

Beaumont

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Triaging And Identifying Acceptable Samples For Testing- Blood Bank

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

The Blood Bank adheres to strict sample labeling requirements to ensure proper patient identification and to foster patient safety. The purpose of this document is to provide Blood Bank staff with instructions that will enable them to triage and identify acceptable blood samples for testing.

II. DEFINITIONS/ACRONYMS:

- A. **ABOCN:** refers to chargeable ABO Confirmation test ordered under ABO/Rh Confirm E/S test code in the Blood Bank Information System.
- B. **Outreach specimens:** Blood samples received through the Corewell Health Reference Laboratory.
- C. **EHR:** Patient Electronic Health Record housed in the hospital computer system
- D. **HIS:** Hospital Information System - the hospital-wide computer system - Epic Hyperspace
- E. **BBIS:** Blood Bank Information System.
- F. **LIS:** Epic Beaker Laboratory Information system
- G. **Neonates:** Patients less than four (4) months old.
- H. **Hemolysis:** Rupture of cells causing the supernatant fluid to appear pink or red.
- I. **WBIT:** "Wrong Blood in Tube" event, sample collection error.
- J. **QNS:** Quantity Not Sufficient.
- K. **NPR:** refers to patients with no previous record in in the BBIS.
- L. **D or DB:** Corewell Health Dearborn Hospital
- M. **F or FH:** Corewell Health Farmington Hills Hospital

- N. **R or RO:** Corewell Health William Beaumont University Hospital
- O. **G or GP:** Corewell Health Beaumont Grosse Pointe Hospital
- P. **T or TR:** Corewell Health Beaumont Troy Hospital
- Q. **Y or TY:** Corewell Health Taylor Hospital
- R. **N or TN:** Corewell Health Trenton Hospital
- S. **W or WA:** Corewell Health Wayne Hospital
- T. **Wristband number (B#):** A unique number found on the patient's wristband and composed of the "B + your sites one letter designation" prefix, 4 digits, and a suffix letter (e.g., BR1234X). The wristband number of neonatal samples may be composed of only the letter "N" prefix letter followed by 5 digits (e.g., N12345).
- U. **Pre-transfusion samples:** Samples labeled with a wristband number that are collected from patients who may potentially be transfused within the three days following the date of sample collection. For example, inpatients, patients admitted for surgery or delivery, and pre-surgical testing when the surgery is scheduled within 3 days from collection.
- V. **Current sample:** A sample that was collected no more than 3 days before the current date. For example, if a sample is drawn on Monday (day 0), then the sample remains "current" all day Monday, Tuesday, Wednesday, and Thursday.
- W. **ATLAS Labworks:** A third party vendor software, web based, that is being utilized as the middleware to connect outreach client offices with the Corewell Health LIS (Beaker).
 - 1. Consists of an electronically connected ordering and reporting system.
 - 2. Utilizes a Patient Centric Repository – a real-time copy of all patients within the Corewell Health EPIC database (patient demographics and insurance information only).

III. POLICIES:

A. General

1. Unclear test orders that accompany a specimen must be clarified with the patient's caregiver.
2. The original label on a blood sample must be firmly attached and must accurately identify the patient from whom it was drawn.
3. Samples should be received in the original sample collection tube.

B. Types of Samples

1. Sample labeling requirements depend on the type of sample. There are 5 general types of samples:
 - a. **Pre-transfusion samples:** Samples labeled with a wristband number that are collected from patients who may potentially be transfused within the three days following the date of sample collection. For example: inpatients, patients admitted for surgery or delivery and pre-surgical testing when the surgery is scheduled within 3 days from collection.
 - b. **Outreach samples:** Corewell Health Reference Laboratory samples, also referred to as Corewell Health Laboratory Outreach samples. For example, samples collected at the office of Outreach physicians (most often obstetrical patients).
 - c. **Outreach samples with ATLAS labels:** Corewell Health Reference Laboratory

samples, also referred to as Corewell Health Laboratory Outreach samples, used in the integration of laboratory services with outreach clients and our affiliate laboratories at other Corewell Health Health System Hospitals.

- d. **Other types of outpatient samples (non-Outreach):** For example, samples collected in the MOB (Medical Office Building) or for pre-surgical testing when the surgery is not scheduled within 3 days from collection.
Note that in some cases, Outreach or outpatient samples may be collected for potential pre-transfusion purposes. In these cases, the sample must meet all of the same labeling requirements for pre-transfusion samples.

2. **Cord Blood Samples:** Samples collected at the time of neonatal birth from the umbilical cord, which are used to assess maternal RhIG candidacy and perform Hemolytic Disease of the Newborn (HDN) Surveys.

Type of Sample	Labeling Requirements	
Pre-Transfusion Samples	<ol style="list-style-type: none"> 1. First and last name 2. Wristband number 3. Medical Record Number (MRN) 4. Date of birth 5. Collection date/time² 6. Phlebotomist identification^{1,2} 	
Outpatient/ Outreach Samples (with or without ATLAS Labels)	<ol style="list-style-type: none"> 1. First and last name 2. Additional, unique identifier: the date of birth, MRN, or other unique client identifier based on site requirements, the ATLAS Label or the Sample ID number. 	In some cases, Outreach or Outpatient samples may be collected for potential pre-transfusion purposes. In these cases, the sample must meet all of the same labeling requirements as for pre-transfusion samples.
Cord Blood Samples	<ol style="list-style-type: none"> 1. Neonate's first and last name per corporate newborn naming policies. 2. Neonate's MRN 3. Collection date² 4. Phlebotomist identification^{1,2} 5. Identification of sample as a "Cord Blood" on specimen, if applicable per site policy. 6. Preferred, but not required: N number from Neonates Wristband 	

¹ Samples collected using the Epic/Rover collection process will not print the phlebotomist identification on the Epic Beaker collection labels but it is available in the computer.

² The collection date/time and phlebotomist identification must be on the sample label or in the computer.

C. Sample Labeling Requirements

1. Sample labeling requirements depend on the type of sample. If a sample is not labeled completely, accurately, and legibly with the following labeling requirements then the sample must be rejected.
 - a. If the specimen is for an inpatient or emergency center patient it may be sent for redraw as described in Section V. Procedure A.1.b.i - *Request for Redraw*.
 - i. Notify the caregivers that the sample has been rejected and a new sample is requested.
Note: If the specimen was linked to a product order, the affected product order(s) will need to be updated with the new specimen ID once it is received.
 - b. If the patient is an Outpatient follow the instructions in III. Policies T. *Appropriate Actions for Mislabeled Outreach Samples*.
 - c. If specimen is received in the LIS the specimen must be rejected in the BBIS as described in the Section V. *Procedure H.1. a- Reject the Specimen in the BBIS*.
 - d. If applicable refer to the section III. Policies O. *Mislabeled Outreach or Outpatient Samples for Patients that are Returning for Hospital Admission while Sample Remains Current*.

D. Sample Labeling Requirements for Pre-transfusion Samples (additional notes)

1. **First and Last Name:** The patient's complete correctly spelled first and last name is required. However, patients' names with many characters may be truncated on the computer generated specimen collection label; the labeling is considered acceptable so long as the label and computer record are compared, and the discrepancy may be attributed to the truncation of characters on the computer generated collection label.
2. **Wristband Numbers for Pre-transfusion Samples:** The samples of patients who are potential transfusion candidates within the three days following the date of sample collection (pre-transfusion samples) must be labeled with the patient's wristband number at the time of collection. Wristband numbers must appear in the following format: site prefix (BD, BF, BG, BN, BR, BT, BW, BY) followed by four-digit number followed by suffix letter (e.g., BR1234X).
 - a. There must only be one wristband number present on a patient sample. If there are multiple wristband numbers present on a sample (written or typed) they must match, or all but one must be clearly and completely crossed out prior to arriving in the Blood Bank. The presence of two different wristband numbers on a patient sample will result in sample rejection.
3. **MRN:** Pre-transfusion samples must be labeled with the medical record number (MRN).
4. **Collection Date and Time:** The collection date and time for pre-transfusion samples must be documented on the sample label, or in the computer.
5. **Identity of the Phlebotomist:** For pre-transfusion samples, there must be a dependable method to

identify the phlebotomist who collected the blood sample. Any of the following methods of identifying the phlebotomist are acceptable:

- a. The phlebotomist's identification may be handwritten on the sample.
- b. The phlebotomist's identification may be documented in the computer.

E. Additional Information on the Collection Label

1. In some cases, additional identifying information may be included on the collection label; e.g., the birthdate or a social security number on an outpatient sample. Any additional information that is included on the collection label must be correct as compared to the information in the BBIS. If any additional information is incorrect the specimen can not be used for testing.
 - a. If the specimen is for an inpatient or emergency center patient it may be sent for redraw as described in Section V. Procedure A.1.b.i - *Request for Redraw*.
 - i. Notify the caregivers that the sample has been rejected and a new sample is requested.
Note: If the specimen was linked to a product order, the affected product order(s) will need to be updated with the new specimen ID once it is received.
 - b. If the patient is an Outpatient follow the instructions in III. Policies T. *Appropriate Actions for Mislabeled Outreach Samples*.
 - c. If specimen is received in the LIS the specimen must be rejected in the BBIS as described in the Section V. Procedure H.1. a- *Reject the Specimen in the BBIS*.
 - d. If applicable refer to the section III. Policies O. *Mislabeled Outreach or Outpatient Samples for Patients that are Returning for Hospital Admission while Sample Remains Current*.

F. Relabeling Samples

1. Specimens should not be relabeled in a manner which obscures the original collection information; however, an additional (secondary) specimen label may be affixed (flagged) to the original specimen when required for additional testing on the ORTHO VISION™.

G. Mislabeled or QNS Samples

1. If a sample is not labeled completely, accurately, and legibly upon arrival in the Blood Bank, it must not be released for subsequent label completion or correction.
2. Once samples are received in the Blood Bank they must not be returned to the collector or caregivers.
3. Any sample that does not meet labeling requirements, is illegibly labeled, or contains insufficient volume for testing should not be tested but should be rejected.
 - a. If the specimen is for an inpatient or emergency center patient it may be sent for redraw as described in Section V. Procedure A.1.b.i - *Request for Redraw*.
 - i. Notify the caregivers that the sample has been rejected and a new sample is requested.
Note: If the specimen was linked to a product order, the affected product order(s) will need to be updated with the new specimen ID once it is received.

- b. If the patient is an Outpatient follow the instructions in III. Policies T. *Appropriate Actions for Mislabeled Outreach Samples*.
- c. If specimen is received in the LIS the specimen must be rejected in the BBIS as described in the Section V. *Procedure H.1. a- Reject the Specimen in the BBIS*.
- d. If applicable refer to the section III. Policies O. *Mislabeled Outreach or Outpatient Samples for Patients that are Returning for Hospital Admission while Sample Remains Current*.

H. Sample Dating

1. The sample's draw date is considered day zero.
2. For pre-transfusion purposes, a sample is considered "current" or "in-date" for 3 days following the draw date.
3. The sample collection date and expiration date are documented in the Blood Bank computer.
4. If a new sample is received, and the Blood Bank has already tested a sample that has less than 24 hours remaining to be considered current, then the new sample should be tested. If units were set up on the previous sample, they should be released to inventory once testing is complete on the new sample.
5. In order to select and issue RBCs for a patient (in non-emergency cases), the sample must be current and compatibility testing must be complete.
6. In order to select and issue platelets, plasma, and cryoprecipitate (in non-emergency cases), ABO/Rh testing must be complete on a sample from the current admission.

I. Historical Record Check

1. A historical record check must be performed to compare ABO, Rh, and antibody screen test results against results of the same tests recorded previously. Available laboratory records for each patient must be routinely searched whenever compatibility testing is performed. This allows for the detection of discrepancies, and for the identification of patients with historical antibody records and special transfusion requirements. For additional information, refer to Transfusion Medicine policy, [Historical Blood Bank Record Check](#).

J. Cord Blood Sample

1. Cord Blood Samples are collected on all live birth deliveries. Blood Bank studies are done on all umbilical cord blood specimens on infants of Rh negative or unknown Rh factor mothers, mothers with an antibody history, or when requested by the provider. If a cord blood sample is received without orders, it is stored in a designated area until at such time an order is placed by the provider in the EHR. When a shingle is received the ordered sample is retrieved from storage and processed as below. Refer to Transfusion Medicine policy, [Newborn Blood Bank Work Up and Cord Blood Evaluation - Blood Bank](#).

K. Antibodies / Potential Delay

1. The patient's caregivers should be notified upon detection of a positive antibody screen or at the time of sample triage if the patient has an historical antibody record that has the potential to delay the Blood Bank in providing blood components for a patient. A comment is added to the antibody screen test **or patient ABO History result**, indicating that there may be a delay.

L. Sample Volume

1. In general, the minimal sample volume for an adult Type & Screen is approximately 2 ml and for neonatal testing it is approximately 0.5 ml. These are only guidelines and the required sample volume depends on factors such as the hematocrit and whether antibody studies are required. It may be beneficial to evaluate the sample's volume *after* centrifugation. If the sample volume appears insufficient, the sample should be rejected.
 - a. If the specimen is for an inpatient or emergency center patient it may be sent for redraw as described in Section V. Procedure A.1.b.i - *Request for Redraw*.
 - i. Notify the caregivers that the sample has been rejected and a new sample is requested.

Note: If the specimen was linked to a product order, the affected product order(s) will need to be updated with the new specimen ID once it is received.
 - b. If the patient is an Outpatient follow the instructions in III. Policies T. *Appropriate Actions for Mislabeled Outreach Samples*.
 - c. If specimen is received in the LIS the specimen must be rejected in the BBIS as described in the Section V. Procedure H.1. a- *Reject the Specimen in the BBIS*.
 - d. If applicable refer to the section III. Policies O. *Mislabeled Outreach or Outpatient Samples for Patients that are Returning for Hospital Admission while Sample Remains Current*.

M. Hemolysis

1. Tests performed with a hemolyzed sample may create difficulties in evaluating test results and antibody-induced hemolysis may be masked. Refer to V. Procedure, G. *Assessment of Hemolysis*.

N. Wrong Blood in Tube Event (WBIT)

1. When the ABO or Rh of a current sample does not match the historical ABO or Rh and in some cases of improper sample labeling, the Blood Bank must consider the possibility of a WBIT event. If applicable, refer to section V Procedure, F. *Wrong Blood in Tube Event (WBIT)*.

O. Mislabeled Outreach or Outpatient Samples for Patients that are Returning for Hospital Admission while Sample Remains Current

1. If the pre-transfusion sample is unacceptable for transfusion purposes and the outpatient will be returning to the hospital while the sample remains current, then the following apply:
 - a. The sample will be triaged and the testing performed as ordered.
 - b. A comment will be added to the antibody screen result indicating "Sample can not be used for transfusion purposes"
 - c. If the antibody screen is positive, a workup will be performed.
 - d. Inactivate the sample in the BBIS upon completion of testing.
 - e. The area in which the patient will be admitted to will be notified to recollect a new

specimen upon patient arrival so that they can plan for collection of a new sample to avoid any procedural delays. Document this communication in a patient profile note in the BBIS and on department communication logs.

P. Additional Policies Relating to Outreach Samples

1. Labeling of Outreach Samples by the Collection Facility:

Outreach / Outreach / OP samples ordered/collected in Beaker LIS will usually have a yellow stripe on the label. Those samples ordered/collected in ATLAS portal will usually have a blue stripe on the label. They may be labeled in one of three manners, depending on where they are collected.

- a. Samples may be collected by a Corewell Health phlebotomist at a Patient Service Center (PSC). The order will be placed in Epic by the PSC, collected in Epic and a Corewell Health phlebotomist will affix the Beaker LIS label to the sample.
- b. Samples may be collected at a facility that is not a PSC (e.g., at the physician's office). These facilities do not place the orders in the LIS and therefore do not label the samples with HIS labels. These samples are sent to Client Services/Processing, who then orders the tests in the Epic and generates the Beaker LIS label. Client Services/Processing then sends the Beaker LIS label and sample to the Blood Bank together in a plastic bag. The Blood Bank then affixes the Beaker LIS label to the sample as described in the section *Affixing LIS Label to Outreach Samples (collected at a facility that is not a PSC)*. These Outreach samples must be labeled at the facility with the first and last name and an additional unique identifier described in the chart above.
Note: If the sample is labeled with the C&P or unique client identifier number, then the C&P number on the sample must match the C&P number on the client requisition. To view the C&P number go to the hospital chart in EPIC via the MRN chart review media. Find the requisition and compare the C&P numbers.
- c. ATLAS Label Specimens – Samples may be collected at a facility that is not a PSC (e.g., at the physician's office). The order will be placed and collected in ATLAS by the physician's office and will be electronically sent from ATLAS to EPIC/Beaker. These samples will be labeled in the physician office with ATLAS Labels and received in Beaker LIS by Client Services/Processing. These ATLAS Label specimens can be scanned by EPIC/Beaker, Safetrace, and the automated instruments. No additional labels are necessary.

Q. Affixing HIS Label to Outreach Samples (collected at a facility that is not a PSC):

1. The name and unique identifier on the sample must match the name and unique identifier on the Beaker LIS label and/or in LIS.
2. Any other identifiers on the sample (in addition to the name and one required numeric identifier) must also match the identifiers on the label and/or in EPIC/Beaker. For example: *A sample is correctly labeled with the name and MRN. In addition, the sample is labeled with the birthdate and middle name. The birthdate and middle name on the sample must match that on the Beaker LIS label.*
3. After verifying that the sample has been labeled properly by the collection facility, the Blood Bank will affix the Beaker LIS label to the sample in such a way as to not obscure original label information and must **initial the label**.

R. Discrepancies due to Recent Name Changes for Outpatient specimens

1. A common reason for this type of occurrence is a recent marriage. After the marriage, the patient's documents (e.g., driver's license, insurance cards, etc.) may not be updated at the time of the sample collection. Therefore, registration may not update the patient's name immediately in EPIC, but instead will add an alias to the record. For example: *A patient was recently married. She has updated her name on her driver's license, but has not yet updated her name on her insurance card. The sample is labeled with her new married name, but the HIS label still has the old name. Registration has created an alias record in EPIC.*
2. For discrepancies due to recent name changes, determine whether registration has added an alias to the record in Epic.
 - a. If an alias record has been created then the technologist may affix the label to the sample, and test the sample based on the name on the Epic Beaker label.
 - b. If an alias record has not been created, then proceed as described in the section *Clarification of Orders or Identifying Information with Client Services* below.

S. Clarification of Orders or Identifying Information with Client Services

1. The Blood Bank should enter a Follow-up Task on the specimen in the LIS to resolve any labeling or ordering concerns, following department guidelines.
 - a. The sample should be tested on a downtime form pending the clarification.
 - b. After testing is completed the sample and the downtime form will be placed in a designated area at your site if applicable.
 - c. Each shift should check the LIS for follow-up updates until the concern has been resolved.
 - d. Based on Client Services' resolution, the sample will either be tested or treated as a mislabeled sample as per policy *Appropriate Actions for Mislabeled Outreach Samples*.

T. Appropriate Actions for Mislabeled Outreach Samples:

1. In cases where the sample was not correctly labeled by the collection facility, the following apply:
 - a. The Blood Bank will not return the sample to Outreach.
 - b. The Blood Bank will document the rejected specimen per site guidelines.
 - c. The Blood Bank will cancel the test in EPIC/Beaker using the reason "Specimen Mislabeled" and using the cancellation comment box to document the details of the labeling error(s). If the cancellation reason selected does not begin with the word "Specimen" a Follow-Up task also needs to be added to the specimen with the reason for the cancellation so that Client Services will be alerted to reach out to the client about the test cancellation.
 - d. If the sample is not tested, the label can be flagged so as not to cover any of the written information. The sample will be placed in a designated area for mislabeled specimens.

- e. If the sample is labeled with a wristband number for pre-transfusion purposes, refer to section III. Policies O. *Mislabeled Outreach or Outpatient Samples for Patients that are Returning for Hospital Admission while Sample Remains Current*.

U. Outreach Samples Labeled with a Wristband Number (B#):

1. In some cases, Outreach or outpatient samples may be collected for potential pre-transfusion purposes. In these cases, the sample must meet all of the same labeling requirements for pre-transfusion samples. If applicable, refer to the section III. Policies O. *Mislabeled Outreach or Outpatient Samples for Patients that are Returning for Hospital Admission while Sample Remains Current*.

V. Outreach Samples Labeled with a Wristband Number, but only an ABO/Rh or Antibody Screen is Ordered:

1. If the Outreach sample is labeled with a wristband number, the patient may be a pre-surgical patient or transfusion candidate. A Follow-up Task will be added on the specimen in the LIS to request clarification as the order was most likely intended to order a Type **and** Screen.

IV. SPECIMEN COLLECTION AND HANDLING:



1. The specimen of choice is an EDTA sample collected in either a PINK or PURPLE top collection tube with affixed identifying label.
2. Samples drawn in serum separator tubes are generally not acceptable.
3. Pre-transfusion samples are collected according to the Transfusion Medicine policy, [Transfusion Services Criteria for Specimen Acceptability](#).

V. PROCEDURE: SAMPLE TRIAGE:

A. Receiving Sample in Beaker LIS

1. **Receive the sample in Beaker LIS (this task can be performed in Laboratory Processing or Blood Bank departments).**
 - a. Verify that all specimen acceptability requirements outlined in policy section above are met before confirming receipt of specimen.
 - i. The name (first and last) is complete, legible and spelled completely.
 - ii. The wristband number on the sample is complete and in the correct format.
 - iii. The MRN on the sample is complete and accurate.
 - iv. The collection date appears on the sample label, or is documented in the computer.
 - v. The phlebotomist identification is documented on the sample label or in the computer.
 - vi. Any information on the sample label (e.g., middle name or birth date), in

addition to the required information, must be accurate.

- vii. Sample volume is acceptable
- viii. No evidence of Gross Hemolysis
- b. If any of the label criteria, specimen volume, or integrity is not met do not receive the specimen.
 - i. **Request for a Redraw in Beaker LIS**
For inpatient specimens request a redraw on the specimen in Beaker LIS:
 - 1. Open the further actions menu  and select **Redraw**
 - 2. Select appropriate reason.
 - 3. Click **Yes** to send to redraw.
 - ii. **Cancel Order in Beaker LIS**
For outpatient specimens or outreach samples cancel the specimen in Beaker LIS.
 - 1. Open the further actions menu  and select **Cancel**
 - 2. Select appropriate cancellation reason and enter detailed comments
 - 3. Click **Yes** to cancel.
- c. Open the Receiving activity in LIS while logged into your site Laboratory.
- d. If specimen requirements and labeling are acceptable receive the specimen by scanning the barcode on the Specimen label.
 - i. Specimens that do not have collection information saved in the LIS are not able to be received into the lab without completing documentation of collection in the LIS.
 - 1. For information entered by the collector but not saved, the collection details can be saved to the specimen by clicking **Apply All**, entering any other applicable collection details from the specimen label if needed, and then clicking the **Receive** button.
 - 2. For specimens without collection details entered in the LIS specimen collection will have to be completed using the information on the specimen prior to receiving the specimen in the LIS. The LIS label should be affixed to the specimen without covering the collection details and patient identifiers on the original label.
 - ii. After a specimen is received, it will display in the activity with a green check mark under the **Received Status** column, and a green box will appear next to the tabs in the center of the screen with a notice that the sample is received.
- e. Review the requisition or shingle and verify that the identifying information matches the information on the sample label.
 - i. If the patient does not have a shingle and you would like to create or print one if applicable (e.g., for Outreach and outpatient samples). To print an additional

shingle from EPIC:

1. Enter your patient MRN in EPIC and go to Chart Review -> Labs -> BB
2. Click on the order you need an additional shingle for
3. Once order opens, scroll down to Order Requisition
4. Click the hyperlinked within the Order Requisition box
5. Print shingle

Note: The printed shingle from EPIC does not look the same as our standard shingle but contains needed information.

B. Receiving Sample in BBIS

1. Receive the specimen in SafeTrace BBIS
 - a. From the Home screen, click on **Patient/Order** → **Specimen**
 - b. Scan specimen container label. (Click continue if necessary)
 - c. Link any available product orders that are not already linked to the specimen by clicking the box next to the desired product order.
 - d. Click **Accept** specimen
2. For pre-transfusion samples (banded specimens) record the specimen B#
 - a. Click on **Patient/Order** → **Patient Search**
 - b. Scan the specimen into the **Specimen ID** field.
 - c. Click **Select** to select patient.
 - d. Click on **Specimens** tab
 - e. Click on Specimen ID number.
 - f. Click **Edit Specimen**.
 - g. Enter Band number from Specimen label into **External ID** Field
 - h. For Neonatal transfusion specimens edit the specimen Expiration Date & Time to four months minus 1 day from the infant's date of birth.
 - i. Click **Save**
3. Recommended workflow: Review available specimens in BBIS to confirm that only specimens for the current admission/encounter with a valid band number, if applicable, are in Available status.
 - a. Click on **Patient/Order** → **Patient Search**
 - b. Scan the specimen into the **Specimen ID** field.
 - c. Click **Select** to select patient.
 - d. Click on **Specimens** tab and click on the Specimen IDs to review available specimens
 - i. Specimens without band numbers - if testing is completed, change status to "Inactive"
 - ii. Specimens with band numbers
 1. If the specimen is from a previous admission, change status to

"Inactive" (Admission information can be found in the **Visits** tab)

2. If the specimen is from the current admission confirm the band number matches the new specimen.
 - a. If the band numbers do not match, confirm with the patient's RN by asking the RN to read the wristband number from the patient's wrist. If the patient has received a new wristband follow instructions in V. Procedure E. *New or Different Wristband Number during the Same Admission - Inactivating Specimen* below.
 - b. If the band numbers match, and the previous specimen is expiring within 24 hours, both specimens can be kept in available status.
 - c. If the band numbers match and the previous specimen's expiration is >24 hours from the current date/time, the new specimen should be inactivated in the BBIS and order canceled in Epic as a Duplicate.

C. History Check and Confirmatory ABORh Testing

1. Perform patient history check in accordance with Transfusion Medicine policy, [Historical Blood Bank Record Check](#) and record results on the patient shingle.
 - a. Be aware of potential MRN mismatches. Any mismatches should be investigated before testing; e.g., a merge may be required. If applicable, add special messages to the patient's profile in the BBIS.
2. Review the shingle for any new special transfusion requirements (e.g., irradiation, CMV negative, sickle cell disease, etc.) and update special requirements.
 - a. FH, Troy, and RO: If applicable, document [Medical Director Review of Special Transfusion Requirements form](#) for review.
3. If the specimen is from a banded patient who does not have a historic ABO/Rh type on file in Safetrace (or in the legacy BBIS SoftBank) and the sample is collected using Positive Patient Identification (PPID), then create an order for **ABORhNCES** test in Safetrace.
 - a. Samples for banded patients that are known to be collected **without** using PPID should have an ABO Confirmation (**ABO/Rh Confirm E/S** test) ordered. The ABO/Rh Confirm E/S is performed on a second properly labeled specimen. The following examples apply:
 - i. Samples collected during downtime.
 - ii. Samples collected at a Long Term Care facility (i.e. Vibra).
 - iii. Samples that arrive with a chart/mylar label and the collection is not complete in Beaker.
 - b. If the specimen is from a non-banded patient who does not have a historic ABO/Rh type, then a **ABORhNCES** or **ABO/Rh Confirm E/S** test is not required.
4. If the patient does have a historic ABO/Rh type on file in Safetrace BBIS or in the legacy BBIS (SoftBank), then write this type on the patient's order/shingle.
 - a. If the patient's historical ABO/Rh is only in the legacy BBIS (SoftBank) then add-on and

result the **Historical ABO/Rh** test.

5. If applicable, retrieve the patient's antibody card if available at your site.

D. Cord Blood Samples

For Cord Blood orders it is necessary to select the testing that you would like performed on the specimen:

1. Go to **Tests** Tab
2. Check box for Pending **CORD E S** for your specimen ID
3. Select **Results** Button
4. Click **Add** → **Test**
5. Mark the checkboxes for the test ID **ABORhFWDES** first and **DATIGGGEL** second. (The test IDs must be selected in that specific order to avoid order duplication on the analyzer.)
Note: Do not select ABORhFWDG as this test code is reserved for Corewell South Blood Banks.
6. Click **Select**.
7. Click **Cancel** to exit screen.

E. New or Different Wristband Number during the Same Admission - Inactivating Specimen

1. If blood bank discovers, or is made aware, of a patient or sample with a new or different wristband from that associated with a previous sample during the same admission, take the following actions:
 - a. The Blood Bank should communicate with the patient's caregivers to determine which wristband number is actually on the wristband that the patient is wearing.
 - i. Royal Oak: If the wristband number recorded on the dispense form was incorrect, document *Problems Related to the Blood Product Dispense Form* and return form to the floor via the pneumatic tube system.
 - b. If the wristband number is determined to be incorrect, then any blood products that have been selected for the patient under the wristband number should be released to available inventory.
 - c. Add a test correction to the Antibody Screen result to document the notification to the caregiver.
 - i. Open the patient profile in BBIS
 - ii. Go to **Tests** tab.
 - iii. Click **Show Complete**
 - iv. Select the **ABSG** for the appropriate specimen
 - v. Click **Results**
 - vi. click **Add -> Correction**
 - vii. Re-enter the Reactions and Interpretation from the original test results.
 - viii. Add Comment ID **REBAN** (This sample can not be used for transfusion

purposes; the patient is now wearing a different wristband. Blood Bank has requested RN _____ to order/collect a new Type/Screen specimen. Notification Date/Time: _____.)

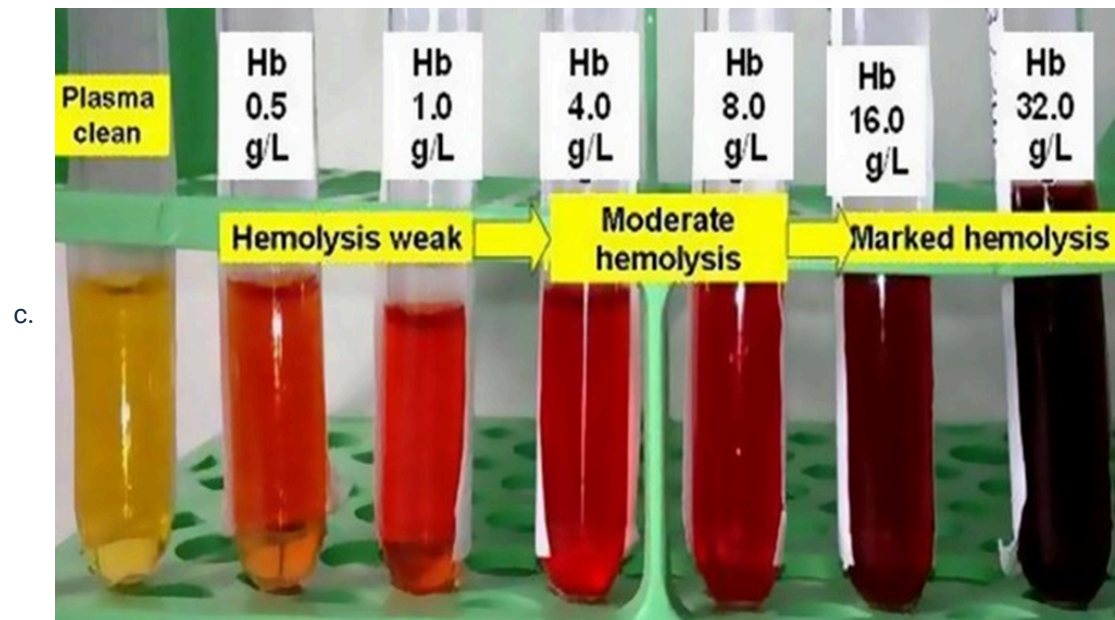
- d. Inactivate the sample in the BBIS.
 - i. Open the patient profile in BBIS
 - ii. Go to **Specimens** tab.
 - iii. Click on the applicable **Specimen ID**.
 - iv. Click **Edit Specimen**.
 - v. Click on **Status** field and select **Inactive** from the drop down list
- e. Consider the possibility of a WBIT and if applicable, proceed to the section V. Procedure F. *Wrong Blood in Tube Event (WBIT)*, below.

F. Wrong Blood in Tube Event (WBIT)

1. If applicable and if possible, repeat the ABO/Rh of the historical sample, redraw the current sample, and repeat the ABO/Rh on this new sample.
2. Invalidate / correct any Blood Bank tests that may have been completed from the improper sample.
3. Ensure that the patient's ABO and Rh of record (demographic screen) correspond to the correct testing from the correct sample(s).
4. Document the event in a variance report per department guidelines.

G. Assessment for Hemolysis

1. A hemolyzed specimen may be used for all routine testing (other than post transfusion reaction evaluation samples) provided there is evidence of a cell button and an internal comment is added to the test to indicate the degree of hemolysis.
2. Centrifuge the sample at the calibrated time and RPM of the centrifuge.
3. If after centrifugation, the color of the plasma is of questionable acceptability, extract a portion of the plasma using a pipette.
 - a. Place plasma sample on a white background.
 - b. Compare color tabs on the the grading chart below to grade the hemolysis of the plasma



4. If the sample is used for post transfusion reaction evaluation and moderate/marked hemolysis is present in the sample, a second sample should be requested for collection.
 - a. If the second sample is acceptable, then the second sample may be tested and the first sample should be rejected as described in the section V. Procedure H. *Specimen Rejection in BBIS*. Select Hemolyzed as the Reject Reason and enter the degree of hemolysis as the Reject Comment (Example "Marked hemolysis present")
 - b. If the second sample is also unacceptable, then contact the nurse/phlebotomist to discuss the draw and verify if it was a traumatic draw.
 - i. If there is evidence to suggest a traumatic draw, request a third collection
 - ii. If there is no evidence of a traumatic draw after second/third collection obtain patient's diagnosis and consult a pathologist for approval to test with appropriate patient controls where the degree of hemolysis present in the sample itself is compared to the degree of hemolysis in the test system at completion.
 - iii. Add a Note to the patient profile in the BBIS to document this information.
 - c. If an acute hemolytic transfusion reaction is suspected, refer to Transfusion Medicine policy [Transfusion Reaction Investigation and Workup](#). A suspected acute hemolytic transfusion reaction is considered a critical value; refer also to Transfusion Medicine policy, [Critical Value Notification Policy for Transfusion Medicine](#).

H. Specimen Rejection in BBIS

1. If the sample must be rejected for any reason after the specimen has been received in LIS
 - a. Reject the Specimen in BBIS
 - i. Go to **Patient/Order -> Specimen**
 - ii. Scan **Specimen ID**
 - iii. Click **Reject Specimen**

- iv. Select appropriate **Reject Reason** from the drop down list.
 - v. Enter appropriate free text comment in **Reject Comment** box.
 - vi. Click **Reject Specimen**.
 - vii. Note: Specimen may also be changed to Rejected status in BBIS through **Patient/Order -> Patient Search -> Specimens** tab.
- b. If the patient is an inpatient or emergency center patient request a redraw in Beaker for the caregivers to re-collect as described in Section V. Procedure A.e - Request for Redraw.
 - i. Notify the caregivers that the sample has been rejected and a new sample is requested.
 - ii. Note: If the specimen was linked to a product order, the affected product order(s) will need to be updated with the new specimen ID once it is received.
 - c. If the patient is an Outpatient follow the instructions in III. Policies T. *Appropriate Actions for Mislabeled Outreach Samples*.
 - d. Document the sample rejection in accordance with Transfusion Medicine policy, Variance Reporting.

VI. REFERENCES:

1. AABB, *Technical Manual*, current edition.
2. AABB, *Standards for Blood Banks and Transfusion Services*, current edition.
3. College of American Pathologists, Transfusion Medicine Checklist, Current edition.

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