Begin rate at 100-150 ml/hour for 15-20 minutes. Observe patient closely for signs of reaction. Do vital signs at this time period and document on the Transfusion Record. If no problems occur, increase rate to

**STEPS**

**KEY POINTS**

FFP may be infused very rapidly in shock or hemorrhage.
approximately 200 ml/hour unless otherwise ordered or indicated. Unit should usually infuse over time of 2 hours. 4 hours is acceptable, especially if fluid overload is possible.

15. If the patient develops symptoms of a possible reaction, stop transfusion of FFP and keep IV open with NS at KVO rate. Symptoms of a possible reaction include: fever, chills, back pain, chest pain, tachycardia, hypotension, rash / urticaria, wheezing, dyspnea, vomiting, diarrhea.

16. At the conclusion of the transfusion of FFP, flush the IV line with 30mL of NS. Return IV to ordered IVF, or keep IV open with NS at KVO rate for at least 30 minutes if no other IV fluids are ordered.

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

**DOCUMENTATION:**

1. Complete the Transfusion Record and place in the patient’s medical record.

2. Notify the Blood Bank of the infusion either by electronic message or 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 printed confirmation page in the patient’s chart or designated area on the unit.

3. Include amount transfused on the Fluid Balance Record. One unit FFP will equal approximately 200-250 mL. The amount will be listed on the bag.

**NOTES:**

1. Vital signs must be obtained prior to beginning the transfusion, after 20 minutes and at the end of the unit. In emergency conditions when multiple units 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 fresh frozen plasma to ensure the correct product has been obtained.

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REFERENCES:


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October, 1988
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