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Indiana University Health

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Owner: *Evangeline Miguel*
Area: *Lab - Blood Bank*
Tag:
Applicability: *Indiana University Health
Pathology Laboratory*

Pre-Surgery Work-Up Process

PURPOSE:

To detail the process that allows blood bank to perform testing on pre-surgery patient specimens received in the blood bank.

SCOPE:

This procedure will detail steps on how to process specimens on pre-surgery patients that had recent transfusion and/or recent pregnancy and those that have not been transfused or have not been pregnant within the last 90 days. Testing is limited to staff qualified to perform serological testing.

EXCEPTIONS:

Any exceptions to this procedure must be approved by the medical director.

DEFINITIONS:

None

POLICY STATEMENTS:

1. Pre-surgery patient specimen received in the blood bank will have a type and screen performed regardless of their recent transfusion and/or pregnancy status.
2. Pre-surgery patient specimen can be retained for crossmatching for a period of 30 days from specimen collection date provided they meet qualifications for pre-surgery work-up eligibility process.
3. Pre-Surgery work-up eligibility qualifications:
 1. No blood transfusion (red blood cells or platelets) within the past 90 days.
 2. No pregnancies within the last 90 days.
 3. Pre-surgery questionnaire form completed and sent with patient specimen
4. Pre-Surgery work-up eligibility disqualifications:
 1. Patients with known clinically significant allo or auto antibodies
 2. Patients having current specimen with positive Antibody Screen

3. Patients transfused with red blood cells or platelets within last 90 days
4. Patient pregnant within last 90 days
5. Surgery date > 30 days from specimen collection date

PRICIPLE/BACKGROUND

None

MATERIALS

None

SPECIMEN REQUIREMENTS:

Minimum specimen volumes are as follows:

Neonates – 3 years: 2 lavender microtainers

3 years – Adult: 13 mL or 6 mL lavender

NOTE: Microtainer™ tubes accepted if quantity is sufficient for testing.

NOTE: Serum separator tubes are NOT acceptable. All specimens must meet identification criteria as outlined in Request/Specimen Processing SOP.

PROCEDURE:

1. Pre-surgery specimen receipt/testing:
 1. Type and Screen (T&S) specimen received in blood bank without pre-surgery questionnaire form; see SOP for ABO/RH and antibody screen.
 2. Type and Screen specimen received in blood bank with pre-surgery questionnaire form:
 1. Specimen arrives with completed pre-surgery questionnaire form.
 1. Call number on form if required information is not complete.
 2. Also, ensure that there is a phone number and name of staff completing form.
 3. If pre-surgery questionnaire form was faxed, match the form to specimen upon receipt.
 2. Staple pre-surgery questionnaire form to front of T&S paperwork. Verify that any component orders received with T&S match the information on pre-surgery questionnaire form. All component requests must be written on the form so they are not missed.
 3. Perform routine testing for ABO/Rh and antibody screen.
 1. Observe sample for hemolysis and record on pre-surgery questionnaire form "Yes" or "No", initial and date.
 2. If antibody screen is positive, refer to SOP for Antibody Identification. Patient is not eligible and is disqualified for this process. Proceed to step 2.0.
 4. Verify that patient is eligible for pre-surgery work-up.
 1. Review pre-surgery questionnaire form for eligibility.

2. Open Patient Product Inquiry (PPI) application.
3. In "Alert" section click on Transfusion History icon. There should be no transfusion of RBC or platelets within last 90 days
4. Enter information into Cerner for patients eligible for pre-surgery work-up:
5. Open PPI application.
 1. Type the Medical Record Number (MRN) of patient in the required field → Enter.
 2. Open the Comment box:
 1. Click on Add.
 2. Press "F2" key → Name: **BB** → Find.
 3. First line is "BB Pre-surgery", highlight → OK.
 4. Highlight "Enter OR Date Here" phrase.
 1. If surgery date is listed, enter the date.
 2. If no date is listed, enter Pending → OK.
 5. Close the comment box.
2. Patients not eligible for Pre-Surgery work-up:
 1. Draw a large "X" on the pre-surgery questionnaire form to indicate patient not eligible.
 2. Call the number on the pre-surgery questionnaire form.
 1. Inform that the patient did not qualify for the pre-surgery work-up eligibility process.
 2. Request new specimen drawn on day of surgery.
 3. Enter Blood Bank comment in PPI using template "BB Not Pre-Surgery": **Not eligible for pre-surgery work-up; OR <Date>_____.**
3. Storage of Eligible Pre-surgery testing specimen and paperwork:
 1. Specimen:
 1. Place original tube in designated rack.
 2. Patients not eligible can be placed in current day's rack.
 2. Paperwork: Place in designated file:
 1. Known surgery date: Place in correct date.
 2. When applicable, Pending surgery dates: Place in "Pending" file alphabetically by letter of last name.
4. Preparation of orders for next day surgery:

Note: Electronic Crossmatch requires patient has a current type and screen specimen. We order a type and screen on patient with "**No Charge**" and enter previous results as a work-around.

 1. Pull pre-surgery questionnaire forms the day before scheduled surgery date.
 2. Move specimens from designated rack to current specimen rack.
 3. Department Order Entry (DOE): Enter patient MRN.
 1. Highlight **CORRECT** encounter.

1. Pre-admit encounter: move cursor, if needed, to verify estimated arrival date matches surgery date.
2. If no encounter available: Try one or all of following processes.
 1. Perform a name search in PPI to see if patient has been registered under a different MRN for surgical encounter.
 1. Make sure the MRN field is blank then click on search button.
 2. Enter patient name in name field (last name, first name) Search.
 2. Wait a while then check to see if encounter becomes available If not available, call registration or:
 1. Fill out "Pre-Surgery Request for Hospital Encounter" form (See form BBT-F006).
 2. Fax to indicated number.
 3. Check later for available encounter to complete process.
2. Orderable box: Type in type and screen → Enter.
 1. Enter the current time into "Requested Start Date/Time" box. Type "T" to display current time.
 2. Click "Order" on task bar; Highlight "No Charge".
 3. Click "Submit Order" icon generating new accession number.
3. Cerner Application: Label Reprint:
 1. Enter new accession number.
 2. Select Label Printer→Print.
 3. Place large accession label on –pre-surgery testing questionnaire form.
 4. Retrieve previous type and screen results to enter into new accession.
 5. Cerner Application: Result Entry.
 1. Enter previous accession number by scanning original label on patient specimen. Results from original testing will populate the resulting fields.
 2. Enter new accession number.
 3. Copy original results from step 4.3.4.1.1.
4. Before verifying, attach a comment to IAT result that will explain to clinicians why another type and screen was ordered.
 1. Click on Comment icon.
 2. Open Result Comment tab → Add.
 3. Press F2 key → Name: **BB** →.Find.
 4. Highlight BB NO CHG EXM → OK.
5. Eligible pre-surgery orders will be held and processed anytime after midnight on day of surgery but prior to surgery time.

NOTE: For charging purposes, eXM must be ordered using an active encounter on day of surgery. Encounters are not active until day of service.

6. Processing orders for eXM:
 1. Return to DOE.
 1. Click "Accession Add-on" icon.
 2. Enter current accession number → Enter.
 3. Orderable: XM; choose XM Computer → Enter.
 4. Submit order.
 2. Cerner Application: Result Entry; complete process to crossmatch number of units requested.
5. Transfer Pre-Surgery paperwork and blood products when applicable to Blood Bank Satellites (i.e. IUH hospital where patient is scheduled for surgery) :
 1. Pre-Surgery Type and Screen only requests: Send or fax requisitions with previous and current Cerner accession numbers to appropriate blood bank satellite.
 2. Pre-Surgery Type and Screen with blood products.
 1. Cerner function: Transfer Products (If Applicable):
 1. Transfer: Select > Inventory.
 2. To Owner Area: drop down→Indiana University Health.
 3. To Inventory Area: Select appropriate satellite location.
 4. Reason: Patient Transfusion.
 5. Scan products to be sent under Product Number.
 6. Click on "Print" button.
 7. After verifying Transfer sheet has printed > Save.
 2. Send to appropriate satellite:
 1. Transfer sheet→Verify that correct inventory location has been selected.
 2. Pre-surgery request form.
 3. If applicable, crossmatched blood for surgery.
6. Procedural Notes:
 1. If a newborn (<4 months) qualifies for pre-surgery work-up, NB eligibility testing can be done and the order saved for date of surgery.
 1. Enter NB eligibility in PPI.
 2. Add NNP transfusion requirements.
 2. Pre-Surgery samples with questionnaire forms received for surgery within 72 hours will still be processed following this SOP in case surgery is postponed. The original accession number will be used if surgery is the next day, otherwise, a new accession number will be generated if surgery is not for the next day.
 3. If applicable, during review of surgery schedule the morning of surgery:
 1. If the patients that had pre-surgery work-up processed the day before are not on the surgery schedule:

1. Notes will be attached to the pre-surgery questionnaire form indicating not on surgery schedule.
 2. Date of surgery will be changed to "Pending" on pre-surgery questionnaire form and in comment section of PPI.
 3. Any crossmatched blood will be released to stock.
 4. Pre-surgery questionnaire form will be sent back to IUHPL or its respective Blood bank satellite to be filed in pending section of pre-surgery file.
 5. Pre-surgery specimens will be pulled from previous day's rack and returned to the designated pre-surgery rack.
 6. Pre-surgery questionnaire forms are filed with date of surgery orders.
2. Patients found on the surgery schedule with surgery "Pending" will be processed according to this SOP.
 1. Remove "Pending" in PPI and enter date of surgery
 2. Pre-surgery questionnaire forms are filed with date of surgery orders.
 4. When applicable, during normal review of daily requisitions, pre-surgery requests will have the "Pre-Surgery" comment removed from the Blood Bank comment section the day after surgery. Non-eligibility comments will also be removed.
 5. Routinely, the pre-surgery pending file section will be reviewed.
 1. Orders > 1 month will be removed.
 2. Pre-surgery eligibility comments on expired forms will be removed from comment section in PPI.
 3. The pre-surgery specimen rack will have expired specimen pulled and discarded.

APPENDICES/ATTACHMENTS/FORMS/LABELS:

FORM BBT-F006:Pre-Surgery Request for Hospital Encounter

Pre-Surgery Questionnaire

POLICY #:

BBT-094

Attachments:

No Attachments

Approval Signatures

Step Description	Approver	Date
Blood Bank Division Director	Daniel Smith: Division Director	10/2018
Blood Bank Medical Director	Nguyet Le: Staff Physician	09/2018
Supervisors (QA Unit)	Tracie Ingle: Supervisor-Lab	09/2018
Supervisors (QA Unit)	Jayanna Slayten	09/2018
Supervisors (QA Unit)	Evangeline Miguel	09/2018

Step Description	Approver	Date
Director	Heather Vaught: Dir-Transfusion Medicine-Lab	09/2018

Applicability

Indiana University Health Pathology Laboratory



Pre-Surgery Questionnaire

Specimen must be drawn within 30 days of surgery

Patient Information:

Patient's Name:	May apply patient label here	Date Surgery Scheduled:	
MR# or DOB		Surgeon/Ordering Practitioner:	
Hospital /Site of Surgery		Surgeon/Ordering Practitioner's contact Info:	

Patient Medical History:

Questions: If patient answers yes to any of the questions, the patient will be disqualified for the pre-surgery testing process. Alert Surgeon of disqualification. Do not send this form, send sample only to the blood bank/transfusion service. Sample is good for 3 days.	Yes	No
The above patient has received red blood cells within the last 90 days		
The above patient has received platelets within the last 90 days		
The above named patient has been pregnant within the last 90 days.		



Patient instructions: If blood products are received between today's date and date of surgery, or if patient becomes pregnant, notify pre-admission testing or Surgeon's office immediately.

Patient's signature	
Components Requested	<input type="checkbox"/> Leukoreduced (CMV safe) Packed Red Blood Cells: _____ Indication: Need in OR on date documented above <input type="checkbox"/> Platelets: _____ <input type="checkbox"/> Thawed Plasma: _____ <input type="checkbox"/> Other: _____ Requirements: <input type="checkbox"/> Irradiated <input type="checkbox"/> CMV negative <input type="checkbox"/> Autologous units <input type="checkbox"/> Directed Units

Order Processing:

- Enter Type and Screen order in Cerner
- Draw and label Specimen (Adult = 6ml EDTA lavender tube, Pediatric = 3ml EDTA lavender tube/microtainers)
- Specimen tube must be signed by phlebotomist and witness attesting to the accuracy of specimen labeling.
- If qualified for the pre-surgery testing, send this completed form with patient sample to the Blood Bank/Transfusion Service. Where applicable, Questionnaire can be faxed to the blood bank.
- If patient does not qualify for the pre-surgery testing process, send patient sample only to the blood bank: Phlebotomist's initials: _____

Person completing Form :(please print): _____ Phone #: _____

Signature: _____ Date: _____

• Sample hemolyzed on receipt: YES NO Initial and Date: _____



Request for Pre-Admit Hospital Encounter

Blood Bank Request for Account
Fax to Pre-Admit Services at 317-962-6188
ALSO call 317-962-8943 when faxing this form

1) Patient Name _____

MRN _____ Surgery Date _____

MD _____ Phone # _____

2) Patient Name _____

MRN _____ Surgery Date _____

MD _____ Phone # _____

3) Patient Name _____

MRN _____ Surgery Date _____

MD _____ Phone # _____

4) Patient Name _____

MRN _____ Surgery Date _____

MD _____ Phone # _____

Please enter a pre-admit account for date of surgery from either the surgery schedule or bed reservation form

Since we have testing on this patient that must be done during this day shift, please inform Blood Bank @ 317-491-6866 if unable to enter registration in a timely manner. Blood Bank may then need to inform the physician's office of the possible delay in treatment for the patient.



Indiana University Health

Area: Patient Care
 Sub Area: Nursing Administration
 Policy #: HM 1.05
 Approval Date: 8/31/2018
 Effective Date: 8/31/2018
 Next Due Date: 8/31/2020

*Clinical
 Policy*

BLOOD BANK PRE-SURGERY TESTING

I. Purpose

To describe the process for submitting samples to the Blood Bank for patients who are scheduled for elective surgery.

II. Scope

This process applies to all patients who will have elective surgery at the AHC.

III. Exceptions

All exceptions are outlined in the procedure below.

IV. Definitions

None

V. Policy Statements

- A. Pre-surgery Blood Bank specimens may be collected at any IU Health facility.
- B. All specimens must be collected following HM 1.02 AP: Blood Bank Specimen Collection and Identification.
- C. All pre-surgery patient samples received in the Blood Bank will have a type and screen performed, regardless of the patient's recent transfusion and/or pregnancy status.
- D. Pre-surgery patient samples can be retained for crossmatching for a period of 30 days if the patient meets the extended specimen eligibility guidelines.
- E. Extended specimen eligibility guidelines:
 - 1. No blood transfusion (red blood cells or platelets) within the past 90 days.
 - 2. No pregnancies within the last 90 days.
 - 3. Surgery is scheduled in the next 30 days.
 - 4. Pre-Surgery Questionnaire form completed and submitted with the patient specimen.
- F. The following criteria disqualifies a patient from eligibility for specimen extension to 30 days. A specimen for type and screen should still be submitted to the Blood Bank when the patient presents for pre-admission testing. A new specimen will be required the day of surgery.
 - 1. Patients with known clinically significant allo or auto antibodies.
 - 2. Patients transfused with red blood cells or platelets within the last 90 days.
 - 3. Patients pregnant within the last 90 days.
 - 4. Surgery date is greater than 30 days from the specimen collection date.
 - 5. Patients with a new positive Antibody Screen.

VI. Procedures

- A. Order a Type and Screen in Cerner and collect the specimen following policies for blood bank specimen collection and patient identification.
- B. Complete the Pre-Surgery Questionnaire form.
 - 1. At the top of the form, document:
 - a. The patient's name and Medical Record number or DOB.
 - b. The date that surgery is scheduled and the hospital location for the surgery.
 - c. The surgeon or ordering practitioner and their contact information (phone, pager, or e-mail).
 - 2. Answer the questions on the Patient Medical History section of the form by asking the patient and/or reviewing documentation in the patient's medical record:
 - a. Has the patient received a red blood cell transfusion in the last 90 days?

- b. Has the patient received a platelet transfusion in the last 90 days?
- c. Has the patient been pregnant in the last 90 days?
- 3. Review the form with the patient and have the patient sign the form. Instruct the patient to notify their physician or Pre-Admission Testing immediately if they are transfused or become pregnant before their surgery.
- 4. Document the number and type of components that are requested to be in the OR for the surgery. If blood components are not needed in the OR, then this section can be left blank.
- 5. The person completing the form: Print your name, document the phone number that the Blood Bank can utilize to call if there are any questions or problems, then sign and date.
- C. Submit the sample and, if eligible, the form to the Blood Bank.
 - 1. If the patient has been transfused or pregnant in the last 30 days, send only the Type and Screen sample. The phlebotomist should initial the form and place in the patient's chart.
 - 2. If the patient has NOT been transfused or pregnant in the last 90 days, then the form should be submitted with the Type and Screen sample.
- D. Upon receipt in the Blood Bank, the laboratory will follow departmental Standard Operating Procedures for the following:
 - 1. For samples that are eligible for specimen extension to 30 days post-collection:
 - a. Perform ABO, Rh, and IAT testing on the day of specimen receipt and enter results into Cerner.
 - b. Enter a PPI comment stating that the patient has a pre-surgical specimen.
 - c. Store the specimen in a pre-surgery specimen rack until the day of surgery.
 - d. On the day of surgery, order and enter the ABO, Rh, and IAT results from previous testing on a current accession at no charge to the patient.
 - e. If requested, crossmatch RBCs for surgery and issue to the OR.
 - f. Allow crossmatch of RBCs until midnight of the 3rd day after surgery (day of surgery is Day 0).
 - 2. For samples that were submitted as eligible but have a new antibody identified during testing:
 - a. Perform ABO, Rh, and IAT testing on the day of specimen receipt and enter results into Cerner.
 - b. Enter a PPI comment stating that the patient is not eligible for specimen extension.
 - c. Notify the ordering practitioner that the patient's sample is only available for three days (day of collection is day 0) and that a new sample will be required on the day of surgery.
 - d. On the day of surgery, perform ABO, Rh, and IAT testing on the new sample and enter results into Cerner.
 - e. Crossmatch RBCs for surgery using the current specimen and issue to the OR.
 - 3. For samples that were not submitted with a Pre-Surgery form:
 - a. Perform ABO, Rh, and IAT testing on the day of specimen receipt and enter results into Cerner.
 - b. On the day of surgery, a new sample will be collected and submitted to the lab. Perform ABO, Rh, and IAT testing and enter results into Cerner.
 - c. Crossmatch RBCs for surgery using the current specimen and issue to the OR.
- E. Upon admission for surgery, verify with the patient that they have not been transfused or become pregnant since their pre-surgical specimen was collected. If the patient has been transfused or becomes pregnant, then notify the Blood Bank immediately and order new ABO, Rh, and IAT testing.

VII. Cross References

HM 1.02 AP: Blood Bank Specimen Collection and Identification

VIII. References/Citations

AABB Standards: Current edition

CAP Inspection Checklists, Transfusion Medicine: Current Edition

IX. Forms/Appendices

Pre-surgery questionnaire.pdf

Form: Pre-Surgery Questionnaire

Clinical Policy

X. Responsibility

Nursing and Patient Care services

Surgery services

Transfusion Medicine

XI. Approval

Policy Oversight Committee

XII. Approval Signatures

- Approval Signatures
- Gilbert, Jason H - Chief Nursing Officer - Jason H Gilbert - PhD MBA RN NEA-BC - 10/15/2018
11:15:43 AM - Approved
- Linden, Elizabeth M - CNO - Elizabeth Linden - DNP, RN - 10/15/2018 2:27:10 PM - Approved

XIII. Dates

- Effective Date: 8/31/2018
- Published Date: 10/15/2018