The Transfusion/Administration of Blood and Blood Products
The purpose of this module is to:

- Provide guidance and information for professionals involved in the transfusion of blood/products.
- Identify select Transfusion Manual policies for review.
- Designate pre-transfusion activities.
- Describe appropriate patient monitoring during the peri-transfusion period.
- Provide instruction regarding accurate documentation of the transfusion event.
The following policies should be reviewed by all personnel who administer blood products:

- TM 3.002 Informed Consent for Blood Transfusion
- TM 3.100 Picking up Blood from the Transfusion Service
- TM 3.102 Guidance Regarding Rate of Blood Product Administration to Adult Patients
- TM 3.110 Infusion Protocol and Documentation of the Transfusion Event
- TM 9.100 Recognizing and Reporting Suspected Transfusion Reactions
The Transfusion Manual

can be accessed from the eWorkplace home page by selecting the “Policies” tab then clicking on “Transfusion Manual”
Beginning the Process

✓ Has a Type & Screen been performed within the last 3 days?

✓ Does your order for transfusion include:
  o Blood product to be transfused?
  o Amount of product to be transfused?
  o Rate for product administration?
  o Indication for blood product ordered?
Informed Consent for Transfusion:

- Must be obtained by a licensed practitioner (not a nurse) prior to the infusion of a blood product (see TM 3.002).

- Is required for the administration of all blood and components and intravenous gamma globulin.

- Needs to be obtained once per each hospital admission.

- Is not needed in a life threatening situation. Consent must be obtained from patient or family as soon as possible after the event.

- Is not required for the administration of albumin, intramuscular gamma globulin or coagulation factor derivatives.

- A surgical consent can be used for transfusions occurring up to 48 hours postoperatively.
BLOOD TRANSFUSION CONSENT

I have been informed by ____________________________ that my medical condition may require treatment with blood products. The type of blood products and amounts administered will be determined by the medical judgment of the physician(s) responsible for my care.

I have been informed that the risks of transfusion include, but are not limited to:

1. The occasional febrile or allergic reactions that present with symptoms of fever, chills, headache, nausea, chest or back pain, shortness of breath, hives, lightheadedness, and/or swelling.
2. The occasional occurrence of a condition known as circulatory overload (too much fluid in your system) where the heart may not be able to effectively handle the amount (volume) of blood product(s) administered (transfused).
3. The rare complication of infectious disease transmission such as hepatitis, HIV disease and other infectious disorders.
4. The very rare complication of red blood cell destruction (hemolysis) which may result in shock, bleeding, kidney failure and/or death.

I further understand that I may refuse to be transfused and the risks and consequences of not receiving this therapy have been explained to me.

I have been told that, in some instances, my own blood (Autologous Transfusion) may be an alternative or that it may be possible to receive blood donated by friends and relatives (Directed Donation).

I understand that I may discuss these alternatives with my doctor.

I understand that no assurances or guarantees have been made to me about the outcome of the transfusion or the fitness or quality of the blood that is transfused.

I understand the risks, benefits, and alternatives of transfusions, and that I may withdraw this consent at any time.

By signing below, I consent to any and all transfusions of blood products except as noted:

__________________________ ____________________________
Signature of Patient or Authorized Representative Relationship (If Authorized Representative)

__________________________
Date Time
Witness Signature Date Time

PRACTITIONER CERTIFICATION: I certify the above patient or responsible individual has received an explanation from me of the above transfusion options including risks and benefits to be expected, and that I am aware of their choice. I have offered to answer any patient or responsible individual's inquiries regarding a transfusion.

__________________________
Practitioner Signature Date Time
If a blood sample is needed to perform a Type & Screen before blood products are prepared you must follow the procedure outlined in TM policy 2.120:

*Patient Identification and Specimen Labeling Policy for Transfusion Medicine (Blood Bank) Specimens.*

This policy *must be read* by everyone completing this module.

This policy is identical to the Clinical Operations policy CO 2.105 by the same name.
1. Sunquest label obtained for blood draw.

2. Person drawing blood verifies that the NAME and MEDICAL RECORD # (MR#) on the Sunquest label match the CIS screen or CIS document; will hand correct the name if cut off.

3. Person drawing blood gets 2nd person and BOTH go to patient and stay until “step 5” is complete. Patient’s full name and MR # from the name band is read or spelled out loud and verified to the Sunquest label.

4. The same 2 people as above must remain at the bedside for the entire blood draw.

5. The label is placed on the blood tube in the patient’s presence. The same 2 people initial the tube along with the date and time.

6. Place Blood Bank specimen in separate biohazard bag and send to lab.
Prior to picking up the blood product from the transfusion Service do you know if the patient:

* has a current informed consent signed?
* or the family has any questions?
* has a patent/appropriate venous access device?
  - Adults: an 18 gauge angiocatheter or venous access device is recommended.
  - Pediatric patients: a 20 to 22 gauge angiocatheter is used. This size can also be used for adults with severely compromised veins.
  - Neonates: a 24 or 26 gauge venous access device is used.
* had vital signs measured within the last 30 minutes?
All transfusions *must* be started within 30 minutes of pickup.
Both RNs must verify that:

- There is an order to transfuse.
- An appropriate infusion rate has been ordered.
- An Informed Consent for Blood Transfusion has been signed by the patient or designee.
The blood product must always be checked at the patient’s bedside.

This is a two witness procedure performed by two individuals (RN or MD with another RN, MD, LPN or perfusionist).

Blood cannot leave the bedside once the blood has been checked!
The bedside check must include:

**Patient Identification**
- Name and medical record number (or Typenex number) on wristband *matches exactly* the patient name and medical record on the transfusion tag.

**Blood Type and Rh**
- ABO and Rh on the blood *tag exactly matches* the ABO and Rh on the blood bag.

**Donor Unit (ID) Number**
- The *donor ID number* on the transfusion tag *exactly matches* the donor ID number on the blood bag.
The bedside check must include:

**Compatibility Test Results**
- Blood product compatibility test results are printed on the transfusion tag.

**Special Transfusion Requirements Have Been Met**
- Product has been prepared as CMV negative and/or has been irradiated as prescribed. If this has not been ordered check as not applicable (NA).
  - CMV negative is noted on the bag.
  - Irradiated is noted on the tag.

**Ensure Blood Product Has Not Expired**
- This date is located on the blood product bag and on the tag.
1. Donor ID Number
2. Blood Type & Rh
3. Product Description
4. Expiration Date
5. Special Testing (If product irradiated will be noted on tag)
Baystate Health
Transfusion Medicine Service

Transfusion form for: Apheresis RED BLOOD CELLS Leukocyte reduced

NAME: Nurse, Nancy  LOCATION: Mass Mutual 8
MRN: 0123456  UNIT ID: W000123400089-X  EXP: 5/30/14
ABO/RH: O neg  ABO/RH: Div:  VOL: 301 mL
Crossmatched By: LX  Date/Time:

Ordered By: Doctor, Ima  **Transfusion Compatibility Result:** COMPATIBLE

WE CERTIFY THAT THE FOLLOWING HAS BEEN VERIFIED:
Inspect the Product

LOOK FOR

• Container integrity.
• Presence of clots.
• Evidence of hemolysis in the plasma or at the interface between red cells and plasma.

*If any of the above are present the blood must not be used and must be returned to the Blood Bank.
NEVER REMOVE THE TAG BEFORE OR DURING TRANSFUSION
• BLOOD PRODUCT ADMINISTRATION

✓ Blood products are administered at physician prescribed infusion rates by using an infusion pump or by the gravity drip method.

✓ Refer to TM policy 3.102 Guidance Regarding Rate of Blood Product Administration to Adult Patients for suggested infusion rates based on the patient’s sensitivity for fluid volume overload.

✓ No blood product should infuse for more than 4 hours.
PEDIATRIC TRANSFUSIONS

Refers to children and infants over 4 months of age.

✖ Different from adult transfusions.

✖ Need to consider:
  ✖ Total blood volume of the child.
  ✖ Ability to tolerate blood loss.
  ✖ Age appropriate hemoglobin & hematocrit levels.

✖ A newborn (neonate) up to the age of 4 months who has been hospitalized since birth will need an ABO, Rh, and antibody screen performed before the first transfusion.

✖ If the initial antibody screen is negative, repeat testing is omitted for the remainder of the neonatal period.
PEDIATRIC TRANSFUSIONS
Continued

Small children (weight less than 30 Kg) should receive a calculated volume of blood product based on their weight rather than a number of units.

For children in the less than 30 Kg category:
- The calculated volume of blood is the actual amount intended for transfusion.
- Transfusion Services technologists will add 20 mls to the calculated volume to account for tubing loss.

Refer to TM 10.200 Guidance Regarding Dose Calculation and Rate of Blood Product Administration to Pediatric Patients.
Rate of blood product administration for the pediatric patient is prescribed in one of three risk categories:

- High risk for volume overload.
- Minimal risk of volume overload.
- Urgent administration needed.

Actual infusion rate will vary depending on the type of blood product ordered.

Refer to TM 10.200 Guidance Regarding Dose Calculation and Rate of Blood Product Administration to Pediatric Patients.
BLOOD DERIVATIVE THERAPY

- A number of clotting factors are available to treat coagulation and bleeding disorders.
  - Most clotting factor dosing is weight based and has a product specific maximum rate of infusion.

- Immunnoglobulin replacement therapy, anti-RhD to suppress the immune system of Rh negative women to an Rh positive fetus and human albumin are also available.

- Refer to Section Five of the Transfusion Manual for information on specific products.
✓ Blood products must not be “piggybacked” into an ongoing infusion.

✓ No IV medications or solutions are to be added to the transfusing blood product.

✓ It is not necessary to add normal saline to the Y connector of the blood administration tubing to decrease product viscosity.
SIGNS & SYMPTOMS OF SUSPECTED TRANSFUSION REACTIONS CAN INCLUDE:

• Elevation of temperature greater than or equal to 1°C or 2°F, with or without chills.

• Shaking chills (rigors), with or without temperature increase.

• Unexplained pain, at infusion site, or in chest, abdomen, or flanks.

• Blood pressure changes, usually acute, either hypertension or hypotension.

• Respiratory distress, including dyspnea, tachypnea, or hypoxemia.

• Breath sound changes or changes in oxygen saturation.
SIGNS & SYMPTOMS OF SUSPECTED TRANSFUSION REACTIONS continued:

- Skin changes including: flushing, urticaria, localized or generalized itching or edema.

- Nausea with or without vomiting.

- Circulatory shock in combination with fever, severe chills, hypotension and high-output cardiac failure. These symptoms are suggestive of acute sepsis but may also accompany an acute hemolytic transfusion reaction.

- Urine color changes. This may be the earliest indication of an acute hemolytic reaction in anesthetized patients.
IN THE EVENT OF A SUSPECTED REACTION

- **STOP** the transfusion.
- **MEASURE** and **RECORD** the patient’s vital signs and document at the time the transfusion is stopped.
- **RECORD** the actual volume of the blood product infused.
- **NOTIFY** the MD and Transfusion Services **IMMEDIATELY**. **REMEMBER!!** Send Blood Bag and administration set back to the Blood Bank with paper transfusion tag.
- **RECHECK** for discrepancies.
- **FOLLOW** the policy instructions TM 9.100 Recognizing and Reporting Suspected Transfusion Reactions.
- **PROMPTLY draw and send** lavender top blood specimen tube(s).
MONITORING THE PATIENT IN THE PERI-TRANSFUSION PERIOD

- Vital signs must be measured within 30 minutes of starting any blood product administration (except Rhogam).
- Patients receiving RBCs, plasma, platelets, cryoprecipitate and IVIG must have vital signs measured 15 minutes after infusion is begun and when infusion is completed.
- If transfusion is completed in 15 minutes document vital signs as end of transfusion.
- Patients who are leaving the facility after transfusion completion must be monitored for at least 30 minutes and must be provided with discharge instructions.
Documentation

• Complete all the transfusion information online as a task generated when a blood product is ordered.
• If a transfusion is completed within 15 minutes document vital signs as END.
• Paper tags will be attached to all blood products. You do not have to fill out this tag but you must keep it attached to the bag until the transfusion is complete.
• The paper transfusion tag can be used as a documentation tool in the event of CIS downtime. Once CIS functionality returns back enter the data from the paper tag into the system.
• Once the transfusion is complete discard the tag into a receptacle designated for the disposal of patient protected health information.
• Emergency uncrossmatched red blood cells will have a red paper transfusion tag attached. The red tag must be signed by the ordering physician and returned to the Transfusion Service. Documentation of the transfusion event can occur electronically or on the paper tag and scanned into the medical record.
• Refer to TM policy 3.110.
BLOOD PRODUCT ID # SCANNING INSTRUCTIONS

Blood Products may be scanned. Cursor must be in box before scanning. An "-" will appear in front of the ID number and can be left in place. Enter a dash "-" at the end of the scanned unit ID number and type in the digit or symbol that appears in the box at the end of the product barcode.

*Unit ID Number/Lot Number:
4v063351280140000

*Product Expiration Date:
12/23/2013

Additional Unit Documentation:
To be used in Critical Care areas:
Yes:

*Pt Ed: Transfusion Learning Evaluation:
- Requires content reinforcement
- Demonstrates independently
- Others:
- Demonstrates with assistance
- Teaching offered but refused
- Explains independently
- Unable to teach/unable to learn

*Pt Ed: Transfusion Information:
- Transfusion
- Blood Transfusion Discharge Instructions
- Other:
Scan this barcode for blood product ID #.

Enter this check digit.
All blood products have a scannable barcode ID number including clotting factors and Rho(D) immune globulin.

More than one box/vial of clotting factor can be documented on a single transfusion tag if each box/vial comes from the same lot number.

When documenting clotting factors remember to indicate the dose administered in the “Comments” section of the transfusion tag.
The licensed individual who performed the pretransfusion safety checks is required to attest as the witness.
Once the transfusion has been completed document the volume infused.
Document any adverse reactions!

Selection of any of the above symptoms (except “None”) will trigger an auto summary patient care report in the Transfusion Service.
REMEMBER: Document derivative/factor dose administered in the “Blood Product Comments” box!
SUPPORT THE BLOOD BANK

Donate your blood and make a difference