Policy Title: Blood and Blood Product Transfusion (Requiring Pre-Transfusion Testing)
Policy Number: 2.2.6
Category: UW Health
Type: Ambulatory and Inpatient
Effective Date: March 17, 2021

I. PURPOSE

To assure the availability of blood and blood products when needed and to improve the safety of such transfusions. This policy applies to inpatients and outpatients for the following products only: red blood cells, white blood cells, platelets, and plasma blood products.

II. POLICY ELEMENTS

A. Obtain Informed Consent, according to UWHC Clinical Policy #4.17, Informed Consent, for blood product transfusions prior to the administration of blood products except in emergency situations. The emergency exception is not to exceed 48 hours at which time a completed consent from the patient or patient's authorized representative must be provided to the Transfusion Services unless waived by Transfusion Services Attending Physician/Fellow by contacting Transfusion Services. Informed consent for transfusion will be documented on Consent to Operations, Anesthetics, Diagnostic Radiology, Transfusion - UWH #1289139 or other procedures form or other approved hospital forms.
B. The completed consent form is placed in the patient's medical record.
C. When caring for patients who refuse a blood transfusion refer to UW Health Clinical Policy #2.2.1, Caring for Patients Who Refuse Blood Transfusions.
D. The appropriate credentialed healthcare provider, as defined in UW Health Clinical Policy #3.4.2, Patient Care Orders, completes the order for blood products, which must include an indication code. To reference hospital indication codes for blood products found within the Indications For Blood Product Transfusion – Adult – Inpatient/Ambulatory and Indications for Blood Product Transfusion – Pediatric/Neonatal – Inpatient/Ambulatory Clinical Practice Guidelines.
E. Anyone who transfuses blood products or verifies patient, blood product, and paperwork, match is required to have initial and annual training.
F. Transfusions may be administered only by physicians, advanced practice providers, registered nurses, perfusionists, clinical monitoring technologists, and ECMO specialists trained in blood administration.
G. All patients must have an identification band in place per UW Health Clinical Policy #3.2.1, Patient Identification. Additionally, within Surgical Services follow Surgical Services Policy #2.01, Admission of Patients to Surgical Services and Requirements for Initiation of Surgical Procedures.
H. The patient must have one or more intravenous (IV) lines in place prior to picking up blood products.
I. Only appropriately trained clinical staff members are to draw blood specimens.
J. The specimen label (computer generated or computer downtime label) is checked/compared with patient's ID band, and affixed to specimen AT RECIPIENT'S SIDE (such as bedside) IMMEDIATELY AFTER BLOOD HAS BEEN DRAWN. The information on the label must match that on the patient's ID Band [i.e., patient's last name, first name and medical record number (MRN)]. In addition, the conscious and oriented patient should be asked to state and/or spell their last name, first name, and state date of birth (DOB).
K. Stat -- Crossmatch complete in about one hour (if uncomplicated by antibodies). Routine -- Crossmatch complete within 8 hours (if uncomplicated by antibodies).
L. If blood is needed before testing is completed, an appropriate credentialed healthcare provider must include in the order that the blood is to be given without a crossmatch.
M. When blood products provided by referring hospitals are transported with incoming patients, any blood products not being actively administered to the patient must be immediately brought to Transfusion Services.

III. SUPPLIES

A. Blood administration set (Y-type Blood Administration Set) or IV pump Blood Administration set and 0.9% NS IV solution (The filter in these sets usually range from 170-250 microns).
B. Appropriate Peripheral IV catheter Gauge for adults, e.g., 18-22 gauge, for children 20-24 gauge
C. Central venous catheter 18 gauge/4Fr or larger lumen size preferred for adult
D. Extension set with Safesite® valve, as indicated

E. Protective replacement cap (blue dead-end cap), as indicated

IV. PROCEDURE

A. TRANSMISSION OF THE ORDER TO TRANSFUSION SERVICES.
   i. The appropriate credentialed healthcare provider, as defined in UW Health Clinical Policy #3.4.2, Patient Care Orders, completes an order either electronically or via paper (UWH # 1280411) specifying hospital indication code for transfusion, blood product to be transfused, number of units or transfusion instructions such as volume in milliliters to be transfused, the time transfusion is to be initiated, flow rate(s), pre-medications, blood warmers, etc. The request for blood products must also specify special product requirements such as Cytomegalovirus (CMV) negative, irradiated, etc. The electronic order generates a requisition that prints in Transfusion Services. When the computer is unavailable or not functioning a paper request form (UWH #1280411) must be completed and sent to Transfusion Services.
   ii. Red Blood Cell orders will be set up when a clinician releases the product order. Additional units can be set-up upon order up to 23:59 PM (midnight) to three days following specimen collection [i.e., if collected anytime on Friday (=day 0) specimen will expire at 23:59PM (midnight) on Monday (=day 3)].
   iii. A technologist is on duty in Transfusion Services at all times to process emergency requests.
   iv. Notification of Available Blood Products:
      a. Cryoprecipitate: Several units are normally given at a time, and are "pooled" by Transfusion Services into one bag. Pooling must be done shortly before administration. Transfusion Services must be notified by telephone (608-263-8367) approximately 30-60 minutes before the transfusion is to begin; Transfusion Services personnel will call the nursing unit, Operating Room (OR) or other identified patient location when the product is ready for issue.
      b. Plasma such as Fresh Frozen Plasma, 24-hour plasma, plasma cryoprecipitate reduced, etc. notify Transfusion Services 30-60 minutes before administration.
      c. Pediatric and neonatal divided or split units will take approximately 30 minutes to prepare.

B. BLOOD SAMPLES FOR TYPE & SCREEN AND CROSSMATCH.
   i. A label (computer generated or computer downtime label) must be attached with identifying information: patient's last name, first name, and MRN.
   ii. The identifying information on the label must exactly match the corresponding information on the patient's identification band. If the patient has no ID band one should be applied at the time of sample collection; the information on the specimen label must match the information on the patient's ID band. In addition, the conscious and oriented patient should be asked to state and/or spell their last name, first name, and state their date of birth (DOB).
   iii. The blood specimen label must include the date and time of collection as well as employee identification (i.e., employee identification number, printing full and last name, or network login identification).
      a. When the electronic health record and barcode scanning are utilized the collection step includes the necessary information and hand writing this information on the tube is not necessary.
      b. When the electronic health record and barcode scanning are not utilized, (for example down time, MTP, and code settings) date and time of collection as well as employee identification (i.e. employee identification number, printing full first name and last name, or network login identification) must be written on the label.
         1. The employee identification number, full name, or provider network login identification (e.g., BXL02) of the blood drawer indicates information on the specimen/label has been checked against the patient's ID band and if unable to visualize the ID band (e.g., during surgery) utilize the patient care record and patient label to ensure the information matches exactly.
         2. NOTE: The Joint Commission requires that "the blood sample drawn from the recipient for typing and crossmatching must be LABELED IMMEDIATELY AND ADEQUATELY **AT THE RECIPIENT'S SIDE**, such as bedside, in order to maintain certainty of identification throughout all subsequent testing." IN NO CASE SHOULD AN UNLABELED TUBE OF BLOOD BE TAKEN FROM THE AREA TO ANOTHER AREA FOR LABELING.
   iv. Phlebotomy staff obtains blood specimens for typing and crossmatching during regular hours

(0430-2300) for nonemergency inpatient transfusions. Outpatient drawing hours: refer to Phlebotomy Services on U-Connect.

v. If testing is needed sooner than a blood specimen can be collected by the blood drawing team; an appropriately trained healthcare provider may draw blood specimens.

vi. Intraoperative/Intraprocedural blood specimens are collected by the appropriately trained healthcare provider.

vii. If a patient receives transfusions of red blood cells, they may be immunized to one or more red blood cell antigens and new antibodies may appear in their blood within a few days. Therefore, the AABB and the FDA require use of recipient samples less than 3 days old for all pre-transfusion testing if the recipient has been pregnant or transfused within the previous 3 months. Blood products will be set-up just in time as orders are received in Transfusion Services.

a. Exception: Patients who have a planned surgical procedure may qualify to have their Type & Screen extended. If the patient has a planned surgical procedure, and if they have not been pregnant OR had an RBC transfusion in the last 90 days, then those patients can have their Type & Screen drawn 30 days prior to their scheduled surgery date.

viii. During an intraoperative/intraprocedural case Transfusion Services may request another blood sample or additional blood samples. The anesthesia provider will draw the sample and the circulating nurse or designee will deliver a labeled pink top tube immediately to Transfusion Services.

C. DISPENSING OF BLOOD OR BLOOD PRODUCTS FROM TRANSFUSION SERVICES.

i. Establish an IV line according to Nursing Patient Care Policy #1.23AP, Continuous Peripheral Intravenous Therapy (Adult & Pediatrics) (Inpatient and Ambulatory).

ii. Reference grid below related to steps for specified areas:

Non-Intraoperative Areas	Intraoperative Areas
a. The person requesting blood products to be dispensed releases blood product order that will print in Transfusion Services, include tube station ID so that Transfusion Services knows where to send blood product. During computer downtime complete a paper, "Request to Dispense Blood Product" form that contains the following information: patient identification (including patient last name, first name, and MRN), name of product, number of units that will be dispensed/picked up in a given trip, employee ID, provider requesting product, unit where product will be dispensed, and pneumatic tube station number.	a. Intraoperative blood and blood product orders are set up to either be released at the time of surgery or auto released when ordered intraoperatively. The Surgeon or Anesthesia personnel communicate the need to dispense blood and blood products. The OR RN will contact Transfusion Services to request the blood or blood product(s) to be set up for dispense.
b. The "Request to Dispense Blood Product" form is tubed or taken to Transfusion Services (during computer downtime) and Transfusion Services uses this information to dispense the product(s). Any employee/volunteer may pick up the blood product. 1. If blood products are to be dispensed through the hospital pneumatic tube system you must include the pneumatic tube station number on the "Request to Dispense Blood Product" form.	b. Blood and blood products must be picked up by the OR RN or designee. A computer-generated label or handwritten label (during computer downtime) is taken to Transfusion Services. Transfusion Services personnel will verify the patients last name, first name and MRN. When prompted, inform the Transfusion Services personnel of your employee ID number, Patient's OR suite number, and the ordering provider. 1. To request blood products be dispensed via the pneumatic tube system follow these steps: a. Send to Transfusion Services i. Index card or piece of paper with a computer-generated or handwritten patient label with the patient's last name, first name, and MRN.

	ii. Tube Station number. iii. Blood products needed (i.e., 2 RBC's, 2 FFP's, etc.). iv. Employee ID number of person responsible from removing from the tube station. v. OR suite number. vi. Ordering provider. 2. To release a pneumatic tube: a. Pneumatic tube station will beep until the secured tube is released. b. To release the tube the person receiving the blood or blood product must enter the last 4 digits of the patients MRN. 3. Exceptions: a. No more than two products can be tubed at the same time. b. Refrigerated and non-refrigerated products cannot be tubed together.
c. Number of units released at one time is restricted, as follows, to minimize the chance of transfusing a unit of blood to the wrong patient: 1. For routine patient use, no more than one unit of red cells will be issued at one time on any patient by Transfusion Services. 2. At the discretion of Transfusion Services two units of red blood cells may be issued without ice. Once the red blood cells are issued from Transfusion Services, both units must be transfused within 4 hours. If a decision is made **NOT** to transfuse the unit(s), the blood must be returned to Transfusion Services within thirty minutes of issue. Blood returned after thirty minutes is quarantined until it can be discarded. CAUTION: When two units are issued it is recommended that even the unopened unit be hung on the IV pole to prevent the product from being separated from the patient. Failure to follow this instruction may result in the unit being misplaced (causing the red cell unit to expire prior to infusion) or inadvertently hung on another patient. 3. Exceptions will be made on request of an appropriately credentialed healthcare worker in consultation with Transfusion Services.	c. The OR RN or designee will only pick up blood and blood products for one patient at a time. The number of units is based on the surgical needs and is not restricted.

D. STORAGE OF BLOOD PRODUCTS OUTSIDE OF TRANSFUSION SERVICES.
   i. Red blood cell and plasma products (e.g., plasma, cryoprecipitate, etc.) may be stored only in designated monitored blood refrigerators with very rigid temperature regulations and alarms to indicate abnormal temperatures or within validated coolers distributed by Transfusion Services. Surgical Services blood refrigerators shall be monitored according to the AABB standards and are suitable for storage of red blood cell and plasma products. Unused blood or blood products must be returned to Transfusion Services as soon as possible (e.g., end of surgery).
   ii. Refrigerators anywhere else in the UW Heath facilities are not suitable for storage of blood, unless monitored by Transfusion Services. If the blood transfusion is not started within 30 minutes, the blood should be returned to Transfusion Services. DO NOT STORE BLOOD OR BLOOD PRODUCTS IN PATIENT CARE UNIT REFRIGERATORS.
   iii. DO NOT STORE PLATELET PRODUCTS IN ANY REFRIGERATORS OR ON ICE. If the transfusion is not started within 30 minutes, the platelets should be returned to Transfusion Services.
   iv. When blood or blood products provided by referring hospitals are transported with incoming patients, any blood or blood products not being actively administered to the patient must be immediately brought to Transfusion Services.
   v. Level 1 Traumas, refer to UW Health Clinical Policy #5.1.10, Adult Trauma: Trauma Team Response at University Hospital and UW Health Clinical Policy #5.1.11, Pediatric Trauma.

E. BLOOD PRODUCTS ADMINISTRATION VERIFICATION. Reference grid below related to steps for specified areas:

Non-Intraoperative Areas	**Intraoperative Areas and other anesthetizing locations, Massive Transfusion Protocol Level 1 Trauma, Code setting or during Health Link and/or Transfusion Services computer system downtime. (Normal Saline is the only IV solution to prime and flush blood administration set. Note: in operative and trauma settings when rapid infusion is occurring Lactated Ringers solution can be used. Once rapid transfusion subsides, or post-operatively, the blood administration set will be replaced and normal saline is used.)**
i. Check the transfusion order to determine blood products to be transfused, number of units or volume in milliliters, time the transfusion is to be initiated, flow rate, pre-medications if ordered, and ancillary equipment such as a blood warmer. Also, check special blood product requirements such as irradiation, CMV negative, etc. a. Note: Do not irradiate or expose Stem Cells to radiation. ii. Verify informed consent and reevaluate the medical condition of the patient. iii. Assemble equipment. a. All blood products must be transfused through a standard blood administration set, and /or filter. 1. NOTE: Only transfuse Granulocyte concentrates through a standard blood administration set. Do not transfuse through a depth-type microaggregate filter or leukocyte	i. Each individual independently verifies the patient's last name and first name, and MRN ARE the SAME on: a. Patient ID band, 1. Intraoperatively a verified patient label (computer generated label or handwritten computer downtime label) may be used in lieu of the ID band when the surgical procedure limits access to the patient ID band. b. Unit Tag sticker, and c. Record of Blood Transfusion (form UWH# 1280412) ii. Each individual verifies the donor blood type and unit number ARE the SAME on: 1. Blood or blood product bag, 2. Unit Tag sticker, and 3. Record of Blood Transfusion (form UWH# 1280412) iii. Verify from the Record of Blood Transfusion (form UWH# 1280412): 1. The patient's blood type * 2. The crossmatch (XM) test results (Red Cells and Granulocytes Only)

reduction filter.
2. For neonates, Transfusion Services can provide aliquots in pre-filtered syringe sets that do not require the use of the filtered blood administration set.

b. Normal saline is the **only** IV solution to prime and flush blood administration set. (Note: In operative and trauma settings when rapid infusion is occurring Lactated Ringers solution can be used. Once rapid transfusion subsides, or post-operatively, the blood administration set will be replaced and normal saline used.)

c. Do not add medications to the blood bag or tubing including those intended for intravenous use. Do not piggyback medications of any kind.

d. Blood warmer if ordered.

iv. Upon receipt of a blood product verify that the appropriate blood product with the attached Unit Tag sticker and accompanying form UWH# 1280412 (e.g., in the case of computer downtime, selected intraoperative/intraprocedural patients, level 1 traumas, etc). Inpatient and ambulatory units will not receive form UWH# 1280412 when Health Link and Transfusion Services computer system are available as verification steps will be done in Health Link.

v. Inspect blood for abnormal color and presence of clots. Turn bag upside down several times to gently mix all contents. Return to Transfusion Services immediately if abnormal in appearance.

vi. The transfusion must be started within 30 minutes after blood product leaves Transfusion Services or be returned to Transfusion Services.

vii. Take blood or blood product to bedside or patient area (in clinic). If appropriate, ask the patient to state his/her last name, first name and if possible spell their last name.

viii. Prior to the start of transfusion, there must be two independent verifications of correct product for:

a. First verification: a licensed individual (RN, MD) must visually inspect that all information identifying the blood product with the intended recipient has been

iv. Verify special transfusion requirements (i.e. irradiated, CMV negative, etc.) and the unit has not expired.

a. *Note: The blood type between patient and donor may not always match, if unclear please call Transfusion Services for clarification or The American Center Laboratory for clarification. Exceptions may occur if the product is frozen/deglycerolized red cells, FFP, platelets.

v. Intraoperatively blood and blood products can be verified by licensed providers, as well as, NAs, Surgical Technologists, and Surgical Clinical Monitoring Technologist trained in the blood verification process by Surgical Services.

vi. The first verification will be completed when the blood or blood product arrives in the patient specified OR suite. The employee ID number, printed last name and first name or providers network login ID is recorded in the space provided on form UWH# 1280412.

vii. The second verification is completed by the transfusionists prior to administration through a scan verification process. The electronic scanning verifies the order with the patient information.

viii. In the case of Health Link downtime, each verifier records their signature plus employee ID number, printed last name and first name or provider network login ID in the space provided on form UWH# 1280412.

ix. Form UWH# 1280412 is placed in the patient medical record.

xii. If there are any discrepancies in the identifying information, **DO NOT START THE TRANSFUSION**, and immediately contact and/or return the blood or blood product to Transfusion Services.

matched, item by item in the presence of the recipient. b. Second verification is use of the electronic health record blood administration workflow including barcode scanning which confirms appropriate product for transfusion. ix. If the electronic health record with barcode scanning verification is unavailable, then follow the validation process detailed on the Record of Blood Transfusion form (UWH #1280412) must be followed. x. Verify by visual inspection that all information identifying the blood product with the intended recipient has been matched, item-by-item, in the presence of the recipient. Initiate the electronic health record blood administration workflow including barcode scanning to dually verifying the blood product received is the product prepared for the patient If there are any discrepancies in the identifying information, **DO NOT START THE TRANSFUSION**, and immediately contact Transfusion Services. xi. Verification Steps in Health Link only. a. Each individual (either two licensed individuals or one individual and the barcode scanning) independently verifies the patient's last name and first name, and MRN ARE the SAME on: 1. Identification band 2. Unit Tag sticker 3. The patient's medical record b. Each individual verifies the donor blood type and unit number ARE the SAME on: 1. Blood or blood product bag, 2. Unit Tag sticker, and 3. The patient's medical record c. Verify from the Unit Tag sticker 1. The patient's blood type * 2. The crossmatch (XM) test results (Red Cells and Granulocytes Only) d. Verify the Date/Time on the Unit has not expired e. * Note: The blood type between patient and donor may not always match; if unclear please call Transfusion Services (263-	

8367) or The American Center Laboratory (234-6600) for clarification. f. For neonatal and pediatric patients only: Verify the volume to be transfused in milliliters (mls).	

F. DURING ADMINISTRATION OF BLOOD PRODUCTS:
- i. The tranfusionist records transfusion start date and time in Health Link (on the Record of Blood Transfusion during computer downtime).
- ii. The Unit Tag sticker must never be removed from blood bag prior to completion of the transfusion.
- iii. All blood and blood products must be transfused through a standard blood administration set.
- iv. Granulocyte concentrates will not be transfused through a depth-type microaggregate filter or leukocyte reduction filter.
- v. Do not add medications to blood products or piggyback lines to the blood product infusion or tubing.
- vi. All autologous and/or directed donor blood products will be given prior to allogenic transfusions.
- vii. Stem cells will not be exposed to gamma irradiation or X-ray irradiation because sufficient cell death could occur and harm engraftment.
- viii. The transfusion must be started by a licensed person who has completed initial and annual training for administering blood.
- ix. The licensed person who starts the transfusion must remain with patient for at least five (5) minutes after transfusion has been started (as blood enters the body). Close observation (every 2-3 minutes) shall occur for an additional ten (10) minutes; observe for signs of immediate adverse reaction to transfusion.
- x. The flow rate is adjusted according to the appropriate credentialed healthcare providers written instructions.
- xi. If a very rapid flow rate is required, trained personnel may initiate pressure infusion, either by use of a rapid infusion device or a cuff.
  - a. NOTE: For instructions on the use of an Infusion Pump refer to Nursing Patient Care Policy #1.24, Alaris System (Adult and Pediatric).
- xii. All vital signs must be recorded in Health Link (on the Record of Blood Transfusion or the PACU and anesthesia forms during computer downtime) except during use of rapid infuser and apheresis procedures. Vital signs should be recorded pre- transfusion, at 15 minutes ± 5 minutes after the start of the transfusion, and post transfusion (within one hour of completing transfusion). Pre-transfusion is defined as within 15 minutes before the start of transfusion. Spaces are available to record additional vital signs and symptoms.
- xiii. The infusion site should be checked periodically for evidence of obstruction of the needle or subcutaneous infiltration and flow rate should be maintained as specified by the appropriate credentialed healthcare provider.
- xiv. In general, transfusion of any blood product must be completed within 4 hours of being dispensed and prior to the product expiration located on the product. Depending on the blood product, the patient's size, cardiac status, blood volume status (bleeding versus congestive failure, etc.), the infusion time may be short or long, but no longer than 4 hours. Therefore, the patient's appropriate credentialed healthcare provider must individualize the order for each patient.
  - a. NOTE: If a unit of whole blood or red cells cannot be infused within 4 hours, e.g., Pediatrics, ask Transfusion Services to "split" blood product. The remaining portion of blood product will be stored appropriately in Transfusion Services until needed. In most cases the remaining portion will expire within 24 hours if not used.
- xv. The blood administration set should be changed every 4 hours and not to exceed a maximum of 8 hours. When hanging a subsequent product for infusion on the same tubing, one should consider: if the administration will exceed the 4-hour limit and utilize a new blood administration set. More frequent changes may be necessary as debris collects on standard in-line filters and impedes flow.
- xvi. The entire volume of platelet suspension including residual in tubing should be administered. If red cells, whole blood, plasma or normal saline will follow platelet infusion, the lines must be flushed with an adequate volume of normal saline to remove residual blood product.
- xvii. The entire volume of cryoprecipitate solution should be infused. The bag may be rinsed and tubing flushed with normal saline.

G. POST ADMINISTRATION OF BLOOD PRODUCTS.

i. The patient should be monitored for an hour following transfusion for signs of a delayed reaction. It is strongly recommended that outpatients remain in the hospital area for this hour after transfusion. If the patient refuses to stay after instruction of the importance, this should be documented in the patient care record.
ii. Record information including date and time transfusion ended, volume transfused, and any reaction in Health Link (or on Record of Blood Transfusion, form UWH# 1280412 during computer downtime). If you answered yes to a transfusion reaction proceed to section III, J.

H. DISPOSAL OF EMPTY BLOOD PRODUCT BAG.
i. Dispose of blood bags and blood administration sets as you would any other biohazard waste.

I. RETURNING BLOOD PRODUCTS TO TRANSFUSION SERVICES:
i. Blood bags and Record of Blood Transfusion (UWH # 1280412) form are to be returned to Transfusion Services only under these conditions:
a. The blood or blood product was not transfused, or
b. The patient has had a transfusion reaction.
ii. In the event the partially used blood bag is to be returned to Transfusion Services, call Transfusion Services and request a zip-lock bag. Tie a knot in the administration tubing to prevent leakage, place bag and tubing in zip-lock bag.
iii. If patient is in contact or droplet isolation, the outside of the labeled blood container(s) should be wiped off with hospital disinfectant then placed in a zip-lock bag for return to Transfusion Services. Place a label with patient's identification on the outer bag.
iv. For Intraoperative Blood Salvage, refer to UW Health Clinical Policy # 2.2.5 Intraoperative Blood Salvage.

J. TRANSFUSION REACTION FOLLOW-UP:
i. In the event of a transfusion reaction, vital signs and symptoms must be recorded in Health Link or on Record of Blood Transfusion (i.e., computer downtime forms, etc.).
ii. If the patient develops symptoms or signs suggestive of a transfusion reaction, if any other unexpected change in condition is noted, or any transfusion error occurs the transfusion should be stopped and the appropriate credentialed healthcare provider and Transfusion Services (608-263-8367)/The American Center Laboratory (608-234-6600) must be notified immediately. Print Transfusion Reaction Worksheet (worksheet # 1566.4.13 F4) from link in Health Link or U-Connect.
iii. Follow instructions on Transfusion Reaction Worksheet and/or instructions below:
a. Transfusion should be stopped and provider notified immediately.
b. Administration tubing should be disconnected and sterility maintained, and new blood administration set connected; keep the intravenous line open with slow drip of 0.9% normal saline.
c. Recheck patient and donor unit identification, form UWH# 1280412, or patient's chart to determine that the correct patient is receiving the correct blood product. Initial, date and time this entry on the Transfusion Reaction Worksheet.
d. The provider reporting a reaction must sign, date and time Transfusion Reaction Worksheet.
e. Save all blood or blood product and tubing and return to Transfusion Services for analysis.
f. Provider places order for transfusion reaction work-up labs (panel code O189984) which includes Direct Antiglobulin Test; Hemoglobin Screen, Urine; and ABO & Rh typing. Note: The keyword "reaction" can be used for an easier orders search.
g. If reaction occurs; call Transfusion Services (263-8367), complete "Transfusion Reaction Symptoms" section on form UWH# 1280412, and return completed Transfusion Reaction Worksheet to Transfusion Services. If UWH # 1280412 was used, return a copy to Transfusion Services.
h. Laboratory investigation will be performed by Transfusion Services if a transfusion reaction is suspected.
i. Refer to appendices 1, 2, and 3 for possible signs and symptoms of a transfusion reaction, risks of blood transfusion, and management of transfusion reactions.

K. TROUBLESHOOTING HEALTH LINK BLOOD ADMINISTRATION MODULE:
i. Unable to scan blood product - Confirm that patient last name and first name on blood product matches patient last name and first name on computer. If not, call Transfusion Services to resolve.
ii. The patient last name and first name on Blood product matches patient last name and first name on computer. It is possible Transfusion Services forgot to complete product issue step in HCLL, interface is down between HCLL and Health Link, or HCLL computer is down. First, call Transfusion Services to check the issue status of your blood product. If this doesn't resolve the

situation Transfusion Services should activate banner and call the Help Desk.

L. COMPUTER DOWNTIME:
   i. Health Link downtime – Transfusion Services will need to send paper Record of Blood Transfusion with each blood product. Independent dual verification of patient identification and blood and blood products is done on paper.
   ii. Interface between HCLL computer system and Health Link is down – Call Help Desk, and Transfusion Services sends paper Record of Blood Transfusion with each blood product. Independent dual verification of patient identification and blood and blood products may need to be recorded on the Record of Blood Transfusion (UWH # 1280412) form.
   iii. HCLL computer system is down – Transfusion Services calls the Help Desk to activate banner, and Transfusion Services hand writes labels for blood product and Record of Blood Transfusion and sends paper Record of Blood Transfusion with each blood product. Independent dual verification of patient identification and blood and blood products will be recorded on the Record of Blood Transfusion (UWH # 1280412) form.

M. COMPUTER SYSTEM RECOVERY:
   i. Send Record of Blood Transfusion (UWH# 1280412) to be scanned into patient record.

N. MONITORING OF BLOOD UTILIZATION:
The Tissue and Blood Products Committee, Transfusion Services, and Clinical Labs will monitor and address transfusion practices in the following categories through evaluations and Patient Safety Net (PSN) reports:
   i. Ordering practices.
   ii. Patient identification.
   iii. Sampling collection and labeling.
   iv. Infectious and noninfectious adverse events.
   v. Near-miss events.
   vi. Usage and discard.
   vii. Appropriateness of use.
   viii. Blood administration policies.
   ix. The ability of services to meet patient needs.
   x. Compliance with peer-review recommendations.
   xi. Clinically relevant laboratory results.

O. FORMS

UWH# 1280411 Transfusion Services Request (Manual/Computer Downtime Form)
UWH# 1280412 Record of Blood Transfusion
UWH# 1289139 Consent to Operations, Anesthetics, Diagnostic Radiology, Transfusion
Transfusion Reaction Worksheet 1566.4.13 F4
Intake-Output form
ICU Flow Sheet
Hemodialysis Flow Sheet

V. COORDINATION

Author: Director, Lab Services
Senior Management Sponsor: SVP/COO
Reviewers: Director Transfusion Services; Manager of Surgical Services Approval committees: Tissue and Blood Products Committee; UW Health Clinical Policy Committee, Medical Board
UW Health Clinical Policy Committee Approval: May 21, 2018

UW Health is a cohesive, united and integrated academic medical enterprise comprised of several entities. This policy applies to facilities and programs operated by the University of Wisconsin Hospitals and Clinics and the University of Wisconsin Medical Foundation, Inc., and to clinical facilities and programs administered by the University of Wisconsin School of Medicine and Public Health. Each entity is responsible for enforcement of this policy in relation to the facilities and programs that it operates.

VI. APPROVAL

Peter Newcomer, MD

Chief Clinical Officer

J. Scott McMurray, MD
Chair, UW Health Clinical Policy Committee

VII. REFERENCES

Appendix A: Possible Signs and Symptoms of a Transfusion Reaction
Appendix B: Risks of Blood Transfusion
Appendix C: Management of Transfusion Reactions
Circular of Information for the Use of Human Blood, October 2017
N Engl J Med Feb. 11, 1999; 438-447
Blood Supply: Risks, Dodd & Leiby; Annual Review of Medicine 2004
AABB Technical Manual 2017
CAP Transfusion Medicine Checklist, TRM.41025, 8/17/16
Surgical Services policy #2.01, Admission of Patients to Surgical Services and Requirements for Initiation of Surgical Procedures
UW Health Clinical Policy #3.4.2, Patient Care Orders
UW Health Clinical Policy #3.2.1, Patient Identification
Surgical Services policy # 6.07 Operating Room Blood Refrigerator Monitoring
Nursing Patient Care policy #1.23AP, Continuous Peripheral Intravenous Therapy (Adult & Pediatric) (Inpatient and Ambulatory)
Nursing Patient Care policy #1.24, Alaris System
UWHC Clinical policy #4.17, Informed Consent
UW Health Clinical policy #2.2.1, Caring for Patients Who Refuse Blood Transfusions
UW Health Clinical policy #3.2.1, Patient Identification
UW Health Clinical policy #5.1.10, Adult Trauma: Trauma Team Response at University Hospital
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VIII. REVIEW DETAILS

Version: Revision
Last Full Review: July 4, 2018
Next Revision Due: July 2021
Formerly Known as: UWHC policy #8.12 & Surgical Services Departmental Policy # 2.04, Blood and Blood Components- OR