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Procedure: Requisition & Specimen Processing

Reference # 26929

I. PURPOSE

To detail procedure for receiving, accepting/rejecting, storing requisitions (order requests) & specimens and checking patient history records for Blood Bank immunohematology testing.

II. SCOPE

This SOP addresses critical control points for accepting/rejecting and processing requisitions & specimens received for testing at all IU Health Blood Bank locations. Refer to SOP Outreach Requests & Specimen Processing to process order requests from Outreach locations. This SOP applies to all trained blood bank team members.

III. STATEMENTS/REQUIREMENTS

A. **SPECIMEN REQUIREMENTS**

Color	Anticoagulant	Patient Age	Minimum Volume Required
Lavender	EDTA	Less than 4 years	(2) 0.5 mL microtainers
		4-12 years	(1) 6 mL tube preferred (1) 3 mL tube accepted
		13 years and older	(1) 6 mL tube
Red top or pink top (EDTA) tubes (3 or 6 ml) may also be accepted if they are correctly labeled.			
NOTE: A change in sample volume may be requested depending on the patient's age, the patient's hematocrit, and/or the presence of atypical antibodies.			

B. All Blood Bank specimens used for testing will be stored a minimum of 7 days post transfusion or 10 days from collection date.

C. Specimens may be collected up to 30 days before intended transfusion date when patient has not been pregnant or received cellular blood products in the last 90 days. See SOP Procedure: Pre-Surgery Work-Up Process.

1. Patients with antibodies are NOT eligible for pre-surgery work-up process.

All specimens going to the blood bank must have the two (2) names of the phlebotomist and a witness on the specimen label written in ink that is resistant to smearing. The full name or first initial and full last name may be written or printed. Names must be legible. NOTE: Blood Bank may accept specimens collected using PPID if phlebotomist/witness signatures are missing.

Unlabeled specimens and specimens not meeting minimum labeling requirements are not acceptable.

D. Additional specimens requested for volume depletion of sample after the original collection date will have an ABO/Rh **plus Antibody Screen** performed with results entered on a new accession number—order should be entered in Cerner by Nursing staff or MD.

E. All patients will have their previous history records checked in Cerner with each new sample.

1. Any Discrepancy MUST be investigated, resolved, and documented in Occurrence Management Process as documented in Deviation Documentation and Management.

F. All patients will have their Archival history records checked (SOP BBCE-025 Procedure: How to Use AIMA Blood Bank Archive) one time with documentation entered into the Cerner history record file.

G. When possible, use Post-It Flags to aid in prioritizing samples.

1. All "STAT" requests and requests for additional specimens may have "RED" Post-It Flag attached to the top of Requisition.
    i. Time of sample receipt may be written on the red flag.
    ii. Ward may be called if specimen not received within "ONE" (1) hour.
2. If an order has an additional red cell request, “Add on Order”, then a “Blue Post-it Flag” may be used to help visually identify what is needed for the patient.

IV. DEFINITIONS

AABB: Association for the Advancement of Blood & Biotherapies

BBTS: Blood Bank Transfusion Service

COLLECTION DATE: Day Zero--date specimen drawn.

MRN: Medical Record Number

OUTREACH: Clients within IU Health System contracted by IU Health for testing.

PPI: Patient Product Inquiry

QA UNIT: BBTS Management, Transfusion Medicine Division Director, Quality Coordinator, TSO, and BBTS Team Leads

SOP: Standard Operating Procedure

SSN: Social Security Number

TOTALLY MISLABELED: Specimen has been labeled with incorrect patient identification (ie. Wrong blood in tube).

V. EQUIPMENT/RESOURCES

Supplies:

Parafilm	Specimen Storage Racks
16 x 100mm test tubes	Specimen Labels

Equipment:

Centrifuge	Refrigerator
PC with Cerner software	PC with Archive Data software
Specimen Label Printer	

VI.PROCEDURE

A. Requisition processing:

1. Outreach and/or Client orders will be placed in Cerner or Life-Point by Registration/Client rep and may not generate a Requisition to print in Blood Bank. One may need to 'print screen' information in either "PPI" (Patient Product Inquiry) Cerner function or Power Chart to see tests ordered, unless copy of original order is delivered with specimen to Blood Bank.
2. In general, blood product and test requisitions, also known as orders, print directly to the Blood Bank.
3. Review Order Request. Minimum information on requisition includes:
   a. Patient's First and Last name.
   b. Patient's MRN (Medical Record Number).
      Outpatient may have SSN (Social Security #) or DOB (Date of Birth) as identifiers when MRN is not available.
   c. Date of Birth
   d. Date of request
   e. Patient's location
   f. Physician's name.
   g. Tests and/or quantity of blood components requested.
   h. Intended time of transfusion
   i. Medical Indication for transfusion
4. Use Cerner function "PPI" (Patient Product Inquiry) to obtain:
   a. Patient's accession number for tests ordered; Click on Red test tube.
   b. If product order requisition prints—and NO specimen orders displays in "PPI".
      i. Call Ward/Clinic or Client and request order for specimen (i.e., Type & Screen), if required.
         a. T and S required for RBC transfusion and Crossmatch
         b. T and S not required for Plasma, Platelet, Cryo order if the patient has a historical ABO/Rh without any PPI comment for Second ABO/Rh sample requirement
      ii. Document the call to the ward/clinic or client on the requisition with date/time, name of person receiving call and lab staff initials.
      iii. Hang request on clip above control desk file until new specimen orders received.
      iv. Use Cerner function "Label Reprint" to print accession labels.
         a. Apply one large product order accession label to requisition, when applicable.
         b. Apply one large Type and Screen label to product order requisition that has a current Type and Screen completed. This label will be used for the "Add on Crossmatch.

B. Patient History (records) Search: Three Parts to the Patient History Search

1. Cerner PPI Search
   a. Using "PPI" enter patient's MRN
   b. Confirm patient name and MRN displayed in "PPI" matches requisition.
   c. When blood type is available record a checkmark next to blood type and one checkmark for each BB archive comment.
      i. When blood type is NOT available, record on requisition: "NC" (No Cerner)
      ii. For manual requisitions (print screen etc.), record the patient's blood type or any applicable history from Cerner if available.
   d. Person performing Cerner history check MUST initial requisition.
2. AIMA BB ARCHIVE Patient History (records) Search:
   a. AIMA Requirement
      i. Required by any MRN starting less than 725XXX
      ii. Required for Patients with MRN starting with 800XXX or 900XXX
      iii. Not required for patient with MRN starting with "725" or higher
   b. See SOP Procedure: How to Use AIMA Blood Bank Archive to access historical information for patients and products entered in ADAC and Sunquest (legacy systems).
      i. If archival data is present, print archival data screen and attach to requisition.
      ii. When there is no archival data, or patient's MRN is above 725 – write "NA" (No Archive Date) on requisition.
   c. Person performing AIMA history check MUST initial requisition.
3. Care Web History Search
   a. Log into CERNER Powerchart
   b. Click "Patient" from Task Bar
   c. Search Patient by MRN
   d. Once patient chart is retrieved
   e. Select "Careweb" from Tool Bar
      i. Careweb should open with linked patient information at top left of screen and your identification (name) will appear in top center/right of screen.
   f. Click on "Date Range" drop down arrow.
      i. Change to "ALL DATES"
   g. Click on "Results Filter" from center of page.
   h. Select only the Blood Bank tests that are listed (if present)
      i. Example
         a. Ab Identified
         b. ABO and Rh
         c. Direct Coombs IgG Ab
         d. Indirect Coombs
         e. Platelet Ab Scn %
   i. Scroll to bottom of that *pop up* window and select "OK".
      i. Only Blood Bank Tests results will show.
   j. Review page(s) for previous ABO and RH results
      i. If found, Open the field to display results.
      ii. Look for any other Blood Bank testing history (Ab Identified etc.)
   k. Print results and attach archive history to current requisition.
   l. Document on Cerner or Manual Requisition "Careweb Hx attached" with your initials.

C. Updating Patient Product Inquiry (PPI) with archival data:

1. Must be performed by Medical Technologists (MT) only.
2. MT verifying 2nd Cerner ABO/RH or same sample ABO/RH verify should enter Archive Comments in Cerner.
3. Enter Comments: "BB Archive checked" template.
4. Click "Comment", Click "Add", place cursor in "White" Comment box, Press F2, Type "BB" in Name field, Click "Find", Select Template, Click "OK".
5. Enter confirmed transfusion requirements, i.e., Leukoreduced, Irradiation, etc.
6. Use BB Historical AB ID to result previously identified clinically significant antibody displayed in patient's history record (archive).

D. Requisition Distribution

1. Place Order Requests waiting for specimen in file at control desk until specimen is received.
2. Add on XM Orders – give to the applicable MT to complete.
3. Component orders (not requiring specimen) –give to Component area.

E. Specimen Receiving

1. Pull Requisition from Control Desk file when specimen received. Be sure to double check requisitions hanging above file on clips for any missed product orders.
2. Verify information on specimen label and requisition are identical.
3. Perform visual inspection of specimen and label:
    a. Each tube must have a label firmly affixed.
    b. Patient's First and Last names
        i. Unnamed trauma patients may be labeled with "Doe" and a number. Example: Doe, Seventyfive; Doe Sixtyfour etc.
    c. Patient's MRN
        i. Outpatients may have SSN or DOB as identifies when MRN not available.
        ii. Outpatients may have other unique identification numbers.
    d. Patient's Date of Birth
    e. Date specimen collected
    f. Patient's location
4. Specimen Types
    a. Samples for Immunohematology testing (i.e., ABO/Rh, IAT, Newborn Profile, DAT): Lavender/pink-EDTA topped tubes are acceptable, including microtainers. Red top tubes are acceptable for manual testing but not automated testing. Tubes do not need to be full.
    b. Samples for TEG
        i. For TEGCK, TEGCOMP, or TEGCKH, two 3.2% Sodium Citrate tubes (light-blue topped) must be present, and each tube must be filled to the indicated fill level.
        ii. For Platelet Mapping (PLTMP), a green-topped heparin tube must be present and filled to the indicated fill level.
        iii. Collection time must be within the last 2 hours. The collection time is assumed to be the time on the label. If the time on the label is more than 2 hours ago, then use Container Inquiry to determine the specimen collection time.
        iv. Specimens must be maintained at room temperature. Specimens that are shipped on cold packs or in a cooler must be rejected.
        v. Identification of phlebotomist and witness: NOTE: applies only to samples for Immunohematology Testing (i.e., ABO/Rh, IAT, Newborn Profile, DAT)

5. Phlebotomist Identification for Blood Bank Specimens
    a. Signature of nurse/phlebotomist drawing sample and signature of witness who verifies the specimen's accuracy must be on specimen label. The patient or patient's caregiver can sign as a witness.
    b. If less than two signatures are present on the sample, then check for PPID. PPID means that verification of the patient's identity was performed using scanned barcodes in Cerner.
        i. OUTREACH specimens NOT intended for blood product transfusions may have only One Signature, No Signatures, or initials only provided "PPI" is updated accordingly.
            a. Enter Comments: "BB Outreach Problem Sample: template for one signature specimens or specimens having no signatures or initials only.
            b. Only the most recent "Problem Sample" Comment should be in PPI. Remove any previous comments.
    c. Verify PPID
        i. This is checked when specimen is received. When using the Specimen Log In app in Cerner by "accession"
        ii. Next Click on the Container Inquiry App from Task Bar to observe if the sample was collected by PPID.
        iii. Follow the If/Then decision tree below

If…	Then…
PPID Collection is Present: Event -Dispatched -Collected -Received -PAID Collection **-PPID Collection** -Received -Orders Added	Specimen is acceptable for Blood Bank Testing
PPID Override is present *or* PPID is not present	Specimen is not acceptable for Blood Bank Testing

    d. Samples for TEG:
        i. For TEGCK, TEGCOMP, or TEGCKH, two 3.2% Sodium Citrate tubes must be present, and each tube must be filled to the indicated fill level.
6. Determine the need for 2nd ABO/Rh Sample and receive acceptable specimens.
    a. Review PPI Information in Cerner, archive check documentation and PPID status

If	Then
Patient has no history of ABO/Rh and the sample is PPID collected,	Using DOE order ABO/Rh verify on the same accession
Patient has no history of ABO/Rh and the sample is not collected by PPID,	Call ward/clinic or client and request a second ABO/Rh sample collection. Document on the Requisition the name of the person notified, date/time and BB staff members initials. Refer to ABO/Rh SOP

    b. Receive the sample in Cerner "Specimen Log-In" application.
    c. Forward specimen and requisition to appropriate area for centrifugation

d. Centrifuge the sample, as needed.

7. Reject unacceptable specimens:
   a. Specimen is unacceptable when specimen does not meet labeling requirements.
   b. Receive specimen in Cerner "Specimen Log-In" application.
   c. Use "DOE" (Department Order Entry) to cancel test order w/ appropriate reason
   d. Notify ward of need for a Recollect and Reorder
   e. Document call on Requisition.
      i. Date/Time of call
      ii. Name of person receiving call
      iii. Reason for unacceptable specimen
      iv. Initials of Blood Bank Lab staff making the call
   f. Remove Label from specimen and affix to order.
   g. Place requisition in Unacceptable tray and discard specimen in appropriate biohazard container
   h. When sample is TOTALLY mislabeled suspected as Wrong Blood in Tube (WBIT), the BB team member will document an Unplanned Deviation with details and submit to supervisor for completion.

F. Specimen Storage
   1. After testing, All specimens WITHOUT Pre Surgery Questionnaire Form will be stored in a rack labeled with collection date.
      a. Specimens used for testing will be stored a minimum of 7 days post transfusion or 10 days from collection date.
      b. Exception to the above step is for samples with positive IAT or history or a position IAT. These will be stored in designated ABID racks.
      c. Donor segments used for IgG crossmatch will be placed in 16x100 tubes. It is helpful when storing segments which have been opened, cover the tube with parafilm. Identify who the donor segments with patient identifiers, for example affix specimen label to tube.
         i. Segment tubes will be discarded a.fter 11 days of storage.
   2. All Eligible specimens with Pre-Surgery questionnaire will be stored separately: (Refer to SOP Procedure: Pre-Surgery Work-Up Process The pre-surgery samples are stored alphabetically in Pre-Surgery Sample racks for up to 30 days until day of surgery/transfusion.
   3. When specimen is retrieved for additional testing, it should be returned to rack labeled with collection date.

G. File "Requisition" at completion of Testing/Component preparation in current days tray.

VII. CLINICAL SIGNIFICANCE/SPECIAL CONSIDERATIONS

None

VIII. REFERENCES

AABB Technical Manual, current edition.

AABB Standards, current edition.

Quality System, AABB/IU Health.

IX. FORMS/APPENDICES

None

X. APPROVAL BODY

None

PROCEDURE #:

BBT – 011