PURPOSE:

To ensure and/or maintain hemodynamic stability and treat and/or correct blood loss, blood clotting disorders, dilutional coagulopathy resulting from massive blood replacement, and blood component deficiencies of factor VIII (i.e., hemophilia A and Von Willebrand's Disease), Factor XIII, and Fibrinogen, and improve oxygen carrying capacity of the circulatory system.

DEFINITIONS:

Albumin - any of numerous simple heat-coagulable water-soluble proteins that occur in blood plasma or serum.

Autologous Blood - involving one individual as both donor and recipient

Blood/Fluid Warmer - FDA approved device used to warm blood components

Cryoprecipitate - a precipitate (as factor VIII) that is formed by cooling blood plasma "Cryoprecipitate", commonly just "cryo", is a frozen blood product prepared from blood plasma.

Fresh Frozen Plasma - the fluid portion of one unit of human blood that has been centrifuged, separated, and frozen within 6 hours of collection. Only fresh frozen plasma can be used to treat factor V and VIII deficiencies.

Platelets - a minute colorless body of blood that is derived from fragments of megakaryocyte cytoplasm, that is released from the bone marrow into the blood, and that assists in blood clotting by adhering to other platelets and to damaged epithelium.

POLICY:

A. Informed Consent

1. An informed consent shall be completed prior to administration of Blood/Blood Components except for in an emergent situation. Outpatient informed consent is valid for only 30 days with exception to outpatient Oncology which informed consents are valid for 1 year. Inpatient informed consent is valid for the course of transfusion treatments for the same condition or episode of care.

2. If the reason for a future transfusion differs notably from previous rational, or if the patient's condition has changed significantly, the physician should discuss the new or different situation with the patient and document the new informed consent on the Consent/Refusal for Blood or Blood Products form.

3. The patient may choose not to consent to the transfusion of blood/blood products. The Consent/Refusal for Blood or Blood Products form shall be completed for patients who refuse transfusion.

4. Refusal of blood will be denoted with a NO BLOOD sticker on the front of the chart.

B. Physician's Order

1. The route of administration for blood products is intravenous. A physician's order shall be written for all transfusions of blood/blood components specifying:
   a. type of component: red blood cells, pheresis platelets, fresh frozen plasma, or cryoprecipitate
   b. number of units to be administered
   c. warming of blood/blood components
   d. special need requests
   e. premedications if needed

C. Retrieval of blood products
Blood may be retrieved by any staff member assigned by a RN as long as there is not a change in blood type. In the event of a change in blood type the RN who is transfusing the blood must retrieve the blood.

D. Transfusion Record
1. Upon receipt of the blood transfusion order, the Blood Bank shall dispense the Blood/Blood Component with a Transfusion Record attached. The Transfusion Record shall be utilized for documentation of bedside verification, and/or other data as indicated on the form.

E. Verification Prior to Transfusion Blood/Blood Component Transfusions
1. Red blood cells, pheresis platelets, fresh frozen plasma, and cryoprecipitate shall be verified in the patient’s presence, at the bedside, prior to transfusing by the RN and another RN or Licensed Independent Practitioner. Note: When completing the verification process, do not stop or interrupt the process at any point once started (i.e., take a phone call, etc).
2. The unit to be transfused shall be compared with the Transfusion Record for a complete match, including patient identification using two identifiers, patient compatibility for red cells, and expiration date of unit and verification using the blood lock system. Note: The blood/blood component shall not be spiked until the verification process has been completed and deemed accurate. The verifying personnel shall sign their full legal signature on the Transfusion Record in the space provided. Note: The Transfusion Record shall not be signed until after the verification process has been completed and deemed accurate.
3. One of the individuals conducting the identification verification must be the qualified transfusionist who will administer the blood or blood component to the patient. The second RN included in the verification will not be an orienting RN or student.

4. Any blood type change will be approved by the pathologist and approval will be noted in Meditech.

F. Transfusion Time and Blood Storage
1. Blood/blood components obtained from the Blood Bank shall be completely transfused within four hours of issue. Blood/blood components returned to the Blood Bank within 30 minutes of dispensation shall be returned to inventory. Do not store blood in unit refrigerator.
2. Grand Valley Oncology: Blood/blood components received from Blood Bank will be kept in validated coolers until blood administration occurs. Any unused product must be returned to Blood Bank as soon as possible.

G. Using the Appropriate Filter
1. An appropriate filter shall be used when infusing blood/blood components: A standard blood Y-type tubing which includes a filter (210 microns) is utilized with red blood cells and pheresis platelets. Y-Type tubing and filter shall be changed after 4 hours of transfusion time. If more than 1 unit can be transfused in 4 hours, the blood tubing may be used for more than one unit, but not for more than 4 hours (AABB 2011).
2. Surgical department uses standard blood tubing. Tubing changes shall include extension sets (such as those on blood warmers) that are not an integral part of IV access (INS S38).
3. The same y-type blood tubing is required for:
   a. Fresh Frozen Plasma
   b. Cryoprecipitate (80 micron filter can also be used)

H. Tubing and warming
1. Start the IV with a t-extension whenever possible for ease of access and tubing changes.
2. An FDA approved blood warming device shall be used to warm blood/blood components as a measure to decrease the incidence of cardiac arrhythmias and cardiac arrest associated with the administration of multiple units of cold blood, blood components, or solutions (such as rapid infusion rates of >100ml/minute), or when the patient is known to have cold agglutinins (INS Standard S.30). Not to be used for routine transfusion of blood.
3. Strictly follow manufacturer’s instructions and specifications. Each blood warmer shall be validated and monitored by Biomedical Engineering. The blood warmer shall have a visible thermometer and audible alarm system.
4. To avoid hemolysis, blood shall not be warmed above 42 degrees Centigrade, or place in refrigerator after warming. Blood shall never be warmed in the microwave or any other method other than an FDA approved blood warming device (INS Standard S.30).
5. Once thawed, single donor cryoprecipitate must be transfused within 6 hours. Pooled Cryoprecipitate (multiple donors) must be transfused within 4 hours. If not transfused within this time period, it must be discarded. During this time period, it should be kept at room temperature.

PROCEDURE:

A. Verify that the consent has been signed and is not outdated.
B. Verify the physician’s order.
C. Verify that the patient’s IV is patent prior to obtaining the blood. Blood or blood components may be transfused via a 14- to 24-gauge peripheral IV catheter, central venous access device, or intraosseous access device (INS S59 & S66).
D. Obtain appropriate blood tubing and/or filter and prime as per manufacturers guideline.
E. Obtain blood through blood bank with patient’s identifying information.
F. Verify patient's name and birth date.
G. Compare to name and birth date on blood/blood component label. (Compare information on blood/blood component label to blue chip or bracelet if patient is unable to state name and birth date.)
H. Verify blood/blood component with second person. IF THERE IS ANY DISCREPANCY, NOTIFY LAB AND DO NOT START INFUSION UNTIL DISCREPANCY HAS BEEN CORRECTED.
I. Unlock blood loc bag using patient specific combination from blood loc bracelet.
J. Baseline vitals will be obtained, then again 15 minutes after start of transfusion, 30 minutes after start of transfusion, 60 minutes after start of transfusion, and post-transfusion in the non-emergent situation.
K. Begin transfusion at appropriate rate for patient's medical status. Typically start cautiously for the first 15 minutes, then may increase rate to 100ml/hr - 300ml/hr for a medically stable patient (INS, 2004, UMich, 2010). Rate should be reduced for patients with or at risk of fluid overload. Transfusion must be completed within 4 hour period.
L. Transfusionist is responsible for monitoring the patient's response to transfusion for the first 15 minutes after the blood has reached the patient.
M. In the event of a blood transfusion reaction, stop the infusion, contact the physician and the lab and follow the Transfusion Reaction Workup policy.

DOCUMENTATION:

A. Complete TRANSFUSION RECORD.
   1. All blanks must be filled in appropriately.
   2. Place white copy on chart.
   3. Send yellow copy to the lab.
   4. Hard copy is to remain on bag at all times.

RESPONSIBILITY:

RN's, Ward Secretaries, Lab, and Admissions employees

REFERENCES:

American Association of Blood Banks Circular of Information for the use of human blood and blood components (2009). Retrieved from:
http://www.aabb.org/resources/bct/pages/aabb_coi.aspx


The Joint Commission standard PC.02.01.07 and NPSG.01.03.01

http://www.pathology.med.umich.edu/bloodbank/manual/bbch_6/index.html -

http://medical.merriam-webster.com/medical/PLATELETS

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**Signed by**: (01/06/2016 07:48PM PST) Kristin M Gundt, CNO

**Effective**: 01/06/2016

**Revised**: [04/02/2007 Rev. 1], [08/07/2009 Rev. 2], [12/31/2009 Rev. 3], [08/11/2010 Rev. 4], [06/29/2011 Rev. 5], [09/28/2011 Rev. 6], [03/15/2012 Rev. 7], [10/16/2013 Rev. 8], [01/06/2016 Rev. 9]

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