PROGRAM Standard Operating Procedure – Laboratory Services	
Title: SCM29099 Blood Bank Sample Collection	Policy Number: 15-194-V1
Program Name: Transfusion Medicine	
Applicable Domain: Lab, Diagnostic Imaging and Pharmacy Services	
Additional Domain(s): Community Health Centre Clinical Services; Hospital Based Clinical Services	
Effective Date: 25/03/2025	Next Review Date: 25/03/2027
Issuing Authority: Director, Laboratory and Diagnostic Imaging Services	Date Approved: 25/03/2025
Accreditation Canada Applicable Standard: TM 19.5, 20.1-20.5	

GUIDING PRINCIPLE:
The Northwest Territories Health and Social Services Authority (NTHSSA) value patient's rights to receive safe and competent care. This includes ensuring an effective process for all patients requiring laboratory testing, and transfusion of blood components and products.

PURPOSE/RATIONALE:
To positively identify a client and accurately label specimens and paperwork that will be used for any transfusion testing including pre-transfusion specimens for type and screen (TS) and compatibility (crossmatch) testing prior to or post transfusion of blood components.

- Specific procedure for how to collect a venous sample is covered under the venipuncture procedures.
- Incomplete requisitions will NOT be accepted by Blood Bank.
- If patient received an emergency transfusion prior to a pre-transfusion specimen being collected – post transfusion specimens will also be covered under this procedure for purposes of testing for type and screen and compatibility testing (crossmatch).
- Unequivocal identification of the patient shall be made before drawing blood specimens, including a check of the patient's hospital arm band. If errors or discrepancies are found during the process of identification, blood samples will NOT be drawn until the problem has been satisfactorily resolved. In situations where recipients do not have an identification (ID) band, a procedure to identify the recipient shall be in place. See **NTHSSA-Wide Policy: Client Identification.**

> **NOTE:** Date of birth is not a satisfactory unique identifier for blood bank samples. While birthdate can be used to assist in identifying the patient, the requisition and sample must include a second unique identifier such as Healthcare Number (PHN) or Medical Record Number (MRN)

- All patients being transfused with a blood component shall have an Ident-A Blood Recipient Band (BBID Number) which provides continuous positive identification of the patient from the time of specimen collection to the completion of the transfusion episode.
- Only the following qualified persons may take responsibility for collecting or identifying patients for the purpose of transfusion of blood components or blood products:
    - medical laboratory assistants (MLA)
    - medical laboratory technologists (MLT)
    - combined laboratory and X-Ray technicians (CXLT)
    - registered nurses (RN)
    - licensed practical nurses (LPN)
    - nurse practitioners (NP)
    - physicians
    - emergency medical technicians (EMT)
    - midwives

  No other staff may take on this responsibility, including students. Students may participate but will require a co-signatory.
- All staff participating in the collection or identification of blood bank specimens must have their names, signature and initials recorded in the Master Signature Record for their department.
- The initials of the person drawing the blood specimen and the date and time of collection shall be documented on the requisition, sample tubes and on the appropriate locations of the Ident-A Band labels and bracelet applied to the patient. The identity of the second identifying individual shall be documented on the requisition for pre or post transfusion samples.
- For samples drawn for testing that is not for purposes of transfusion of a blood component, such as type and screen for Rhogam or DAT testing, no BBID number or bracelet is required, and no second person to identify the patient is required. This is only required for samples used for testing prior to the transfusion of Blood components.

DEFINITIONS:

- **Blood component:** a therapeutic part of blood intended for transfusion (e.g. red cells, platelets, granulocytes, plasma and cryoprecipitate)

- **Blood product**: a therapeutic product derived from human blood or plasma and produced by a manufacturing process (e.g. albumin, immunoglobulins, coagulation products, WinRho/RhIG).

- **Pre-transfusion specimen:** Sample in which laboratory testing required to ensure compatibility between the blood of the **transfusion** recipient and the blood component intended for **transfusion** will be performed. Testing includes but is not limited to Type and Screen and Crossmatch.

- **Blood Bank Identification number (BBID):** the unique number assigned to the patient for the purpose of blood component transfusion found on the Ident-A™ Blood Recipient System Form (BBID# sticker sheet). It assists in the unequivocal identification of patient and blood component as this number is utilized throughout the transfusion process, from collection to transfusion. It is displayed on the patient armband, requisition, collected samples and blood components to be transfused. This number is referred to differently dependent on the blood services provider (e.g. Blood Bank Identification number (BBIN)).

- **Laboratory Information System (LIS):** Software system that records, manages and stores data for the clinical laboratory.

SCOPE/APPLICABILITY:
Medical Laboratory Technologists (MLTs), Combined Laboratory and X-Ray Technicians (CLXT), Medical Laboratory Assistants (MLAs), Registered Nurses (RN), Licenced Practical Nurses (LPN), Physicians, Midwives, Emergency Medical Technicians (EMT)

SAMPLE INFORMATION:

Type	Blood – anticoagulated with EDTA
Source	Venipuncture
Collection Container	• 6.0mL pink topped BD Vacutainer® tubes (REF 367899) - EDTA tube • pediatric collection: pink topped BD Microtainer® MAP tubes – EDTA • Non additive tube such as 10mL Red top glass tube
Volume	3.0-6.0 mL
Stability	14 Days (most testing must be performed within 96 hours of collection)
Patient Preparation	None
Storage Requirements	2-8°C
Criteria for rejection and follow up action	Specimens that are: Mislabelled, hemolysed, lipemic, icteric, low volume, greater than 96 hours old Follow up action: Recollect specimen

SUPPLIES:

- Transfusion Medicine Requisition
- Patient identification labels
- Ident-A™ Blood Recipient Band (Red Band)
- Ident-A™ Blood Recipient System Form (BBID# sticker sheet)
- Materials for Venipuncture as per **SCM20300 Venipuncture Procedure**

SPECIAL SAFETY PRECAUTIONS:

- Most hemolytic transfusion reactions are a result from errors in recipient or specimen identification; therefore, the laboratory will only accept specimens for transfusion medicine with complete, accurate and legible labels.
- Handle all patient samples as potentially infectious and utilize Universal Routine Precautions.

PROCEDURE INSTRUCTIONS:

Step	Action
Patient Identification and specimen labelling for testing	
1	**The Requisition** Examine the requisition to determine that all required fields have been completed. Double check that the following information is complete and legible: 1. Patient's full first name and last name 2. Patient's date of birth 3. Unique patient identifier such as Healthcare Number (PHN) or Medical Record Number (MRN) 4. Patient's location 5. Ordering Clinician 6. Testing Priority – Routine, Urgent or STAT 7. Test(s) requested 8. Blood component(s)/product requested and required volume or dosage 9. Diagnosis or clinical information 10. Patient history NOTE: If information is missing, confirm the missing details with medical staff or the patient prior to proceeding with blood collection. See **TMM40100 - Guidelines for the Evaluation of Requests for Blood**

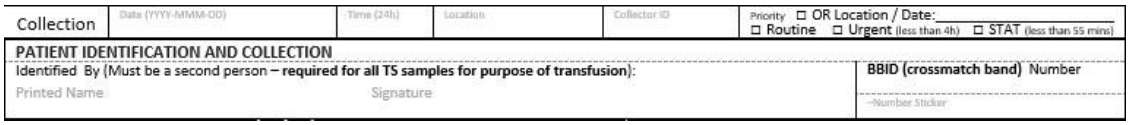
<table>
<tr><td></td><td colspan="2">Components and SCM20902 Transfusion Medicine Requisition Job Aid for further information on these requirements.
<u>See Appendix A for Transfusion Medicine Requisition</u>
<u>See Appendix B for HDN Investigation Requisition</u></td></tr>
<tr><td rowspan="5">2</td><td colspan="2">Identify the Recipient – Ask the patient to:
State and spell their first and last names
State their date of birth
This information provided by the patient must match the patient’s Hospital ID band and the requisition.
<u>NOTE:</u> If sample is considered a Pre-transfusion sample then this must be performed in the presence of a second qualified individual to be a Second Identifier.</td></tr>
<tr><td>If:</td><td>Then:</td></tr>
<tr><td>The recipient is unable to communicate and is not wearing an identification band</td><td>Ask a qualified person to identify the patient and put a hospital ID band on the recipient before collecting the specimen.</td></tr>
<tr><td>The recipient is unable to communicate and is wearing an identification band</td><td>Ask a qualified person to identify the patient via the identification band on the recipient before collecting the specimen.</td></tr>
<tr><td>The recipient is able to communicate but speaks a different language</td><td>A translator will have to be called to help identify the patient.</td></tr>
<tr><td></td><td>The patient is unable to communicate and</td><td>The patient will be given an “Unknown, Unknown” band as per NT Health and Social Services Data Processes and Standards Cheat Sheet.</td></tr>
</table>

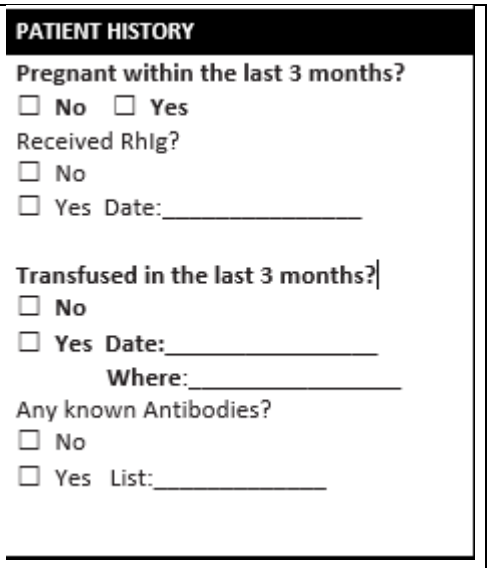
	the specimen collection is required STAT	• Corresponding information should be used on the Blood Bank requisition, tube and band. • The Blood Bank band with unique BBID number shall stay on the recipient until the transfusion episode is completed. • Once the patient is satisfactorily identified the patient records can be merged in Medipatient (or hospital electronic health information system) and the laboratory information system (LIS)
	Any of the information is incorrect	• Correct any discrepancies (new arm band, new patient label(s), new requisition) prior to collecting specimen(s).

Second Patient Identifier

For Pre-transfusion specimens only (Type and Screen & Crossmatch):

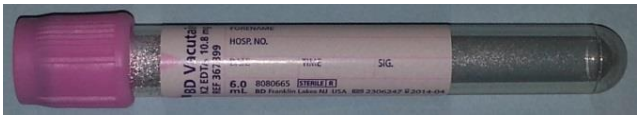
The second individual identifying the patient must sign their initials in the "Patient Identified By" box on the top right hand corner of the requisition. If the initials are not legible the Collector must ask the Identifier their initials and print them next to the signed initials so that they may be typed into the LIS accurately upon sample receipt.



3	**Patient History Section** If the patient history information is not completed on the requisition, ask the recipient if: 1. They have ever received a transfusion within the last 3 months and if so, when – specify date 2. If they are or have been pregnant within the last 3 months and if so if they have ever received Rh Immune Globulin (aka RhIG, WinRho or RhoGam). Record these details on the patient history section of the requisition. Red arrows denote minimun requirement for patient history. 
4	**Collection Tubes** Venipuncture for the following test orders Collect: • **Type and Screen (Group and Rh with Antibody Screen) –** 1 x 6.0mL pink topped BD Vacutainer® tubes (REF 367899) - EDTA tube • **DAT*** (Direct Antigen Test)– 1 x 6.0mL pink topped BD Vacutainer® tubes (REF 367899) - EDTA tube OR for pediatric collection 1 x pink topped BD Microtainer® MAP tubes – EDTA • **ABO/Rh (Group and Rh) –** 1 x 6.0mL pink topped BD Vacutainer® tubes (REF 367899) - EDTA tube OR for pediatric collection 1 x pink topped BD Microtainer® MAP tubes – EDTA • **FMH –** 1 x 6.0mL pink topped BD Vacutainer® tubes (REF 367899) - EDTA tube • **POST1 –** 1 x 6.0mL pink topped BD Vacutainer® tubes (REF 367899) - EDTA tube OR for pediatric collection 1 x pink topped BD Microtainer® MAP tubes – EDTA

- **CORD BLOOD –** 1 x Non additive tube such as 10mL Red top glass tube
- **Neonatal Antigen Testing –** pediatric collection 1 x pink topped BD Microtainer® MAP tubes – EDTA
- **HDN testing** – pediatric collection 1 x pink topped BD Microtainer® MAP tubes – EDTA

For tests above with * If ordered with TS or ABO/Rh, testing can be combined and only 1 tube collected for blood work



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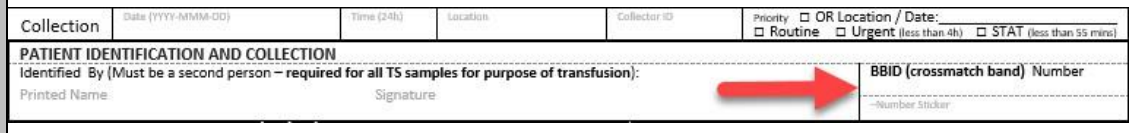
Labelling the Specimens and Ident-A Band Sheet

NOTE: Label the specimens and apply the band to the patient immediately after venipuncture, **before** leaving the patient's side.

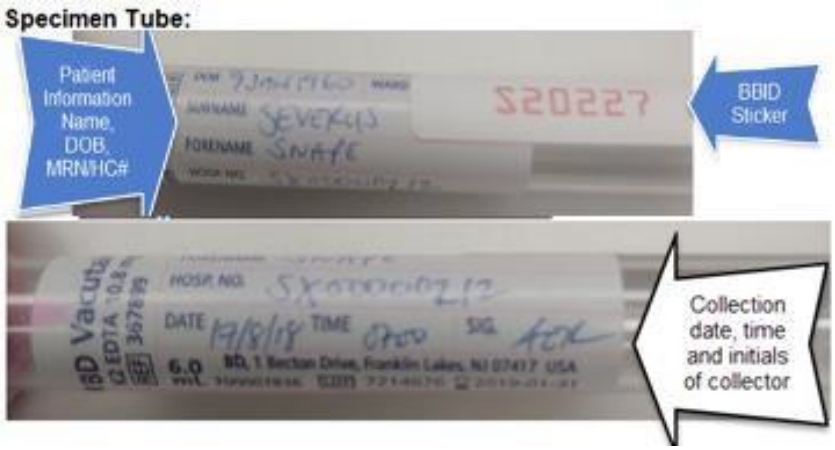
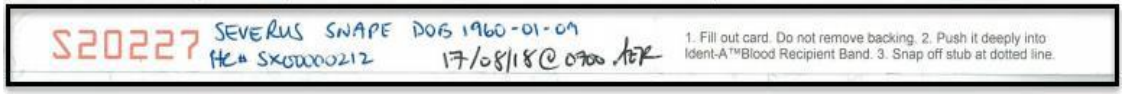
Ident-A Band Sheet (BBID): (only required for Pre-transfusion specimens)

1. Patient's first name and last name
2. Patient's MRN or PHN
3. Patient's date of birth
4. Date and time of collection
5. Collector's initials
6. Place an Ident-A Blood Sticker on sample collection tube(s) and the requisition



Sample Tubes:

1. Patient's first name and last name
2. Patient's MRN or PHN
3. Patient's date of birth

	4. Date and time of collection 5. Collector's initials **Specimen Tube:** 
6	**Patient Arm Banding (only for pre-transfusion patients)** • Detach the completed Recipient Band insert from the bottom of the Ident-A™ label sheet.  • Push it deeply into the pink/red Ident-A™ Recipient Band. • Snap off stub at dotted line. • Attach the band to the recipient's wrist. • Attach the "unique Ident-A™ number" (BBID Number) to the specimen tubes and both pages of the transfusion requisition form.
7	Sign and write the collection date and time on the request form. 
8	**Perform a final check before leaving the patient** • Compare the patient name and identification number on the specimen tube label(s), request form and identification band.
9	Sample, Requisition and BBID sticker sheet is to be forwarded to the Lab as soon as possible.

EXPECTED RESULTS:

- Patients who may require a transfusion shall be identified properly and receive a unique Ident-A Band BBID.
- Patient history applicable to transfusion testing will be obtained.
- Requisitions will be properly completed per transfusion medicine standards.
- Blood Bank samples will be appropriately labeled, signed and have time and date of collection indicated.
- See **SCM20901 Pre-transfusion Testing Examples: Requisition, BBID Label sheet and Specimen Tube** for an example of a filled out Requisition, Ident-A Band BBID Label sheet and Bracelet and Specimen Tube

PERFORMANCE MEASURES:

- Rate of rejected samples/requisitions for Transfusion Medicine testing

CROSS-REFERENCES:

N/A

ATTACHMENTS:

Appendix A: Transfusion Medicine Requisition

Appendix B: HDN Investigation Requisition

REFERENCES:

1. Canadian Society of Transfusion Medicine. (December 2021). *Standards for Hospital Transfusion Services, Version 5.*
2. Canadian Standards Association. *Blood and Blood Components CAN/CSA-Z902-20 (2020).*
3. CLSI. (April 2019). *Accuracy in Patient and Sample Identification, 2nd Edition; Approved Guideline. CLSI Document GP33-ED2:2019.* Wayne, PA: Clinical Laboratory Standards Institute.
4. CLSI. (April 2017). *Collection of Diagnostic Venous Blood Specimens, 7th Edition; Approved Guideline. CLSI Document GP41-ED7:2017.* Wayne, PA: Clinical Laboratory Standards Institute.

RELATED DOCUMENTS:

SCM20901 Pre-transfusion Testing Examples
SCM20902 Transfusion Medicine Requisition Job Aid

APPROVAL:

March 25, 2025
Date

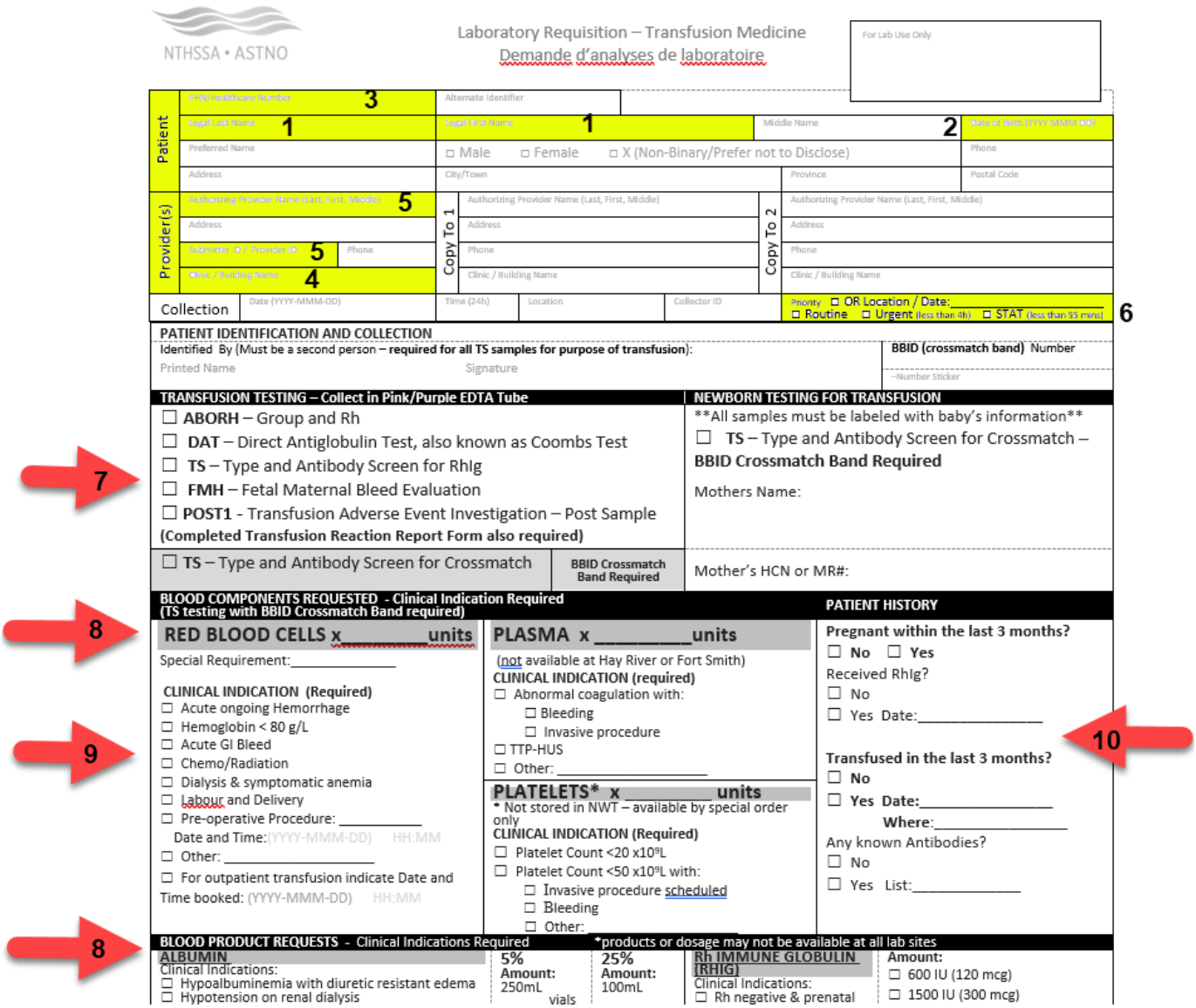
Director, Laboratory and Diagnostic Imaging Services

REVISION HISTORY:

REVISION	DATE	Description of Change	REQUESTED BY
1.0	20080805	Initial Release	C. Russell
1.1	20201117	Update to New Format	C. Russell
1.2	20151020	Change from SCM20800 to SCM20900 and update to current references	C. Russell
2.0	20171228	Update to new template; Update Safety Precautions to include Routine Practices; Update procedure to include more explicit instructions; Update References.	JGD Bernier
2.1	20190828	New Template / Reviewed and clarified instructions	C. Sosiak
2.2	20191017	Update procedure to include test types and collection requirements and test information; related documents update; clarification of pre-transfusion specimens; expected results	A. Richardson
2.3	20201001	Updated references and related documents to current, Update to include for increased scope/applicability of users, removed some references to documenting in LIS	A. Richardson
2.4	20210601	Updated with new requisition images, updated testing codes and collection tube requirements (Step 4)	A. Richardson
2.5	20240923	Updated with new requisition images, added HDN requisition, added appendix	A. Richardson
2.6	20250325	Added Related Documents.	A. Richardson

		Updated template. Remove cross references to facilitate Policy and Procedure Framework approval.	

Appendix A: Transfusion Medicine Requisition



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Laboratory Requisition – Transfusion Medicine
Demande d'analyses de laboratoire

For Lab Use Only

Patient

PHN/Healthcare Number 3 | Alternate Identifier

Legal Last Name 1 | Legal First Name 1 | Middle Name 2 | Date of Birth (YYYY-MMM-DD)

Preferred Name | ☐ Male ☐ Female ☐ X (Non-Binary/Prefer not to Disclose) | Phone

Address | City/Town | Province | Postal Code

Provider(s)

Authorizing Provider Name (Last, First, Middle) 5 | Copy To 1: Authorizing Provider Name (Last, First, Middle) | Copy To 2: Authorizing Provider Name (Last, First, Middle)

Address | Address | Address

Specialty ID / Provider ID 5 | Phone | Phone | Phone

Clinic / Building Name 4 | Clinic / Building Name | Clinic / Building Name

Collection | Date (YYYY-MMM-DD) | Time (24h) | Location | Collector ID

Priority ☐ OR Location / Date:_____
☐ Routine ☐ Urgent (less than 4h) ☐ STAT (less than 55 mins) 6

PATIENT IDENTIFICATION AND COLLECTION

Identified By (Must be a second person – **required for all TS samples for purpose of transfusion**):
Printed Name | Signature

BBID (crossmatch band) Number
Number Sticker

TRANSFUSION TESTING – Collect in Pink/Purple EDTA Tube

☐ **ABORH** – Group and Rh
☐ **DAT** – Direct Antiglobulin Test, also known as Coombs Test
☐ **TS** – Type and Antibody Screen for RhIg
☐ **FMH** – Fetal Maternal Bleed Evaluation
☐ **POST1** - Transfusion Adverse Event Investigation – Post Sample
(Completed Transfusion Reaction Report Form also required)

☐ **TS** – Type and Antibody Screen for Crossmatch | **BBID Crossmatch Band Required**

NEWBORN TESTING FOR TRANSFUSION

All samples must be labeled with baby's information
☐ **TS** – Type and Antibody Screen for Crossmatch – **BBID Crossmatch Band Required**

Mothers Name:

Mother's HCN or MR#:

BLOOD COMPONENTS REQUESTED - Clinical Indication Required (TS testing with BBID Crossmatch Band required)

RED BLOOD CELLS x_____units

Special Requirement:_____

CLINICAL INDICATION (Required)
☐ Acute ongoing Hemorrhage
☐ Hemoglobin < 80 g/L
☐ Acute GI Bleed
☐ Chemo/Radiation
☐ Dialysis & symptomatic anemia
☐ Labour and Delivery
☐ Pre-operative Procedure: _____
Date and Time:(YYYY-MMM-DD) HH:MM
☐ Other: _____
☐ For outpatient transfusion indicate Date and Time booked: (YYYY-MMM-DD) HH:MM

PLASMA x _____units

(not available at Hay River or Fort Smith)
CLINICAL INDICATION (required)
☐ Abnormal coagulation with:
☐ Bleeding
☐ Invasive procedure
☐ TTP-HUS
☐ Other: _____

PLATELETS* x _____ units

* Not stored in NWT – available by special order only
CLINICAL INDICATION (Required)
☐ Platelet Count <20 x10⁹L
☐ Platelet Count <50 x10⁹L with:
☐ Invasive procedure scheduled
☐ Bleeding
☐ Other: _____

PATIENT HISTORY

Pregnant within the last 3 months?
☐ **No** ☐ **Yes**
Received RhIg?
☐ No
☐ Yes Date:_____

Transfused in the last 3 months?
☐ **No**
☐ **Yes Date:**_____
Where:_____
Any known Antibodies?
☐ No
☐ Yes List:_____

BLOOD PRODUCT REQUESTS - Clinical Indications Required *products or dosage may not be available at all lab sites

ALBUMIN
Clinical Indications:
☐ Hypoalbuminemia with diuretic resistant edema
☐ Hypotension on renal dialysis
5% **Amount:** 250mL vials
25% **Amount:** 100mL

Rh IMMUNE GLOBULIN (RHIG)
Clinical Indications:
☐ Rh negative & prenatal
Amount:
☐ 600 IU (120 mcg)
☐ 1500 IU (300 mcg)

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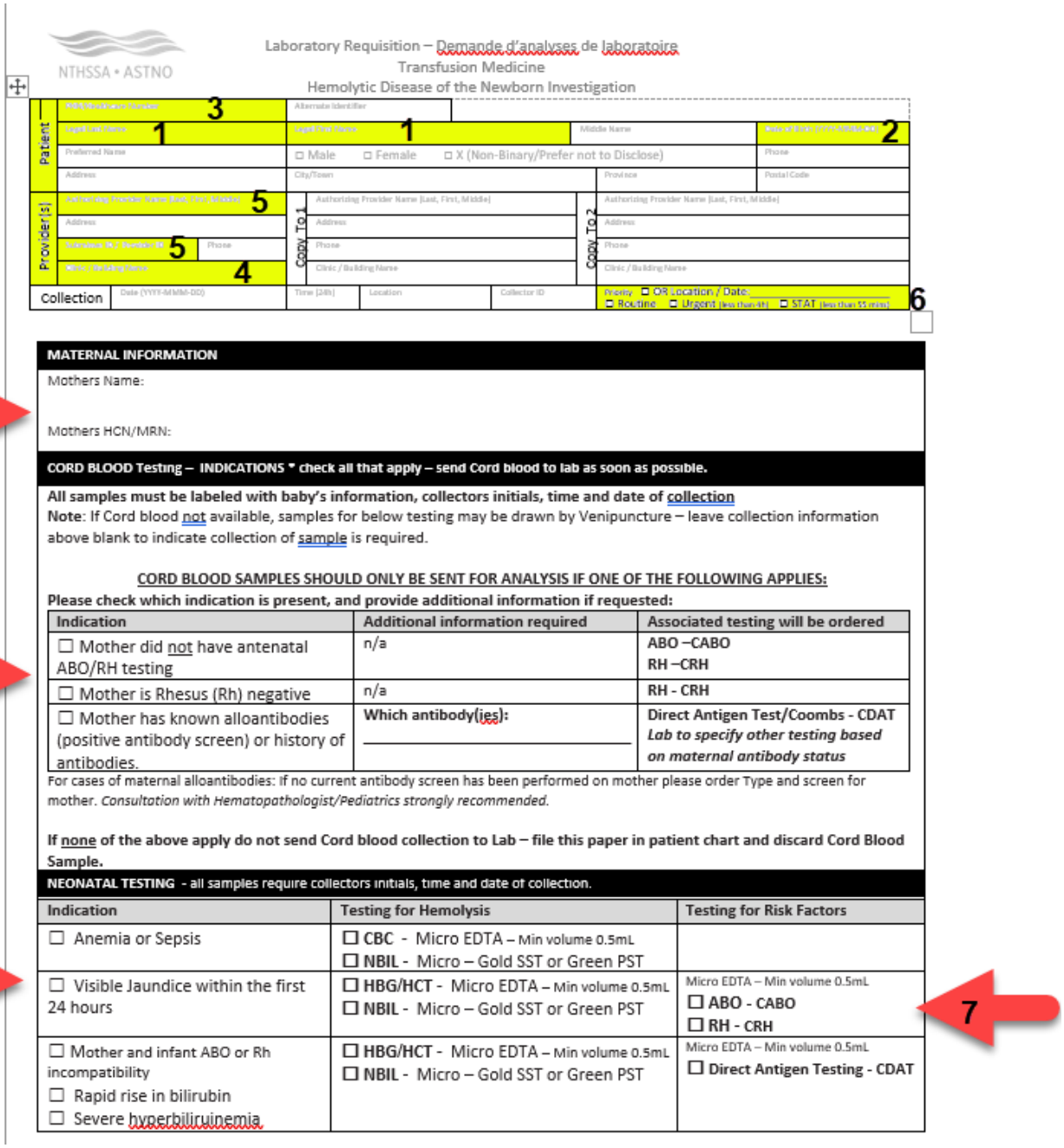
Appendix B: HDN Investigation Requisition



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Laboratory Requisition – Demande d'analyses de laboratoire
Transfusion Medicine
Hemolytic Disease of the Newborn Investigation

Patient

Provider(s)

Copy To 1

Copy To 2

Collection

Date (YYYY-MMM-DD)

Time (24h)

Location

Collector ID

Priority ☐ OR Location / Date:
☐ Routine ☐ Urgent (less than 4h) ☐ STAT (less than 55 mins)

MATERIAL INFORMATION

Mothers Name:

Mothers HCN/MRN:

CORD BLOOD Testing – INDICATIONS * check all that apply – send Cord blood to lab as soon as possible.

All samples must be labeled with baby's information, collectors initials, time and date of collection
Note: If Cord blood not available, samples for below testing may be drawn by Venipuncture – leave collection information above blank to indicate collection of sample is required.

CORD BLOOD SAMPLES SHOULD ONLY BE SENT FOR ANALYSIS IF ONE OF THE FOLLOWING APPLIES:

Please check which indication is present, and provide additional information if requested:

Indication	Additional information required	Associated testing will be ordered
☐ Mother did not have antenatal ABO/RH testing	n/a	**ABO –CABO** **RH –CRH**
☐ Mother is Rhesus (Rh) negative	n/a	**RH - CRH**
☐ Mother has known alloantibodies (positive antibody screen) or history of antibodies.	**Which antibody(ies):** _____	**Direct Antigen Test/Coombs - CDAT** ***Lab to specify other testing based on maternal antibody status***

For cases of maternal alloantibodies: If no current antibody screen has been performed on mother please order Type and screen for mother. *Consultation with Hematopathologist/Pediatrics strongly recommended.*

If none of the above apply do not send Cord blood collection to Lab – file this paper in patient chart and discard Cord Blood Sample.

NEONATAL TESTING - all samples require collectors initials, time and date of collection.

Indication	Testing for Hemolysis	Testing for Risk Factors
☐ Anemia or Sepsis	☐ **CBC** - Micro EDTA – Min volume 0.5mL ☐ **NBIL** - Micro – Gold SST or Green PST	
☐ Visible Jaundice within the first 24 hours	☐ **HBG/HCT** - Micro EDTA – Min volume 0.5mL ☐ **NBIL** - Micro – Gold SST or Green PST	Micro EDTA – Min volume 0.5mL ☐ **ABO - CABO** ☐ **RH - CRH**
☐ Mother and infant ABO or Rh incompatibility ☐ Rapid rise in bilirubin ☐ Severe hyperbiliruinemia	☐ **HBG/HCT** - Micro EDTA – Min volume 0.5mL ☐ **NBIL** - Micro – Gold SST or Green PST	Micro EDTA – Min volume 0.5mL ☐ **Direct Antigen Testing - CDAT**

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